

NATIONAL MARINE FISHERIES SERVICE REPORT

National Marine Fisheries Service (NMFS) Southwest Region will briefly report on recent regulatory developments relevant to highly migratory species fisheries and issues of interest to the Council.

Council Task:

Discussion.

Reference Materials:

1. Agenda Item C.1.a, Attachment 1: NMFS SWR Activity Report.

Agenda Order:

- a. Southwest Region Activity Report
- b. Reports and Comments of Advisory Bodies
- c. Public Comment
- d. Council Discussion

Mark Helvey

PFMC
10/26/06

**NMFS Report
Highly Migratory Species
Activity Report**

Northern Committee of the Western and Central Pacific Fisheries Commission: The Second Meeting of the Northern Committee took place at Tokyo, Japan, on 11th- 13th September 2006. The Meeting was attended by representatives from Canada, Japan, Republic of Korea, Philippines, United States of America, and Chinese Taipei as well as the observers from the Cook Islands, Palau, Vanuatu, and Russian Federation. Of interest to the Pacific Council, the Committee reviewed the Conservation and Management Measure on North Pacific albacore, which was adopted in 2005. The Committee agreed that the measure should be continued with no amendment. The Committee requested members of the Committee to submit information on implementation of this Conservation and Management Measure, in particular on effort control and data provision for the review by the Technical and Compliance Committee.

General Advisory Committee to the U.S. Section to the Inter-American Tropical Tuna Commission

The next meeting of the General Advisory Committee (GAC) to the U.S. Section to the Inter-American Tropical Tuna Commission (IATTC) will be held November 1, 2006, in Long Beach, California. The GAC will meet to receive and discuss information on: 1) introductions of new GAC members appointed for 2006-2009; 2) election of a Chair for 2006-2009, 3) 2006 IATTC activities; 4) recent and upcoming meetings of the IATTC and its working groups, including a) conservation and management measures for tunas for 2007 and beyond, b) measures to be taken in cases of noncompliance with the IATTC's conservation and management measures, c) management of fishing capacity, d) and, measures to address bycatch and other issues; 5) IATTC cooperation with other regional fishery management organizations; 6) and, administrative matters pertaining to the General Advisory Committee.

Regulatory

IATTC Tuna Conservation: NMFS is preparing a proposed rule to implement the IATTC Tuna Conservation Measures for 2007. This measure mimics the current Resolution for Tuna Conservation Measures for 2004, 2005, and 2006, with the change of annual longline catch of bigeye tuna in the eastern Pacific Ocean during 2007 to not exceed 500 metric tons or their national 2001 catch level, whichever is higher. This change provides the increased flexibility that the U.S. sought for managing the U.S. longline fleet.

HMS Permits: NMFS is preparing a proposed rule to revise the method for renewing and replacing permits issued under the HMS FMP. Permits that were originally issued in 2005 are coming up for renewal in 2007. NMFS proposes to modify the renewal process by substituting the vessel identification number with the vessel owner's birth month as the renewal date. NMFS also proposes that vessel owners requiring a duplicate permit provide a written request to NMFS. These proposed regulations are being proposed as means to improve the efficiency and timeliness of the permit system.

US-Canada Albacore Treaty Vessel List: NMFS is preparing a proposed rule to clarify current regulations for the process vessel owners need to take if they intend to fish for albacore in Canadian waters. The proposed rule will require these albacore to notify NMFS each year to be placed on the “vessel list” that remains valid for a single calendar year. The vessel list then reverts to zero vessels on December 31 of each year. Revising the way the list is created and updating the list every year is intended to facilitate the United States’ obligation to annually provide Canada a current list of U. S. vessels that are likely to fish albacore off the coast of Canada.

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FINAL CHANGES TO ROUTINE MANAGEMENT MEASURES

At the September 2006 meeting, the Council approved for public review alternatives developed by the Highly Migratory Species Management Team (HMSMT) to address three possible regulatory changes. Attachment 1 describes alternatives to change vessel marking requirements applicable to recreational charter boats. Attachment 2 describes alternatives for recreational fishery bag limits for albacore and bluefin tuna in Federal waters off of California. The third alternative is a change to the northern boundary of the Pacific leatherback conservation area, which is applicable to drift gillnet vessels and is currently located off the mid-Oregon coast. The draft environmental assessment with an analysis of the alternatives was not received in time to include in the briefing book. It will be provided as a supplemental item at the onset of the November 2006 Council meeting. However, decision support analyses are available at this time for the first two alternatives (see reference material listing below).

At this meeting, the Council task is to take final action by choosing a preferred alternative for each of the three proposed regulatory changes. The National Marine Fishery Service will then initiate the rulemaking process necessary to implement any regulations by April 1, 2007.

Council Action:

Adopt Final Preferred Alternatives for Changes to 2007-2008 Routine Management Measures.

Reference Materials:

1. Agenda Item C.2.a, Attachment 1: Decision Support Document for Change in HMS Vessel Marking Requirements for Commercial Passenger Fishing Vessels.
2. Agenda Item C.2.a, Attachment 2: Decision Support Document for Daily Bag Limits for North Pacific Albacore and Northern Bluefin Tuna Caught by Recreational Anglers in the Federal Exclusive Economic Zone Waters Adjacent to California.

Agenda Order:

- a. Agenda Item Overview
- b. Report of the Highly Migratory Species Management Team
- c. Agency Comments
- d. Reports and Comments of Advisory Bodies
- e. Public Comment
- f. **Council Action:** Adopt Final Changes to 2007-2008 Routine Management Measures

Kit Dahl

Michele Culver

PFMC
10/25/06

Change in HMS Vessel Marking Requirements for Commercial Passenger Fishing Vessels

(Action Pursuant to the Process for Modification of Routine Management Measures under the Biennial Framework in the Fishery Management Plan for U.S. West Coast Fisheries for Highly Migratory Species)

Decision Support Document November 2006

Prepared by:
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HMSMT/NMFS SWR

Background

The vessel marking implementing regulations at 50 CFR 660.704, pursuant to the Fishery Management Plan for U.S. West Coast Fisheries for Highly Migratory Species (HMS FMP) require all commercial fishing vessels and recreational charter vessels to display their official numbers on the port and starboard sides of the deckhouse or hull, and on an appropriate weather deck (horizontal or flat surface) so as to be visible from enforcement vessels and aircraft. The Council received testimony from commercial passenger fishing vessel (CPFV) representatives that meeting this requirement would detract from the beauty of some of the charter vessels and degrade the attraction factor for future clients. The National Marine Fisheries Service (NMFS) received a letter from Mr. Bob Fletcher requesting relief for the Southern California CPFV fleet in meeting these requirements. In their June 2006 report the HMSMT stated that, when this regulation was developed, the intent was to place this requirement on HMS commercial fishing vessels, but that charter vessels would be exempt, similar to exemptions granted under the Groundfish FMP. At their September 2006 meeting the Council adopted three alternatives for public review, described below.

Alternatives

(1) No Action. Retain current Federal regulations:

Sec. 660.704 Vessel identification.

(a) Official number. Each fishing vessel subject to this subpart must display its official number on the port and starboard sides of the deckhouse or hull, and on an appropriate weather deck so as to be visible from enforcement vessels and aircraft.

(b) Numerals. The official number must be affixed to each vessel subject to this subpart in block Arabic numerals at least 10 inches (25.40 cm) in height for vessels more than 25 ft (7.62 m) but equal to or less than 65 ft (19.81 m) in length; and 18 inches (45.72 cm) in height for vessels longer than 65 ft (19.81 m) in length. Markings must be legible and of a color that contrasts with the background.

Pros: Enforcement officers argue that requiring official marking on CPFVs helps to distinguish them from foreign fishing vessels that may conduct illegal fishing operations in the U.S. Exclusive Economic Zone (EEZ). This is principally an issue close to the U.S.-Mexico border because many CPFVs transit into Mexican waters to fish and at times Mexican flag purse seine vessels have been reported illegally crossing into the U.S. EEZ in pursuit of tuna.

Cons: CPFV operators argue that the marking requirements would detract from the attractiveness of their vessels, which is a factor in advertising for new customers. Markings on the side of the wheelhouse would make it difficult to have rod stowage in this location since the fishing rods would obscure the vessel number. Not having this stowage would inconvenience their customers. Operators respond to the enforcement argument by pointing out that CPFVs are easily distinguishable from foreign commercial fishing vessels that might enter the U.S. zone by their distinctive aerial profiles even without displaying an official number. Furthermore, this is principally an issue for CPFVs in Southern California while CPFVs in Washington and Oregon are also inconvenienced.

(2) Provide a specific exemption for HMS commercial passenger and recreational charter fishing vessels to the vessel marking requirements described above.

The pros and cons of this alternative are essentially the same as no action: removing the requirement would address the concerns raised by CPFV operators but might cause some problems with vessel identification by enforcement officers. Providing the exemption would be consistent with the exemption provided recreational charters boats under the Groundfish FMP.

(3) Require HMS commercial passenger and recreational charter fishing vessels to display the official number on an appropriate weather deck so as to be visible from enforcement aircraft.

Pros: Requiring marking only on a weather deck would have less aesthetic impacts than placing them on a vertical surface. For vessels that could do so, the top of the wheel house could be used, an area not visible to prospective customers. Aircraft are the primary enforcement platform in this context; surface craft have the option of boarding to confirm vessel identification.

Cons: Smaller vessels (e.g., “six packs”) may not have sufficient weather deck space for markings. The marked weather deck would need to be kept clear of equipment (e.g., bait wells) and customers in order for the markings to be visible to aircraft. Surface enforcement vessels would have to hail and/or board the vessel to confirm identification.

Applicability of National Environmental Policy Act (NEPA)

As with the bag limit action (see Agenda Item C.2.a, Attachment 2), changing this requirement would be a Federal action (rulemaking); therefore, the environmental effects of vessel marking must be considered to comply with NEPA. Applicable regulations and policies implementing NEPA establish procedures that must be followed for any Federal action in order to determine if it will result in significant environmental impacts, and if so, to disclose the impacts and identify measures to mitigate such impacts. Each Federal agency may identify types of actions that are “categorically excluded” from further NEPA review. These are “actions which do not individually or cumulatively have a significant effect on the human environment and which have been found to have no such effect in procedures adopted by a Federal agency ... and for which, therefore, neither an environmental assessment nor an environmental impact statement is required” (40 CFR 1508.4). Preliminary information on this action is sufficient to reasonably conclude that no significant environmental effects would result from the changes in vessel marking and the Council may take final action without the need for the type of detailed environmental impact analysis found in an environmental assessment or environmental impact statement. (See Agenda Item C.2.a, Attachment 2 for further discussion of the procedures related to categorical exclusion.) As part of the rulemaking process, NMFS would prepare the necessary documentation for compliance with NEPA.

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Implement Daily Bag Limits for North Pacific Albacore and Northern Bluefin Tuna Caught by Recreational Anglers in Federal Exclusive Economic Zone Waters Adjacent to California

(Action Pursuant to Modification of Routine Management Measures Under the Framework in the Fishery Management Plan For U.S. West Coast Fisheries For Highly Migratory Species)

Decision Support Document

November 2006

Prepared by:
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HMSMT/California Department of Fish and Game, Marine Region

1.0 THE PROPOSED ACTION, PURPOSE, AND NEED

The proposed action is to implement daily bag limits for North Pacific albacore (*Thunnus alalunga*) and northern bluefin tuna (*Thunnus orientalis*) caught by recreational anglers in Federal Exclusive Economic Zone (EEZ) waters (3-200 nm) adjacent to the State of California. Currently, recreational anglers are not limited in their take of albacore and bluefin tuna in EEZ waters between the US-Mexican and the California-Oregon borders. This is the geographic scope for the proposed action. Implementation of this proposed action falls within the concept of the “framework adjustment” approach described in the HMS FMP for establishing or adjusting routine management measures on a biennial cycle, without amending the FMP. The National Oceanic Atmospheric Administration’s (NOAA) National Marine Fisheries Service (NMFS) is the action agency for the purpose of implementing any Federal regulation pursuant to Council action. Any change in the regulations would become effective April 1, 2007, and stay in effect for at least two years.

If recreational bag limits are adopted for Federal waters, the California Fish and Game Commission would then consider moving forward with amendments to the current California regulations that apply to state waters (0-3 nm), to ensure consistency between Federal and state regulations as a separate action.

The purpose of the proposed action is to develop conservation measures consistent with the Inter-American Tropical Tuna Commission’s (IATTC) 2005 Resolution C-05-02 on North Pacific albacore and the International Scientific Committee for Tuna and Tuna like Species in the North Pacific Ocean (ISC) 2004 recommendation for northern bluefin tuna to avoid increasing current fishing mortality for these species.

The proposed action is needed for the sustainable management of these important recreationally and commercially harvested tuna species. The best scientific evidence for albacore and bluefin tuna from the IATTC and ISC indicates both species are either fully exploited, or may be experiencing fishing mortality above levels that are sustainable in the long term. Currently, there is no daily bag limits for albacore and bluefin caught by recreational anglers fishing in EEZ waters adjacent to California.

1.1 Background to and Purpose of this Document

The Fishery Management Plan (FMP) for West Coast Fisheries for Highly Migratory Species (HMS) describes a routine biennial management cycle with decision making occurring at the June, September, and November Council meetings to establish or adjust harvest specifications for a 2-year period beginning on April 1, of the following year. As part of the 2007-08 management cycle the Council's HMS Management Team (HMSMT), composed of State and Federal fishery managers, developed an initial list of regulatory proposals for consideration by the Council, including the proposal evaluated in this document. At their June 2006 meeting the Council, and its HMS Advisory Subpanel (HMSAS), reviewed this list. The Council then directed the HMSMT to develop a range of alternatives for this proposal, which they adopted for public review at their September 10–16, 2006, meeting in Foster City, California. The Council takes final action to adopt their preferred alternative at the November 12–17, 2006, meeting in Del Mar, California. NMFS would then initiate rulemaking and address other statutory requirements in order to implement the preferred Alternative by April 1, 2007.

Implementation of bag limits for albacore and bluefin tuna through the Federal regulatory process is one of the actions under consideration by the Council. As with all Federal actions, and NOAA policies, the environmental effects must be considered within the framework established by the National Environmental Policy Act (NEPA). NEPA establishes procedures that must be followed for any Federal action in order to determine if it will result in significant environmental impacts, and if so, to disclose the impacts and identify measures to mitigate such impacts. Each Federal agency may identify types of actions that are “categorically excluded” from further NEPA review. These are “actions which do not individually or cumulatively have a significant effect on the human environment and which have been found to have no such effect in procedures adopted by a Federal agency ... and for which, therefore, neither an environmental assessment nor an environmental impact statement is required” (40 CFR 1508.4). NOAA outlines such procedures in its guidance document NAO 216-6; at §5.05b, “determining the appropriateness for use of categorical exclusions, it states:

The proposed action should be evaluated to determine the appropriateness of the use of a categorical exclusion (CE). The analysis should determine if: 1) a prior NEPA analysis for the “same action demonstrated that the action will not have significant impacts on the quality of the human environment (considerations in determining whether the proposed action is the “same” as a prior action may include, among other things, the nature of the action, the geographic area of the action, the species affected, the season, the size of the area, etc.); or 2) the proposed action is likely to result in significant impacts as defined in 40 CFR 1508.27.

The purpose of this document is to provide sufficient information to support: 1) Council decision-making on what type of bag limit to recommend and 2) a NMFS determination that the proposed action may be categorically excluded from further NEPA analysis.

The preliminary assessment of the proposed action provided below indicates that the bag limits being considered would have a very modest effect on curtailing recreational fishing opportunity and that no significant impacts would therefore occur. Although not specifically considered in the EIS evaluating the HMS FMP (PFMC 2003), the EIS did comprehensively review the environmental baseline and indicated that no significant impacts would occur as a result of implementing the FMP, including framework procedures to allow consideration of bag limits. NMFS may use information from the HMS FMP EIS and this document to support a CE determination. Agency guidance (NAO 216-6 §5.05d) describes the procedures necessary for documenting a CE, which NMFS would undertake as part of the Federal rulemaking process upon receipt of the Council's recommendation on the proposed action.

The Council process is also an effective scoping mechanism. Scoping is “an early and open process for determining the scope of issues to be addressed and for identifying significant issues related to a proposed action” (40 CFR 1501.7). The scoping process described in NEPA regulations emphasizes public involvement, prioritization of issues so that the impact analysis may focus potentially significant impacts, and planning the impact analysis. The Council, as much as it is an organization, is a process for coordinating involvement of the public and interested State and Federal agencies in decision making related to Federal fishery management. All Council meetings, and meetings of its various committees, are open to the public and opportunity for oral and written comment on issues brought before these bodies is provided. Through this process additional information may become available in support of NMFS’ determination on the appropriateness of a CE for this action.

2.0 DESCRIPTION OF DAILY LIMIT ALTERNATIVES FOR ALBACORE AND BLUEFIN TUNA

Based on direction from the Council, the HMSMT analyzed four albacore and two bluefin tuna daily bag limit alternatives for the recreational fishery operating in EEZ waters adjacent to California. In addition to a description and discussion for each action alternative, Table 1 provides pros and cons to help in the decision process. A range of alternatives was also developed for Washington’s recreational fishery but were not approved for public review at the request of the Washington Department of Fish and Wildlife (WDFW) at the September 2006 Council meeting. The WDFW is going to seek a moratorium on the issuance of new non-salmon charter vessel permits through the Washington State Legislature, rather than placing a limit on the number of albacore per angler on a per trip basis. The Oregon Department of Fish and Wildlife currently has a 25 fish bag limit for albacore and has no plans at this time to modify it.

2.1 California Recreational Daily Bag Limit Alternatives for Albacore Tuna

No Action Alternative 1 (Status Quo): Would maintain current regulations for albacore tuna (i.e., no daily bag limit).

Action Alternative 2: Implements a statewide limit of 25 albacore per angler per day.

Discussion: Selection of this alternative would remove the unlimited take provision currently in effect in EEZ waters adjacent to California. An analysis on the observed frequency of occurrence for albacore in the possession of recreational anglers statewide from 1997 to 2005 indicates 99 percent of the anglers land from 1 to 12 albacore per day (Table 2 and Figure 1). Therefore, a limit of 25 albacore per angler per day would not impact current fishing practices for albacore but it would eliminate unlimited catches during periods of peak abundance in waters adjacent to California. This measure would also provide consistency with Oregon’s daily limit for albacore.

Action Alternative 3: Implements an albacore bag limit of 25 fish per angler per day north of a line running due west of Point Conception (34° 27’ N latitude) to the California/Oregon border; and an albacore limit of 10 fish per angler per day south of a line running due west of Point Conception to the US/Mexican border (Figure 2).

Discussion: Selection of this alternative would remove the unlimited take provision currently in effect in EEZ waters adjacent to California and provide for two differential limits along California’s coastline consistent with the public comments that have been received by the CDFG. It is thought that Point Conception would represent a good geographical break-point for regulatory differences; anglers would have to transit quite a distance to fish in one area and land in another. A regional analysis on the observed frequency of occurrence for albacore in the possession of recreational anglers from 1997 to 2003 indicates

differential bag limits would accommodate what is already taking place in the fishery: 99 percent of anglers land between 1 to 10 fish per day when fishing south of Point Conception and between 1 to 12 fish per day when fishing north of Point Conception (Tables 3 and 4, and Figures 3 and 4). As in Alternative 2, the 25 fish limit north of Point Conception would provide consistency with Oregon's daily limit for albacore.

Action Alternative 4: Implements an albacore bag limit of 25 fish per angler per day north of a line running due west of Point Arena (38° 54' N latitude); an albacore limit of 10 fish per angler per day between lines running due west of Point Arena and Point Conception (34° 27' N latitude); and an albacore limit of 5 fish per angler per day between lines running due west of Point Conception and the US/Mexican border (Figure 2).

Discussion: Selection of this alternative would remove the unlimited take provision currently in effect in EEZ waters adjacent to California and provide for three regional differential bag limits along California's coastline. As in Alternative 3, the differential bag limits would be regulated by region. A regional analysis on the observed frequency of occurrence for albacore in the possession of recreational anglers from 1997 to 2003 indicates 99 percent of the anglers had 1 to 12 fish between Point Arena and the California/Oregon border; 1 to 11 fish between Point Arena and Point Conception; and 1 to 10 fish between Point Conception and the US/Mexican border. This alternative would accommodate what is already taking place in the fishery north of Point Conception; however, reducing the catch from an unlimited take to a 5 fish limit south of Point Conception is estimated to potentially affect about 8 percent of the angler-reported catch in this region (Tables 3, 5, and 6, and Figures 3, 5, and 6). A 5 fish limit would also provide consistency with the current Mexican recreational daily limit for albacore.

In addition, if Alternative 4 is selected, a new HMS management line at Point Arena would need to be specified in Federal regulations.

2.2 California Recreational Daily Bag Limit Alternatives for Bluefin Tuna

No Action Alternative 1 (Status Quo): Would maintain current regulations for bluefin tuna (i.e., no daily bag limit).

Action Alternative 2: Implements a statewide bag limit of 5 to 10 bluefin per angler per day may be taken.

Discussion: Selection of this alternative would remove the unlimited take provision currently in effect in ocean waters adjacent to California. An analysis on the observed frequency of occurrence for bluefin tuna in the possession of California recreational anglers statewide from 1998 to 2002, indicates anglers retain five or less bluefin tuna per day (Table 7 and Figure 7) ; therefore, this alternative would be expected to accommodate current fishing practices, while establishing a maximum daily take limit.

2.3 Washington Alternatives Considered But Not Approved for Public Review

No Action Alternative 1: (Status Quo): Would maintain current regulations for albacore tuna.

Action Alternative 2: An albacore limit of 25 fish per angler on a per trip basis; the possession limit would be equal to one trip limit. It would be unlawful for anglers to fish for, retain, possess, or land albacore tuna in excess of the specified trip limit.

Action Alternative 3: An albacore limit of 20 fish per angler on a per trip basis; the possession limit would be equal to one trip limit. It would be unlawful for anglers to fish for, retain, possess, or land albacore tuna in excess of the specified trip limit.

Table 1. Pros and Cons for albacore and bluefin tuna daily bag limit alternatives.

Albacore Alternative	Pros	Cons
1	<ul style="list-style-type: none"> • Recreational fishermen would experience no regulatory restrictions for albacore harvest. 	<ul style="list-style-type: none"> • Does not support the 2005 IATTC resolution and the 2004 ISC recommendations for conservation of albacore. • Does not convey a sense of conservation in association with the recreational fishing community. • Provides incentive to individuals to catch more albacore than usual and un-lawfully sell their excess catch.
2	<ul style="list-style-type: none"> • Would eliminate unlimited catches during periods of peak abundance in waters adjacent to California. • Provides disincentive to individuals attempting to un-lawfully sell excess catch of albacore; currently < 1 % of the fishermen statewide catch more than 11 albacore per day. • Supports IATTC resolution and ISC conservation recommendations for albacore. • Provides consistency with Oregon's daily albacore limit. 	<ul style="list-style-type: none"> • Implementation of limits greater than 11 fish may encourage "trophy bags," resulting in fish wastage. • No reciprocal commercial harvest limits for albacore.
3	<ul style="list-style-type: none"> • Would remove the unlimited take provision currently in effect in ocean waters adjacent to California. 	<ul style="list-style-type: none"> • Adds complexity to current regulations. • Would establish regional limits with no biological support.
4	<ul style="list-style-type: none"> • Would remove the unlimited take provision currently in effect in ocean waters adjacent to California. • Would implement regional limits that are consistent with the northern and southern boundaries of California with Oregon and Mexico. • Would provide consistency with the current Mexican recreational daily limit for albacore 	<ul style="list-style-type: none"> • A reduction to a five fish limit south of Point Conception might lead to a decline in participation by fishermen. • Fishermen may perceive a reduction from unlimited take to a five fish limit south of Point Conception as not worthy of the cost of a fishing license, vessel trip fees, and travel expenses. • A reduction to a five fish limit south of Point Conception could result in fishermen high grading catch, resulting in fish wastage.
Bluefin Alternative	Pros	Cons
1	<ul style="list-style-type: none"> • Recreational fishermen would experience no regulatory restrictions for bluefin harvest. 	<ul style="list-style-type: none"> • Does not support ISC conservation recommendations for bluefin tuna. • Does not convey a sense of conservation in the recreational fishing community.
2	<ul style="list-style-type: none"> • Supports 2004 ISC conservation recommendations for bluefin tuna. • Eliminates unlimited take provision for bluefin tuna. • Accommodates current fishing practices for bluefin tuna. 	<ul style="list-style-type: none"> • Implementation of limits greater than 5 fish may encourage "trophy bags," resulting in fish wastage.

3.0 CONSISTENCY WITH MSA NATIONAL STANDARDS

An FMP or plan amendment and any pursuant regulations must be consistent with ten national standards contained in the MSA (§301). These are:

National Standard 1 states that conservation and management measures shall prevent overfishing while achieving, on a continuing basis, the optimum yield from each fishery for the United States fishing industry.

The proposed action is estimated to have a minimal effect on recreational fishing opportunity and would not result in overfishing of any target or non-target species.

National Standard 2 states that conservation and management measures shall be based on the best scientific information available.

Analysis of bag limit alternatives uses information from the Recreational Fisheries Information Network (RecFIN) database.

National Standard 3 states that, to the extent practicable, an individual stock of fish shall be managed as a unit throughout its range, and interrelated stocks of fish shall be managed as a unit or in close coordination.

Albacore and bluefin tuna stocks have a distribution wider than the West Coast EEZ. The HMS FMP recognizes the need for managing these stocks in the international context through organizations such as the Inter-American Tropical Tuna Commission.

National Standard 4 states that conservation and management measures shall not discriminate between residents of different states. If it becomes necessary to allocate or assign fishing privileges among various United States fishers, such allocation shall be (A) fair and equitable to all such fishers; (B) reasonably calculated to promote conservation; and (C) carried out in such manner that no particular individual, corporation, or other entity acquires an excessive share of such privileges.

The proposed action does not involve allocation or the assignment of fishing privileges.

National Standard 5 states that conservation and management measures shall, where practicable, consider efficiency in the utilization of fishery resources; except that no such measure shall have economic allocation as its sole purpose.

The proposed action has no effect on efficiency of utilization.

National Standard 6 states that conservation and management measures shall take into account and allow for variations among, and contingencies in, fisheries, fishery resources, and catches.

The proposed action focuses on the California recreational HMS fishery and is not expected to affect other fisheries catching the same fish species.

National Standard 7 states that conservation and management measures shall, where practicable, minimize costs and avoid unnecessary duplication.

The proposed action does not duplicate existing management measures or regulations.

National Standard 8 states that conservation and management measures shall, consistent with the conservation requirements of this Act (including the prevention of overfishing and rebuilding of overfished stocks), take into account the importance of fishery resources to fishing communities in order to (A) provide for the sustained participation of such communities, and (B) to the extent practicable, minimize adverse economic impacts on such communities.

Bag limits could have a modest effect on recreational fishing behavior but is not expected to have noticeable adverse socioeconomic impacts.

National Standard 9 states that conservation and management measures shall, to the extent practicable, (A) minimize bycatch and (B) to the extent bycatch cannot be avoided, minimize the mortality of such bycatch.

The bag limits being proposed will potentially provide a benefit in regards to minimizing bycatch because recreational fishers would stop fishing when the bag limit is reached.

National Standard 10 states that conservation and management measures shall, to the extent practicable, promote the safety of human life at sea.

The proposed action is not related to the safety of human life at sea.

LITERATURE CITED

- ISC (International Scientific Committee for Tuna and Tuna-like Species in the North Pacific Ocean). 2004a. Report of the 3rd ISC Pacific bluefin tuna working group. Intl. Sci. Comm. for Tuna and Tuna-like species in the North Pacific Ocean, ISC/04/Plenary/6.
- IATTC (Inter-American Tropical Tuna Commission). 2005. Resolution C-05-02 on northern albacore tuna. <http://www.iatcc.org/PDFFiles2/C-05-02-Northern-albacore-tuna.pdf>.
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- PFMC (Pacific Fishery Management Council). 2003. Fishery Management Plan and Environmental Impact Statement for US West Coast Fisheries for Highly Migratory Species. Pacific Fishery Management Council, Portland, OR, August 2003.
- RecFIN (Recreational Fisheries Information Network). 2006. Accessed: September 18, 2006. <http://www.recfin.org/forms/est2004.html>.

Table 2. Frequency of occurrence for albacore observed in bag sizes from 1 to 37 statewide, 1997-2003.

Bag¹ Size	Bag Frequency (number)	Bag Frequency (percent)	Cumulative Frequency (percent)
1	862	39	39
2	437	20	59
3	303	14	73
4	220	10	83
5	166	7	90
6	58	3	93
7	49	2	95
8	43	2	97
9	12	1	98
10	17	1	98
11	15	1	99
12	7	< 1	99
13	1	< 1	99
14	4	< 1	99
15	3	< 1	99
17	1	< 1	99
18	1	< 1	99
19	1	< 1	99
20	1	< 1	99
37	1	< 1	100

Data Source for Table 2 and Figure 1: RecFIN, bag frequency data, extracted September 18, 2006.

Summary for albacore caught in ocean waters adjacent to California by recreational anglers, in all marine areas, and all boat based fishing modes from January 1997 through December 2003.

Type A catch (observed by sampler). Number of bags examined with albacore: 2,202.

Additional information:

¹- no observations of bags with 16, 21,...,36 albacore.

Table 3. Frequency of occurrence for albacore observed in bag sizes from 1 to 17 fish south of Point Conception, 1997-2003.

Bag ¹ Size	Bag Frequency (number)	Bag Frequency (percent)	Cumulative Frequency (percent)
1	534	37	37
2	312	22	59
3	211	15	74
4	144	10	84
5	109	8	92
6	33	2	94
7	26	2	96
8	27	2	98
9	9	< 1	98
10	8	< 1	99
11	10	< 1	99
12	3	< 1	99
14	3	< 1	99
15	1	< 1	99
17	1	< 1	100

Data Source for Table 2 and Figure 2: RecFIN, bag frequency data, extracted September 18, 2006. Summary for albacore caught in ocean waters adjacent to California south of Pt. Conception by recreational anglers, in all marine areas, and all boat based fishing modes from January 1997 through December 2003. Type A catch (observed by sampler). Number of bags examined with albacore: 1,431.

Additional information:

¹ - no observations of bags with 13 or 16 albacore.

Table 4. Frequency of occurrence for albacore observed in bag sizes from 1 to 37 fish north of Point Conception to the California/Oregon border, 1997-2003.

Bag ¹ Size	Bag Frequency (number)	Bag Frequency (percent)	Cumulative Frequency (percent)
1	328	43	43
2	125	16	59
3	92	12	71
4	76	10	81
5	57	7	88
6	25	3	91
7	23	3	94
8	16	2	96
9	3	< 1	97
10	9	1	98
11	5	1	98
12	4	< 1	99
13	1	< 1	99
14	1	< 1	99
15	2	< 1	99
18	1	< 1	99
19	1	< 1	99
20	1	< 1	99
37	1	< 1	100

Data Source for Table 2 and Figure 1: RecFIN, bag frequency data, extracted September 18, 2006. Summary for albacore caught in ocean waters adjacent to California by recreational anglers, in all marine areas, and all boat based fishing modes from January 1997 through December 2003. Type A catch (observed by sampler). Number of bags with albacore: 771.

Additional information:

¹ - no observations of bags with 16, 17, 21,...36 albacore.

Table 5. Frequency of occurrence for albacore observed in bag sizes from 1 to 12 fish north of Point Arena to the California/Oregon border, 1997-2003.

Bag¹ Size	Bag Frequency (number)	Bag Frequency (percent)	Cumulative Frequency (percent)
1	24	52	52
2	3	7	59
3	2	4	63
4	1	2	65
5	4	9	74
6	3	7	81
7	6	13	94
8	1	2	96
12	2	4	100

Data Source for Table 2 and Figure 1: RecFIN, bag frequency data, extracted September 18, 2006.

Summary for albacore caught in ocean waters adjacent to California by recreational anglers, in all marine areas, and all boat based fishing modes from January 1997 through December 2003.

Type A catch (observed by sampler): Number of bags examined with albacore: 46 .

Additional information:

¹- no observations of bags with 9, 10, or 11 albacore.

Table 6. Frequency of occurrence for albacore observed in bag sizes from 1 to 37 fish between Point Conception and Point Arena, 1997-2003.

Bag¹ Size	Bag Frequency (number)	Bag Frequency (percent)	Cumulative Frequency (percent)
1	304	42	42
2	122	17	59
3	90	12	71
4	75	11	82
5	53	7	89
6	22	3	92
7	17	2	94
8	15	2	96
9	3	0	97
10	9	1	98
11	5	1	99
12	2	0	99
13	1	0	99
14	1	0	99
15	2	0	99
18	1	0	99
19	1	0	99
20	1	0	99
37	1	0	100

Data Source for Table 2 and Figure 1: RecFIN, bag frequency data, extracted September 18, 2006.

Summary for albacore caught in ocean waters adjacent to California by recreational anglers, in all marine areas, and all boat based fishing modes from January 1997 through December 2003.

Type A catch (observed by sampler): Number of bags examined with albacore: 725.

Additional information:

¹- no observations of bags with 16, 17, and 21...36 albacore.

Table 7. Frequency of occurrence for bluefin tuna observed in bag sizes from 1 to 10 fish statewide, 1998 to 2002.

Bag ¹ Size	Bag Frequency (number)	Bag Frequency (percent)	Cumulative Frequency (percent)
1	135	70	69
2	44	22	91
3	11	5	96
4	6	2	99
5	1	<1	100
6	0	0	100
7	0	0	100
8	0	0	100
9	0	0	100
10	0	0	100

Data Source for Table 5 and Figure 7: RecFIN, bag frequency data, extracted August 3, 2006

Summary for bluefin tuna caught in California by recreational anglers, in all marine areas, and all boat based fishing modes from January 1998 through December 2002. The type A+B I catch data weighted by trip and catch estimates:

Type A (observed by sampler). Number of bags with bluefin tuna: 197 .

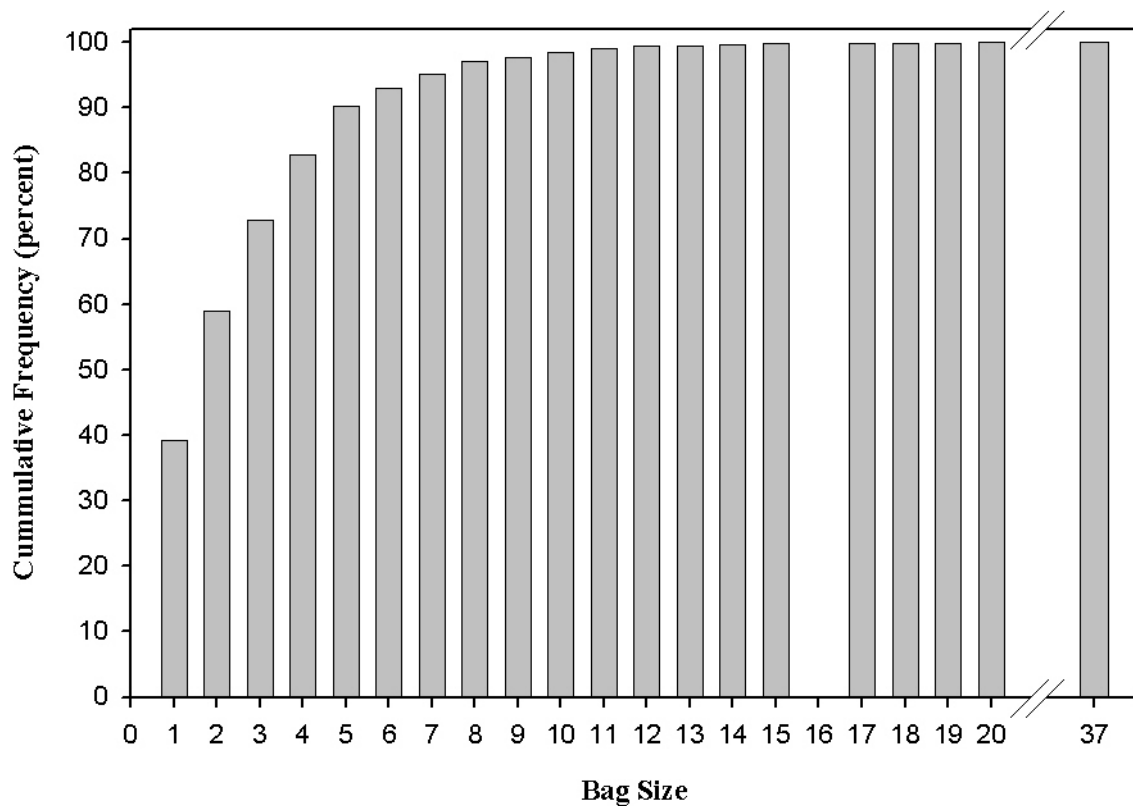


Figure 1. Cumulative percent frequency of occurrence for albacore observed in bag sizes from 1 to 37 fish statewide, 1997-2003.



Figure 2. Proposed management lines for California albacore bag limit Alternatives 3 and 4.

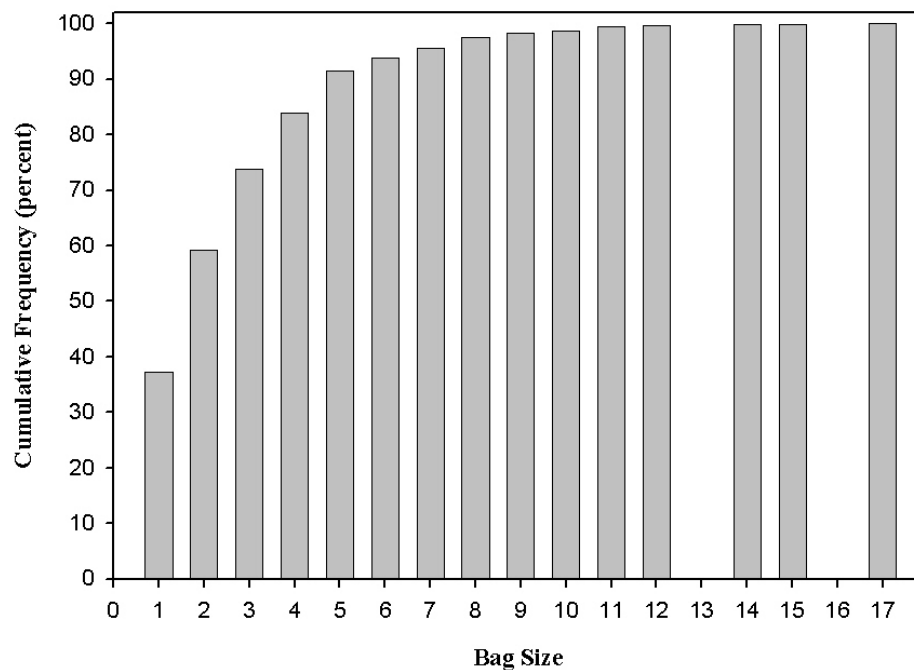


Figure 3. Cumulative percent frequency of occurrence of albacore observed in bag sizes from 1 to 17 fish south of Point Conception, 1997-2003.

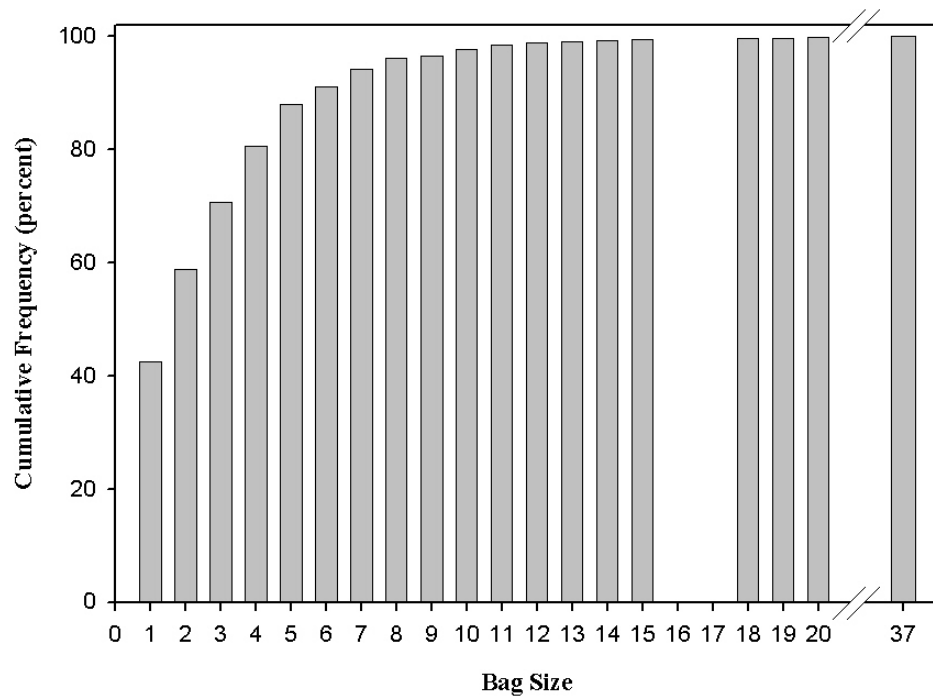


Figure 4. Cumulative percent frequency of occurrence of albacore observed in bag sizes from 1 to 37 fish north of Point Conception and the California/Oregon border, 1997-2003.

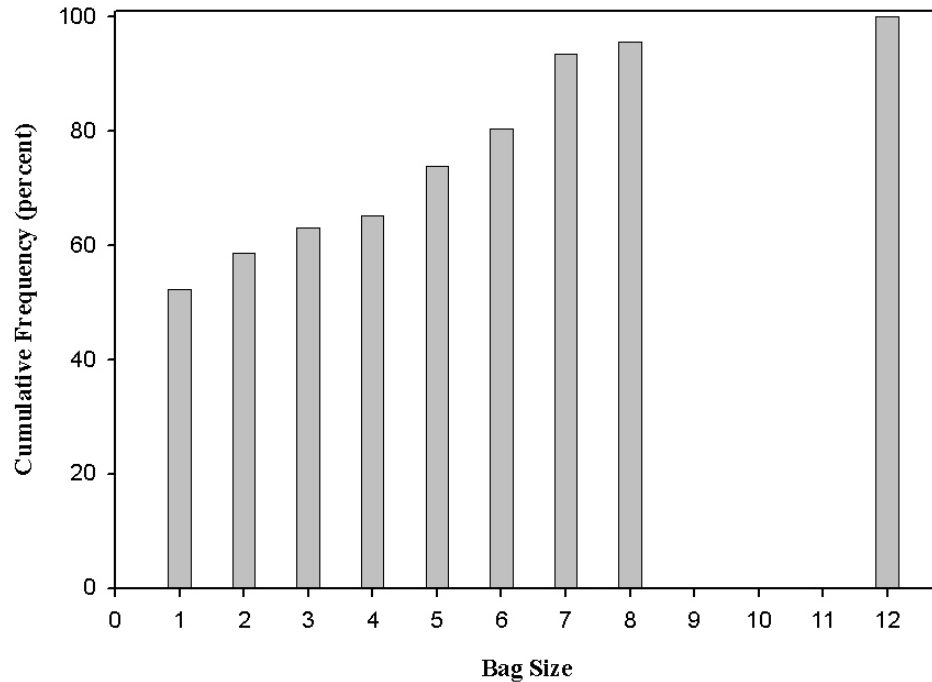


Figure 5. Cumulative percent frequency of occurrence of albacore observed in bag sizes from 1 to 12 fish between Point Arena and the California/Oregon border, 1997-2003.

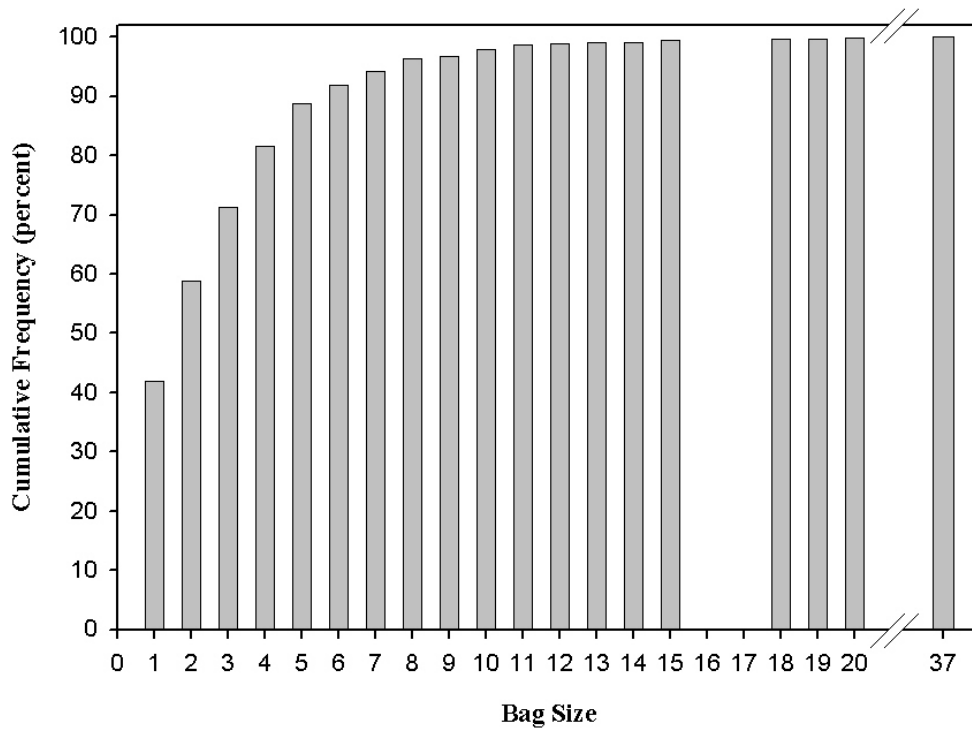


Figure 6. Cumulative percent frequency of occurrence of albacore observed in bag sizes from 1 to 37 fish between Point Conception and Point Arena, 1997-2003.

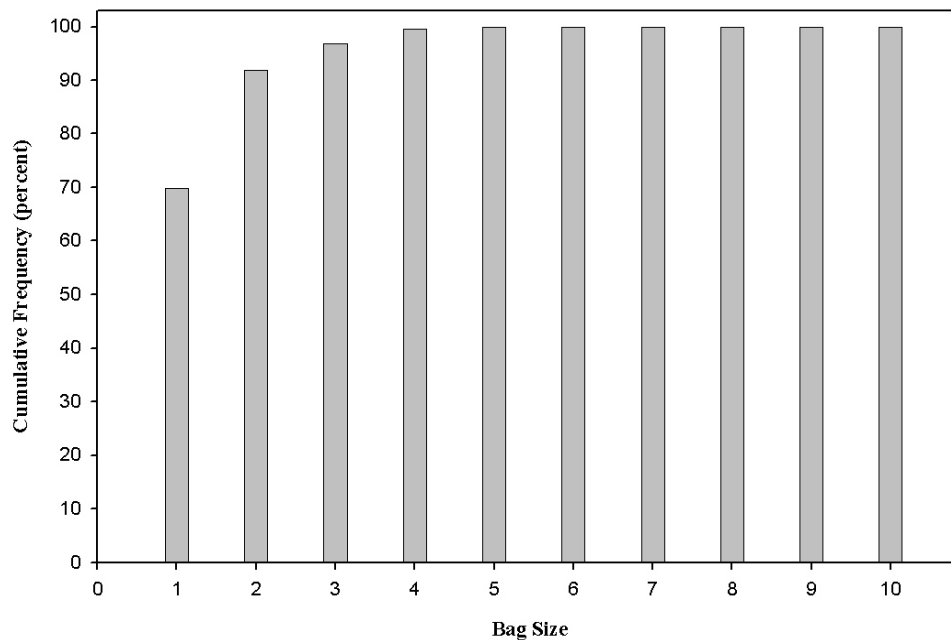


Figure 7. Cumulative percent frequency of occurrence of bluefin tuna observed in bag sizes from 1 to 10 fish Statewide, 1998-2002.

HIGHLY MIGRATORY SPECIES MANAGEMENT TEAM REPORT ON FINAL CHANGES TO ROUTINE MANAGEMENT MEASURES

At the September 2006 meeting, the Council approved management measure alternatives for public review for the 2007-08 biennial management cycle. If approved, the regulations implementing these changes would be effective beginning April 1, 2007 through March 31, 2009 (minimum of two years), or until changed. The Highly Migratory Species Management Team (HMSMT) and Council staff drafted analyses on the vessel marking and California recreational bag limit alternatives for albacore and bluefin tuna, which are presented in Attachments 1 and 2. A draft Environmental Assessment (EA) was not completed for the proposed drift gillnet turtle closure boundary alternatives in time for this meeting, but the HMSMT has a proposed process and timeline to address this management issue.

Routine Management Measure Alternatives

Vessel Marking Requirements

The current HMS regulations require all commercial vessels, including charter vessels and Commercial Passenger Fishing Vessels (CPFV), to display their official numbers on the port and starboard sides of the deckhouse or hull, and on an appropriate weather deck (horizontal or flat surface) so as to be visible from enforcement vessels and aircraft. The official numerals must be at least 10 inches in height for vessels 25-65 feet in length, and 18 inches in height for vessels longer than 65 feet. In September, the Council approved for public review the following alternatives to exempt charter vessels from this marking requirement:

1. No Action (status quo) – All commercial vessels, including charter vessels, would have to adhere to the current HMS vessel marking requirements.
2. Provide a specific exemption for commercial passenger and recreational charter fishing vessels to the HMS vessel marking requirements.
3. Do not require commercial passenger and charter vessels to display official number on port and starboard sides of deckhouse or hull, but maintain a requirement to display official number on appropriate weather deck so as to be visible from aircraft.

HMSMT Discussion: The current regulatory language originated from the West Coast Groundfish Fishery Management Plan (FMP); however, the Groundfish FMP specifically excludes commercial passenger and charter vessels. When the FMP regulations were developed for HMS, the intent was to place these vessel marking requirements on commercial HMS vessels, but to exempt CPFVs and charter vessels; Alternative 2 is consistent with this intent.

California Recreational Limits for Tuna

In September 2006, the Council approved for public review the following alternatives for recreational limits for albacore and bluefin tuna for California:

Albacore

1. No Action (status quo) – There would be no bag limit for albacore.

2. A statewide bag limit of 25 albacore per angler per day may be taken or possessed.
3. An albacore bag limit of 25 fish per angler per day may be taken or possessed north of Pt. Conception; an albacore bag limit of 10 fish per angler per day may be taken or possessed in waters between Pt. Conception and the U.S./Mexico border.
4. An albacore bag limit of 25 fish per angler per day may be taken or possessed north of Pt. Arena; an albacore limit of 10 fish per angler per day between Pt. Arena and Pt. Conception; and an albacore limit of 5 fish per angler per day between Pt. Conception and the US/Mexican border.

HMSMT Discussion: From a pan-Pacific perspective, West Coast recreational landings represent about 1% (California is 0.9%) of the total albacore harvest. However, implementing a recreational albacore limit could be viewed as a step in support of the Inter-American Tropical Tuna Commission's albacore resolution C-05-02 and the U.S. commitment to not increase its current effort level on albacore. A daily limit of 10 albacore south of Pt. Conception and 25 albacore north of Pt. Conception accommodates most of the current fishing activity and the northern limit would be consistent with Oregon's marine fish bag limit of 25 fish.

Bluefin

1. No Action (status quo) – There would be no bag limit for bluefin tuna.
2. A statewide bag limit of 5-10 bluefin per angler per day; the possession limit would be equal to one daily bag limit.

HMSMT Discussion: The HMSMT believes that it is important to ensure that the purposes of the albacore bag limit remain separate from those proposed for bluefin tuna. A recent stock assessment indicates that overfishing is likely occurring on albacore, although a biological reference point for that stock has not yet been agreed upon by the Council and the international management bodies. The proposed albacore bag limit is, in part, in response to that. While it has not been determined that overfishing is occurring for bluefin tuna, recent indices of bluefin stock abundance demonstrate that fishing pressure likely exceeds F_{Max} . While the HMSMT acknowledges that implementing a bluefin bag limit is viewed as a proactive conservation measure by some, implementing a bag limit of ten bluefin, when catch data indicate that anglers have not retained more than five per day, may not accomplish any conservation and, further, may result in increased targeting on bluefin. However, having the measure in place could potentially limit catch (depending on the bag limit adopted) if bluefin become more available to California anglers.

Proposed Management Measure Process and Timeline for Drift Gillnet Regulations

In September 2006, the HMSMT proposed that a separate EA document be completed for the proposed drift gillnet measures, as the analysis and process to change them were considerably more complicated and time-consuming than the analyses for the other management measures. An EA was not completed in time for the Council's consideration at this meeting; however, the HMSMT could draft one prior to the Council's June 2007 meeting. Therefore, the HMSMT recommends that the Council delay final action on this item until then. Following the Council's action in June 2006, the National Marine Fisheries Service could draft and file implementing

regulations, which could be effective beginning April 1, 2008 (i.e., the start of the second fishing year in the biennial cycle).

HMSMT Recommendations:

1. Adopt Alternatives for:
 - a. Vessel Marking
 - b. California Recreational Bag Limits for Albacore and Bluefin Tuna; and
2. Delay Final Action on the Proposed Drift Gillnet Turtle Closure Boundary Measures until June 2007.

PFMC
11/13/06

ENFORCEMENT CONSULTANTS REPORT ON FINAL CHANGES TO ROUTINE MANAGEMENT MEASURES

The Enforcement Consultants (EC) continue to support vessel marking Alternative 3, requiring all highly migratory species (HMS) charter boats to display their official number on the weather deck, visible from the air, for the following reasons.

- The numbers of foreign fishing vessels entering U.S. waters continues to rise. The National Oceanic and Atmospheric Administration currently has three open cases under investigation where Mexican flagged vessels have been observed fishing in U.S. waters. The California charter boat group has reported increases in the number of Mexican vessels observed entering and fishing in U.S. waters.
- Preventing foreign vessels from taking U.S. resources, and in this case valuable HMS will be enhanced with the ability to distinguish between U.S. and foreign vessels from the air under Alternative 3 (from U.S. Coast Guard over-flights for example). This will allow at-sea enforcement to target suspect vessel incursions that lack visible official numbers. Without them, only helicopters can effectively be used. With official numbers on the weather deck C-130s can be used and more fisheries enforcement flights over a larger area can be accomplished.
- The EC understands that this currently is only a Southern California issue but the requirements would apply coastwide under the options provided. The Council may want to discuss limiting the rule to some area in Southern California. Currently Oregon and Washington have a very small HMS charter vessel fleet and no real need to over fly this fleet has been identified.

The EC supports bag limit Alternative 2 which would implement a statewide limit of 25 albacore per angler per day off California. This alternative creates a consistent albacore limit in and within all three western states. Maintaining a single consistent statewide limit keeps regulations simple for anglers and enforcement personnel.

HIGHLY MIGRATORY SPECIES ADVISORY SUBPANEL REPORT ON
FINAL CHANGES TO ROUTINE MANAGEMENT MEASURES

For vessel marking requirements the Highly Migratory Species Advisory Subpanel (HMSAS) supports Option 2 in Agenda Item C.2.a, Attachment 1: provide a specific exemption for highly migratory species commercial passenger and recreational charter fishing vessels to the vessel marking requirements.

For daily bag limits for North Pacific albacore and Northern bluefin tuna by recreational anglers in the Exclusive Economic Zone off of California (Agenda Item C.2.a, Attachment 2), the HMSAS supports albacore Option 3, a daily bag limit of 25 fish North of Point Conception and 10 fish South of Point Conception and bluefin Option 2, with a daily bag limit of 10 fish.

PFMC
10/08/06

WESTPORT CHARTERBOAT ASSOCIATION

P. O. BOX 654 • WESTPORT, WASHINGTON 98595

RECEIVED

OCT 16 2006

PFMC

October 12, 2006

Pacific Fishery Management Council
Chairman Don Hansen
7700 NE Ambassador Place, Suite 101
Portland, OR 97220-1384

Re: HMS regulations – hull markings

Dear Chairman Hansen;

The Westport Charterboat Association would like to go on record in support of removing the requirement for charter vessels to display hull markings while engaged in HMS fisheries. We believe that this measure is unnecessary and was never really intended to apply to charter vessels. We would support the Enforcement Consultants position that the vessel Official number be displayed on the weather deck only.

Thank you for your consideration,



Steve Westrick, President
Westport Charterboat Association

EXEMPTED FISHING PERMITS (EFP)

According to adopted procedures, the Council receives Highly Migratory Species (HMS) EFP applications in advance of the June meeting, adopts for public review those proposals it is considering, and takes final action to recommend granting of an EFP at their September meeting. No new applications were received for the 2007 season; however, there are two outstanding proposals with relevance to 2007. At the March 2006 meeting the Council recommended granting an EFP for 2006 to allow drift gillnet vessels to operate in the Pacific leatherback conservation area (closed August 15-November 15) under set limits and caps on the take of the leatherback sea turtles and selected marine mammal species. The EFP applicant proposed that the EFP fishery would operate for at least three years, with annual review by the Council and a decision as to whether to recommend continuation for the next year. The Council also preliminarily approved a second proposal for a single vessel to fish with longline gear within the West Coast Exclusive Economic Zone (EEZ), currently prohibited under the Fishery Management Plan for U.S. West Coast Fisheries for Highly Migratory Species (HMS FMP). That applicant originally proposed to start in the fall of 2006. But at the time of Council preliminary approval in March, he asked that his proposal be considered for the 2007 fishing season instead.

For these two 2007 EFP proposals, the Highly Migratory Species Management Team (HMSMT) recommended a decision schedule different than that described in Council Operating Procedures. At this meeting, the HMSMT is scheduled to brief the Council on the results of the drift gillnet EFP during the 2006 season. Then at the March 2007, meeting they would give the Council a final report on the 2006 drift gillnet EFP and the Council would decide whether to recommend continuation in 2007, with any changes to the conditions of the permit. At this meeting the HMSMT will also provide the Council (in a supplemental report) with a preliminary range of alternatives for the longline EFP, which the Council would consider adopting for public review. Then at the March 2007 meeting, the HMSMT would provide a draft environmental assessment (EA) analyzing the adopted alternatives and the Council would take final action to choose a preferred alternative. Since both EFPs would not commence until late summer/early fall, this is intended to provide enough time for the various procedural requirements to be met, such as completion of an EA and biological opinion pursuant to Section 7 of the Endangered Species Act.

Council Action:

- 1. Consider Drift Gillnet EFP Status for 2006 and Provide Guidance for further considerations in 2007.**
- 2. Adopt Preliminary Alternatives for 2007 Shallow Set Longline EFP.**

Reference Materials:

1. Agenda Item C.3.c, Public Comment.

Agenda Order:

- a. Agenda Item Overview
- b. Reports and Comments of Advisory Bodies
- c. Public Comment
- d. **Council Action:** Consider Drift Gillnet EFP (Status for 2006 and Guidance for 2007) and Preliminary Alternatives for 2007 Shallow Set Longline EFP

Kit Dahl

PFMC
10/25/06

HIGHLY MIGRATORY SPECIES ADVISORY SUBPANEL REPORT ON EXEMPTED FISHING PERMITS FOR 2007

It is the understanding of the Highly Migratory Species Advisory Subpanel (HMSAS) that all of the requirements necessary to issue the drift gillnet exempted fishing permit (EFP) have been met except for final approval by National Marine Fisheries Service (NMFS) Headquarters of the permit required under §101(a)(5)(E) of the Marine Mammal Protection Act. The HMSAS requests that the Council send a letter to NMFS Headquarters with the following message:

Understanding that many segments of the West Coast commercial fisheries are significantly depressed, as validated by the disaster designation for the commercial salmon and groundfish fisheries, the drift gillnet EFP is an opportunity to show areas of the ocean where additional harvest opportunity for West Coast commercial fishermen exist. This potential opportunity, which is based in scientific principals, may lead to increased harvest that will help support the West Coast commercial fishery infrastructure and family businesses that represent the majority of the industry participants. It is our understanding that the delay in approval of this EFP, which has already caused a lost opportunity for the 2006 season, is based on a slow response from NMFS Headquarters in Washington, DC. Because of the importance of the approval of this EFP to the West Coast fisheries, the Council encourages NMFS to expedite the completion of this EFP. Without approval in a timely manner, the industry will lose another year of opportunity.

Mr. Bob Fletcher abstained from this HMSAS recommendation.

The HMSAS also asks the Council to send out the longline EFP alternatives as proposed by Highly Migratory Species Management Team for public review in order to potentially improve fishing opportunity for West Coast fishermen.

PFMC
11/08/06

HIGHLY MIGRATORY SPECIES MANAGEMENT TEAM REPORT ON EXEMPTED FISHING PERMITS

The Highly Migratory Species Management Team (HMSMT), in consultation with the Highly Migratory Species Advisory Subpanel (HMSAS), developed the following draft alternatives for the proposed pelagic longline exempted fishing permit (EFP) submitted by Pete Dupuy, dated February 13, 2006. Alternative 2 presents the terms and conditions as presented in the original EFP application submitted at the March 2006 Council meeting. Alternative 3 represents the suite of modifications to the original EFP terms and conditions that were discussed and recommended by the HMSMT and the HMSAS at their joint meeting earlier this month.

Background

The overall goal of the longline EFP proposal is to collect sufficient data to consider whether it is feasible for current drift gillnet permit holders to switch over to shallow set longline gear in the future as a more bycatch friendly alternative for harvesting swordfish. The immediate objective of the longline EFP proposal for the 2007 season is to test whether a single vessel operation, fishing shallow set longline gear within the U.S. West Coast Exclusive Economic Zone (EEZ), is economically and logistically feasible.

The EFP alternatives would require 100% observer coverage to provide data leading to estimates of, among other things, the bycatch rates and interactions with protected species such as marine mammals, sea turtles, and seabirds that might be expected from an expanded longline fishery. As with the proposed drift gillnet (DGN) EFP considered by the Council, its advisory bodies, and NMFS, the HMSMT recommends that restrictive terms and conditions be applied to the longline EFP including the imposition of protected species take caps (included in Alternative 3) based upon the best available science. The utilization of protected species caps would be analyzed through the National Environmental Policy Act process and documentation. If the EFP is approved for further consideration by the Council and NMFS, the anticipated level of interactions with Endangered Species Act (ESA) listed species will be thoroughly analyzed as part of the required Section 7 consultation process, including preparation of a biological opinion on the preferred alternative.

The Highly Migratory Species (HMS) Fishery Management Plan (FMP) implementing regulations contain a prohibition on the use of longline gear to target HMS within the U.S. EEZ at 50 CFR 660.712(a)(1), hence the need for an EFP to conduct this test fishery. All other applicable requirements of the HMS FMP would be in effect under this proposed EFP, including sea turtle and longline seabird mitigation measures at 50 CFR 660.712(b) and (c), respectively, and the requirement to attend a pre-season NMFS Protected Species Workshop detailing best practices and procedures for bycatch mitigation techniques as required at 50 CFR 660.712(e). In order to minimize the likelihood of interactions with ESA listed sea turtles, the EFP terms and conditions would include compliance with the applicable sea turtle mitigation measures required in the FMP for the Pelagic Fisheries of the Western Pacific Fisheries Management Council¹.

¹ The Pelagics FMP requires all shallow set longline vessels to carry vessel monitoring system (VMS) units. The HMSMT does not recommend the VMS requirement for this EFP given the 100% observer coverage requirement that will be in place.

Alternative 1

Status quo: Do not approve the proposed longline EFP

Alternative 2

Approve the longline EFP as submitted:

1. A single vessel participating
2. 100% observer coverage
3. No fishing within the Southern California Bight (SCB)²
4. No fishing within 30 miles of the coastline
5. No lightsticks
6. Utilizing shallow-set longline gear configuration
 - a. 50 – 100 km mainline
 - b. 18 meter floatline
 - c. 24 meter branchlines
 - d. 2-25 hooks between floats
 - e. 400 to 1,200 hooks per set
7. Maximum of 14 sets per trips
8. Maximum of 4 trips between September and December (up to 56 total sets for the entire duration of the proposed EFP).
9. Use 18/0 circle hooks with a 10 degree offset to fish for swordfish (as described at 50 CFR 660.33(f))
10. Use smaller circle hooks with no offset to fish for tunas
11. Use of mackerel or mackerel-type bait (as described at 50 CFR 660.33(g))

Alternative 3

Approve the longline EFP as submitted (i.e., apply all of the provisions listed under Alternative 2) with the following additional restrictions:

1. Prohibit the use of small circle hooks, allow only 18/0 circle hooks with a 10 degree offset to fish for swordfish (as described at 50 CFR 660.33(f))
2. Require 4-6 hooks between floats
3. Require use of time and depth recorders (TDR) to estimate fishing depth³
4. Gear may not be set until one hour after sunset and must be pulled by sunrise
5. Prohibit the use of a line shooter for setting the gear
6. Require use of a dehooking device to maximize finfish (e.g., blue shark) bycatch survivability
7. Establish protected species take caps for marine mammals, sea turtles, seabirds, and prohibited species, such as striped marlin, that may be exposed to and adversely affected by this action
8. Allow the use of lightsticks

² For the purposes of this EFP, the southern California Bight is tentatively defined as an area from Point Conception south to the Mexican border and those waters inshore of the Santa Rosa Ridge. Precise coordinates defining the SCB would be included in the final Terms and Conditions document that would implement the EFP.

³ The number of TDR units deployed per set and per trip will be determined by NMFS in consultation with the applicant.

Discussion Regarding Alternative 3

The HMSMT and Highly Migratory Species Advisory Subpanel proposed Alternative 3 recognizing that the goal of the fishery is to target swordfish in the EEZ with longline gear as an alternative to drift gillnet gear. The smaller circle hooks and deeper sets (up to 25 hooks between floats) proposed under Alternative 2 would allow targeting of both swordfish and tuna, whereas restricting the fishery to use 18/0 circle hooks and 4-6 hooks between floats is consistent with swordfish targeting and the Hawaii-based shallow set longline fishery on the high seas. Furthermore the large circle hooks and use of a dehooking device are expected to reduce bycatch mortality. After consultation with the EFP applicant and a coordinator from the Western Pacific Fishery Management Council (WPFMC) for the Hawaii-based fishery, the HMSMT and HMSAS realized that fishing for swordfish without lightsticks would not be profitable and should not have been proposed in the original EFP application, thus Alternative 3 would allow the use of lightsticks.

Regional Resource Conservation Issues

The HMSMT would like to point out that incidental catches of bigeye, yellowfin, and albacore tuna may occur as part of the EFP. The Inter-American Tropical Tuna Commission (IATTC) has adopted conservation resolutions to address potential overfishing on these stocks. NMFS is in the process of addressing bigeye and yellowfin overfishing and has also indicated concurrence with IATTC and WCPFC resolutions that increased U.S. effort on north Pacific albacore would not occur.

Management Issues

As stated, the overall objective of the EFP is to collect information to consider whether to provide a fishing opportunity for current drift gillnet holders to switch over to longline gear in the future. This is the second time that Mr. Dupuy has submitted an EFP application for pelagic longline gear to target HMS. To date, the Council's policy discussions have centered on the current policy of the California Department of Fish and Game, which is to not allow pelagic longline fishing within the U.S. EEZ. This policy was incorporated into the HMS FMP final rule at 660.712(a)(1).

However, the HMSMT believes that the Council should discuss: 1) what swordfish-targeted fisheries the Council would like to see be provided in the future (i.e., drift gillnet, harpoon, and/or pelagic longline); and 2) whether the Council is willing to allow the amount of pelagic longline fishing that would be needed to assess whether it is a viable alternative gear to drift gillnet (i.e., several participants in an experimental fishery, rather than the one applicant).

Until the Council has these discussions and makes a policy decision about whether to allow pelagic longline fishing inside the U.S. EEZ, the HMSMT believes that this issue will likely continue to arise through the Council's annual consideration of EFP applications. The HMSMT does not believe that this opportunity should be considered in a piecemeal fashion, but rather, through a more deliberative process.

HMSMT Recommendation:

Discuss whether the Council would like to allow targeted HMS fisheries with pelagic longline gear in the EEZ in the future; and

- a. If so, decide whether to approve the longline EFP alternatives for public review;
- b. If not, then the Council may wish to consider indicating its intent in its Operating Procedure for EFP applications for HMS (to avoid spending additional Council, HMSMT, and Highly Migratory Species Advisory Subpanel resources on this issue through the annual EFP process).

PFMC

11/13/06

Subject: Keep the Current Restrictions on Longlines
From: ddun@chevron.com
Date: Fri, 02 Jun 2006 15:39:52 -0800
To: pfmc.comments@noaa.gov;donald.mcisaac@noaa.gov
CC: karen@seaturtles.org

Agenda Item C.3.c
Public Comment 1
November 2006

June 1, 2006

*The Council received 866 copies of this email as of
October 25, 2006.*

Mr. Donald McIsaac
Executive Director
Pacific Fishery Management Council
7700 NE Ambassador Place, Suite 200
Portland, OR 97220-1384

Phone: 1-866-806-7204 or
(503) 820 2280
Fax: (503) 820-2299

Dear Mr. McIsaac:

I am writing to express my opposition to the proposal before the Pacific Fishery Management Council (PFMC) to reestablish a longline fishery in U.S. Pacific waters, reversing protection measures in place for sea turtles and other marine species. Scientists have warned the critically endangered leatherback sea turtle, could go extinct in the Pacific in the next 5-30 years unless efforts to reduce the threat of being injured or killed by longlines and gillnets are reversed.

The PFMC made the right decision in 2004 when it prohibited the use of longline gear in U.S. West Coast waters. As a result for the past two years leatherback sea turtles have been safe from the threat of longlining in U.S. waters off the Pacific Coast.

There is not sufficient justification to develop and expand a pelagic longline fishery in U.S. Pacific waters. If approved by the Council, the proposal to allow pelagic longline gear through an Exempted Fishing Permit (EFP) will undermine successful conservation measures protecting the critically endangered leatherback sea turtle as well as billfish, seabirds, marine mammals, sharks and other fish,

Finally, allowing longliners back into our waters if they use circle hooks would also be a set back to essential conservation measures. The recent closure of the Hawaii swordfish longline fishery has provided conclusive evidence that circle hooks fail to prevent the "take" of endangered sea turtles. This confirms the only option left is a closure of longline fishing in the Pacific to prevent the threat to these endangered species. I urge you not to reverse your decision. I look forward to your reply on this issue.

Sincerely,

Daniel Duncan 364 Marie Common Livermore, California 94550 ddun@chevron.com

Subject: Opposing the West Coast Longline Experiment

From: "Jim Bockerstette" <jbockerstette@systemsintegrated.com>

Date: Mon, 10 Jul 2006 14:37:43 -0700

To: <pfmc.comments@noaa.gov>

Hello,

I am writing this email to strongly oppose the experimental west coast longline. We are currently at a point in world history where humans are capable of overexploiting just about any species of commercial value on the planet. This is especially true for large pelagic fish which roam our west coast waters. Most, if not all, peer reviewed articles indicate that large pelagic fish are over harvested and cannot sustain current harvesting levels. It makes no sense to continue to increase the pressure on these resources. We should be finding ways to reduce harvesting pressure not increase it.

Longlines are notoriously indiscriminate killers. It is simply impossible to target a particular species even if one was found to be not fully exploited. Longlines should be eliminated world wide and should not be considered for an "experiment". The experiment is over and longlines have been found to kill everything not just targeted species. Given the fact that bluefin, albacore and bigeye tuna are all fully exploited or over exploited; it seems silly to expose them to even more pressure even though they may not be targeted. I don't need to mention that sea turtles get caught in longlines as well, or do I? The only reason this "experiment" may not catch many sea turtles is because they are already severely threatened. Do we have to completely wipe out certain sea turtle species for an "experiment" we already know the outcome? Definitely not!

Please consider what I have written and then say no to the longline experiment.

Thank you for your time.

Jim Bockerstette.

October 24, 2006

Mr. Don Hansen, Chair
Pacific Fishery Management Council
7700 NE Ambassador Place, Suite 101
Portland, OR 97220

Rodney McInnis, Regional Administrator
National Marine Fisheries Service
Southwest Regional Office
501 West Ocean Boulevard, Suite 4200
Long Beach, CA 90802-4213

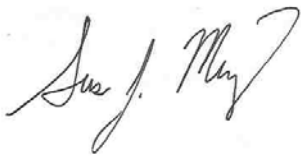
RE: Agenda Item: C.3 Exempted Fishing Permits, Drift Gillnets

Dear Mr. Hansen and Mr. McInnis:

At the March 2006 Pacific Fishery Management Council meeting, the Council approved an exempted fishing permit (EFP) that would allow up to 30 drift gillnet vessels to target swordfish in an area that has been specifically closed to protect endangered leatherback sea turtles during the time when turtles are present. We believe that the costs of this action to the marine ecosystem, including the killing of sea turtles, seals, whales and dolphins, and the bycatch of non-target fish, far outweigh any possible economic benefits, if any, of opening this area.

Given the costs and risks to protected resources and fish, we believe that the Council should not have approved the EFP and forwarded it to NMFS for review. What is more, we oppose any efforts to authorize this or a similar exempted fishing permit for 2007. Please see our previous correspondence on this issue for our full comments and opposition to this exempted fishing permit.

Sincerely,



Susan Murray
Acting Director, Pacific

Past correspondence:

1. August 10, 2006. Letter to Dr. Hogarth and Mr. McInnis, NMFS. Filed with Center for Biological Diversity and Sea Turtle Restoration Project/ Turtle Island Restoration Network
2. August 10, 2006. Letter to Mr. McInnis, NMFS.
3. April 14, 2006. Letter to Dr. Hogarth, NMFS.
4. October 25, 2005. Letter to Don Hansen, NPFMC. Agenda Item J.3.D

Oct 19 06 11:35a

Frank Emerson

831 757 7383

(831) 757-7383

Alliance of Communities for Sustainable Fisheries**256 Figueroa Street #1, Monterey, CA 93940****(831) 373-5238**

www.alliancefisheries.org

October 18, 2006

RECEIVED**OCT 19 2006****PFMC**

William T. Hogarth
Director, NOAA Fisheries
1315 East West Highway, 9th Floor
Silver Spring, MD 20910

Dear Dr. Hogarth:

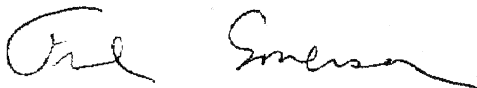
The ACSF applauds your decision to support the Pacific Fishery Management Council's recommendation to conduct an exempted fishery permit (EFP) for the west coast swordfish drift-net fishery.

We view your support of this EFP as an outstanding example of resource management leadership in balancing the often times conflicting mandates to protect our nations' marine resources, as well as to promote sustainable fishing opportunities. The above mentioned EFP accomplishes both these goals.

The EFP gives the drift-net swordfish fishermen an opportunity to demonstrate that the time/area closure enacted to protect leatherback sea turtles was based on assumptions that did not take into account the reduced leatherback interaction rate since the implementation of a regulatory requirement for drift-nets to be set a minimum distance of 36 feet below the sea surface. It also limits fishing opportunity through the EFP, and ensures the highest levels of leatherback protections by requiring 100% observer coverage, real-time monitoring, and fixed leatherback and marine mammal take caps.

It is not often that such a win-win scenario is encountered, and you are to be congratulated for supporting your staff at the Southwest Region for their role in facilitating the successful implementation of this EFP.

Sincerely,



Frank Emerson
Co-Chair, ACSF

C: Don Hansen, Chairman PFMC
Mark Helvey, NOAA Fisheries
Rodney McInnis, South West NOAA Fisheries Regional Administrator

Supporting Associations & Organizations

Pacific Coast Federation of Fishermen's Association
Port San Luis Commercial Fishermen's Association
Morro Bay Commercial Fishermen's Association
Monterey Commercial Fishermen's Association
Fishermen's Association of Moss Landing
Santa Cruz Commercial Fishermen's Marketing Association
Half Moon Bay Fishermen's Marketing Association
Fishermen's Alliance
Western Fishboat Owners Association
Ventura County Commercial Fishermen's Association
Federation of Independent Seafood Harvesters
Golden Gate Fishermen's Association
Port San Luis Harbor District
City of Morro Bay Harbor
City of Monterey Harbor
Moss Landing Harbor District
Santa Cruz Port District
Pillar Pt. Harbor, San Mateo County Harbor District



CENTER FOR BIOLOGICAL DIVERSITY

BECAUSE LIFE IS GOOD.

November 6, 2006

Via Electronic Mail

Donald McIsaac
Executive Director
Pacific Fishery Management Council
7700 NE Ambassador Place, Suite 200
Portland, OR 97220-1384
E-mail: Donald.McIsaac@noaa.gov

Mr. Donald K. Hansen
Chair, Pacific Fishery Management Council
Pacific Fishery Management Council
7700 NE Ambassador Place, Suite 200
Portland, OR 97220
E-mail: pfmc.comments@noaa.gov

RE: Agenda Item C-3: Exempted Fishing Permits

Dear Mr. McIsaac, Mr. Hansen and members of the Council:

The Center for Biological Diversity, Turtle Island Restoration Network, and Oceana submit the following comments regarding Agenda Item C-3 of the November 2006 meeting of the Pacific Fishery Management Council ("PFMC" or "Council") concerning Exempted Fishing Permits ("EFPs"). Pursuant to PFMC policy as articulated on its website, we request that this letter be distributed to the Council at or before the onset of the November meeting.

The Agenda for the November meeting of the Council frames the issues before the Council as "Consider Drift Gillnet EFP (Status for 2006 and Guidance for 2007) and Preliminary Alternatives for 2007 Shallow Set Longline EFP." According to the "Situation Summary" contained in the Briefing Book for the November meeting, "the HMSMT is scheduled to brief the Council on the results of the drift gillnet EFP during the 2006 season." Based on numerous telephone conversations with, and written statements by officials with the National Marine Fisheries Service/NOAA Fisheries ("NMFS"), it is our understanding that the proposed Drift Gillnet EFP for 2006 has not yet been issued. Given the proposed EFP has not been issued, and the August 15 to November 15 permit season is virtually over, we do not see what "results" from the EFP could possibly be relayed to the Council for its

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Email: bcummings@biologicaldiversity.org web: www.biologicaldiversity.org

consideration.¹ The only relevant information to be gleaned from the proposed 2006 EFP is that NMFS did not issue the permit because NMFS could not lawfully do so. Since the same legal obstacles to issuing such a permit would also apply to any 2007 Drift Gillnet EFP to be considered by the Council and NMFS, we do not see any reason for the Council to waste the limited resources of NMFS by again recommending that such an unwise and unlawful permit be issued. Nevertheless, given the track record of the Council and NMFS of supporting the proposed 2006 EFP, we offer the following comments regarding any Drift Gillnet EFP for 2007. Similarly, we believe the proposed 2007 longline EFP cannot lawfully be issued by NMFS, and therefore also does not warrant the further consideration of the Council. Our specific objections to both of these proposed EFPs follow.

I. THE 2007 DRIFT-GILLNET EFP MUST BE DENIED

As we have stated on numerous occasions in our comments to the Council and NMFS regarding the proposed 2006 EFP which would have allowed vessels currently permitted to participate in the California/Oregon Drift Gillnet Fishery (“Fishery”) to set drift-gillnet gear in the Pacific Leatherback Conservation Area from August 15 to November 15, notwithstanding the fact that existing law and regulation prohibit the setting of such gear during this period, any request to allow harmful fishing gear in the Pacific Leatherback Conservation Area while leatherbacks are likely to be in the area must be denied. Issuing such an EFP in 2007 would be wholly incompatible with the very purpose for which the Pacific Leatherback Conservation Area was created: to protect critically endangered Pacific leatherback sea turtles from entanglement and drowning in drift-gillnet fishing gear. In addition to being utterly misguided as a matter of policy and science, issuance of the 2007 EFP would be illegal, as doing so would violate the Endangered Species Act (“ESA”)(16 U.S.C. § 1531 *et seq.*), Marine Mammal Protection Act (“MMPA”)(16 U.S.C. § 1361 *et seq.*), Migratory Bird Treaty Act (“MBTA”)(16 U.S.C. § 706 *et seq.*), National Marine Sanctuaries Act (16 U.S.C. § 1431 *et seq.*), Coastal Zone Management Act (“CZMA”) (16 U.S.C. § 1451 *et seq.*), Magnuson-Stevens Fishery Conservation and Management Act (“MSA”) (16 U.S.C. § 1801 *et seq.*), and the National Environmental Policy Act (“NEPA”) (42 U.S.C. § 4321 *et seq.*).

A. The Drift-Gillnet Fishery

The California/Oregon Drift Gillnet Fishery for Shark and Swordfish (“Fishery”) is currently primarily a federally-managed fishery, with the majority of the fishing effort occurring in federal waters within 200 miles of the coasts of California and Oregon. The fishery is governed pursuant to the overlapping provisions of a federal Highly Migratory Species Fishery Management Plan (“FMP”) under the MSA, and regulations promulgated by NMFS to implement that FMP, Biological Opinions drafted by NMFS under the ESA, regulations promulgated by NMFS pursuant to the ESA to implement the Biological Opinions, regulations promulgated by NMFS pursuant to the MMPA to implement a Take Reduction Plan developed for the Fishery, as well as several provisions of California and Oregon state law.

¹ Given the stated purpose of the 2006 EFP was “data collection” we do not see how NMFS could justify issuing the EFP at this late date, as any “data” collected would be of such limited temporal and spatial scale that any results extrapolated from it would be of little statistical significance. Issuing the EFP at this point would simply place critically endangered leatherback sea turtles and other protected species at needless risk.

The Fishery consists of approximately 100 permitted vessels of which approximately 40 are active in a given year. These vessels use nets of approximately one mile in length with mesh sizes of 16 to 22 inches. The nets are generally set in the evening and retrieved in the morning, and theoretically allow small animals to pass through while trapping larger animals. Although termed “gillnets,” the nets used in the Fishery actually entangle fish and other animals rather than trap them by the gills. The majority of fishing effort in the Fishery occurs between August and the end of January.

Although the Fishery originally targeted thresher sharks, today it also targets both swordfish and shortfin mako sharks. Other species commonly caught and kept by this Fishery include opah, louver, and various species of tuna. The majority of the targeted catch in the Fishery now consists of swordfish taken off the California coast between San Diego and Cape Mendocino. Sunfish or mola and blue sharks are the two most common unwanted fish species or “bycatch” caught by the Fishery, with over ten thousand molas and one thousand blue sharks caught and discarded by the Fishery in 2005 alone.

Historically, the Fishery has resulted in the incidental bycatch of many species of marine mammals, sea turtles and seabirds. Several of these species are listed as endangered or threatened under the ESA, including sperm whales (*Physeter macrocephalus*), humpback whales (*megaptera novaeangliae*), fin whales (*Balaenoptera physalus*), Steller sea lions (*Eumetopias jubatus*), leatherback sea turtles (*Dermochelys coriacea*), loggerhead sea turtles (*Caretta caretta*), green sea turtles (*Chelonia mydas*), and olive ridley sea turtles (*Lepidochelys olivacea*). Moreover, the critically endangered North Pacific right whale (*Eubalaena japonica*) occurs within the range of the Fishery and is at risk from it. Similarly, the recently listed Southern Resident population of killer whales (*Orcinus orca*), a species historically entangled and killed by the Fishery, seasonally occurs in the range of the Fishery. In addition, numerous non-ESA listed marine mammals protected by the MMPA have been ensnared and killed in gillnets used by the Fishery, including, for example, pilot whales, common, Pacific white-sided, and northern right whale dolphins, and several additional species of whales, sea lions and seals.

NMFS considers the Fishery a Category I fishery under the MMPA. A Category I fishery is a fishery that has “frequent incidental mortality and serious injury of marine mammals.” 16 U.S.C. § 1387(c)(1)(A); 50 C.F.R. § 229.2. Since at least 1990, NMFS has monitored the Fishery due to its high rate of bycatch. Mortality and entanglement rates are calculated based upon the number of individuals observed entangled or killed and the percentage of the fishing effort observed. Mortality and entanglement rates vary from year to year, with some species observed killed every year and others observed killed only every two or three years. Consequently, NMFS’s estimates of annual mortality and entanglement rates vary based upon which years are used to calculate the average.

In response to the high level of marine mammal mortality from the Fishery, in 1997 NMFS adopted the Pacific Offshore Cetacean Take Reduction Plan and accompanying regulations pursuant to Section 118(f) of the MMPA. The Take Reduction Plan and implementing regulations became effective October 30, 1997. 62 Fed. Reg. 51805 (Oct. 3, 1997). Despite the Take Reduction Plan, the Fishery continues to kill marine mammals at rates in excess of those authorized by the MMPA.

Because implementation of the Take Reduction Plan constitutes federal agency action within the meaning of the ESA, NMFS undertook an internal Section 7 consultation in connection with adoption of the Take Reduction Plan and implementing regulations, and issued a Biological Opinion on September 30, 1997, concluding that the Fishery would not jeopardize any listed marine mammal or sea turtle

species. However, NMFS also concluded that the requirements of Section 101 of the MMPA for permit issuance could not be met and that, therefore, no incidental take of ESA-listed marine mammal species could be authorized. Nevertheless, in spite of the fact that no take of ESA-listed marine mammals was authorized by NMFS, the Fishery continued to operate and take listed marine mammals. Additionally, take of listed sea turtle species occurred at levels in excess of that authorized by the 1997 Biological Opinion's Incidental Take Statement.

In March 2000, the Center for Biological Diversity and Turtle Island Restoration Network brought suit against NMFS for violations of the ESA and MMPA related to the Fishery. In response, on October 23, 2000, NMFS issued a new Biological Opinion for the Fishery. NMFS also at this point issued a permit under Section 101 of the MMPA authorizing the Fishery to take ESA-listed marine mammal species. 65 Fed. Reg. 64670. The new Biological Opinion concluded that the Fishery would likely jeopardize both the loggerhead and leatherback sea turtles. With regard to the leatherback sea turtles, NMFS concluded that the projected take of the species from the Fishery, would jeopardize the species because any further mortality to leatherbacks from the western Pacific nesting population equated to jeopardy:

Therefore, any additional impacts to the western Pacific leatherback stocks are likely to maintain or exacerbate the decline in these populations. This would further hinder population persistence or attempts at recovery as long as mortalities exceed any possible population growth, which appears to be the current case, appreciably reducing the likelihood that western Pacific leatherback populations will persist. Additional reductions in the likelihood of persistence of western Pacific leatherback stocks are likely to affect the overall persistence of the entire Pacific Ocean leatherback population by reducing genetic diversity and viability, representation of critical life stages, total population abundance, and metapopulation resilience as small sub-populations are extirpated. These effects would be expected to appreciably reduce the likelihood of both the survival and recovery of the Pacific Ocean population of the leatherback sea turtle.

Biological Opinion at 94. (Emphasis added).

As required by Section 7(b) of the ESA, 16 U.S.C. § 1536(b), NMFS proposed a reasonable and prudent alternative that would avoid jeopardy to the leatherback. Id. The reasonable and prudent alternative required that a seasonal closure of the Fishery be implemented North of Point Conception in the fall. Specifically the Biological Opinion states:

By August 1, 2001, NMFS, or the states of California and Oregon, must implement regulations to close an area to drift gillnets from Point Conception, California (34°27'N), north to 45°N, and west to 129°W, from August 15th to October 31st.

Id. at 102. While NMFS illegally delayed the implementation of this closure, on August 24, 2001, after receiving a notice of intent to sue from the Center for Biological Diversity and Turtle Island Restoration

Network, NMFS finally implemented a modified version of the required closure through an interim final rule. 66 Fed. Reg. 44549.²

The closure ultimately implemented by NMFS runs from August 15 to November 15 each year and extends from Point Sur (364°18.5'N) in California to 45°N on the Oregon Coast.

Since the leatherback closure went into effect, no leatherback sea turtles have been observed taken in the Fishery.

In April 2004, NMFS finally promulgated regulations implementing the long overdue FMP for HMS fisheries on the West Coast. 69 Fed. Reg. 18453. Through these regulations, NMFS incorporated the existing leatherback and loggerhead closures into the FMP regulations.³ See 50 C.F.R. § 660.713(c)(1). The February 4, 2004 Biological Opinion for the FMP reached its no jeopardy conclusion for the leatherback based on the premise that the leatherback closure would remain in effect.

The February 4, 2004 Biological Opinion for the FMP contained an Incidental Take Statement estimating the likely take of listed sea turtles and marine mammals from the Fishery. However, due to the interplay of the MMPA and ESA, no take authorization for ESA-listed marine mammals was issued:

The ESA allows takings of threatened and endangered marine mammals only if authorized by section 101(a)(5) of the MMPA. Until the proposed action receives authorization for the incidental taking of marine mammals under section 101(a)(5) of the MMPA, the incidental takes of marine mammals described below are not exempt from the taking prohibition of section 9(a), pursuant to section 7(o) of the ESA.

February 4, 2004 Biological Opinion at 226. The MMPA Section 101 permit issued to the Fishery in October 2000 for the take of threatened and endangered marine mammals expired on October 24, 2003. See 65 Fed. Reg. 64670. No subsequent take authorization has been issued even though the Fishery continues to capture and kill ESA-listed marine mammals.⁴

B. The Proposed 2007 Drift-Gillnet Exempted Fishing Permit

No EFP for the 2007 fishing season has yet to be officially authorized or proposed by the Council or NMFS. Nevertheless, it is our expectation that any proposed 2007 Drift-Gillnet EFP will be substantially similar to the proposed 2006 EFP. On July 11, 2006 NMFS published a notice in the Federal Register regarding an EFP which would allow vessels currently permitted to participate in the Fishery to set drift-gillnet gear in the Pacific Leatherback Conservation Area from August 15, 2006 to November 15, 2006 notwithstanding the fact that existing law and regulation prohibit the setting of such

² The Biological Opinion also required a similar time/area closure to protect loggerhead sea turtles. NMFS failed to meet this requirement of the Opinion as well, and only implemented the closure over a year late following litigation by the Center for Biological Diversity and Turtle Island Restoration Network. See 67 Fed. Reg. 78388 (Dec. 24, 2002).

³ While the leatherback closure remained the same, the loggerhead closure was modified somewhat from the previous ESA regulation.

⁴ On July 28, 2006 NMFS published a notice of proposed issuance of a permit under Section 101(a)(5) of the MMPA for ESA-listed marine mammals taken by the Fishery. See 71 Fed. Reg. 42809. This permit has not been finalized and as such is currently of no legal effect.

gear during this period. See 71 Fed. Reg. 39055 (July 11, 2006). NMFS described the 2006 EFP as follows:

The EFP would authorize approximately 30 vessels to fish from August 15, 2006, to November 15, 2006, in an area off the U.S. West Coast of California and Oregon defined as the Pacific Leatherback Conservation Area within the Federal EEZ. The EFP would allow a maximum of 300 DGN sets, and would require 100 percent observer coverage for all fishing under the EFP. The fishery would be managed through limits on the amount of incidental take of protected species. The proposed EFP would impose a limit of two leatherback sea turtles that may be incidentally taken during the course of fishing under the EFP and limit to one the number of serious injuries or mortalities to humpback whale (*Megaptera novaeangliae*), short-finned pilot whale (*Globicephala macrorhynchus*), or sperm whale (*Physeter macrocephalus*). If any one of these limits is reached by the fishery authorized by the EFP, the EFP would be immediately revoked.

71 Fed. Reg. 39055. Our understanding is that NMFS has not issued the 2006 EFP and the intended permit duration of the proposed permit has already largely past. Given the Pacific Leatherback Conservation Area is closed to drift-gillnet gear from August 15 to November 15 each year, we anticipate the 2007 EFP would similarly run from August 15, 2007 to November 15, 2007.

C. Violations of Law

In our previous letters to NMFS and the Council we described how the *current* Fishery is in violation of numerous provisions of law, and how any *expansion* of that Fishery, including through a proposed EFP that would allow drift-gillnet fishing in the Pacific Leatherback Conservation Area when leatherbacks are present, would also violate numerous provisions of law.⁵ Unfortunately, neither the Council nor NMFS have adequately addressed these legal issues in the processing of the 2006 EFP or in the consideration of the 2007 EFP, rendering both the current operation of the Fishery and any proposed EFPs unlawful. We are confident that a reviewing court will not only set aside any EFP as arbitrary and capricious, but will also find NMFS's management of the Fishery as a whole to legally infirm. NMFS must reject the proposed 2007 EFP and instead work towards ensuring that the current Fishery operates consistent with all existing law, or not at all.

1. Violations of the ESA

Section 2(c) of the ESA establishes that it is "...the policy of Congress that all Federal departments and agencies shall seek to conserve endangered species and threatened species and shall utilize their authorities in furtherance of the purposes of this Act." 16 U.S.C. § 1531(c)(1). The ESA defines "conservation" to mean "...the use of all methods and procedures which are necessary to bring any endangered species or threatened species to the point at which the measures provided pursuant to this Act are no longer necessary." 16 U.S.C. § 1532(3). Similarly, Section 7(a)(1) of the ESA directs that the Secretary review "...other programs administered by him and utilize such programs in furtherance of the purposes of the Act." 16 U.S.C. § 1536(a)(1).

⁵ See our letters of August 10, 2006 (Comment letter to NMFS on proposed 2006 EFP), June 23, 2006 (60-day Notice of Intent to Sue), February 28, 2006 (Letter to Council urging rejection of EFP request), October 25, 2005 (Letter to Council regarding Fishery), and September 13, 2005 (Letter to Council regarding EFPs).

NMFS's continued authorization of the Fishery is violating Sections 2(c) and 7(a)(1) of the ESA because the agency refuses to use its authorities to further the purpose of listed species conservation. Specifically, by not closing the Fishery or taking other measures to avoid unlawful take following the unpermitted taking of a humpback whale by the Fishery during the 2004/2005 fishing season, NMFS is violating these provisions. See Sierra Club v. Babbitt, 65 F.3d 1502, 1511, fn 15 ("If Seneca violates section 9, or any other environmental standard, the BLM need not consult with the FWS before exercising its right under the environmental stipulation to terminate the offending project. Indeed, section 7(a)(1) would appear to *require* the BLM to utilize its authority under the stipulation to suspend an activity that would result in a taking.") (Emphasis in original). Moreover, issuing an EFP which would allow drift-gillnet vessels to fish in the Pacific Leatherback Conservation Area after previously finding that such fishing would jeopardize this critically endangered species, would run afoul of these provisions as well.

Section 7(a)(2) of the ESA requires federal agencies to "insure that any action authorized, funded, or carried out by such agency . . . is not likely to jeopardize the continued existence of any endangered species or threatened species or result in the adverse modification of habitat of such species . . . determined . . . to be critical" 16 U.S.C. § 1536(a)(2); 50 C.F.R. § 402.14(a). To accomplish this goal, agencies must consult with the delegated agency of the Secretary of Commerce or Interior whenever their actions "may affect" a listed species. 16 U.S.C. § 1536(a)(2); 50 C.F.R. § 402.14(a). Where, as here, NMFS is both the acting agency and the delegated wildlife agency for purposes of the listed species in question, different branches of NMFS must undertake internal consultation with each other.

At the completion of consultation NMFS issues a Biological Opinion that determines if the agency action is likely to jeopardize the species. If so the opinion must specify a Reasonable and Prudent Alternative ("RPA") that will avoid jeopardy and allow the agency to proceed with the action. 16 U.S.C. § 1536(b).

As described above, in the 2000 Biological Opinion, NMFS had the following to say about any further mortality to western Pacific leatherbacks:

Therefore, any additional impacts to the western Pacific leatherback stocks are likely to maintain or exacerbate the decline in these populations....These effects would be expected to appreciably reduce the likelihood of both the survival and recovery of the Pacific Ocean population of the leatherback sea turtle.

Biological Opinion at 94. (Emphasis added). NMFS then concluded that the estimated annual mortality of leatherbacks from the Fishery would likely jeopardize the species. NMFS therefore proposed as an RPA a seasonal closure of the Fishery in the waters off the Central and Northern California and Southern Oregon Coasts. NMFS adopted a variant of this RPA via an ESA rulemaking which instituted the current closure. 66 Fed. Reg. 44549. The closure was then reaffirmed by NMFS when it adopted the HMS FMP under its authorities under the MSA. 69 Fed. Reg. 18444; 50 C.F.R. § 660.713. Since the October 2000 biological opinion for the Fishery, the status of the leatherback in the Pacific has

further declined.⁶ We believe, as NMFS stated in 2000, that authorization of any leatherback take in the Pacific would violate the requirement to avoid jeopardy to the species. Therefore, any proposal, such as through an EFP, to allow the Fishery into currently closed areas occupied by the critically endangered leatherback sea turtle would violate Sections 7(a)(2) of the ESA.

Section 7(d) of the ESA, 16 U.S.C. § 1536(d), provides that once a federal agency initiates consultation on an action under the ESA, the agency, as well as any applicant for a federal permit, “shall not make any irreversible or irretrievable commitment of resources with respect to the agency action which has the effect of foreclosing the formulation or implementation of any reasonable and prudent alternative measures which would not violate subsection (a)(2) of this section.” The purpose of Section 7(d) is to maintain the environmental status quo pending the completion of interagency consultation. Section 7(d) prohibitions remain in effect throughout the consultation period and until the federal agency has satisfied its obligations under Section 7(a)(2) that the action will not result in jeopardy to the species or adverse modification of its critical habitat. Our understanding is that NMFS is still engaged in consultation over the issuance of the 2006 EFP to allow the Fishery to operate in the leatherback closure area. See 71 Fed. Reg. at 39055-56 (“NMFS is engaged in formal consultation to determine if the proposed action is likely to jeopardize the continued existence and recovery of any endangered or threatened species or result in the destruction or adverse modification of critical habitat.”). Continued authorization of the Fishery during this consultation constitutes a violation of this provision as well.

An agency’s duty to avoid jeopardy is continuing, and “where discretionary Federal involvement or control over the action has been retained or is authorized by law,” the agency must in certain circumstances reinitiate formal consultation. 50 C.F.R. § 402.16. An FMP is clearly a continuing agency action requiring reinitiation of consultation if any of the triggering circumstances occur. Among those circumstances is when the authorized take is exceeded. Id. The excessive take also constitutes “new information” triggering the reinitiation requirement.

In this case, no take of ESA-listed marine mammals is authorized by the February 2004 Biological Opinion. Nevertheless, take of humpback whales has occurred. The reinitiation requirements have been triggered. Moreover, the recent listing of the Southern Resident population of killer whales (*Orcinus orca*) as endangered also triggers the reinitiation requirement. Killer whales have historically been documented entangled and killed by the Fishery, and the newly listed population seasonally occurs in the range of the Fishery. Because NMFS has failed to reinitiate consultation it is in violations of its procedural and substantive mandates to insure against jeopardy to listed species.⁷

The ESA prohibits any “person” from “taking” threatened and endangered species. 16 U.S.C. § 1538. The definition of “take”, found at 16 U.S.C. § 1532(19), states,

⁶ Fortunately, the seasonal closure of portions of the Fishery for the protection of the leatherback sea turtles appears to be effective. The past three years of observer data show no bycatch of leatherback sea turtles. It would be criminal for NMFS to undue this apparently successful management measure and allow drift-gillnet vessels to set their nets in areas where they are likely to entangle and kill this critically endangered species.

⁷ NMFS’s ongoing consultation on the issuance of the 2006 EFP is no substitute for reinitiating consultation on the Fishery as a whole. Conner v. Burford, 848 F.2d 1441, 1453 (9th Cir. 1988) (“ESA requires the Biological Opinion to analyze the effect of the *entire* agency action.”)(emphasis in original).

The term "take" means to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct.

In a case dealing with fisheries, the Court ruled "the statute not only prohibits the acts of those parties that directly exact the taking, but also bans those acts of a third party that bring about the acts exacting a taking. We believe that...a governmental third party pursuant to whose authority an actor directly exacts a taking of an endangered species may be deemed to have violated the provisions of the ESA" Strahan v. Coxe, et al, 127 F.3d 155 (1st Cir. 1997).

NMFS's continued authorization of the Fishery directly authorizes fishing activities that have been documented to take humpback whales, fin whales, sperm whales, and leatherback and loggerhead sea turtles and therefore fits the statute's definition of take. Such take is ongoing. Similarly, issuance of any EFP will also cause such take. As discussed below, take of ESA-listed marine mammals by the Fishery is not authorized via either the ESA or MMPA, yet such take, as demonstrated by the entangled humpback whale in 2004/2005, is clearly occurring. NMFS is violating Section 9 of the ESA. The proposed 2007 EFP will violate this provision as well.

2. Violations of the MMPA

The Fishery entangles and kills ESA-listed marine mammals as well as numerous non-listed marine mammal species. It must therefore be operated in a manner consistent with the procedural and substantive mandates of the ESA and MMPA or not at all. The Fishery is currently operating without any take authorization for ESA-listed marine mammals. Take can be authorized via an Incidental Take Statement issued pursuant to the ESA only if such take is also authorized pursuant to Section 101 of the MMPA. On October 30, 2000, NMFS issued a three-year take authorization to the Fishery pursuant to Section 101(a)(5)(E) of the MMPA, 16 U.S.C. § 1371(a)(5)(E), allowing the take of ESA-listed marine mammals, specifically sperm, fin, and humpback whales, and the eastern stock of Steller sea lion. 65 Fed. Reg. 64670. While we believe this permit was improperly issued in the first instance, regardless of the infirmities of this permit, it is now expired and no take of any ESA-listed marine mammal is authorized for the Fishery, or for that matter any fishery under the HMS FMP. Unfortunately, the Fishery continues to entangle ESA-listed marine mammals. For example, observer data from the 2004-2005 fishing season shows the entanglement of a humpback whale. This take was not authorized under the ESA or the MMPA and therefore occurred in violation of both statutes. Continued operation of the Fishery, and certainly the proposed 2007 EFP allowing vessels into currently closed areas, violates the provisions of the ESA and MMPA prohibiting such take. Until and unless the Fishery as a whole receives a lawful Section 101 authorization pursuant to the MMPA, we believe that the Fishery must be suspended. Additionally, no EFP can be issued unless the take that will occur from the fishing pursuant to the EFP is also permitted pursuant to both the MMPA and ESA.⁸

The continued authorization of the Fishery and the proposed EFP also violate the unambiguous command of the MMPA that all fisheries "shall reduce incidental mortality and serious injury of marine mammals to insignificant levels approaching a zero mortality and serious injury rate" by April 30, 2001.

⁸ If NMFS finalizes the proposed issuance of a permit under Section 101(a)(5) of the MMPA for ESA-listed marine mammals taken by the Fishery, this permit would not authorize take of ESA-listed marine mammals by vessels fishing pursuant to the EFP. The proposed permit only covers the current Fishery, not any EFPs. See 71 Fed. Reg. 42809.

16 U.S.C. § 1387(b)(1). NMFS has defined ZMRG by regulation as ten percent of Potential Biological Removal (“PBR”). The Fishery’s take of marine mammal species remains above this threshold. For example, in the 2005 Pacific Stock Assessment Reports the Fishery was estimated to kill 23 northern right whale dolphins each year, in excess of a ZMRG level of 16. Similarly, take of the short-finned pilot whale is not just above ZMRG, but almost at PBR. Take of sperm, humpback and fin whales also remains well above 10% of PBR, thereby exceeding the definition of ZMRG. Because April 30, 2001 has come and gone without the Fishery reaching ZMRG, the continued authorization, or any expansion, of the Fishery violates the MMPA.⁹

The MMPA explicitly requires NMFS to “amend the take reduction plan and implementing regulations as necessary to meet the requirements of” the MMPA to reach ZMRG, and, when necessary, to “proscribe emergency regulations that, consistent with such plan to the maximum extent practicable, reduce incidental mortality and serious injury in the fishery.” 16 U.S.C. §§ 1387(f)(7)(F) & 1387(g)(1)(A). Given the Fishery continues to take marine mammals at levels in excess of ZMRG, NMFS failure to utilize this authority to amend the Take Reduction Plan violates these provisions of the MMPA as well. Issuing the proposed EFP would take NMFS further down the path away from compliance with this provision of the MMPA.

3. Violations of the MBTA

We believe that the Fishery as currently authorized is violating the MBTA. Obviously, any EFP would likewise violate the MBTA. Section 2 of the MBTA provides that “it shall be unlawful at any time, by any means or in any manner,” to, among many other prohibited actions, “pursue, hunt, take, capture, [or] kill” any migratory bird included in the terms of the treaties. 16 U.S.C. § 703 (emphasis added). The term “take” is defined as to “pursue, hunt, shoot, wound, kill, trap, capture, or collect.” 50 C.F.R. § 10.12 (1997). The primary species taken by the Fishery, the northern fulmar, is included in the list of migratory birds protected by the MBTA. See 50 C.F.R. § 10.13 (list of protected migratory birds). Other MBTA protected species such as the Cassin’s auklet are also taken by the fishery. The MBTA imposes strict liability for killing migratory birds, without regard to whether the harm was intended. Its scope extends to harm occurring “by any means or in any manner,” and is not limited to, for example, poaching. See e.g., U.S. v. Moon Lake Electric Association, 45 F. Supp. 2d 1070 (1999) and cases cited therein. Indeed, the federal government itself has successfully prosecuted under the MBTA’s criminal provisions those who have unintentionally killed migratory birds. E.g., U.S. v. Corbin Farm Service, 444 F. Supp. 510, 532-534 (E. D. Cal.), affirmed, 578 F.2d 259 (9th Cir. 1978); U.S. v. FMC Corp., 572 F.2d 902 (2nd Cir. 1978).

The MBTA applies to federal agencies such as NMFS as well as private persons. See Humane Society v. Glickman, No. 98-1510, 1999 U.S. Dist. LEXIS 19759 (D.D.C. July 6, 1999), affirmed, Humane Society v. Glickman, 217 F.3d 882, 885 (D.C. Cir. 2000)(“There is no exemption in § 703 for farmers, or golf course superintendents, or ornithologists, or airport officials, or state officers, or federal agencies.”). Following Glickman, FWS issued Director’s Order No. 131, confirming that it is FWS’s position that the MBTA applies equally to federal and non-federal entities, and that “take of migratory

⁹ Even if NMFS could somehow construe the promulgation of the Pacific Offshore Cetacean Take Reduction Plan as relieving the Fishery of the April 30, 2001 ZMRG deadline, the five-year deadline contained in the MMPA for a fishery to reach ZMRG under a Take Reduction Plan has also come and gone. See 16 U.S.C. § 1387(f)(2).

birds by Federal agencies is prohibited unless authorized pursuant to regulations promulgated under the MBTA.” MBTA Section 3 authorizes the Secretary of the Interior to “determine when, to what extent, if at all, and by what means, it is compatible with the terms of the conventions to allow hunting, take, capture, [or] killing . . . of any such bird.” 16 U.S.C. § 704. FWS may issue a permit allowing the take of migratory birds if consistent with the treaties, statute and FWS regulations. NMFS however has not obtained, much less applied for such a permit authorizing any take by the Fishery (or any other fishery under the HMS FMP) or for fishing pursuant to the EFP.

NMFS cannot dispute that the Fishery kills birds protected under the MBTA. We believe that until such take is permitted, NMFS cannot lawfully allow any fishing, including that which would be authorized by the EFP, which is likely to result in death of such species.¹⁰

4. Violations of MSA

NMFS has promulgated regulations governing the issuance of EFPs. See 50 C.F.R. § 660.745. Under these regulations, NMFS may authorize fishing that would otherwise be prohibited by an FMP only in very limited circumstances. Specifically, NMFS may only authorize such fishing for “limited testing, public display, data collection, exploratory, health and safety, environmental cleanup, and/or hazard removal purposes.” 50 C.F.R. § 660.745(b). In attempting to shoehorn into this regulatory scheme a proposed EFP that would for all practical purposes eliminate the Pacific Leatherback Conservation Area, the Council claimed the 2006 EFP was for the purposes of “collecting data on the incidental take of ESA protected leatherback sea turtles to allow for informed management decisions in determining appropriate protective measures.” Such a rationale is absurd; NMFS has sufficient data on the impact of the Fishery on leatherbacks. Prior to the closure takes were occurring at a rate that NMFS determined jeopardized the species. Subsequent to the closure no takes have been documented. To kill more critically endangered leatherback sea turtles simply to “collect data” to reaffirm the well-established fact that unregulated gillnet fishing kills leatherbacks makes a mockery of any rational interpretation of the exempted fishing regulations. If the Council wishes to reopen the leatherback closure area to the Fishery, it must follow standard MSA procedures. It must not be allowed to do so under the guise of an EFP.

5. Violations of National Marine Sanctuaries Act

The proposed EFP also is in apparent violation of the National Marine Sanctuaries Act (“NMSA”) (16 U.S.C. § 1431 *et seq.*). Among the purposes of the NMSA are “to maintain the natural biological communities in the national marine sanctuaries, and to protect, and, where appropriate, restore and enhance natural habitats, populations, and ecological processes.” 16 U.S.C. § 1431(b)(3). To achieve these purposes, the NMSA requires that “Federal agency actions internal or external to a national marine sanctuary, including private activities authorized by licenses, leases, or *permits*, that are likely to destroy, cause the loss of, or injure any sanctuary resource are subject to consultation with the Secretary.” 16 U.S.C. § 1434(d)(1)(A) (emphasis added). This consultation provision requires the agency proposing the action to provide a written statement describing the action and the potential effects

¹⁰ In its response to comments on the FMP, NMFS claimed that the MBTA does not apply beyond the 3 nautical mile territorial sea and therefore it need not comply. This is simply wrong. As NMFS is or should be aware, in 2001 an Interior Solicitor’s Opinion concluded that the MBTA does in fact apply in the U.S. EEZ. NMFS’s conclusions to the contrary will not survive legal scrutiny.

on sanctuary resources no later than 45 days before the final approval of the proposed action. 16 U.S.C. § 1434(d)(1)(B). The action agency must follow the recommendations of the Secretary to avoid injury to any sanctuary resource or otherwise act to prevent and mitigate damage to such resources. 16 U.S.C. §§ 1434(d)(2), 1434(d)(3) & 1434(d)(4).

The Pacific Leatherback Conservation Area overlaps with the boundaries of three National Marine Sanctuaries, the Monterey Bay, Gulf of Farallones, and Cordell Bank National Marine Sanctuaries. The leatherback sea turtle as well as the marine mammals, seabirds and fish that will likely be caught by vessels fishing pursuant to the EFP are all resources protected by these sanctuary designations. The proposed EFP would clearly “destroy, cause the loss, or injure” these resources. We are unaware of any action by NMFS to comply with either the consultation provision of the NMSA or its substantive requirements. Absent such compliance, the proposed EFP cannot lawfully be issued.

6. Violations of Coastal Zone Management Act

The proposed EFP also is being processed in apparent violation of the Coastal Zone Management Act (“CZMA”) (16 U.S.C. § 1451 *et seq.*). CZMA requires that

[A]ny applicant for a required Federal license or permit to conduct an activity, in or outside of the coastal zone, affecting any land or water use or natural resource of the coastal zone of that state shall provide in the application to the licensing or permitting agency a certification that the proposed activity complies with the enforceable policies of the state’s approved program and that such activity will be conducted in a manner consistent with the program. At the same time, the applicant shall furnish to the state or its designated agency a copy of the certification, with all necessary information and data.

16 U.S.C. § 1456(c)(3)(A). The sea turtles, seabirds, marine mammals, and fish that will be caught and killed by vessels operating under the proposed EFP are all “natural resources” protected by California’s Coastal Management Program. Entangling and killing these animals clearly “affects” these resources triggering the consistency requirement of CZMA. We are unaware of the appropriate CZMA consistency certification in the application materials for either the 2006 or 2007 EFPs. Absent such a certification and evidence of California’s concurrence in that determination, the EFP applications must be rejected as violative of CZMA.

7. Violations of NEPA

While we believe that the proposed EFP is legally untenable because of the substantive requirements of the ESA, MMPA, MBTA, NMSA, CZMA and MSA, we also believe that the issuance of any such EFP would also violate the environmental review provisions of NEPA. NEPA’s fundamental purposes are to guarantee that: (1) agencies take a “hard look” at the environmental consequences of their actions before these actions occur by ensuring that the agency has, and carefully considers, detailed information concerning significant environmental impacts; and (2) agencies make the relevant information available to the public so that it may also play a role in both the decisionmaking process and the implementation of that decision. See, e.g. 40 C.F.R. § 1500.1. In this instance, NMFS has apparently completely reversed this process. NMFS has decided it wishes to allow drift-gillnet fishing in the area currently closed to such fishing to protect leatherback sea turtles. Such prejudging of

the outcome completely taints the NEPA process and is unlawful. See Metcalf v. Daley, 214 F.3d 1135, 1143 (9th Cir. 2000).

In addition to the flawed timing of the NEPA analysis, NMFS's most significant violation of NEPA is its failure to prepare a full Environmental Impact Statement ("EIS") for the EFP. Under NEPA:

an EIS must be prepared if "substantial questions are raised as to whether a project . . . may cause significant degradation of some human environmental factor." To trigger this requirement "a plaintiff need not show that significant effects will in fact occur," raising "substantial questions whether a project may have a significant effect is sufficient."

Idaho Sporting Congress v. Thomas, 137 F.3d 1146, 1149-50 (9th Cir. 1998) (citations omitted) (emphasis in original).

In its processing of the 2007 EFP, we assume NMFS will rely on the same infirm EA as the agency used in its analysis of the 2006 EFP.¹¹ This EA itself explicitly or implicitly acknowledged that several of the Council on Environmental Quality ("CEQ") "significance" factors triggering the need to prepare an EIS were met by the proposed 2006 EFP. See 40 C.F.R. § 1508. CEQ factors triggered by the 2006 EFP, included but were not limited to, whether the action involves "[u]nique characteristics of the geographic area such as proximity to historic or cultural resources, park lands, prime farmlands [and] ecologically critical areas," id. at § 1508.27(b)(3) (leatherback foraging areas); "[t]he degree to which the effects on the quality of the human environment are likely to be highly controversial," id. at § 1508.27(b)(4) (EA at 6: "The proposed action is likely to be controversial"); "[t]he degree to which the action may establish a precedent for future actions with significant effects or represent a decision in principle about a future consideration," id. at § 1508.27(b)(6) (the stated purpose of the EFP is to expand the Fishery); "the degree to which the action is related to other actions with . . . cumulatively significant impacts," id. at § 1508.27(b)(7) (the related Longline EFP as well as all other impacts on the leatherback throughout its range); the "degree to which the action may adversely affect an endangered or threatened species," id. at § 1508.27(b)(8) (previously found to jeopardize the leatherback); and whether "the action threatens a violation of Federal . . . law or requirements imposed for the protection of the environment." Id. at § 1508.27(b)(10) (violates ESA, MMPA, MBTA, NMSA, CZMA and MSA). Each of these factors would also apply to the 2007 EFP now under considerations. Any of these factors, standing alone, is sufficient to require preparation of an EIS. Ocean Advocates v. United States Army Corps of Engineers, 402 F.3d 846, 865 (9th Cir. 2005). For the 2007 EFP, all of these factors require the preparation of an EIS.

In sum, reliance on an EA for the 2007 EFP is completely at odds with the letter and spirit of NEPA. Rather than cast aside compliance with NEPA in its rush to accommodate the gillnet industry in time for the upcoming fishing season, if NMFS wishes to consider modifications to the Fishery it must do so only in a careful manner after preparation of an EIS. We therefore believe that the only lawful course for NMFS to follow at this point is to either select the No Action Alternative in the Draft EA, or to forgo action until the completion of a full EIS that analyzes a full range of alternatives, including alternatives, such as the complete closure of the Fishery, which may be necessary to come into compliance with existing law.

¹¹ In the Federal Register notice for the 2006 EFP NMFS stated that it would rely on the draft EA prepared for the Council's consideration of drift-gillnet management measures. 71 Fed. Reg. 39055.

II. THE 2007 LONGLINE EFP MUST BE DENIED

The Council is also considering approval and recommendation of an EFP for 2007 which would allow the entry of a longline fishing vessel into the EEZ of California for the first time. As with the Drift-Gillnet EFPs, this proposed EFP is inappropriate and unwise as a matter of science and policy. Additionally, for reasons similar to those applicable to the 2006 and 2007 Drift-Gillnet EFPs, actual issuance of the Longline EFP by NMFS would violate a suite of laws, including the ESA, MMPA, MBTA, NMSA, CZMA, MSA, and NEPA. This proposed permit must also be denied.

A. The California Longline Fishery

Pelagic longline fishing involves the use of a monofilament line that stretches from 20 to upwards of 40 miles from a vessel and is set to given depth depending on the target species. Attached to the longline are additional lines to which are attached weights and baited hooks. A single longline fishing vessel may deploy several thousand hooks at one time.

In addition to the target species, usually swordfish, tunas, and sharks, longline gear catches non-target and undersized fish, sharks, sea turtles, marine mammals, and seabirds. Sea turtles, marine mammals, and seabirds all get caught on the baited hooks of longlines, or are entangled in the lines, and being air breathers, subsequently drown. Those that do not immediately drown often suffer serious injury, such as hook ingestion, condemning them to a slower death by starvation, internal bleeding, or infection.

Longlining for swordfish within the California EEZ has been prohibited since at least 1977 when the State of California promulgated regulations declaring that “Swordfish may be taken only with hand-held hook and line or handthrust harpoon.” 14.C.C.R. § 107.¹² Pelagic longlining more generally was prohibited by Fish and Game Code § 9028 which banned hook and line fishing gear longer than 900 feet. However, swordfish and other longline-caught fish caught outside the EEZ could be landed in California if a declaration indicating such intent was filed with the Department of Fish and Game prior to departure. F&G Code § 8113.

In light of this regulatory scheme effectively prohibiting longlining in the EEZ off California, but allowing the landing of longline-caught fish from outside the EEZ, the California-based longline fleet has historically been rather small, with most U.S. longline fishing in the Pacific being based out of Hawaii rather than California. From the 1980s to late 1990s, the California-based longline fleet fluctuated in size from about two to a couple dozen boats.

However, in November of 1999, the Court in Center for Marine Conservation, et al., v. National Marine Fisheries Service, et al., (Civ. No. 99-00152 DAE)(D. Hawaii) issued an injunction restricting longline fishing under the Hawaii FMP throughout much of the North Pacific. The injunction was designed to reduce sea turtle mortality, primarily to leatherbacks from shallow-set longlining targeting swordfish. In March 2001, NMFS issued an ESA Section 7 Biological Opinion on the Hawaii FMP and

¹² A separate provision of the Fish and Game Code, Section 8561, allowed fishing for swordfish with drift-gillnet gear, subject to numerous restrictions. These restrictions were largely carried over into federal regulations with the adoption of the HMS FMP in 2004.

concluded that continued operation of the FMP would jeopardize the continued existence of the leatherback, loggerhead, and green sea turtles. NMFS subsequently modified the Hawaii FMP, virtually eliminating for several years the Hawaii-based longline fishery for swordfish.

Subsequent to the Hawaii injunction and modification of the Hawaii FMP, numerous boats from Hawaii relocated to California, with up to 48 vessels operating out of California in 2000. Due to the fact that West Coast HMS fisheries were not subject to an FMP at that time, these vessels operated subject to virtually no federal regulation. Nevertheless, the California-based longline fishery caught and killed numerous federally protected species.

From August 1995 through 1999, California-based longline fishing vessels self-reported numerous interactions with sea turtles. Thirty-five leatherback, twenty-one loggerhead, nineteen olive ridley, and twelve green sea turtles were reported caught during this period. The self-reports of bycatch from this period also report the take of over one hundred albatross, a Hawaiian monk seal and an unidentified sea lion. From October 2001 to March 2003 NMFS placed limited observers on some of the California-based longline fishing vessels. These observers, monitoring only a fraction of the fishing effort, recorded entanglements of 23 loggerhead sea turtles, 2 leatherback sea turtles, and 1 olive ridley sea turtle. In August 2003, NMFS predicted (based on prior observer data and assuming that fishing effort remained the same as in 2002) that the California-based longline fishery was entangling 174 loggerhead sea turtles (47 killed) and 53 leatherback sea turtles (14 killed) each year.

In light of the high level of sea turtle take occurring in the California-based longline fishery, and given that NMFS was unwilling to enforce the ESA, and the Council was years behind schedule in finalizing the HMS FMP and bringing the fishery under federal management, in March 2000, the Center for Biological Diversity and Turtle Island Restoration Network filed suit under the ESA seeking to force NMFS to engage in Section 7 consultation on permits issued to California-based longline fishers pursuant to the High Seas Fishing Compliance Act of 1995 (“HSFCA”)(16 U.S.C. § 5501 *et seq.*).

In August 2003, the Ninth Circuit ruled that NMFS was violating the ESA with regards to its management of the California-based longline fishery. Turtle Island Restoration Network, et al., v National Marine Fisheries Service, 340 F.3d 969 (9th Cir. 2003).

Shortly after the court ruled that the California-based longline fishery was operating in violation of the ESA, the Council and NMFS finally issued the long-overdue HMS FMP and accompanying regulations. 69 Fed. Reg. 18444 (April 7, 2004). The FMP brought the California-based longline fishery under federal management and included a provision prohibiting shallow-set longlining west of 150° W long. 50 C.F.R. § 660.712(2). However, in its biological opinion for the FMP, NMFS concluded that allowing shallow-set longlining east of 150° W long. would jeopardize the loggerhead sea turtle. NMFS therefore issued an RPA requiring the prohibition of shallow-set longlining east of 150° W long. NMFS instituted this closure pursuant to its authorities under the ESA. 69 Fed. Reg. 11540 (March 11, 2004); 50 C.F.R. § 223.206(d)(9).

Following the FMP and corresponding ESA regulations, most of the California-based longline fishers relocated to Hawaii where the formerly closed swordfish fishery was set to reopen with new management restrictions. A few vessels continued to fish intermittently from California using deep-set longlines to catch tuna outside the EEZ. However, deep-set longlining for tuna (either by California or

Hawaii-based vessels) has been suspended east of 150° W long. to address overfishing of bigeye tuna. 71 Fed. Reg. 38297 (July 6, 2006). Similarly, the Hawaii-based swordfish longline fishery has been suspended for exceeding authorized take of ESA-listed sea turtles. 71 Fed. Reg. 14416 (March 22, 2006).¹³

B. The Proposed 2007 Longline Exempted Fishing Permit

The Council is currently considering an EFP for the 2007 fishing season which would allow pelagic longlining within the EEZ off California for the first time. According to the “Situation Summary” contained in the Briefing Book for the November meeting, the Council has already effectively made its decision on the requested EFP.

The Council also preliminarily approved a second proposal for a single vessel to fish with longline gear within the West Coast Exclusive Economic Zone (EEZ), currently prohibited under the Fishery Management Plan for U.S. West Coast Fisheries for Highly Migratory Species (HMS FMP). That applicant originally proposed to start in the fall of 2006. But at the time of Council preliminary approval in March, he asked that his proposal be considered for the 2007 fishing season instead.

According to the EFP application, the “purpose of this EFP is to conduct a small scale (1 vessel) pelagic longline fishery within the West Coast EEZ to determine if longline gear is an economically viable HMS harvest substitute for drift gillnet (DGN) gear.” EFP App. at 1. The application describes the scale, location and duration of the EFP as follows.

EFP fishing will not occur within 30 miles of the coastline, or within the southern California bight. Each trip will consist of about 14 sets, approximately 14,000 hooks per trip (1,000 hooks per set x 14 sets). This EFP proposes 4 trips (56,000 hooks) during the period September thru December.

EFP App. at 6.

C. Violations of Law

In our discussion of the Drift-Gillnet EFPs above, we described how both the existing Drift-Gillnet Fishery and any proposed EFP violate numerous statutory provisions. We believe that the proposed Longline EFP is similarly infirm. Rather than repeat the statutory background for each violation, below we briefly described the likely violations of law associated with the processing and issuance of the proposed Longline EFP. Given these significant and largely insurmountable legal problems with the proposed EFP, it must be denied.

¹³ While the closures of the deep-set longline fishery east of 150° W long., as well as of the Hawaii shallow-set longline fishery are both theoretically temporary measures, given the status of bigeye tuna and the dubious success of the mitigation measures for the Hawaiian fishery, we are doubtful that either of these fisheries can lawfully reopen.

1. Violations of the ESA

As with the Drift-Gillnet EFP, we believe issuance of the proposed Longline EFP would violate Sections 2, 7, and 9 of the ESA. Longline fisheries are known to hook, entangle, and kill ESA-listed sea turtles, marine mammals, and seabirds. As discussed above, NMFS itself has acknowledged that any further mortality to the critically endangered Pacific leatherback sea turtles would jeopardize the species. Until and unless technology is devised that eliminates the risk of injury or mortality to leatherbacks we cannot support any pelagic longline fishing in the Pacific. Such an approach is also consistent with the call put out by over 1000 international scientists from more than 100 countries and 300 non-governmental organizations from 62 countries calling on the U.N. to institute an immediate moratorium on pelagic longline fishing in the Pacific until measures can be put in place that eliminate such bycatch. See http://www.seaturtles.org/press_release2.cfm?pressID=261

In addition to the Longline EFP's impacts on the leatherback sea turtle, fishing pursuant to such a permit also puts at risk the loggerhead sea turtle. NMFS instituted the closure of shallow-set longlining east of 150° W long. in part to protect the Pacific loggerhead sea turtles. 69 Fed. Reg. 11540 (March 11, 2004); 50 C.F.R. § 223.206(d)(9). Given the take of loggerheads increases in El Nino years, and NOAA has declared El Nino conditions will continue to develop into 2007, the odds of a vessel fishing pursuant to the Longline EFP taking loggerheads are greatly increased. See http://www.cpc.ncep.noaa.gov/products/analysis_monitoring/enso_advisory/

The Longline EFP also puts at risk several species of ESA-listed marine mammals. Both sperm whales and humpback whales have been observed entangled in identical fishing gear used by Hawaii-based pelagic longlining vessels. Killer whales are likewise known to interact with and become entangled in longline fishing gear. The Southern Resident population of killer whales (*Orcinus orca*) was recently listed as endangered, and is known to seasonally occur in the range of the proposed EFP. Additionally, Steller sea lions and Guadalupe fur seals also may overlap with the proposed EFP and are subject to entanglement. In order to issue the proposed EFP, NMFS not only needs to undergo Section 7 consultation on each of these marine mammals, but also must obtain take authorization pursuant to both the ESA and Section 101 of the MMPA. We do not believe the EFP can meet the legal standards for such take authorization under either statute.

The issuance of the Longline EFP would likely violate the ESA based on impacts to the Short-tailed albatross. Self-reports of seabird interactions with the former California-based longline fishery acknowledged take of 100 albatross of various species. Dozens of albatross were also observed taken in the handful of trips with actual observer coverage. It is therefore reasonable to assume that Short-tailed albatross are likely to be entangled and killed if pelagic longline fishing is allowed off of California. Given the perilous status of the Short-tailed albatross, we do not believe that any additional take authorization for the species can be lawfully granted.

Finally, given the closure of shallow-set longlining east of 150° W long. was promulgated pursuant to NMFS's authorities under the ESA, rather than under the MSA, we do not see how an EFP issued under the MSA could lawfully be issued in direct contravention of ESA regulations prohibiting such fishing. See 69 Fed. Reg. 11540 (March 11, 2004); 50 C.F.R. § 223.206(d)(9). If the permit applicant for the EFP wishes to fish in contravention of ESA regulations, the applicant must also apply for a permit under Section 10 of the ESA. Our understanding is that the applicant has not done so.

Moreover, we do not see how the standards of Section 10 could possibly be met by the proposed activities. The EFP must be rejected as inconsistent with the intent and letter of the ESA.¹⁴

2. Violations of the MMPA

The Longline EFP cannot be issued without also violating the MMPA. As discussed above, take of ESA-listed marine mammals must be authorized under both the ESA and MMPA if it is to lawfully occur. We do not believe that the necessary “negligible impact” finding under the MMPA can lawfully be made for the ESA-listed species likely to interact with pelagic longline gear deployed in the EEZ off California. Therefore, no such permit can be issued and any take will be in violation of both the ESA and MMPA.

For non-ESA listed marine mammals, take in violation of the MMPA is also likely to occur. Both the Hawaii and Atlantic longline fisheries are categorized as Category 1 fisheries on the 2006 List of Fisheries, while the remnant California-based deep-set longline fishery is listed as a Category 2 fishery. Only the Atlantic longline fishery has a take reduction team to address marine mammal bycatch. It would be unwise and unlawful to allow an additional marine-mammal killing fishery to operate without a take reduction team prior to at least initiating the take reduction process for these other two longline fisheries. Additionally, a Category 1 or 2 fishery is by definition taking marine mammals at levels above ZMRG. Given the statutory deadline for reaching ZMRG has already passed, we do not believe that issuing an EFP that would result in take of stocks of marine mammals where mortality and serious injury are already above ZMRG is consistent with the ZMRG mandate of the MMPA.

The most likely species of non-ESA listed marine mammals to be taken by fishing pursuant to the Longline EFP are Risso’s dolphins and short-finned pilot whales. Take of pilot whales from the Drift-Gillnet fishery is already near PBR, and is of course well over ZMRG. Take of even a single pilot whale by the Longline EFP would put mortality and serious injury to the stock over PBR. Pilot whales are the most frequent marine mammal species encountered by the Atlantic longline fishery. There is no reason to believe that they would not also be taken by a similar fishery off California. Until and unless, a take reduction plan is in place that reduces pilot whale mortality to ZMRG, NMFS cannot authorize any fishing activity through an EFP which is likely to result in additional take of the species.

3. Violations of the MBTA

As explained above with reference to Drift-gillnets, the MBTA applies to U.S. fisheries that take migratory birds. It is undisputed that longline fishing kills seabirds protected by the MBTA. Fishing pursuant to the Longline EFP runs the significant risk of hooking and killing all three species of North Pacific albatross. Each of these species is recognized by the IUCN as imperiled. The most likely species to be killed by the EFP is the Black-footed albatross, a species under petition for listing under the ESA. Absent a permit under the MBTA authorizing the take of the Black-footed albatross and other migratory birds, the EFP cannot lawfully be issued.

¹⁴ All other violations of the ESA by the Longline EFP are substantially similar to those of the Drift-Gillnet EFPS and therefore will not be repeated here.

4. Violations of MSA

The proposed EFP is requested to “determine if longline gear is an economically viable HMS harvest substitute for drift gillnet (DGN) gear.” EFP App. at 1. This does not meet the regulatory criteria for issuance as it does not fall within the categories enumerated at 50 C.F.R. § 660.745. Moreover, given there is no way a longline fishery using current technology can lawfully operate in the EEZ off California, such a fishery is not “viable” by definition. NMFS cannot issue the permit.

5. Violations of National Marine Sanctuaries Act

The proposed Longline EFP states that “EFP fishing will not occur within 30 miles of the coastline, or within the southern California bight.” This language is vague enough that it does not completely foreclose fishing within designated marine sanctuaries. Any EFP issued must include such geographical limitations so as to explicitly preclude its operation with any National Marine Sanctuary. To do otherwise would violate the procedural and substantive provisions of the NMSA as discussed above with reference to the Drift-Gillnet EFPs.

6. Violations of Coastal Zone Management Act

The proposed Longline EFP suffers from the same legal deficiencies under CZMA as the Drift-Gillnet EFPs discussed above. The Council and NMFS must reject the proposed EFP until and unless compliance with CZMA is assured.

7. Violations of NEPA

While we believe that the proposed Longline EFP would be legally untenable because of the substantive requirements of the ESA, MMPA, MBTA, NMSA, CZMA and MSA, we also believe that the issuance of any such EFP would violate the environmental review provisions of NEPA because there is no indication that the Council or NMFS has prepared a full EIS as required by law. The factors triggering the EIS requirements of NEPA are discussed in the Drift-Gillnet section above. These same factors are implicated by the Longline EFP. NMFS and the Council must prepare an EIS, and solicit public review and comment on it before taking any further action with regard to the Longline EFP.

III. CONCLUSION

As the above makes clear, we believe that issuance of either the Drift-Gillnet EFP or the Longline EFP would violate numerous statutory provisions, including the ESA, MMPA, MBTA, MSA, NMSA, CZMA, and NEPA. We therefore recommend the Council and NMFS reject each of the proposed EFPs. Thank you for your concern

Sincerely,
/s/
Brendan Cummings
Ocean Program Director
Center for Biological Diversity

cc

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November 6, 2006

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RE: Agenda Item C-3: EFP Application for Longline Fishery

Dear Mr. McIsaac, Mr. Hansen and members of the Council:

On behalf of the undersigned organizations we are writing to oppose the issuance of a proposed exempted fishing permit (EFP) for a longline fishery within the US West Coast Exclusive Economic Zone (EEZ). The proposed EFP will undermine successful conservation measures protecting the critically endangered leatherback sea turtle, valuable fish stocks, and other marine life by allowing this non-selective gear type into areas where it is currently prohibited.

Pelagic longlining is a fishing method with a low degree of selectivity that consists of a main line up to 60 miles in length from which over a thousand hooks can be deployed that are left to soak for up to 10 hours. As a result a significant part of a pelagic longline fishery is bycatch that is caught on the hooks or entangled in the lines. Bycatch species of longline fishing include critically endangered leatherback sea turtles, loggerhead sea turtles, whales, dolphins, seals, sea lions, sea birds, sharks, billfish, and other fish species. This bycatch is either thrown back, often dead or injured, or alternatively commercialized, and places additional pressures on protected species and already depleted fisheries.

Due to concerns of the effects of such an indiscriminate fishing method on the marine environment, pelagic longline fishing has been prohibited within 200 miles of the California and Washington coast for over 15 years. In March 2004, this ban was extended to the entire West Coast Economic Exclusive Zone (EEZ) for all pelagic longlining, and to the high seas for West Coast-based shallow-set swordfish pelagic longlining. These important conservation measures have been successful in helping to protect the target and non-target species caught or entangled by this non-selective gear type. The detrimental effects of pelagic longlining on marine species have been demonstrated by the US

domestic Atlantic and Hawaii-based longline fisheries, both of which have a long history of closures and regulations due to bycatch problems and the depletion of target species.

We note that although the applicant initially requests an EFP for a single longline vessel, the applicant also proposes the possibility of expanding and developing this longline fishery within the US West Coast EEZ to include up to 70 or more vessels. Given the above outlined concerns we believe the development and expansion of such a pelagic longline fishery within the US West Coast EEZ would be inappropriate. The EFP would weaken successful conservation measures for endangered sea turtles and other protected species, place increased pressure on already over fished and depleted fish stocks, and undermine the health and integrity of the marine ecosystem. Therefore, we respectfully request that the PFMC rejects the EFP application for a pelagic longline fishery.

Sincerely,

Karen Steele
Save the Leatherback Campaign Coordinator
Sea Turtle Restoration Project

Sharon B. Young
Marine Issues Field Director
Humane Society of the United States

Monica Engebretson
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Robert Winter
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Larry M. Brown
Owner
Brown & Associates

The following two letters, previously sent to Rodney McInnis, were submitted to the Council as part of public comment by Karen Steele, Save the Leatherback Campaign Coordinator, Sea Turtle Restoration Project.

Rodney R. McInnis
Regional Administrator, Southwest Region
National Marine Fisheries Service
501 West Ocean Blvd., Suite 4200
Long Beach, CA 90802-4213.

August 9, 2006

RE: EFP Application for the Drift-Gillnet Fishery (I.D. 070506D)

Dear Mr. McInnis:

On behalf of the undersigned organizations and our more than 15 million combined members and activists worldwide, we are writing to oppose the issuance of a proposed exempted fishing permit (EFP) to expand the swordfish/thresher shark drift-gillnet fishery into current time/area closures. The proposed EFP will undermine successful conservation measures protecting critically endangered leatherback sea turtles and other marine wildlife by allowing drift-gillnets to be used in areas along the California and Oregon coastline in which this highly indiscriminate gear type is currently prohibited.

The California/Oregon drift-gillnet fishery has a long history of bycatch problems. According to observer data from the National Marine Fisheries Service (NMFS), the fishery has discarded more than half of its fish catch each year for the past 15 years. Those discards include recreationally valuable and depleted species, such as striped marlin, as well as many fish species that have no active management measures, harvest caps or even stock assessments. The fishery also entangles and kills protected and endangered species, including dolphins, whales and sea turtles.

Since 2001, portions of the California and Oregon coastline have been closed to drift-gillnet fishing from August 15th through November 15th to protect endangered leatherback sea turtles which seasonally inhabit these waters. Scientists warn that unless fishing pressure is significantly reduced, leatherback turtles whose nesting population has plummeted from 91,000 in 1980 to fewer than 5,000 in 2002, will likely become extinct. Since the time/area closure was instituted, there have been no observed takes of leatherbacks in the drift-gillnet fishery. Satellite tracking data affirms that the existing closed area functions as an important foraging spot for migratory leatherback turtles. We do not believe there is sufficient evidence to justify rolling back these critical protective measures to allow increased drift-gillnet fishing.

Given the success of the closure, it is wholly inappropriate to weaken protections and allow drift-gillnet vessels in areas where they are likely to entangle and kill protected and critically endangered marine species. The existing time/area closures comply with domestic and international conservation mandates and are consistent with the best available scientific information. The EFP will compromise sea turtle conservation efforts and undermine the health and integrity of the marine ecosystem. Therefore, we respectfully request that NMFS reject the exempted fishing permit application.

Sincerely,

USA

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Tethys Research Institute

August 10, 2006

Mr. Rodney R. McInnis
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501 West Ocean Blvd., Suite 4200
Long Beach, CA 90802-4213

RE: EFP Application for the Drift-Gillnet Fishery (I.D. 070506D)

Dear Mr. McInnis:

On July 11, 2006 the National Marine Fisheries Service (NMFS) announced their preliminary determination that an application for an exempted fishing permit (EFP) for the California/Oregon Drift Gillnet Fishery warrants further consideration. The EFP, if issued, will undermine conservation measures protecting the critically endangered leatherback sea turtle as well as seabirds, marine mammals, sharks and other fish by allowing drift-gillnets to be used in areas along the California and Oregon coastline in which this destructive gear type is currently prohibited.

Since 2001, areas north of Point Conception to an intersect with the Oregon coast and out beyond the Exclusive Economic Zone (EEZ) to 129° West longitude have been closed to drift-gillnet fishing from August 15th through November 15th in order to protect leatherback sea turtles which seasonally inhabit these waters. The proposal under consideration by NMFS would allow drift-gillnets back into the seasonally closed area when leatherbacks are present. Recent satellite tracking data affirms that the current closures reflect critical foraging areas for the migratory leatherback populations.

The leatherback sea turtle (*Dermochelys coriacea*) tops the list of species being driven to the brink of extinction in the Pacific by the global expansion of industrial fishing. The Pacific leatherback turtle's nesting population has plummeted from 91,000 in 1980 to fewer than 5,000 in 2002. Leatherback sea turtles are listed as endangered under the U.S. Endangered Species Act and critically endangered by the World Conservation Union's (IUCN) red list of threatened species. In 2006, the IUCN's Marine Turtle Specialist Group's "State of the World's Sea Turtle" Report identified leatherbacks in the Pacific as the leading issue in Global Sea Turtle Conservation and that conservation measures are more urgently needed in the Pacific.

Leading scientists warn that unless immediate and significant steps are taken, the leatherback sea turtle, which has inhabited the oceans since the time of the dinosaurs 100 million years ago, will soon become extinct. Moreover, the plight of the leatherback sea turtle, the world's largest and most wide-ranging sea turtle, may foreshadow a host of extinction events that may significantly alter the oceans' ecosystem functions.

The current drift-gillnet closure has provided a successful working balance between the interests of fishers and the urgent need to protect the critically endangered leatherback

sea turtle. During the drift-gillnet closures, this fishery, which targets swordfish, tuna and sharks, had no recorded takes of leatherback sea turtles. Such successful time/area closures, which eliminate the overlap of drift-gillnet fishing gear with the presence of leatherback sea turtles, should remain in place in the Pacific where the leatherback is at the greatest risk of extinction.

The existing time/area closures illustrate compliance with domestic and international conservation mandates and are consistent with the best available scientific information.

We, the undersigned, urge the National Marine Fisheries Service to disapprove the EFP application for the drift-gillnet fishery and maintain the current time/area closures that prohibit the deployment of drift-gillnet fishing gear in areas off the California and Oregon coasts when leatherback sea turtles are likely to inhabit these waters.

Sincerely,

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As of August 7th, 224 scientists from 39 countries have signed this letter. Affiliation for identification purposes only. Listing of affiliation does not imply endorsement by that institution.

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October 26, 2006

Mr. Donald McIsaac
NOAA Pacific Fishery Management Council
7700 NE Ambassador Place, Suite 200
Portland OR 97220

RECEIVED
OCT 30 2006
PFMC

Dear Donald,

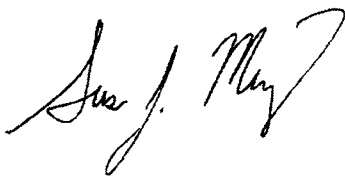
As a Friend of the Pacific, you're aware that all is not perfectly well with the immensely rich and diverse ecosystem off the West Coast. For instance, all turtles and most species of large whales are still considered threatened or endangered. One of the main activities that threatens their continued survival or ability to rebound is fishing with indiscriminate gears.

The West Coast fishery most deadly to these animals is the drift gillnet fishery for swordfish, tuna and thresher shark. Unfortunately a proposal is currently in front of the National Marine Fisheries Service to re-open the fishery in an area closed five years ago to protect one of the most endangered animals in the sea, the Pacific leatherback sea turtle. As of this writing, the decision had not been publicly made, but all indications are that the proposal is seriously being considered.

Today, Oceana released a report "Net Casualties" that further expands on turtle casualties nationwide – nearly 10,000 are known to be killed and more than 334,000 injured. To see a full copy of the report please visit <http://www.oceana.org/index.php?id=1684>.

We also hope you find the attached OpEd, which appeared in a recent commentary section of the Sunday Monterey Herald, interesting, informative, and useful in your efforts to help conserve the Pacific coast. Please spread the word to help end the consideration of reopening the Pacific Leatherback Conservation Area, for 2006 and for the years to come.

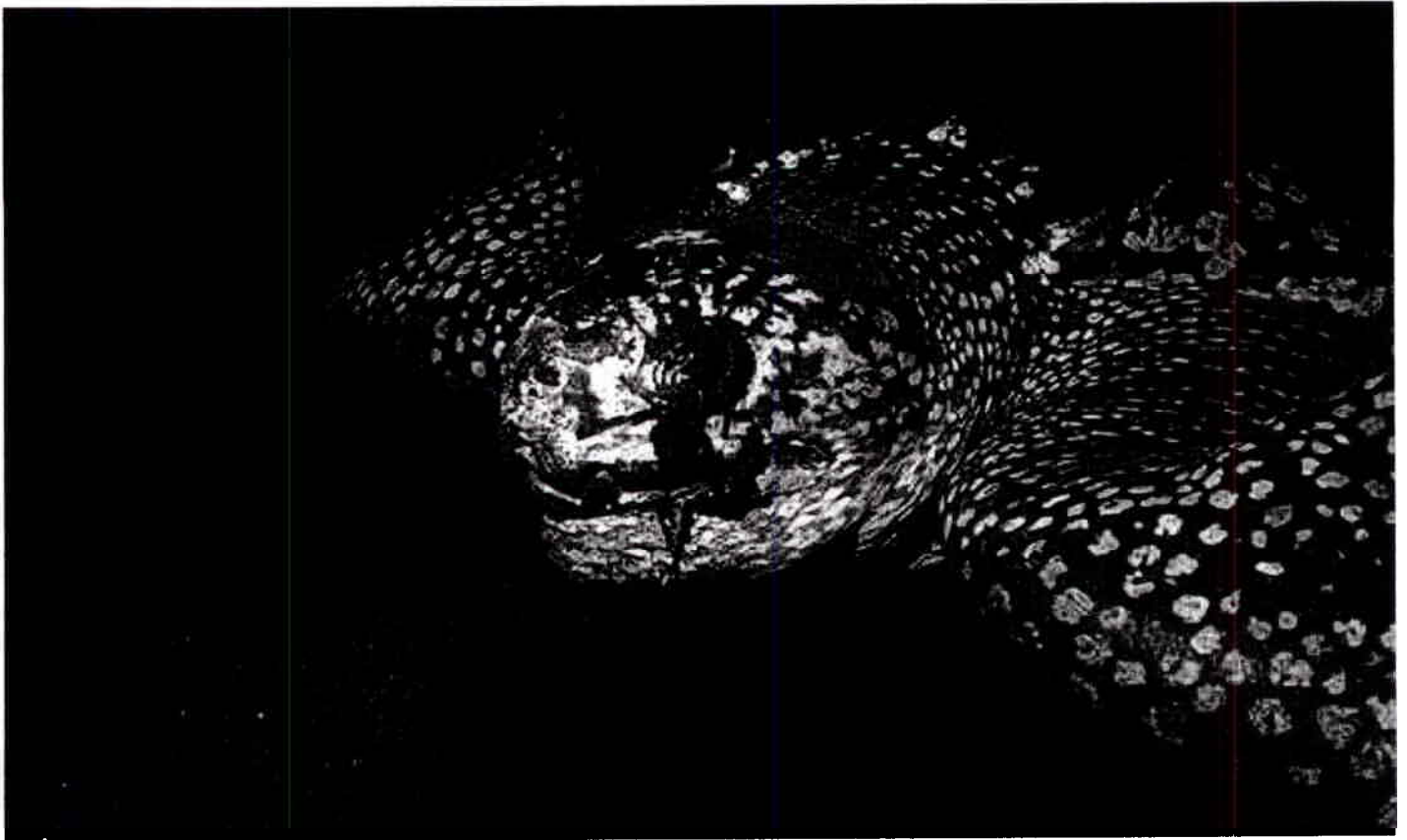
Sincerely,



Susan Murray
Acting Director, Pacific

Enclosure

KEEP AREA CLOSED FOR TURTLES' SAKE



BARBARA L. JOHNSTON/ MCT

By **SANTI ROBERTS**
Guest commentary

Pacific leatherback sea turtles have survived on this planet for nearly 100 million years. They have endured ice ages, major volcanic events, meteor impacts, and most every predator in the sea. However, they, and other endangered marine life, cannot survive being caught and drowned in drift gillnets.

Knowing this, in 2001, the National Marine Fisheries Service put into place a three-month drift gillnet closure in a large area off the coast of California that would allow leatherback turtles to safely migrate and feed in U.S. waters, including Monterey Bay. The closure —the Pacific Leatherback Conservation Area — has been so effective that no leatherback turtles have been reported drowned in the entire fishery since protections were put in place.

So, why then is the Fisheries Service now considering reopening this area year round to up to 30 drift gillnet vessels?

It's not because the gear has improved. Drift gillnets remain as destructive as they were prior to the 2001 closure. In addition to endangered turtles, dolphins and porpoises, seals and sea lions, and even large whales drown in this fishery. Between 1996 and 2002, more than 50 turtles, 700 seals and sea lions, over 1,000 dolphins and porpoises, and 35 large whales were killed.

These air-breathing animals often die when caught in these huge nets, long enough to loop around a football

field six times. In fact, drift gillnets are so harmful to ocean life that they are banned on the high seas and in the waters of several states, including Washington, Georgia and Florida. The proposal before the Fisheries Service would open up the protected area as long as there are fishery observers on each vessel and caps on the number of leatherbacks and some whale species that can be killed. These controls will help limit the number of leatherback turtles and certain large whales killed.

Unfortunately, with these critically endangered species, the survival of every single one counts. What is more, there will be no caps on the number of other sea turtles, fin whales, gray whales, elephant seals, California sea lions and dolphins killed. Nor will there be any caps on the amount of fish simply discarded, dead and dying, which in this fishery amounts to more than is kept.

It is also not because of economics; the proposed reopening is not expected to provide significant economic benefit. The industry folks argue that the closed area has directly led to the decline in the drift gillnet fishery. But this fishery was waning long before the closure was implemented, with the number of active vessels dropping by half between 1994 and 2000. The Fisheries Service has concluded that the "economic impact of an increase in (drift gillnet) effort is likely to differ little from zero." In other words, there is no predicted economic gain from this proposed opening.

The proposed opening therefore makes no sense for either scientific or economic reasons. It also makes no sense for political reasons, as the public has shown overwhelming opposition. Further, it would seem to fly in the face of the recent Governors' Agreement on Ocean Health, where the states of California, Oregon and Washington have explicitly recognized the need for addressing the declining health of our ocean and the need to sustain marine wildlife populations.

In California, we pride ourselves on being progressive in ocean management. If the Fisheries Service approves the opening of the Pacific Leatherback Conservation Area, it will be a hugely irresponsible step backward. Just as we are protecting areas in our state waters through the Marine Life Protection Act, we would be re-opening areas in our federal waters to a wasteful and destructive way of fishing.

The question ought not to be how do we open this area, but rather, how can we catch swordfish, tuna and thresher shark without sacrificing so many other marine creatures? If we don't take the time to find that answer, Pacific leatherback sea turtles may go extinct on our watch.

This was written by Larry Crowder, director of the Duke Center for Marine Conservation at Duke University; Michael Sutton, director of the Center for the Future of the Oceans at the Monterey Bay Aquarium; Cindy Walter of Passionfish restaurant in Pacific Grove; and Santi Roberts, California project manager for Oceana.

What do you think? Those concerned about the proposed reopening should fax comments to William Hogarth, director of NOAA Fisheries Service, at (301) 713-2384, or e-mail bill.hogarth@noaa.gov or Jim Lecky at jim.lecky@noaa.gov





November 7, 2006

Mr. Donald McIsaac
Executive Director, Pacific Fishery Management Council
7700 NE Ambassador Place, Suite 200
Portland, OR 97220-1384

RE: Agenda Item C.3 - 2007 Shallow Set Longline Exempted Fishing Permit Application

Dear Mr. McIsaac and the Council:

The Ocean Conservancy submits the following comments opposing the exempted fishing permit (EFP) application to reestablish a Pacific longline fishery. Pelagic longline fishing has been banned within 200 miles of the California coast for well over a decade, and in March 2004 this ban was extended to the entire west coast EEZ for all pelagic longlining, and to the high seas beyond the EEZ for west coast-based shallow-set pelagic longlining. The proposal currently before the Pacific Fishery Management Council ("Council") for consideration would permit an "exempted" longline fishery within the EEZ off of California. We do not believe there is sufficient evidence to justify allowing a renewed longline fishery. Therefore, we urge the Council and the National Marine Fisheries Service (NMFS) to reject the longlining EFP.

We are concerned that reintroducing pelagic longlining off the U.S. west coast poses a grave threat to endangered and protected species including marine mammals, seabirds and Pacific loggerhead and leatherback populations. In recent decades, incidental and intentional take throughout the Pacific has affected sea turtles to the point that some populations are hovering on the brink of extinction. Fisheries mortality has been especially problematic for loggerheads and leatherbacks, with overall nesting population reductions in excess of 80 percent. Although the World Conservation Union (IUCN) has not yet evaluated loggerheads regionally, Pacific loggerheads, like Pacific leatherbacks, will qualify as "Critically Endangered" on the Red List of Threatened Species, based on nesting population reductions of 80 percent or more in the last three generations. Both loggerheads and leatherbacks have suffered precipitous declines in less than three generations. The two major loggerhead populations in the Pacific are found in Japan and Australia, with less than 1,000 and 300 turtles, respectively, nesting annually. While the status of the leatherback has been the focus of much attention in recent years, conservation protection and support is as critical for the loggerhead as for the leatherback. According to the latest surveys, there are more nesting leatherbacks in the Pacific than nesting loggerheads.

The Pacific longline fisheries out of California and Hawaii were both previously found to cause jeopardy to leatherback and loggerhead sea turtle populations under the Endangered Species Act

(ESA). Consequently, a moratorium on pelagic longline fishing east of 150 degrees West longitude was imposed by NMFS in 2004 to guard against jeopardy to loggerheads even after the Pacific Council banned longlining west of 150 degrees West longitude. These far reaching closures demonstrate just how vulnerable threatened and endangered sea turtles are to the impacts of fishing. As the Council is well aware, the Hawaii-based shallow-set longline fishery was closed for a number of years because of its impacts on sea turtles. It was allowed to re-open in 2004 subject to the conditions that only large 18/0 circle hooks be used, that an effort cap be established to control the number of longline sets, and that a hard cap on turtle take be established to close the fishery if it approached the limits of its take authorization. The annual hard cap on take of loggerheads was reached in March of this year, after the fishery operated for less than three months. See 71 Fed. Reg. 14824 (March 24, 2006).

The Ocean Conservancy has repeatedly called for a comprehensive evaluation of the impacts of all U.S. longlining in the Pacific on imperiled sea turtle populations, yet that essential step toward understanding the effects of Pacific longlining on Pacific turtle populations still has not occurred. It would be inappropriate, to say the least, to consider allowing the capture of turtles by a California based fishery – EFP or otherwise – when the Hawaii fishery was closed for exactly this reason just 6 months ago. The Hawaii and California based fleets fish in the same manner, often in the same area, and catch the same turtles. See 69 Fed. Reg. 11540, 11543 (March 11, 2004) (preamble to final rule closing Pacific longline fishery east of 150 degrees West long.). In addition, the fleets consist of many of the same boats as they have had a history of moving back and forth to avoid the closures to protect sea turtles that have alternated between Hawaii and California in recent years. A standard “cumulative effects” analysis is not enough in this case where the fisheries often act as a single unit.

The Council also must consider the collective impact of the proposed longlining EFP along with the currently pending drift gill-net EFP. With only one week remaining for the 2006 permit period, NMFS has yet to issue a final approval for the drift gillnet EFP. Presumably, the applicant will be seeking approval of the drift gillnet EFP for 2007, and managers will be faced with two new exempted fishing permits coming into effect at the same time, and the additional impacts for Pacific turtles that they will entail. As such, we urge the Council to proceed with caution as far as taking any steps to reestablish longlining on the California coast. If the Council does approve the EFP, it should ensure that it includes stringent conservation measures that will minimize the impact of the fishery on loggerhead and leatherback sea turtles, including requiring the use of 18/0 circle hooks, 100% observer coverage, and hard caps on both fishing effort and turtle take.

To the extent that Pacific Council is interested in transitioning away from destructive gill-net fishing to a more selective gear type in order to target swordfish and other highly migratory fish stocks, we recommend that the Council and NMFS reframe this issue as a broader policy discussion, rather than approaching it in piecemeal fashion through the exempted fishing permit process. Current longline closures have provided a successful working balance between the interests of fishers and the urgent need to protect critically endangered leatherback and loggerhead sea turtles. It would be irresponsible to re-establish the longline fishery without the

necessary conservation safeguards and a thorough environmental impacts analysis. The EFP application currently under review is not predicated on a comprehensive assessment of sea turtle populations and fishery interactions and does not adequately consider the associated impacts on endangered and protected species and the marine ecosystem. Therefore, we respectfully request that the PFMC and NMFS reject the proposal to reestablish the Pacific longline fishery.

Sincerely,



Meghan Jeans
Pacific Fish Conservation Manager
The Ocean Conservancy



Dr. Wallace J. Nichols
Senior Scientist
The Ocean Conservancy

Dear Mr. Hansen and Dr. McIsaac,

I support the continued closure of the Pacific Leatherback Conservation Area to drift gillnets. Since the closure, not a single leatherback sea turtle has been caught and killed in the entire fishery.

As you consider the Drift Gillnet Exempted Fishing Permit for 2007 and beyond, please remember the critically endangered Pacific leatherback sea turtle may be within 30 years of extinction. It would be irresponsible to dissolve the conservation measures currently in place to protect them.

Sincerely,

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Date: 11/3, 2006

RECEIVED

NOV 07 2006

PFMC

Mr. Don Hansen, Chair
Dr. Donald McIsaac, Director
Pacific Fishery Management Council
7700 NE Ambassador Place, Suite 101
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For more information, please visit:
WWW.OCEANA.ORG



Photo: hatchling Pacific Leatherback sea turtle; by Suzanne Livingstone

As of the close of the supplemental public comment deadline (5:00 p.m., November 6, 2006) the Council had received 84 postcards with this message.



As of the close of the supplemental public comment deadline (5:00 p.m., November 6, 2006) the Council had received more than 220 emails with a message opposing the issuance of the exempted fishing permit for the drift gillnet fishery because of concern for the impact on leatherback sea turtles, marine mammals, and other protected species. A representative sample of the email messages is included here. All of the emails may be accessed on the Council's website at <http://www.pcouncil.org/bb/2006/bb1106.html#highly> as Agenda Item C.3.c, Supplemental Public Comment.

Subject: Pacific Leatherback Conservation Area
From: "Jennifer Spiller" <jspiller@mbayaq.org>
Date: Mon, 30 Oct 2006 16:27:56 -0800
To: <pfmc.comments@noaa.gov>

I want this area to remain safe for turtles by keeping the Pacific Leatherback Conservation Area closed. This closure should remain in place far into the future -- not just for 2006. Thank you for listening.

Jennifer Spiller
Membership Assistant
Monterey Bay Aquarium
1800-840-4880
(831) 648- 4926
jspiller@mbayaq.org

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Subject: the turtles

From: "priya bhikha" <laugh.a.holic101@hotmail.com>

Date: Tue, 31 Oct 2006 15:37:24 -0800

To: pfmc.comments@noaa.gov

BCC:

hi. my name is priya and im just a teen but i understand the importance of sealife, as u may not. sea turtles...they've been around for a pretty long time. but if you continue to allow their population to decline, they wont be around anymore...will they? they are gentle creatures. what did they do to deerve this? probably nothing except for laying their eggs on beaches. but that hardly violates any law. death sentence is cruel and disgusting. evil men get condemned to this punishment. but the sea turtles...what the hell did they do?

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Subject: Agenda Item C. 3

From: "Margaret Fawcett" <mgfawcett@earthlink.net>

Date: Tue, 31 Oct 2006 15:03:20 -0800

To: <pfmc.comments@noaa.gov>

Dear Pacific Fishery Management Council:

This email is to urge you to keep closed, during the 3 month migration period of Pacific leatherback turtles, the fishery off the coast of California and Oregon to the use of drift gillnets. This ancient specie continues to need protection and with their numbers so low, the world cannot afford to lose to drowning even one such turtle. Your willingness to keep this area closed during this migratory three month period has helped protect this critically endangered specie as well as all the other mammals which also can die from drowning from drift gillnets.

Please once again, and for subsequent years until the species level is no longer endangered or until drift gillnets have been modified so as to no longer be a threat, close this area for at least this 3 month migratory period.

Thank you for your consideration of my request.

Sincerely,

Margaret Fawcett
72 Cypress Place
Sausalito, CA 94965

Subject: Agenda Item C.3. Drift Gillnet FMP Comment

From: "Beth Cataldo" <bcataldo@ccsf.edu>

Date: Tue, 31 Oct 2006 15:02:33 -0800

To: <pfmc.comments@noaa.gov>

To Pacific Fishery Management Council member:

I am writing to voice my concern about the proposal to reopen areas on the California coastline to gillnet vessels. When the National Marine Fisheries Service put into place a three-month drift gillnet closure in a large area off the coast of California it allowed leatherback turtles to safely migrate and feed in U.S. waters. The closure -- the Pacific Leatherback Conservation Area -- was very effective.

I do not understand why the Fisheries Service is now considering reopening this area year round to up to 30 drift gillnet vessels.

As a volunteer at the Marine Mammal Center in Sausalito, California, I have seen marine mammals encased in gillnets. It is clearly a painful death for these animals caught inside netting so strong that it can cut into their braincase. Once they are caught, there is no way out. I also have seen photos and heard stories from marine biologists about the extensive damage that gillnets have done to pelagic birds, harbor porpoises, dolphins, seals and whales.

We have evolved away from using gillnets. The fishing industry has adapted to these changes. I urge National Marine Fisheries Services to keep with the current policy.

Thank you,

Beth Cataldo
692 8th Ave.
San Francisco, CA 94118

Subject: Pacific Leatherback Conservation Area Closure

From: Starry Sprenkle <starry_s2002@yahoo.com>

Date: Tue, 31 Oct 2006 14:42:53 -0800 (PST)

To: pfmc.comments@noaa.gov

Dear Pacific Fishery Management Council:

The struggles that migratory species like the Pacific Leatherback turtle face to survive are astounding. If we do not do our part to protect them off of the coasts of the US, how can we expect poorer countries to protect them?

Please keep California and Oregon waters safe for turtles by keeping the Pacific Leatherback Conservation Area closed during the migratory season for the turtle, as it has been successfully for the last years. It is not a permanent closure of the fishery, just a temporary one every year. The fishermen can find ways to cope with this closure and secure other income, or increase the price of their goods.

The drift gillnet fishery is simply not compatible with the survival of this species. It is far too destructive. As an ecologically vital step in the conservation of this species, this closure should remain in place far into the future -- not just for 2006. Please don't allow all sides to waste time and energy year after year debating this-- make a multiple year closure, to encourage fishermen to find permanent solutions elsewhere.

Sincerely,

Starry Sprenkle
Salinas/Monterey, CA

Starry Dawn Sprenkle

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Subject: Pacific Leatherback Conservation Area Closure

From: Starry Sprenkle <starry_s2002@yahoo.com>

Date: Tue, 31 Oct 2006 14:42:53 -0800 (PST)

To: pfmc.comments@noaa.gov

Dear Pacific Fishery Management Council:

The struggles that migratory species like the Pacific Leatherback turtle face to survive are astounding. If we do not do our part to protect them off of the coasts of the US, how can we expect poorer countries to protect them?

Please keep California and Oregon waters safe for turtles by keeping the Pacific Leatherback Conservation Area closed during the migratory season for the turtle, as it has been successfully for the last years. It is not a permanent closure of the fishery, just a temporary one every year. The fishermen can find ways to cope with this closure and secure other income, or increase the price of their goods.

The drift gillnet fishery is simply not compatible with the survival of this species. It is far too destructive. As an ecologically vital step in the conservation of this species, this closure should remain in place far into the future -- not just for 2006. Please don't allow all sides to waste time and energy year after year debating this-- make a multiple year closure, to encourage fishermen to find permanent solutions elsewhere.

Sincerely,

Starry Sprenkle
Salinas/Monterey, CA

Starry Dawn Sprenkle

Want to start your own business? Learn how on [Yahoo! Small Business.](#)

Subject: Gil net fishing
From: "Stacy Wilson" <wilson.stacy@gmail.com>
Date: Tue, 31 Oct 2006 14:10:54 -0800
To: pfmc.comments@noaa.gov

Dear Sirs,

How can you even consider lifting restraints on gillnet fishing??? There are so many species that rely on us to help them survive. Letting this practice continue would permanently harm and eliminate these beautiful creatures from our oceans forever. Do the right thing; please continue the gillnet fishing restrictions and continue to impose more and more restrictions on their usage in our oceans. Hopefully one day there will be no gillnets and our oceans will thrive once again.

Thank you for your consideration.

Stacy Wilson
344 Colville Dr
San Jose, CA 95123
408.449.0313

--

Be Yourself
Everyone Else Is Already Taken

Subject: Leatherback Sea turtles

From: Rebecca Anderson <godschild139@yahoo.com>

Date: Tue, 31 Oct 2006 14:05:41 -0800 (PST)

To: pfmc.comments@noaa.gov

Pacific leatherback sea turtles have survived on this planet for nearly 100 million years. They have endured ice ages, major volcanic events, meteor impacts, and most every predator in the sea. However, they, and other endangered marine life, cannot survive being caught and drowned in drift gillnets.

Knowing this, in 2001, the National Marine Fisheries Service put into place a three-month drift gillnet closure in a large area off the coast of California that would allow leatherback turtles to safely migrate and feed in U.S. waters, including Monterey Bay. The closure -- the Pacific Leatherback Conservation Area -- has been so effective that no leatherback turtles have been reported drowned in the entire fishery since protections were put in place.

So, why then is the Fisheries Service now considering reopening this area year round to up to 30 drift gillnet vessels?

It's not because the gear has improved. Drift gillnets remain as destructive as they were prior to the 2001 closure. In addition to endangered turtles, dolphins and porpoises, seals and sea lions, and even large whales drown in this fishery. Between 1996 and 2002, more than 50 turtles, 700 seals and sea lions, over 1,000 dolphins and porpoises, and 35 large whales were killed.

These air-breathing animals often die when caught in these huge nets, long enough to loop around a football field six times. In fact, drift gillnets are so harmful to ocean life that they are banned on the high seas and in the waters of several states, including Washington, Georgia and Florida.

The proposal before the Fisheries Service would open up the protected area as long as there are fishery observers on each vessel and caps on the number of leatherbacks and some whale species that can be killed. These controls will help limit the number of leatherback turtles and certain large whales killed.

Unfortunately, with these critically endangered species, the survival of every single one counts. What is more, there will be no caps on the number of other sea turtles, fin whales, gray whales, elephant seals, California sea lions and dolphins killed. Nor will there be any caps on the amount of fish simply discarded, dead and dying, which in this fishery amounts to more than is kept.

It is also not because of economics; the proposed reopening is not expected to provide significant economic benefit. The industry folks argue that the closed area has directly led to the decline in the drift gillnet fishery. But this fishery was waning long before the closure was implemented, with the number of active vessels dropping by half between 1994

and 2000. The Fisheries Service has concluded that the "economic impact of an increase in (drift gillnet) effort is likely to differ little from zero." In other words, there is no predicted economic gain from this proposed opening.

The proposed opening therefore makes no sense for either scientific or economic reasons. It also makes no sense for political reasons, as the public has shown overwhelming opposition. Further, it would seem to fly in the face of the recent Governors' Agreement on Ocean Health, where the states of California, Oregon and Washington have explicitly recognized the need for addressing the declining health of our ocean and the need to sustain marine wildlife populations.

In California, we pride ourselves on being progressive in ocean management. If the Fisheries Service approves the opening of the Pacific Leatherback Conservation Area, it will be a hugely irresponsible step backward. Just as we are protecting areas in our state waters through the Marine Life Protection Act, we would be re-opening areas in our federal waters to a wasteful and destructive way of fishing.

The question ought not to be how do we open this area, but rather, how can we catch swordfish, tuna and thresher shark without sacrificing so many other marine creatures? If we don't take the time to find that answer, Pacific leatherback sea turtles may go extinct on our watch.

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Subject: Agenda Item C.3. Drift Gillnet FMP Comment'

From: "LLOYD DENT" <lloyd Dent@adelphia.net>

Date: Tue, 31 Oct 2006 13:47:25 -0800

To: <pfmc.comments@noaa.gov>

I am distressed by the threat to Pacific leatherback sea turtles from the proposed action of the National Marine Fisheries Service. If the annual 3-month drift gillnet closure is eliminated only temporarily, the Pacific leatherback may be eliminated forever. What kind of world are we leaving for our children and grandchildren? What is the benefit to the public? Since the economic impact of an increase in drift gillnet effort is likely to differ little from zero, according to the Fisheries Service, but the danger of extinction will differ significantly, the closure must be continued..

Lloyd A. Dent

Attorney at Law

4431 Laurel Grove Avenue

Studio City, CA 91604

(818) 763-0700

Subject: Agenda Item C.3. Drift Gillnet FMP Comment

From: Patti Llorin <alohala@sbcglobal.net>

Date: Tue, 31 Oct 2006 13:46:49 -0800 (PST)

To: pfmc.comments@noaa.gov

I want to inform you that I support the continued closure of the drift gillnet fishery off the coast of California and Oregon for three months during the migration of the Pacific leather back turtle.

I do not see how this will impact the drift gillnet fishery since it has been in effect since 2001. But I do however see the negative impact this will have on the population of the leather back turtle/other mammals if this closure does not continue.

Patti Llorin

Subject: Agenda Item C.3. Drift Gillnet FMP Comment

From: Kim Galeazzi <kgaleazzi@yahoo.com>

Date: Tue, 31 Oct 2006 13:21:27 -0800 (PST)

To: pfmc.comments@noaa.gov

Dear Sir/Madam

Please ensure that our coasts retain there natural resources and provide for this area to remain safe for turtles by keeping the Pacific

Leatherback Conservation Area closed.

Thank you for you consideration.

Kim Galeazzi

Subject: Agenda Item C.3.Drift Gillnet FMP Comment

From: GDFlowers@aol.com

Date: Tue, 31 Oct 2006 15:50:45 EST

To: pfmc.comments@noaa.gov

Deart Council:

I urge you to continue to ban gill net fishing off the coast of California and Oregon each year during the three month Pacific Leatherback Turtle migration period. The ban in the past has proven to be effective in saving the Turtles.

Sincerely,

Gerald D. Flowers, LTC retired, U.S. Army

Subject: Agenda Item C.3. Drift Gillnet FMP Comment

From: "Janet Kessin" <jkessin@juilliard.edu>

Date: Tue, 31 Oct 2006 15:22:43 -0500

To: <pfmc.comments@noaa.gov>

Dear Council Members,

This year my family and I spent 5 weeks vacationing on the West Coast. Almost exclusively, our time was spent within 10 - 20 miles of the coastline, the entire length from Seattle to Los Angeles. We'd planned the vacation specifically to enjoy the sea life, bird life, and the remarkable old growth forests that are so absent from the East Coast where we live. I can't describe to you our thrill to see so close at hand sea lions, turtles, seals, pelicans, and so much more. We were amazed and grateful that the fragile line differentiating existence or extinction hasn't been crossed, and were impressed at to learn about some forward-thinking protections that have been initiated.

It's easy to think of 'just one program' as not-particularly necessary. But I wonder how you know when you've let slip one protection too many. I'd like to think we'll be able to visit many more times and experience that same joy of being so close to nature.

Please continue the closure of gillnet fisheries during the 3 months of the leatherback turtle migration. Every creature counts.

Thank you,

Janet Kessin

Director of Communications

The Juilliard School

(212) 799-5000 ext. 207

Subject: gill net fishing
From: Dbal23456@aol.com
Date: Tue, 31 Oct 2006 15:02:58 EST
To: pfmc.comments@noaa.gov
CC: wilson.stacy@gmail.com

Gentlepersons:

Gill net fishing off the California and Oregon Coast should continue to be banned, indefinitely. It endangers many species, especially sea turtles. As an attorney for 25 years, I have had years of experience in balancing competing interests, and know that some types of environmental impacts are so devastating that they create public reactions that lead to prohibitions on much lesser impact activities. Please continue with the restraints previously imposed upon Gill net fishing, as failure to do so may inspire greater scrutiny that will ultimately result in an even worse economic impact to the industry.

Yours Truly,
Doug Allen
Burnett, Burnett & Allen
160 West Santa Clara St. 12th flr.
San Jose, CA. 95113
(408) 298-6540

Subject: save a beautiful species

From: nmbanach@uwm.edu

Date: Tue, 31 Oct 2006 14:00:11 -0600

To: pfmc.comments@noaa.gov

I am a college student speaking out to you, the Management Council. You seem to forget that if we continue to ignore the fact that we are day by day wiping out homes of hundreds of animals; someday they will be completely wiped out. Get rid of the drifting gillnets along the California and Oregon coasts. Find alternative ways. GET RID OF THE NETS. Save the turtles because they count too.
Nicole

Subject: Agenda Item C.3. Drift Gillnet FMP Comment
From: Robert Harkins <rharkinswillflyforfood@yahoo.com>
Date: Tue, 31 Oct 2006 11:56:27 -0800 (PST)
To: pfmc.comments@noaa.gov

To whom it may concern:

It has come to my attention that the 3-month closure of the Pacific Leatherback Conservation Area is not automatically a yearly closure as I had believed.

I am therefore requesting that you keep this area safe for turtles by keeping the Pacific Leatherback Conservation Area 3-month closure in effect- not just for 2006, but for as far into the future as possible; permanently would be my desire.

Once the species is extinct, it's too late too increase the closure duration, and we can never get them back.

Sincerely,

Robert W. Harkins

Subject: Agenda Item C.3. Drift Gillnet FMP Comment

From: Michael Mullany <mmullany@yahoo.com>

Date: Tue, 31 Oct 2006 11:42:54 -0800 (PST)

To: pfmc.comments@noaa.gov

Please keep the the Pacific
Leatherback Conservation Area closed until a verifiable rebound in the populations of
pacific leatherback turtles can be ascertained. It would also help if this decision was
not revisited every year but reconsidered at five year intervals.

Thank you.

Michael Mullany
415-824-1799

Subject: Agenda Item C.3. Drift Gillnet FMP Comment

From: Bud Vieira <bud_vieira@yahoo.com>

Date: Tue, 31 Oct 2006 11:42:22 -0800 (PST)

To: pfmc.comments@noaa.gov

Dear Council Members,

Drift gillnetting is a horribly indiscriminate fishing practice that is terribly damaging to ocean life. I speak to you as the son of a fishing family who has seen bad fishing practices destroy stocks in the Grand Banks and George's Banks in the Northeast. There has to be a better, more sustainable way to fish.

I understand that the current ban on driftnetting off the California and Northwest coast is up for review. While the ban was rightly instituted to stop the near extinction of the Pacific Leatherback sea turtle, many other forms of marine life are also threatened by these nets. With increasing pressure on fish stocks, and habitat change increasing from El Nino conditions and global warming, this inefficient, "let's throw a net across three miles of the sea and see what gets caught" approach is unconscionable.

I urge you to not only re-instate the ban for the coming year, but make the ban permanent. We not only stand to lose the Leatherback, which predates us by more than 60 million years, but also countless marine mammals, important predators like sharks, and adequate fish stocks for our future needs.

Alfred Vieira
Oakland, California

Everyone is raving about the all-new Yahoo! Mail
(<http://advision.webevents.yahoo.com/mailbeta/>)

Subject: Agenda Item C.3. Drift Gillnet FMP Comment

From: "dsgnqueen" <dsgnqueen@yahoo.com>

Date: Tue, 31 Oct 2006 14:41:01 -0500 (Eastern Standard Time)

To: <pfmc.comments@noaa.gov>

I received a most devastating letter from the Monterey Ocean Action Team stating the dire threat of Pacific Leatherback's impending extinction, due to lack of caution on the part of fishermen with drift gillnets.

Our ocean's future depends on the great care that we take in preserving that which is absolutely necessary to preserve. The needless killing of animals such as these, makes me ashamed of the human race, and it's inability to preserve nature and it's precious lifeforms, especially when such simple measures can be taken to avoid the unnecessary devastation and demise of such lovely creatures.

We urge you to keep the Pacific Leatherback Conservation Area closed, so that these great creatures may continue to thrive, and our children's children will also be able to enjoy them...and the generations to come.

Thank you for caring!

C Ziegler

Subject: Agenda Item C.3. Drift Gillnet FMP Comment

From: "George Perry" <gmperry@redshift.com>

Date: Tue, 31 Oct 2006 11:09:25 -0800

To: <pfmc.comments@noaa.gov>

Gentlemen:

I am writing to ask that you retain the ban on drift gillnet fishing within the Pacific Leatherback Conservation Area. Gillnet fishing destroys not only the endangered Leatherback Turtles but countless other marine mammals and fishes that are not the target of the fishery. Survival of the Leatherback Turtle depends on eliminating any taking or killing of these animals, and no procedures can be crafted that would guarantee that result if gillnet fishing is allowed in their feeding and migration areas. Furthermore, since the Fisheries Service itself has concluded that there is little or no economic benefit to lifting the gillnet ban in the Conservation Area, there is no sound reason for lifting the ban.

Thank you.

George Perry
1211 Pico Ave.
Pacific Grove, CA

Subject: Agenda Item c.3. Drift Gillnet FMP Comment

From: barbara carmichael <blcarm@yahoo.com>

Date: Tue, 31 Oct 2006 11:03:44 -0800 (PST)

To: pfmc.comments@noaa.gov

CC: oceanaction2@mbayaq.org

Greetings,

I am very concerned about the decline of Pacific leatherneck turtles. I understand that you will be considering whether or not to extend the 3month closure of gillneting in the area of their annual migration. I urge you to continue the closure- frankly I do not understand why this is not permanently in place. Why should this have to be decided every year? It would seem to be common sense to continue one of the few practices that seems to work for the future of these wonderful creatures, and to make it a permanent practice.

As a teacher, I am speaking on behalf of my fourth graders, and my grandchildren- all of whom are passionate about turtles! Thank you very much.

Sincerely,

Barbara Carmichael

blcarm@yahoo.com

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Subject: Agenda Item C.3. Drift Gillnet FMP Comment

From: Karen <hsunhsun_us@yahoo.com>

Date: Tue, 31 Oct 2006 10:29:07 -0800 (PST)

To: pfmc.comments@noaa.gov

Dear Fisheries Managers,

You have done a great job saving the Pacific Leatherback Turtles; please keep up your good job.

You and your predecessors saw the danger of Drift Gillnet Fishing towards these turtles, that in 2001, you, the Federal fisheries managers closed the drift gillnet fishery off the coast of California and Oregon for three months of the year. The closure coincides with the leatherback turtle migration, allowing the turtles to safely feed in these waters.

On behalf of the turtles, we ask your help to keeping the Pacific Leatherback Conservation Area closed to fishing. We further ask that you make this closure remain in place far into the future, not just for 2006.

Humbly yours,

Karen Downing

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Subject: AGENDA ITEM C.3 DRIFT GILLNET FMP COMMENT

From: "Shiotani, Tami" <Tami.Shiotani@rpsa.rioh.com>

Date: Tue, 31 Oct 2006 10:25:35 -0800

To: <pfmc.comments@noaa.gov>

The Pacific Leatherback Conservation Area should stay closed to drift gillnet vessels for at least 3 months but gillnets should not be allowed at all - they kill everything.

Drift gillnets should be banned everywhere. If California would ban the gillnets, that's a start - but only a start.

Tami Shiotani
Thousand Oaks, CA

Subject: Please continue to help leatherback turtles
From: "Eric Nardone" <enardone@mbayaq.org>
Date: Tue, 31 Oct 2006 10:04:58 -0800
To: <pfmc.comments@noaa.gov>

Dear Pacific Fisheries Management Commission,

Please continue to enforce the 3 month ban on drift gillnet fishing off the coast of California and Oregon. It is my understanding that this ban greatly reduces the number of Leatherback sea turtles killed as by catch. I have a one yr. old son and another child on the way. It is my sincerest hope that they can grow up in a state where the leaders and regulator bodies understand that steps taken to protect our natural world for the long term may outweigh short term economic gains. Please help protect the Leatherback Sea turtle and all the species of the Pacific, so my kids and all the kids in California may inherit an ocean world in at least as good of shape as our generation did.

Thank you,

Eric J. Nardone

Subject: Agenda Item C.3. Drift Gillnet FMP Comment

From: "Ava Ferguson" <AFerguson@mbayaq.org>

Date: Tue, 31 Oct 2006 09:57:57 -0800

To: <pfmc.comments@noaa.gov>

Dear Pacific Fishery Management Council,

In 2001, fisheries managers closed the drift gillnet fishery off the coast of California and Oregon for three months of the year to coincide with the leatherback turtle migration. The closure has been so effective that not a single leatherback turtle has been recorded caught in the fishery since then. That's why I support closing these waters to drift gill nets on a permanent basis--and not just for 2006. Pacific leatherbacks are on the brink of extinction. Won't you do your part to ensure that they survive for future generations?

Sincerely,

Ava Ferguson
PO Box 1989
Aptos, CA 95001

Subject: Pacific Leatherback Conservation Area
From: "MICHELLE HALL" <shellvail@hotmail.com>
Date: Tue, 31 Oct 2006 17:55:32 +0000
To: pfmc.comments@noaa.gov
CC: oceanaction2@mbayaq.org
BCC:

I received an email from the Monterey Bay Aquarium about the closure of the Pacific Leatherback Conservation Area. I would like to see the enclosure closed during turtle migration so that the turtles can safely migrate and feed. I have been working with herpetological organizations for several years and have several rescued turtles of my own. I do not think that 3 months is too much to ask to protect these animals. I think these animals deserve protection from the fishing industry and that they should be more than willing and cooperative to help in any way they can. Since we are encroaching on more and more animal habitats, I think we should be respectful and responsible when we are in their habitat. The last thing we want is to lose these beautiful turtles! Thank you for your time and considering my request.

Michelle (Shelley) Hall

Subject: 'Agenda Item C.3. Drift Gillnet FMP Comment'

From: Kristen Liming <kmliming@yahoo.com>

Date: Tue, 31 Oct 2006 09:45:34 -0800 (PST)

To: pfmc.comments@noaa.gov

To the Pacific Fishery Management Council:

It has come to my attention that the Pacific leatherback turtle is in deep trouble -- yet again. The information I encountered stated that over the past 20 years, the population of Pacific leatherbacks has plummeted by 97%. Destructive fishing practices, especially **drift gillnets** have pushed Pacific leatherbacks close to extinction.

To address this dire threat, in 2001 Federal fisheries managers closed the drift gillnet fishery off the coast of California and Oregon for three months of the year. The closure coincides with the leatherback turtle migration, allowing the turtles to safely feed in these waters. The closure has been so effective that **not a single leatherback turtle has been recorded caught** in the fishery since then! Great news!!

Unfortunately, I have also come to know that fisheries managers are preparing to allow drift gillnet fishing again -- with potentially devastating consequences for leatherback sea turtles.

I would like to tell you that I want this area to remain safe for turtles by keeping the Pacific Leatherback Conservation Area closed. It is my understanding that every year the Pacific Fishery Management Council decides whether or not to continue closing this area so I would like to emphasize that this closure should remain in place far into the future -- not just for 2006.

Thank you so much for your time and consideration on this matter and for helping to protect our natural resources for generations to come.

Sincerely,

Kristen Liming
kmliming@yahoo.com

Subject: Agenda Item C.3. Drift Gillnet FMP Commenta
From: "shawn harstad" <shawnharstad@gmail.com>
Date: Tue, 31 Oct 2006 11:38:06 -0600
To: pfmc.comments@noaa.gov

To whom it may concern:

When will it end? When will we learn? ...When its too late. Nothing is worth the extinction of another species...Nothing.

-Shawn Harstad

Subject: agenda item c.3. FMP drift net comment
From: "CarlaSue Hanson" <carlasueh@msn.com>
Date: Tue, 31 Oct 2006 09:18:15 -0800
To: <pfmc.comments@noaa.gov>

it is imperative that the pacific leather back turtle conservation area be kept closed to give these magnificent animals a chance at survival. Drift gill nets are destructive to the complete marine environment killing everything in their wake. Commercial fishing has a strong lobby but if we do not protect our waters, our resources will be decimated and fishermen will be out of a job permanently! Please do not be short-sighted. This area needs to be protected for the long term stabilization of the marine habitat.

Sincerely,
CarlaSue Hanson
Newport Beach, Ca

----- Original Message -----

From: [Ocean Action Team](#)

To: carlasueh@msn.com

Sent: Monday, October 30, 2006 4:12 PM

Subject: Monterey Bay Aquarium:Sea Turtle Alert



Monterey Bay Aquarium

OAT Logo



[Turtle](#) **Speak Out NOW for Pacific Leatherback Turtles**

The Pacific leatherback turtle urgently needs your help. **Your voice by November 7th could help save this struggling species.**

The Pacific leatherback turtle, the largest of the sea turtles and a species that predates the dinosaurs, is in deep trouble. Over the past 20 years, the population of Pacific leatherbacks has plummeted by 97%. Destructive fishing practices, especially [drift gillnets](#), have pushed Pacific leatherbacks close to extinction.

To address this dire threat, in 2001 Federal fisheries managers closed the drift gillnet fishery off the coast of California and Oregon for three months of the year. The closure coincides with the leatherback turtle migration, allowing the turtles to safely feed in these waters. The closure has been so effective that **not a single leatherback turtle has been recorded caught** in the fishery since then!

Now fisheries managers are preparing to allow drift gillnet fishing again – with potentially devastating consequences for leatherback sea turtles.

What you can do

Send an email or a fax to the Pacific Fishery Management Council today. Tell them you want this area to remain safe for turtles by keeping the Pacific Leatherback Conservation Area closed. Every year the Pacific Fishery Management Council decides whether or not to continue closing this area so please emphasize that this closure should remain in place far into the future -- not just for 2006.

Your comments must be received by Tuesday, November 7th. Email

your comments to pfmc.comments@noaa.gov or fax them to 503- 820- 2299. Use the subject line: 'Agenda Item C.3. Drift Gillnet FMP Comment'.

If you do send an email or fax, we'd love to know! Simply respond to this email, or included us as a Bcc on your comments. Thanks!

Learn more

[Please read this recent Op-Ed that appeared in the Monterey County Herald.](#) Feel free to draw on language from the article or this alert while writing your comments.

Tell a friend

Forward this email to a friend and urge them to write a letter on behalf of the turtles! Encourage them to become Ocean Action Team members so that we can contact them when it is time to speak out on other critical ocean issues.

Thank you for weighing in on behalf of the Pacific leatherback turtles!

Sincerely,

Aimee David and Ken Peterson
Ocean Action Team

email: oceanaction2@mbayaq.org
web: <http://www.oceanactionorg>

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Monterey Bay Aquarium | 886 Cannery Row | Monterey | CA | 93940

Subject: protect the turtles

From: Wildini@aol.com

Date: Tue, 31 Oct 2006 12:11:38 EST

To: pfmc.comments@noaa.gov

CC: oceanaction2@mbayaq.org

Please do not allow drift gillnet fishing start again. I support having a responsible policy for fishing that does not harm the turtles. Please keep the Pacific Leatherback Conservation Area closed. This closure should remain in place far into the future -- not just for 2006.

Kathy Whilden

98 Via Campana

Monterey, CA 93940

Subject: Agenda Item C.3

From: Kate Gudmundson <kgudmunds0n@yahoo.com>

Date: Tue, 31 Oct 2006 09:10:46 -0800 (PST)

To: pfmc.comments@noaa.gov

Please protect the Pacific Leatherback Turtles from drift gillnets during their 3 month migration period. This issue is of great importance to my family and me. *Please, please, please* do your best to protect these magnificent and precious sea creatures.

Sincerely,

Catherine Gudmundson
129 Christopher Avenue
Campbell CA 95008

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Subject: Agenda Item C.3. Drift Gillnet FMP Comment: Leatherback Sea Turtles
From: "David P. Weil" <weil@mindspring.com>
Date: Tue, 31 Oct 2006 12:03:22 -0500
To: <pfmc.comments@noaa.gov>

To whom it may concern:

I am requesting that the area accessible to leatherback turtles remain safe for them by keeping the Pacific Leatherback Conservation Area closed!!! Every year the Pacific Fishery Management Council decides whether or not to continue closing this area. Please keep this area closed far into the future -- not just for 2006.

Now fishery managers are preparing to allow drift gillnet fishing again - with potentially devastating consequences for the leatherback sea turtles. Please do not allow drift gillnet fishing again, so that these turtles can repopulate!

Thank you for your cooperation and understanding!!!!

David P. Weil
The Weil Group

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Subject: 'Agenda Item C.3. Drift Gillnet FMP Comment'

From: Reynolds Damon <stealthnum2@yahoo.com>

Date: Tue, 31 Oct 2006 08:43:21 -0800 (PST)

To: pfmc.comments@noaa.gov

CC: Ocean Action Team <oceanaction2@mbayaq.org>

Please keep this area safe for turtles by keeping the Pacific Leatherback Conservation Area closed. This closure should remain in place far into the future -- not just for 2006, because it is essential for the future of our planet and the turtles who roam it. Please have consideration for this endangered species!

Thanks

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Subject: Pacific Leatherback Turtles
From: Brian Forstat <brian@agilitygraphics.com>
Date: Tue, 31 Oct 2006 08:38:59 -0800
To: pfmc.comments@noaa.gov

To whom it may concern,
by writing this, I urge you to keep the Pacific Leatherback Conservation Area closed for the three month of their migration each year, allowing the turtles to safely pass through and feed in these waters and not become extinct. In my opinion it is crucial to keep this area to remain safe for turtles by keeping the Pacific Leatherback Conservation Area closed.

Thank you for your time.
Sincerely,
Brian

.....
Agility Graphics
Brian Forstat

405 - 33rd Avenue #303
San Francisco, CA 94121

415.386.1142
brian@agilitygraphics.com
<http://www.agilitygraphics.com>
.....

Subject: 'Agenda Item C.3. Drift Gillnet FMP Comment'

From: gemela katz <katzz137@yahoo.com>

Date: Tue, 31 Oct 2006 08:31:08 -0800 (PST)

To: pfmc.comments@noaa.gov

October 31, 2006

To the Pacific Fishery Management Council:

Hello, My name is Susan Orth and I am an elementary school teacher in California. As an educator I have an obligation to teach my students about the natural environment and to be good stewards of it. We start studying about dinosaurs in the beginning of the year. It is a great reminder to show students about how species become extinct. I strive to teach them about the importance of the natural world and how we depend so much on the natural resources to survive.

I am writing this email to address the Pacific Leatherback Turtle which is the largest sea turtles that predate dinosaurs. These turtles are endangered due to destructive fishing practices, mainly using drift gillnets. It was great legislation to restrict drift gillnet fishery of the coasts of California and Oregon during the migration so they can safely feed in these waters. This has tremendously saved the Pacific Leatherback Turtle from extinction because they are not being caught in these nets.

I urge you to seize the use of these gillnets during those 3 months during the Pacific Leatherback Turtle's migration not just for 2006, but indefinitely. Please help save the fate of these turtles so future generations will have them to enjoy! I don't want yet another species to be extinct due to man's actions.

Thank you,

Susan Orth
Elementary School Teacher

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Subject: Keep Pacific Leatherback Conservaton Area Closed!

From: "Staci Peters" <stacina@gmail.com>

Date: Tue, 31 Oct 2006 08:24:32 -0800

To: pfmc.comments@noaa.gov

As a California resident, I pride myself on the fact that California is a very progressive state, finding new and environmentally beneficial ways to do things. This includes keeping our waters as free as possible from destructive fishing practices, and drift gillnet fishing is one of the most destructive practices we face. The bycatch (mostly sea lions, turtles, dolphins, etc) is staggering. Opening the Pacific Leatherback Conservation Area would be a huge step backward. Instead of allowing something so destructive, it would benefit all of us (and our oceans) to find more progressive, sustainable means of fishing. Please keep the Leatherback Conservation area closed to give these species (especially the endangered Leatherback sea turtles) a fighting chance.

Thank you for your consideration,

Staci Peters

Long Beach, California

Subject: 'Agenda Item C.3. Drift Gillnet FMP Comment'.

From: Sister4136@aol.com

Date: Tue, 31 Oct 2006 11:19:21 EST

To: pfmc.comments@noaa.gov

Please keep the drift gillnet areas closed so that the leatherback turtles can remain safe by keeping the Leatherback Conservation Area closed. Thank you for your time,
Aja LiVigni

Subject: Agenda Item C.3. Drift Gillnet FMP Comment

From: "Herrera, Allison" <AHerrera@emdeon.com>

Date: Tue, 31 Oct 2006 10:11:04 -0600

To: pfmc.comments@noaa.gov, bill.hogarth@noaa.gov, jim.lecky@noaa.gov

Hello,

I am writing to request that we follow in the foot steps of Washington, Georgia, and Florida in protecting California's marine life. How can those with the decision making power consciously reopen the Pacific Leatherback Conservation area knowing the automatic destruction to **ANY and ALL** marine life that will result. Also, I ask that serious consideration needs to be given to banning drift gillnets as they have no significant scientific or economic benefits.

Please help make the right decision to protect these animals that can not protect themselves.

Sincerely,

Allison Herrera

Subject: Agenda Item C.3 Drift Gillnet FMP Comment
From: "Jennifer Comeau" <jcomeau@hhdainc.com>
Date: Tue, 31 Oct 2006 08:09:36 -0800
To: <pfmc.comments@noaa.gov>

Please keep the area off the California/Oregon coast safe for turtles by keeping the Pacific Leatherback Conservation Area closed. I hope that this area can also remain closed for these months in years to come!!
Thank you-

Jennifer Comeau
Hurkes|Harris Design Associates, Inc.
1510 Front Street, Suite 300, San Diego, CA 92101
Direct: (619) 702-0380 ext. 30 | Fax: (619) 702-0383

E-mail: JComeau@hhdainc.com | Web: www.hhdainc.com

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Subject: Agenda Item C.3. Drift Gillnet FMP Comment

From: "Steph Takahashi" <steph_tt@hotmail.com>

Date: Tue, 31 Oct 2006 08:05:31 -0800

To: pfmc.comments@noaa.gov

BCC:

The Pacific Leatherback Conservation Area should stay closed to the approx. 30 drift gillnet vessels for the 3 month closure. In addition to endangered turtles, dolphins and porpoises, seals and sea lions, and even large whales drown in these gillnets. That is too much marine life wasted. Drift gillnets are banned on the high seas and in the waters of several states, including Washington, Georgia and Florida. I wish California would join those states in banning this harmful way of fishing. The question ought not to be how do we open this area, but rather, how can we catch swordfish, tuna and thresher shark without sacrificing so many other marine creatures?

Stephanie Takahashi
Sunland, California

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Subject: Agenda Item C.3. Drift Gillnet FMP Comment

From: Cazz Matazz <bluestar628@yahoo.com>

Date: Tue, 31 Oct 2006 07:58:51 -0800 (PST)

To: pfmc.comments@noaa.gov

I do not agree with your proposal to reopen the Pacific Leatherback Conservation Area for fishing while utilizing drift gillnetts. It is an inefficient way to fish in that although you may catch all the fish you need, hundreds of other types of marine life will be killed for no good reason at all. It has also been shown that using the drift gillnet will not give your industry the economic boost that it needs. As I said before, I am very against this proposal that will allow hundreds of animals to be killed when they don't have to be.

Thank you, Cassandra Matthews

Subject: Agenda Item C.3. Drift Gillnet FMP Comment

From: "Dan Tudor" <dantudor@tudorwines.com>

Date: Tue, 31 Oct 2006 07:57:13 -0800

To: <pfmc.comments@noaa.gov>

Dear Pacific Fishery Management Council,

Our planet is being destroyed at every corner of the globe. With thousands of species driven to extinction every year this is no time to relax regulations.

The ban on drift gillnets should remain!! If we can't even protect a few turtles, what species is next? Humans. That's right. Take a stand for the turtles and biodiversity on our only planet.

Sincerely,

Dan Tudor

Tudor Wines
Winemaker/Owner
P.O. Box 830
Pacific Grove, CA 93950
831-224-2116 mobile
831-855-0147 fax
dantudor@tudorwines.com
www.tudorwines.com

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Subject: Agenda Item C.3.Drift Gillnet FMP Comment

From: Dawn Bleau <mightymom2@verizon.net>

Date: Tue, 31 Oct 2006 07:56:51 -0800 (PST)

To: pfmc.comments@noaa.gov, bill.hogarth@noaa.gov, jim.lecky@noaa.gov

Dear Sirs,

I am writing to implore you to please allow the Pacific Leatherback Sea Turtle to live.

Please think for just a moment that these creatures have survived nearly 100 million years! They have endured ice ages, major volcanic events, meteor impacts, and most every predator in the sea. Do you really want to be known as the one entity that was able to bring down the Pacific Leatherback Sea Turtle to extinction?

Your Concern should not be how can you open the Pacific Leatherback Conservation Area, but how can you catch swordfish, tuna and thresher shark without sacrificing so many other marine creatures.

Do you really want to contribute to the extinction of the Pacific Leatherback Sea Turtle? I PRAY YOU DO NOT!

Sincerely Concerned

Dawn E. Bleau R.N.

Subject: Agenda Item C.3. Drift Gillnet FMP Comment'.

From: Kendra Wilson <kenwildrason@sbcglobal.net>

Date: Tue, 31 Oct 2006 07:54:27 -0800 (PST)

To: pfmc.comments@noaa.gov

Dear Pacific Fishery Management,

Please do not allow drift gill nets to open during the migratory months of the highly endangered leatherback. As you already know their numbers have dropped 95% and they have been on this earth 100,000 years!! It would be a sacrilege to lose these wonderful creatures to extinction for a fishing practice that shouldn't be allowed in the first place.

Thank you for your time,

Kendra Wilson

755 14th ave

Santa Cruz, Ca 95062

kenwildrason@sbcglobal.net

Subject: Agenda Item C.3. Drift Gillnet FMP Comment

From: "Dan Tudor" <dantudor@tudorwines.com>

Date: Tue, 31 Oct 2006 07:53:58 -0800

To: <pfmc.comments@noaa.gov>

Dear Pacific Fishery Management Council,

Our planet is being destroyed at every corner of the globe. With thousands of species driven to extinction every year this is no time to relax regulations.

The ban on drift gillnets should remain!! If we can't even protect a few turtles, what species is next? Humans. That's right. Take a stand for the turtles and biodiversity on our only planet.

Sincerely,

Dan Tudor

Tudor Wines
Winemaker/Ower
P.O. Box 830
Pacific Grove, CA 93950
831-224-2116 mobile
831-855-0147 fax
dantudor@tudorwines.com
www.tudorwines.com

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Subject: Leatherback turtles
From: "Erica Hutchinson" <ehutchinson1@gmail.com>
Date: Tue, 31 Oct 2006 07:48:48 -0800
To: pfmc.comments@noaa.gov

To Whom it may concern:

I am writing on behalf of the Leatherback turtles off the Pacific Coast. I understand harmful fishing practices could be reinstated and I am begging you to help keep this area safe by keeping the Pacific Leatherback Conservation Area closed. I would urge you, the Pacific Fishery Management Council, to continue to keep this area closed and let it remain closed well into the future. These animals have made it a long way- let them live!

Thank you for taking the time to read my plea.
I know you'll make the right decision!

Erica Hutchinson
ehutchinson1@gmail.com
San Diego, CA

Subject: Agenda Item C.3. Drift Gillnet FMP Comment

From: "Vanoteghem, Lori" <LVanOteghem@emdeon.com>

Date: Tue, 31 Oct 2006 09:47:49 -0600

To: pfmc.comments@noaa.gov, bill.hogarth@noaa.gov, jim.lecky@noaa.gov

Hello,

I am writing to request that we follow in the foot steps of Washington, Georgia, and Florida in protecting California's marine life. How can those with the decision making power consciously reopen the Pacific Leatherback Conservation area knowing the automatic destruction to **ANY and ALL** marine life that will result. Also, I ask that serious consideration needs to be given to banning drift gillnets as they have no significant scientific or economic benefits.

Please help make the right decision to protect these animals that can not protect themselves.

Sincerely,

Lori VanOteghem

Subject: leather back turtles
From: "john fischer" <johnfischmsn@hotmail.com>
Date: Tue, 31 Oct 2006 07:44:37 -0800
To: pfmc.comments@noaa.gov
CC: oceanby@earthlink.net
BCC:

To whom it may concern -
Please do not allow gill netting during the turtle's migratory season. What a shame it would be to lose such wondrous creatures for forever. Gill netting treats such wonderful creatures as nothing more than trash. With their population decimation, they need every bit of help that we can give them. Lets make the freeze on gill netting during this season far into the future, if not permanent.

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Subject: Agenda Item C.3. Drift Gillnet FMP Comment'.
From: Kathy_and_Dave Werblo <werblo@redshift.com>
Date: Tue, 31 Oct 2006 07:41:40 -0800
To: pfmc.comments@noaa.gov
CC: Werblo Kathy <werblo@redshift.com>

Dear Council,

Please do not allow the reopening of the drift gillnet fishery during the leatherback turtle migration. It is our responsibility to preserve the eco-balance of the sea by intelligent management of this resource. Endangering turtles during their migration by the use of gillnets is unacceptable. Gillnets also have a by-catch problem for many species, especially marine mammals including many threatened species and should be prohibited. If we do not fish responsibly today there will be no fishing in the future.

Thanks!

Kathy

Conservation today makes a better world tomorrow.

Kathy Werblo

Subject: Agenda Item C.3. Drift Gillnet FMP Comment

From: "Heidi C. Quan" <heidicue@yahoo.com>

Date: Tue, 31 Oct 2006 07:34:45 -0800 (PST)

To: pfmc.comments@noaa.gov

PLEASE DO NOT ALLOW DRIFT GILLNET FISHERY OFF THE COAST OF CALIFORNIA AND OREGON DURING THE MIGRATION MONTHS OF THE LEATHERBACK TURTLE. THIS CLOSURE SHOULD REMAIN IN PLACE WELL INTO THE FUTURE SO AS TO AVOID RE-VISITING THIS ISSUE YEAR AFTER YEAR. THE EFFECTIVENESS SPEAKS FOR ITSELF.

KEEP THE PACIFIC LEATHERBACK CONSERVATION AREA CLOSED!

Subject: 'Agenda Item C.3. Drift Gillnet FMP Comment'.

From: "Lisa" <lisa@wildeyephoto.com>

Date: Tue, 31 Oct 2006 07:12:27 -0800

To: <pfmc.comments@noaa.gov>

Please keep the Pacific Leatherback Conservation Area closed. This closure should remain in place for many years to come -- not just for 2006.

Thank you for caring about the future of all species.

Lisa Hoffner

Subject: agenda item C.3. deift gilnet FMP comment

From: "Bonnie whisler" <johnwhi@redshift.com>

Date: Tue, 31 Oct 2006 06:39:44 -0800

To: <pfmc.comments@noaa.gov>

I urge you to continue to keep the Pacific Leatherback Turtle Conservation Area free of the fishery's drift gillnets by keeping it closed to this activity during the turtles' migration period.

Bonnie Whisler
1985 Military Ave.
Seaside, CA

Subject: Agenda Item C.3. Drift Gillnet FMP Comment

From: "Dean Koch" <DeanK@adeza.com>

Date: Tue, 31 Oct 2006 06:04:28 -0800

To: <pfmc.comments@noaa.gov>

Good morning:

My children have read often of all the wonderful, different species of sea turtle. Now, your actions could endanger, or protect again the largest, and oldest of these creatures, the Pacific leatherback turtle.

Please continue to protect this species by continuing to keep the conservation area closed.

Schoolchildren all across the country know much more about sea turtles than the average American. I'd hate to have to explain to my children how this species became extinct, so that we could enjoy cheap frozen fish sticks.

Thank you for your work, and consideration of this important issue.

Dean R. Koch
Vice President, Marketing
Adeza
408-745-0975 x130
www.adeza.com

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Subject: Agenda Item C.3. Drift Gillnet FMP Comment '.

From: katri.hakola@jeppesen.com

Date: Tue, 31 Oct 2006 06:53:37 -0700

To: pfmc.comments@noaa.gov

Good morning -

I am not an activist by any stretch of the imagination, but every so often an issue arises to which I feel the need to respond. I've recently read of the pending decision on drift gillnetting off the Pacific coastline and wanted to send my plea not to reopen this issue. It is a cruel practice, not just for the fish it intends to catch, but for the untended sealife it entraps.

Please spare the marine creatures any further unnecessary deaths to assist the "efficiency" of man's commercial fishing trade. I enjoy eating a good piece of fish, but I would rather pay more at the store, to ensure that the ocean's balance begins to return to a more natural state. True, mankind has managed to sit at the top of the food chain through the use of his innovative brain and dexterous hands, but unlike most other predators, we don't just take what we want to eat. We take everything in our path, and then pick and choose from the catch.

Please rethink allowing gillnetting to resume off California and Oregon.

Thank you -

Katri Hakola
Principal Engineer - JTS Nav Services
Jeppesen Sanderson
desk: (303) 328-6503
Blackberry: (303) 489-8300

Subject: Agenda Item C.3. Drift Gillnet FMP Comment

From: glennakim@comcast.net

Date: Tue, 31 Oct 2006 13:31:12 +0000

To: pfmc.comments@noaa.gov

This e-mail is to request that the Pacific Leatherback Conservation Area remain closed to the gillnet fisherman. The turtles need many more years of protection to keep them from extinction.
Thank you for listening.

Glenna R Merriott
8760 Tropical Ct.
Fort Myers, Fl. 33908
949-842-6289

Subject: Agenda Item C.3. Drift Gillnet FMP Comment

From: "Alan Troup \"(atroup)\" <atroup@cisco.com>

Date: Tue, 31 Oct 2006 01:43:23 -0800

To: <pfmc.comments@noaa.gov>

Hello,

I've recently read that the Pacific Leatherback Conservation Area may be reopened to drift gillnet fishing. Please keep this area closed! Please don't let these animals become extinct. My hope would be that this area would remain safe for the turtles indefinitely, though I understand this decision is reviewed every year. If so, I'll write every year. One more year of keeping the area closed is another chance they have for life.

Thanks very much,

Alan Troup

Subject: Agenda Item C.3. Drift Gillnet FMP Comment

From: Jon Pena <xwhen_in_rome@yahoo.com>

Date: Tue, 31 Oct 2006 00:13:31 -0800 (PST)

To: pfmc.comments@noaa.gov

I want the area to remain safe for turtles by keeping the Pacific Leatherback Conservation Area closed. We need to help these beautiful animals from getting caught on nets, thank you.

Jon

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Subject: Protect the Sea Turtles!

From: Miriam Grönroos <miriam@hem.utfors.se>

Date: Tue, 31 Oct 2006 08:34:02 +0100

To: pfmc.comments@noaa.gov

I just recieved this...

"The Pacific leatherback turtle, the largest of the sea turtles and a species that predates the dinosaurs, is in deep trouble. Over the past 20 years, the population of Pacific leatherbacks has plummeted by 97%. Destructive fishing practices, especially [drift gillnets](#), have pushed Pacific leatherbacks close to extinction.

To address this dire threat, in 2001 Federal fisheries managers closed the drift gillnet fishery off the coast of California and Oregon for three months of the year. The closure coincides with the leatherback turtle migration, allowing the turtles to safely feed in these waters. The closure has been so effective that **not a single leatherback turtle has been recorded caught** in the fishery since then!

Now fisheries managers are preparing to allow drift gillnet fishing again – with potentially devastating consequences for leatherback sea turtles."

...and since I am a protector of Oceans now I'm asking of you, please do not make the same mistake twice. If the sea turtles die, that will be a wound that never heals... Please, do not hurt Pacific Ocean nor humankind like that... PLEASE!!

Miriam

ps. if you knew me you'd know it's unusual for me to ask like that.

Subject: Leatherback sea turtles
From: "John Castle II" <JRCastleII@msn.com>
Date: Mon, 30 Oct 2006 23:25:41 -0800
To: <pfmc.comments@noaa.gov>

Pacific Fishery Management Council

My name is John Castle II. I am a Biologist in Oregon. I firmly believe that we need to preserve our wildlife and in doing so takes a great deal of cooperation. I believe the the Leatherback Sea Turtle is in need of protection. I feel something need to be done about the drift gillnet fishery off the coast of California and Oregon. I want this area to remain safe for turtles by keeping the Pacific Leatherback Conservation Area closed. The turtles takes a long time to make a come back. This closure should remain in place far into the future -- not just for 2006. Help to protect the remaining turtles for future generations. I know you'll do the right thing and keep the Pacific Leatherback Conservation Area closed.

Sincerely,

John R. Castle II
629 SE Morrison #314
Portland, Oregon 97231

Subject: sea turtles

From: "kendall s" <kendalls@hotmail.com>

Date: Mon, 30 Oct 2006 23:19:31 -0800

To: pfmc.comments@noaa.gov

BCC:

please do not allow the return of gillnets to our oceans and seas. these things are highly destructive and unnecessary. please help to protect the security of the leatherback sea turtle and other animals whose home we fish in.

Elias and Kendall Rodriguez

Subject: Gillnets

From: "Steve & Jill Tyler" <styler@cyberhotline.com>

Date: Mon, 30 Oct 2006 22:59:11 -0800

To: <pfmc.comments@noaa.gov>

Please leave our CA coastline closed to gillnets forever. It is extremely critical to preserve our oceans that are in such dire straights. Thank you.

Steve Tyler

2564 Franki St

Orange, CA 92865

Phone...714 283-4404

styler@cyberhotline.com

Subject: (no subject)

From: AJCASEY@aol.com

Date: Tue, 31 Oct 2006 01:44:08 EST

To: pfmc.comments@noaa.gov

Please close the drift gillnet fishery off the coast of California and Oregon for three months of the year to keep this area safe for turtles.

By keeping the Pacific Leatherback Conservation Area closed you continue to preserve a great natural treasure.

Thank you

Art Casey
351 Flamingo Drive
Campbell CA 95008

From: Jaya Srinivasan <oujaya23@yahoo.com>

Date: Mon, 30 Oct 2006 21:45:28 -0800 (PST)

To: pfmc.comments@noaa.gov

Please save the turtles! Do not take the three month grace period off for business and materialistic items sake. Every animal on our planet contributes to the homeostatic environment and we need to keep it that way! Protect the turtles because if it was the other way around they would protect us!!! Thank you for listening, Jaya

Subject: Agenda Item C.3. Drift Gillnet FMP Comment

From: Trish <sprtsfn98@yahoo.com>

Date: Mon, 30 Oct 2006 21:43:51 -0800 (PST)

To: pfmc.comments@noaa.gov

To Whom It May Concern,

I would like to request that your office continue to support the practice of halting Drift Gillnet fishing during Leatherback Turtle migration. It is important that we continue to protect these important creatures.

Thank you.

Trisha Milazzo

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(<http://www.yahoo.com/preview>)

Subject: Agenda Item C.3. Drift Gillnet FMP Comment
From: "Chris Carpenter" <Carpenter@pilot.pprune.com>
Date: Mon, 30 Oct 2006 21:39:36 -0800
To: <pfmc.comments@noaa.gov>

Dear Pacific Fishery Management Council,
I would like to voice my concern regarding the Pacific Leatherback Turtles. I understand PFMC is considering reopening the drift gillnet fishery during a 3 month period that is critical to the lifecycle of this species. Please consider the importance of maintaining a viable population base and refrain from letting yet another industry impose their economic demands on a natural resource that belongs to us all. This closure must remain in place permanently. For wildlife and the environment, it is always a losing proposition where encroachment and enconomics are concerned. Please let the wildlife have a reprieve.

Sincerely,

Chris Carpenter, M.Sc.
Wildlife Biology, Fishery Biology, Environmental Science
(778) 846-9033

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<http://www.pprune.org> The most widely read professional pilots website.

Subject: Agenda Item C.3. Drift Gillnet FMP Comment

From: "Heather" <uclaheather@hotmail.com>

Date: Mon, 30 Oct 2006 21:30:20 -0800

To: <pfmc.comments@noaa.gov>

The Pacific leatherback turtle, the largest of the sea turtles and a species that predates the dinosaurs, is in deep trouble. Over the past 20 years, the population of Pacific leatherbacks has plummeted by 97%. Destructive fishing practices, especially drift gillnets, have pushed Pacific leatherbacks close to extinction.

To address this dire threat, in 2001 Federal fisheries managers closed the drift gillnet fishery off the coast of California and Oregon for three months of the year. The closure coincides with the leatherback turtle migration, allowing the turtles to safely feed in these waters. The closure has been so effective that **not a single leatherback turtle has been recorded caught** in the fishery since then!

Please continue to keep this area closed during the leatherback turtle migration, this year and every year. We cannot afford to lose another precious species from our planet. We have the knowledge and the power to keep these gentle creatures safe, and we must use it.

Thank you,
Heather Norem
8452 Wicklow Lane
Dublin, CA 94568

Subject: Agenda Item C.3. Drift Gillnet FMP Comment'
From: "Margo Hohulin" <ashland95@comcast.net>
Date: Mon, 30 Oct 2006 21:20:49 -0800
To: <pfmc.comments@noaa.gov>

Pacific Fishery Management Council:

I have just learned that the National Marine Fisheries Service is considering reopening a large area off the coast of California to drift gillnet fishing which would potentially kill hundreds, if not thousands of endangered leatherback turtles as well as, dolphins and porpoises, seals and sea lions, and whales. As a resident of California, I find this totally unacceptable.

The controls in place (fishery observers on each vessel and caps on the number of leatherbacks and some whale species that can be killed) are not enough to protect these critically endangered species and the other species where there are no proposed caps.

From what I read the proposed opening makes no sense from a scientific, economic, or political standpoint, so why do this? In addition, there is overwhelming public opposition, including mine. Recently in the Governors' Agreement on Ocean Health, the states of California, Oregon and Washington explicitly recognized the need for addressing the declining health of our ocean and the need to sustain marine wildlife populations. Is this being ignored here?

As a resident of California, I always thought our state was progressive when it came to managing the ocean. This proposed action does not seem progressive, but very backward.

I respectfully urge you to keep this area safe for turtles by keeping the Pacific Leatherback Conservation Area closed, not only in 2006 but indefinitely for the sake of the ocean and all that call it home.

Sincerely,

Margo K. Hohulin

Subject: Fwd: Monterey Bay Aquarium:Sea Turtle Alert

From: <ishi717@cox.net>

Date: Mon, 30 Oct 2006 21:09:54 -0800

To: pfmc.comments@noaa.gov

.No drift gill nets!

Date: Mon, 30 Oct 2006 19:12:36 -0500 (EST)
From: Ocean Action Team <oceanaction2@mbayaq.org>
To: ishi717@cox.net
Subject: Monterey Bay Aquarium:Sea Turtle Alert

Monterey Bay Aquarium

~~~~~  
Speak Out NOW for Pacific Leatherback Turtles

The Pacific leatherback turtle urgently needs your help. Your voice by November 7th could help save this struggling species.

The Pacific leatherback turtle, the largest of the sea turtles and a species that predates the dinosaurs, is in deep trouble. Over the past 20 years, the population of Pacific leatherbacks has plummeted by 97%. Destructive fishing practices, especially drift gillnets

([http://rs6.net/tn.jsp?t=cba7rzbab.0.ngggszbab.nz4lxrbab.7014&ts=S0211&p=http%3A%2F%2Fwww.montereybayaquarium.org%2Fcr%2Fcr\\_seafoodwatch%2Fsfw\\_gear.asp](http://rs6.net/tn.jsp?t=cba7rzbab.0.ngggszbab.nz4lxrbab.7014&ts=S0211&p=http%3A%2F%2Fwww.montereybayaquarium.org%2Fcr%2Fcr_seafoodwatch%2Fsfw_gear.asp)) have pushed Pacific leatherbacks close to extinction.

To address this dire threat, in 2001 Federal fisheries managers closed the drift gillnet fishery off the coast of California and Oregon for three months of the year. The closure coincides with the leatherback turtle migration, allowing the turtles to safely feed in these waters. The closure has been so effective that not a single leatherback turtle has been recorded caught in the fishery since then!

Now fisheries managers are preparing to allow drift gillnet fishing again with potentially devastating consequences for leatherback sea turtles.

What you can do

Send an email or a fax to the Pacific Fishery Management Council today. Tell them you want this area to remain safe for turtles by keeping the Pacific Leatherback Conservation Area closed. Every year the Pacific Fishery Management Council decides whether or not to continue closing this area so please emphasize that this closure should remain in place far into the future -- not just for 2006.

Your comments must be received by Tuesday, November 7th. Email your comments to [pfmc.comments@noaa.gov](mailto:pfmc.comments@noaa.gov) or fax them to 503-820-2299. Use the subject line: Agenda Item C.3. Drift Gillnet FMP Comment.

If you do send an email or fax, we'd love to know! Simply respond to this email, or included us as a Bcc on your comments. Thanks!

Learn more

Please read this recent Op-Ed that appeared in the Monterey County Herald (<http://rs6.net/tn.jsp?t=cba7rzbab.0.oggggszbab.nz4lxrbab.7014&ts=S0211&p=http%3A%2F%2Fwww.montereyherald.com%2Fmld%2Fmontereyherald%2Fnews%2Fopinion%2F1>)  
Feel free to draw on language from the article or this alert while writing your comments.

Tell a friend

Forward this email to a friend and urge them to write a letter on behalf of the turtles! Encourage them to become Ocean Action Team members so that we can contact them when it is time to speak out on other critical ocean issues.

Thank you for weighing in on behalf of the Pacific leatherback turtles!

Sincerely,

Aimee David and Ken Peterson  
Ocean Action Team

-----  
email: [oceanaction2@mbayaq.org](mailto:oceanaction2@mbayaq.org)  
web: <http://www.oceanaction.org>  
-----

Forward email

<http://ui.constantcontact.com/sa/fwtf.jsp?m=1101180305197&ea=ishi717%40cox.net&a=1101442973730>

This email was sent to [ishi717@cox.net](mailto:ishi717@cox.net),  
by [oceanaction2@mbayaq.org](mailto:oceanaction2@mbayaq.org)

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Monterey Bay Aquarium | 886 Cannery Row | Monterey | CA | 93940

**Subject:** Agenda Item C.3. Drift Gillnet FMP Comment  
**From:** Stephanie Roberts <steffroberts0926@sbcglobal.net>  
**Date:** Mon, 30 Oct 2006 21:03:08 -0800 (PST)  
**To:** pfmc.comments@noaa.gov

Imagine my surprise when today I opened my e-mail and learned that it was possible for drift gillnet's to be legally used during such a crucial period for the leatherback turtle.

What a wonderful success for the turtles banning the drift gillnets has been. Let's continue this well into the future and NOT just for 2006. Saying yes to the closure means saying yes to the turtles.

Thank you,  
Stephanie Roberts

**Subject:** Agenda Item C.3. Drift Gillnet FMP Comment

**From:** "Janice Oliver" <janice@the-olivers.com>

**Date:** Mon, 30 Oct 2006 20:33:16 -0800

**To:** <pfmc.comments@noaa.gov>

**CC:** <bill.hogarth@noaa.gov>, <jim.lecky@noaa.gov>

Dear Sirs,

I am writing to urge you to keep the Pacific Leatherback Conservation Area closed!

Pacific leatherback sea turtles have survived on this planet for nearly 100 million years and predate the dinosaurs. However, they, and other endangered marine life, cannot survive being caught and drowned in drift gillnets. In addition to endangered turtles, dolphins and porpoises, seals and sea lions, and even large whales drown in this fishery

When the National Marine Fisheries Service put into place a three-month drift gillnet closure in a large area off the coast of California, the closure allowed leatherback turtles to safely migrate and feed in U.S. waters, including Monterey Bay. The closure has been so effective that no leatherback turtles have been reported drowned in the entire fishery since protections were put in place.

Thank you for your consideration of this very important matter!

-----  
Janice C. Oliver  
38720 Adcock Dr  
Fremont CA 94536

[www.serendipcity.com](http://www.serendipcity.com)

~~~~~

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CENTURY 21 Oliver-Jackson: www.richardnoliver.com

<http://bookcrossing.com/friend/JaniceO>

Subject: Agenda Item C.3. Drift Gillnet FMP Comment

From: "stacy m. boyd" <sboyd9ql@umw.edu>

Date: Mon, 30 Oct 2006 23:31:57 -0500

To: pfmc.comments@noaa.gov

Pacific Fishery Management Council-

I am writing to you today in hopes that the Pacific Leatherback Conservation Area remain closed, due to the safety of the sea turtles. The Pacific Leatherback turtle is the largest of the sea turtles and over the past 20 years, their population has plummeted by 97%. Destructive fishing practices have helped this decrease in population and has pushed the Pacific Leatherback turtles close to extinction.

I understand that in 2001, Federal fisheries managers closed the drift gillnet fishery off the coast of California and Oregon for three months of the year. The closure coincides the the leatherback turtle migration and allows the turtles to safely feed in these waters. The close has been so effective that not one Leatherback turtle has been recorded as being caught in the fishery since then.

If the close in the drift gillnet fishery has proven to be successful for the sea turtles, I am a little confused as to why the fisheries managers would want to reopen it. The sea turtles are already close to extinction and I am afraid that if it is reopened, it will not be much longer until they are extinct.

This issue is not only important for this year, but also in the years to come. The safety and survival of these sea turtles depends on this decision, and I hope you will think about the decision you are making and think about the sea turtles that will be affected.

Thank you for taking your time,

Stacy Boyd
sboyd9ql@umw.edu

Subject: Agenda Item C.3. Drift Gillnet FMP Comment

From: Ken Peterson or Paulette Lynch <lyncherson@sbcglobal.net>

Date: Mon, 30 Oct 2006 20:31:51 -0800 (PST)

To: pfmc.comments@noaa.gov

Please RETAIN and EXTEND the total ban on drift gillnet fishing in the Pacific Leatherback Conservation Area so that these endangered ocean giants do not slide a step closer to extinction.

The small potential gain for a few commercial fishing crews is not worth the potential risk to a species whose numbers have already plummeted by 97 percent.

It's imperative that the closure remain in place, and not just for another year. Act now to extend the closure into the foreseeable future to assure that our grandchildren live in a world with leatherback sea turtles.

The threat to leatherbacks is dire. The risk of doing anything that compromises their survival is far, far too great.

Ken Peterson, Paulette Lynch & Gabriel Peterson

1215 Josselyn Canyon Road

Monterey, CA 93940

lyncherson@sbcglobal.net

831-646-8054

Subject: Agenda Item C.3. Drift Gillnet FMP Comment'.

From: RLSGMAN@aol.com

Date: Mon, 30 Oct 2006 23:28:34 EST

To: pfmc.comments@noaa.gov

To Whom It May Concern:

Please keep the Pacific Leatherback Conservation Area closed to drift gillnet fishing so the Leatherback Turtle remains safe. I am very concerned about the drastic decrease in the Pacific Leatherback population. Having closed it for 2006 has had some very positive results and keeping it closed for a longer period of time will help the Pacific Leatherback recover from the devastation of unmonitored gillnet fishing.

Raymond L. Stevenson
3795 Whitman Circle
Carmel, CA 93923

Subject: Agenda Item C.3. Drift Gillnet FMP Comment

From: T McBroom <tami@hairballdesign.com>

Date: Mon, 30 Oct 2006 20:27:42 -0800

To: pfmc.comments@noaa.gov

Please don't allow drift gillnet fishing again in the Pacific Leatherback Conservation Area. The survival of the Leatherback Turtles depend on this area staying closed - not just now but for years to come.

Regards - Tami McBroom
Pioneer, CA

Subject: Agenda Item C.3. Drift Gillnet FMP Comment'.

From: "Sonya Adams" <tpluss@msn.com>

Date: Mon, 30 Oct 2006 20:13:56 -0800

To: <pfmc.comments@noaa.gov>

My family wants this area to remain safe for turtles by keeping the Pacific Leatherback Conservation Area closed.

The closure has been so effective that **not a single leatherback turtle has been recorded caught** in the fishery since then!

Please continue your efforts to help the leather back turtle to survive for the ecosystem of that ocean.
Sonya Adams

Subject: Reopening Gill Net fishery and Leatherback Sea Turtles
From: "Leesa Watt" <blueplanet.leesa@gmail.com>
Date: Mon, 30 Oct 2006 19:59:10 -0800
To: pfmc.comments@noaa.gov

The following quote from the Monterey Herald dated Monday October 30 nicely sums up why opening the gill net fishery makes no sense. Please for the sake of yet another on the verge of extinction species, do not reopen the gill net fishery.

"The proposed opening therefore makes no sense for either scientific or economic reasons. It also makes no sense for political reasons, as the public has shown overwhelming opposition. Further, it would seem to fly in the face of the recent Governors' Agreement on Ocean Health, where the states of California, Oregon and Washington have explicitly recognized the need for addressing the declining health of our ocean and the need to sustain marine wildlife populations.

In California, we pride ourselves on being progressive in ocean management. If the Fisheries Service approves the opening of the Pacific Leatherback Conservation Area, it will be a hugely irresponsible step backward. Just as we are protecting areas in our state waters through the Marine Life Protection Act, we would be re-opening areas in our federal waters to a wasteful and destructive way of fishing.

The question ought not to be how do we open this area, but rather, how can we catch swordfish, tuna and thresher shark without sacrificing so many other marine creatures? If we don't take the time to find that answer, Pacific leatherback sea turtles may go extinct on our watch."

Sincerely,

Leesa Watt

Subject: Agenda Item C.3. Drift Gillnet FMP Comment

From: Liz Peterson <lizpeterson@optonline.net>

Date: Mon, 30 Oct 2006 22:52:33 -0500

To: pfmc.comments@noaa.gov

Dear Pacific Fishery Management Council Representative:

Please keep the Pacific Leatherback Conservation Area closed so that the turtles and many other marine animals will not be harmed unnecessarily by drift gillnet fishing practices. I visited the California coast several years ago, traveling from my home in New Jersey, and was impressed greatly by its beauty. Please continue to protect species like the Pacific Leatherback Turtle that I believe cannot afford to lose even one individual, and help prevent future horrific decreases in populations of other species.

Regards,

Liz Peterson

Subject: Agenda Item C.3. Drift Gillnet FMP Comment'.

From: bandit97@comcast.net

Date: Tue, 31 Oct 2006 03:40:29 +0000

To: pfmc.comments@noaa.gov

Please do not let the turtles be endangered again by allowing the coast of California and Oregon to be open to drift gillnet fishery.

All of us who care about this

issue want this area to remain safe for turtles by keeping the Pacific Leatherback Conservation Area closed.

Thankyou and sincerely

Therese Breen

Subject: Agenda Item C.3. Drift Gillnet FMP Comment

From: JuStInE <blueskiez3@yahoo.com>

Date: Mon, 30 Oct 2006 19:26:21 -0800 (PST)

To: pfmc.comments@noaa.gov

CC: oceanaction2@mbayaq.org

To the Pacific Fisheries Marine Council:

On behalf of the Ocean Action Network of the Monterey Bay Aquarium, I am writing to request that you consider keeping the Pacific Leatherback Conservation Area closed. Hopefully this will become a permanently protected area because these turtles, as well as other marine mammals, will be subject to even further endangerment. Instead of reenacting the use of drift gillnets, maybe there can be other options considered before ensuring the possible extinction of this ancient species. As an Environmental Studies student, and a person raised around the beauty of the ocean, I am writing to ask you to protect species that fall into harm because of this fishing practice. The research has shown that without these gillnets in use, there were no leatherback turtle deaths and with them, there were more than 50 deaths between 1996 and 2000, not to mention 700 seal and sea lion deaths, 1000+ dolphins and porpoises, and 35 whales. These animal populations cannot sustain anymore casualties, especially due to a fishing tactic that does not necessarily add any economic benefit. So I urge you to please consider keeping this a protected area in order to benefit the balance and the survival of our oceans. Thank you very much.

Sincerely,

Justine Grajski

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(<http://music.yahoo.com/unlimited>)

Subject: Agenda Item C.3. Drift Gillnet FMP Comment

From: "Tom Foster" <foster.tom.m@gmail.com>

Date: Mon, 30 Oct 2006 19:15:44 -0800

To: pfmc.comments@noaa.gov

To Whom It May Concern:

I am writing to you regarding the Pacific Leatherback Turtles and allowing drift gillnet fishing. I think it would be a huge mistake allowing gillnet fishing to occur during the the Leatherback turtle migration. These species are important to the global earth system and are only struggling species due to mankind.

Please close the drift gillnet fishery off the coast of California and Oregon for the 3 months of Leatherback Turtle migration!

Sincerely,
Tom Foster

Subject: Agenda Item C.3. Drift Gillnet FMP Comment
From: "Matthew Stein \(\mdstein\)" <mdstein@cisco.com>
Date: Mon, 30 Oct 2006 18:29:54 -0800
To: <pfmc.comments@noaa.gov>

Although by no means an expert of the economic impact by keeping a ban of drift grill-net fishing in-place off the coast of CA and Oregon I do understand a bit of the impact on nature if we do not keep areas protected during key times of the year.

The loss of any species of animal, although unavoidable due to environmental impacts at times, must be fought at all possible costs when it can be avoided by simple actions on the part of American industry. In this situation, if we believe the latest scientific data that the world is truly down to below 3,000 Pacific Leatherback turtles left of this species we are dangerously close to reducing the gene pool to a level that would make it virtually impossible to bring back this animal.

Why is this important? Besides the fact that we never know what critical piece of history or human medical research we will find from some remote animal, frankly it is the right thing to do (cliché but something even children understand).

I urge the board to consider holding the ban for drift gillnet fishing until such time as this animal is off the endangered species list or newer safer technology is developed for this type of fishing.

I appreciate your time and your consideration.

Matthew Stein
Cisco Systems
408-853-7207

Subject: protected our turtles
From: Ladyshiningstar2@aol.com
Date: Mon, 30 Oct 2006 21:29:08 EST
To: pfmc.comments@noaa.gov

Dear Pacific Fishery Management Council,

Please remain safe for turtles by the keeping the Pacific Leatherback Conservation Area closed. Please protect the turtles so our grandchildren and next generation will see turtles for years to come. Thank you
Pam

Subject: Agenda Item C.3. Drift Gillnet FMP Comment

From: adam <boing@estarcion.com>

Date: Mon, 30 Oct 2006 18:20:51 -0800

To: pfmc.comments@noaa.gov

The Pacific leatherback turtle, the largest of the sea turtles and a species that predates the dinosaurs, is in deep trouble. Over the past 20 years, the population of Pacific leatherbacks has plummeted by 97%. Destructive fishing practices, especially [drift gillnets](#), have pushed Pacific leatherbacks close to extinction.

To address this dire threat, in 2001 Federal fisheries managers closed the drift gillnet fishery off the coast of California and Oregon for three months of the year. The closure coincides with the leatherback turtle migration, allowing the turtles to safely feed in these waters. The closure has been so effective that **not a single leatherback turtle has been recorded caught** in the fishery since then!

I would like this area to remain safe for turtles by keeping the Pacific Leatherback Conservation Area closed. Every year the Pacific Fishery Management Council decides whether or not to continue closing this area so please keep this closure in place far into the future -- not just for 2006.

Thank you,

Adam B. Wells

Subject: Agenda Item C.3. Drift Gillnet FMP Comment

From: Kay Schroer <kschroer@sbcglobal.net>

Date: Mon, 30 Oct 2006 18:07:01 -0800 (PST)

To: pfmc.comments@noaa.gov

I am writing to urge you not to open the California and Oregon coastal area during the season when the Pacific Leatherbacks are migrating. The fishermen destroyed the population before and since the area was off limits in 2001 no turtles have been caught. Turtles take years to mature so it is way premature to open the area again.

The health of the oceans is at the will of man and it is up to us to responsibly protect fish and marine mammals.

Thank you,

Kay Schroer

Subject: Agenda Item C.3. Drift Gillnet FMP Comment

From: Marilyn Wells <beachwitch@mac.com>

Date: Mon, 30 Oct 2006 17:45:39 -0800

To: pfmc.comments@noaa.gov

I want this area to remain safe for turtles by keeping the Pacific Leatherback Conservation Area closed. PLEASE make this make this closure permanent, or keep it in place as long as possible, not just for 2006.

All the best,

Marilyn Wells

Subject: Agenda Item C.3. Drift Gillnet FMP Comment
From: Susie and Phil Kaplan <kaplanvb@cruzio.com>
Date: Mon, 30 Oct 2006 17:41:04 -0800
To: pfmc.comments@noaa.gov

Dear Pacific Fishery Management Council,

We would like to encourage you to continue the ban on drift gillnet fishing to protect the Pacific Leatherback turtles. It would really be a shame to lose these ancient turtles forever.

Thank you for your time.

Sincerely,

Phil and Susie Kaplan
100 N. Rodeo Gulch Rd. #29
Soquel, Ca. 95073

Subject: preserve leatherback turtles
From: "ra3ajw" <ra3ajw@sbcglobal.net>
Date: Mon, 30 Oct 2006 17:34:07 -0800
To: <pfmc.comments@noaa.gov>

This op-ed says it all. Please read it and make the right decision.

Al Bonvouloir

Posted on Sun, Oct. 15, 2006

 [email this](#)

 [print this](#)

KEEP AREA CLOSED FOR TURTLES' SAKE

By SANTI ROBERTS

Guest commentary

Pacific leatherback sea turtles have survived on this planet for nearly 100 million years. They have endured ice ages, major volcanic events, meteor impacts, and most every predator in the sea. However, they, and other endangered marine life, cannot survive being caught and drowned in drift gillnets.

Knowing this, in 2001, the National Marine Fisheries Service put into place a three-month drift gillnet closure in a large area off the coast of California that would allow leatherback turtles to safely migrate and feed in U.S. waters, including Monterey Bay. The closure -- the Pacific Leatherback Conservation Area -- has been so effective that no leatherback turtles have been reported drowned in the entire fishery since protections were put in place.

So, why then is the Fisheries Service now considering reopening this area year round to up to 30 drift gillnet vessels?

It's not because the gear has improved. Drift gillnets remain as destructive as they were prior to the 2001 closure. In addition to endangered turtles, dolphins and porpoises, seals and sea lions, and even large whales drown in this fishery. Between 1996 and 2002, more than 50 turtles, 700 seals and sea lions, over 1,000 dolphins and porpoises, and 35 large whales were killed.

These air-breathing animals often die when caught in these huge nets, long enough to loop around a football field six times. In fact, drift gillnets are so harmful to ocean life that they are banned on the high seas and in the waters of several states, including Washington, Georgia and Florida.

The proposal before the Fisheries Service would open up the protected area as long as there are fishery observers on each vessel and caps on the number of leatherbacks and some whale species that can be killed. These controls will help limit the number of leatherback turtles and certain large whales killed.

Unfortunately, with these critically endangered species, the survival of every single one counts. What is more, there will be no caps on the number of other sea turtles, fin whales, gray whales, elephant seals, California sea lions and dolphins killed. Nor will there be any caps on the amount of fish simply discarded, dead and dying, which in this fishery amounts to more than is kept.

It is also not because of economics; the proposed reopening is not expected to provide significant economic

benefit. The industry folks argue that the closed area has directly led to the decline in the drift gillnet fishery. But this fishery was waning long before the closure was implemented, with the number of active vessels dropping by half between 1994 and 2000. The Fisheries Service has concluded that the "economic impact of an increase in (drift gillnet) effort is likely to differ little from zero." In other words, there is no predicted economic gain from this proposed opening.

The proposed opening therefore makes no sense for either scientific or economic reasons. It also makes no sense for political reasons, as the public has shown overwhelming opposition. Further, it would seem to fly in the face of the recent Governors' Agreement on Ocean Health, where the states of California, Oregon and Washington have explicitly recognized the need for addressing the declining health of our ocean and the need to sustain marine wildlife populations.

In California, we pride ourselves on being progressive in ocean management. If the Fisheries Service approves the opening of the Pacific Leatherback Conservation Area, it will be a hugely irresponsible step backward. Just as we are protecting areas in our state waters through the Marine Life Protection Act, we would be re-opening areas in our federal waters to a wasteful and destructive way of fishing.

The question ought not to be how do we open this area, but rather, how can we catch swordfish, tuna and thresher shark without sacrificing so many other marine creatures? If we don't take the time to find that answer, Pacific leatherback sea turtles may go extinct on our watch.

This was written by Larry Crowder, director of the Duke Center for Marine Conservation at Duke University; Michael Sutton, director of the Center for the Future of the Oceans at the Monterey Bay Aquarium; Cindy Walter of Passionfish restaurant in Pacific Grove; and Santi Roberts, California project manager for Oceana.

Subject: Pacific Fishery Management Council

From: "S. Duffy" <bast3@sbcglobal.net>

Date: Mon, 30 Oct 2006 17:30:47 -0800

To: pfmc.comments@noaa.gov

CC: oceanaction2@mbayaq.org

The Pacific leatherback turtle, the largest of the sea turtles and a species that predates the dinosaurs, is in deep trouble. Over the past 20 years, the population of Pacific leatherbacks has plummeted by 97%. Destructive fishing practices, especially [drift gillnets](#), have pushed Pacific leatherbacks close to extinction.

To address this dire threat, in 2001 Federal fisheries managers closed the drift gillnet fishery off the coast of California and Oregon for three months of the year. The closure coincides with the leatherback turtle migration, allowing the turtles to safely feed in these waters. The closure has been so effective that **not a single leatherback turtle has been recorded caught** in the fishery since then!

I would like this area to remain safe for turtles by keeping the Pacific Leatherback Conservation Area closed. Every year the Pacific Fishery Management Council decides whether or not to continue closing this area so please keep this closure in place far into the future -- not just for 2006.

Thank you,

Stacey Duffy

Subject: help preserve leatherback sea turtles
From: "Tom & Jayne Knecht" <browndogz@comcast.net>
Date: Mon, 30 Oct 2006 18:20:16 -0700
To: <pfmc.comments@noaa.gov>

Dear Pacific Fishery Management Council,

We are writing to implore you to not allow drift gillnet fishing off the California and Oregon coasts during the months the leatherback sea turtles migrate through this area. As you know, gillnet fishing is to the point of evil for the deaths it causes to species that are of no "commercial value". Leatherback sea turtles sadly have a prominent place on that list. As scuba divers, underwater photographers, and environmentalists, we beseech you to not lift the ban on drift gillnet fishing in this region during the months the turtles are present. From the standpoint of right and wrong, we beseech you to permanently disallow gillnet fishing in general. Thank you for your consideration. Please do the right thing.

Sincerely,
Thomas P Knecht, MD, PhD, FACP
Jayne R Knecht
3661 S. Gilroy Rd.
Salt Lake City, UT 84109
801-424-3172
browndogz@comcast.net

Subject: FW: Monterey Bay Aquarium:Sea Turtle Alert

From: "bob" <r.frank@sbcglobal.net>

Date: Mon, 30 Oct 2006 17:17:46 -0800

To: <pfmc.comments@noaa.gov>

CC: "Bonnie Lightner" <bonnjo@gmail.com>, "Catherine Walline" <Catherine.Walline@boe.ca.gov>, "Gene Frank" <gene1139@comcast.net>, "Jake Clark" <shibbiiieeee@yahoo.com>, "John Adamo" <adamo422@sbcglobal.net>, "Judy Frank" <judith1139@comcast.net>, "Katie" <palmieri@nature.berkeley.edu>, "Olivia & Don Dembowski" <dembowsk@optonline.net>, "Suzie Frank" <sifran@myway.com>

It is important to the future of the Pacific leatherback turtle that you do not allow drift gillnets to be used during the turtles migration. Please take into consideration that we all want our children and grandchildren to enjoy these magnificent animals. You have the power to help save them from extinction and I pray that you will do so.

Subject: Agenda Item C.3. Drift Gillnet FMP Comment'
From: "Simpson, Barrie" <barrie.simpson@verigy.com>
Date: Mon, 30 Oct 2006 19:15:31 -0600
To: <pfmc.comments@noaa.gov>

It is my understanding that due to the closure of drift gillnet fishery off the coast of California and Oregon for three months of the year, during the turtle migration, that not a single leatherback turtle has been recorded caught in the fishery since this closure.

I also understand that you may be considering changing this. Please look carefully at the data before you make this decision.

My kids want these turtles around in the future.

Thanks,

Barrie

Barrie Simpson
Verigy Ltd
10100 North Tantau Ave
Cupertino, CA 95014
408-864-2910
barrie.simpson@verigy.com

"This year, make peace with life's challenges, cultivate your ability to be amazed and keep your spirit open to all that shines."

Subject: Agenda Item C.3. Drift Gillnet FMP Comment

From: Jenn Holsten <jholsten@alumni.usc.edu>

Date: Mon, 30 Oct 2006 17:10:15 -0800 (PST)

To: pfmc.comments@noaa.gov

To the Pacific Fishery Management Council:

The closure of the Pacific Leatherback Conservation Area off the coast of California has effectively protected Pacific Leatherback sea turtles and the lives of other marine animals since it was implemented in 2001. The proposed reopening of this area to drift gillnet fishing should be rejected. Drift gillnet fishing remains as destructive to marine life as it was in 2001 when the closure was implemented. There is no scientific basis or predicted economic gain to justify reopening this area to drift gillnet fisheries. The proposed observers and caps on numbers certain animals to be killed are not adequate to protect the declining health of the ocean and to sustain marine wildlife populations.

The reopening of this conservation area would be hugely irresponsible. Please reject the proposed reopening of this area to a wasteful and destructive way of fishing. Please continue to enforce the drift gillnet closure.

Sincerely,
Jenn Holsten

Subject: Drift gillnets
From: "Rudy Patton" <rudy@pattongold.com>
Date: Mon, 30 Oct 2006 17:07:07 -0800
To: <pfmc.comments@noaa.gov>

As a resident of Pacific Grove I am more aware of the ocean than someone who lives in the center of the country. Therefore I feel obligated to request for us and future generations of the entire U.S. that you **not** open up the Pacific Leatherback Conservation Area. We are poorer for each turtle that is lost and we are responsible to future generations. If we do not do what we can now, it cannot be undone.

Who benefits from this threat to the leatherbacks?

I eat fish and love it. But we must be aware of what we are doing and take responsibility for our actions. We share this planet.

There is not much that I personally can do, but I can make this request: **Please keep the Pacific Leatherback Conservation Area closed to drift gillnets. This should remain closed for as long as the Pacific leatherback is endangered.**

Subject: Agenda Item C.3. Drift gillnet FMP comment

From: "Susan Thamer" <sbthamer1933@msn.com>

Date: Mon, 30 Oct 2006 17:06:48 -0800

To: <pfmc.comments@noaa.gov>

To Whom it May Concern:

An urgent request to keep the Pacific Leatherback Conservation Area **CLOSED** so it will remain safe for the Leatherbacks.

On a trip to the Farallones, I was fortunate enough to view these magnificent creatures at close range - they are beautiful and deserve the chance to revive there numbers without drowning in a gillnet. Thank you for your consideration in this urgent matter. Sincerely, Susan B. Thamer

Subject: pacific leatherback turtles
From: Rick Hadley <rbhadley@sbcglobal.net>
Date: Mon, 30 Oct 2006 17:06:11 -0800 (PST)
To: pfmc.comments@noaa.gov
CC: CarlaSue Hanson <carlasueh@msn.com>

To whom it may concern,

I am disturbed to hear that the indiscriminate killing machines, known as drift gill nets are possibly going to be reintroduced off the California and Oregon coasts.

Please do not allow this to happen. The closure for the 3 month period (during migration) has proven to protect the species. Ending the closure would only wipe out all the good that has been accomplished.

sincerely,

Rick Hadley
maine wildlife enthusiast

Subject: agenda item C.3. Drift Gillnet FMP comment
From: janmikeking@comcast.net
Date: Tue, 31 Oct 2006 00:58:12 +0000
To: pfmc.comments@noaa.gov

Pacific Fishery Management Council:

This letter is to urge you to continue to keep the Pacific Leatherback Conservation Area closed. Closing this area gives the Leatherbacks the opportunity to continue their cycle of life which is necessary if we are to keep these wonderful creatures as part of our active ecosystem. Please decide that the Leatherbacks are worthy of our help to help them thrive.

Thank you, Mike King
3047 Whalers Way
Pebble Beach, CA

Subject: Agenda Item C.3. Drift Gillnet FMP Comment

From: "Susan Wishon" <susan@wishon.org>

Date: Mon, 30 Oct 2006 16:50:26 -0800

To: pfmc.comments@noaa.gov

I am writing you today to ask that you continue the protection of the Pacific leatherback turtle, the largest of the sea turtles and a species that predates the dinosaurs. You can do this by keeping this area safe for turtle migration by banning drift gillnets from the coast of California and Oregon at least during their migration season. These turtles have a long way to go before their back to their natural numbers, as within the last 20 years, their population declined by 97%. To regain their population numbers, please keep the ban on drift gillnets.

Thanks,

Susan Wishon

Subject: Agenda Item C.3. Drift Gillnet FMP Comment

From: Cynthia Race <race@stanford.edu>

Date: Mon, 30 Oct 2006 16:38:25 -0800

To: pfmc.comments@noaa.gov

CC: oceanaction2@mbayaq.org

Dear Council Members:

I am writing today to urge you to continue to keep the Pacific Leatherback Conservaton Area closed to gill net fishing. To open the area would serve no economic purpose, and would only endanger further not just the Leatherback turtles, but also dolphins, porpoises, seals, sea lions and whales (many of which are endangered or threatened species).

Personally I would love a complete ban on gill net fishing year round similar to Washington, Georgia or Florida, however until such time as that could be instated, we should continue with the progress that has been made in the past to close it for three months of the year during the critical migration period of the Leatherback turtles which are on the Endangered Species List. As there have been no recorded deaths in the fishery since this ban was put in place, it appears to be an effective first step in helping this species try and recover.

Again, I urge you to keep the ban in place as a healthy ocean environment benefits everyone.

Regards,

Cynthia Race

Subject: 'Agenda Item C.3. Drift Gillnet FMP Comment'.

From: Tod Likins <trlikins@cruzio.com>

Date: Mon, 30 Oct 2006 16:33:40 -0800

To: pfmc.comments@noaa.gov

I strongly urge you to keep the three month ban on drift gillnet fisheries in place! There are too few leatherbacks still living to risk another one destroyed and the ban has thus far been completely successful. Please don't destroy this species. Keep the Pacific Leatherback Conservation Area closed!

Dr Tod Likins
130 Anita St
Santa Cruz
CA 95060

Subject: Pacific Leatherback Conservation Area
From: Nalani Ludington <nalaniludington@yahoo.com>
Date: Tue, 31 Oct 2006 15:50:13 -0800 (PST)
To: pfmc.comments@noaa.gov

Dear Pacific Fishery Management Council,

I am writing to strongly encourage you to keep the Pacific Leatherback Conservation Area off the coast of California and Oregon closed to gill-net fishing. It is so important to keep this area safe for this endangered species. The closure of this area will also protect many other marine species, helping to ensure the ecosystem and the health of our ocean which is important not only environmentally, but economically. Since the proposed reopening of the fishery is not expected to provide a specific economic benefit, the reopening would only be a step backward in the progress we have made to protect our oceans and keep them stable. By keeping this area closed we can set an example for other fisheries using this dangerous and destructive fishing method. Thank you for your time and consideration.

Sincerely,
Nalani Ludington

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<http://mail.yahoo.com>

Subject: Agenda Item C.3. Drift Gillnet FMP Comment

From: "Denise Ludington" <dludington@yosemite.org>

Date: Wed, 1 Nov 2006 06:37:38 -0800

To: <pfmc.comments@noaa.gov>

Dear Pacific Fishery Management Council,

I understand that the population of Pacific leatherbacks has been pushed close to extinction due to destructive fishing practices, especially drift gillnets.

I applaud the efforts you have made to address this dire threat, by closing the drift gillnet fishery off the coast of California and Oregon for three months of the year beginning in 2001. The closure coinciding with the leatherback turtle migration, has allowed the turtles to safely feed in these waters. The closure has been so effective that **not a single leatherback turtle has been recorded caught** in the fishery since then!

This is success, but the success will not last unless you continue the closure during the migration time. Please ensure that this area remain safe for turtles by keeping the Pacific Leatherback Conservation Area closed. I know you struggle with the decision whether or not to continue closing this area every year, so please continue the closure to ensure that this magnificent being, largest of the sea turtles and a species that predates the dinosaurs, survives and thrives -- not just for 2006, but far into the future.

Sincerely,
Denise Ludington

Subject: Agenda Item C.3. Drift Gillnet FMP Comment

From: Juli Gumbiner <jag2@sonic.net>

Date: Wed, 1 Nov 2006 06:36:25 -0800

To: pfmc.comments@noaa.gov

CC: Tracy Ross <tmr@sonic.net>

Dear Pacific Fishery Management Council:

Please reject any attempt to reinstitute drift gill net fishing off the coast of California and Oregon during the three months of the Leatherback Turtle migration.

The Pacific leatherback turtle, the largest of the sea turtles and a species that predates the dinosaurs, is in deep trouble. Over the past 20 years, the population of Pacific leatherbacks has plummeted by 97%. Destructive fishing practices, especially drift gillnets, have pushed Pacific leatherbacks close to extinction.

To address this dire threat, in 2001 Federal fisheries managers closed the drift gillnet fishery off the coast of California and Oregon for three months of the year. The closure coincides with the leatherback turtle migration, allowing the turtles to safely feed in these waters. The closure has been so effective that not a single leatherback turtle has been recorded caught in the fishery since then!

This fishing practice not only endangers turtles, but is destructive to marine mammals, who become entangled in these nets and suffer terribly. I urge you to keep our coastline closed.

Thank you for your consideration.

Sincerely,

--Juli Gumbiner

Subject: Agenda Item C.3. Drift Gillnet FMP Comment

From: Beth Jones <blj1@direkt.at>

Date: Wed, 01 Nov 2006 11:06:51 +0200

To: <pfmc.comments@noaa.gov>

To the Pacific Fishery Management Council:

As a participant in Earthwatch's leatherback turtle recovery program, I would like to express my staunch opposition to allowing drift gillnet fishing back into U.S. Pacific waters currently protected by time/area closures.

As you probably know, the population of Pacific leatherbacks has plummeted by 97%. As you also know, needlessly destructive fishing practices, especially the use of drift gillnets, have pushed Pacific leatherbacks close to extinction and recklessly pillaged other marine populations.

So to address this dire threat, in 2001 Federal fisheries managers closed the drift gillnet fishery off the coast of California and Oregon for three months of the year. The closure has been so effective that not a single leatherback turtle has been recorded caught since then!

Now fisheries managers are preparing to allow drift gillnet fishing again – why, when this will certainly have devastating consequences for leatherback sea turtles? Why, when drift gillnets are so harmful to ocean life that they are banned on the high seas and in the waters of several states, including Washington, Georgia and Florida? Why allow drift gillnet fishing again, when the Fisheries Service has concluded that the "economic impact of an increase in {drift gillnet} effort is likely to differ little from zero"?

The fishing industry has sadly become notorious for its short-sighted greed, but drift gillnets and bottom trawling top the industry's list of lazy and stupid choices.

So I'm contacting the Pacific Fishery Management Council today to tell you that I (along with the majority of other Americans) want this area to remain safe for turtles and other marine populations by keeping the Pacific Leatherback Conservation Area closed – not just for 2006, but for good, so populations can finally (hopefully) begin to recover in the years to come!

Thank you for your time and attention,

Beth Jones
Rettenpacher Strasse 19A
A5020 Salzburg, Österreich/Austria
Tel & Fax (011)-43-662-646437
blj1@direkt.at
<http://www.proz.com/translator/9270> (CV in English)
oder/or
<http://www.foreignword.biz/cv/3548.htm> (Lebenslauf auf Deutsch)

Please protect the remaining leatherbacks!

Subject: Please protect the remaining leatherbacks!

From: "Mike Chamberlain" <MChamberlain@mbayaq.org>

Date: Wed, 1 Nov 2006 00:48:17 -0800

To: <pfmc.comments@noaa.gov>

In California, we pride ourselves on being progressive in ocean management. If the Fisheries Service approves the opening of the Pacific Leatherback Conservation Area, it will be a hugely irresponsible step backward. Just as we are protecting areas in our state waters through the Marine Life Protection Act, we would be re-opening areas in our federal waters to a wasteful and destructive way of fishing.

Please reconsider!

Best,

Mike Chamberlain

Subject: Agenda Item C.3. Drift Gillnet FMP Comment

From: jturner95014@comcast.net (Jackie Turner)

Date: Wed, 01 Nov 2006 08:10:38 +0000

To: pfmc.comments@noaa.gov

Please keep the Pacific Leatherback Conservation Area closed to help preserve the leatherback turtles.
This closure should remain in place far into the future -- not just for 2006.

Destructive fishing practices, especially drift gillnets, have pushed these wonderful animals close to extinction.
They must be able to feed safely in these waters.

Jacqueline Turner
Cupertino, California

Subject: Agenda Item C.3. Drift Gillnet FMP Comment

From: Judy Skipworth <booksmart91@yahoo.com>

Date: Tue, 31 Oct 2006 22:47:46 -0800 (PST)

To: pfmc.comments@noaa.gov

Dear Fishery Management Council,

I'm sure, that you are receiving loads of E-mails about the extinct Leatherback Pacific Turtles, or at least hoping. So as you might guess that's exactly what this E-mail is about. It's so funny how many animals go extinct each year just because people become lazy and look for an easier way out. Now 97% is a HUGE number to drop your species down in. I mean why would we want to kill off an animal that is so important and historicly fascinating?

Now in 2001 the driftgill fishery was shut down because you recognized what was happening and promptly dealt with it, I Thank-you for that and hope that you will once again step up to the plate and make this little part of the world balanced again. Besides it was so effective and good for your image, so why not again? Your doing so much by this, so please keep this policy going, vote to close the fisheries again for this year and the next. Besides has man really sank to that level of wiping out entire species because we don't care? Isn't man supposed to be the dominant species of the world? There are other, smarter, and resourceful ways to go about things. Doing this act won't hurt, but it will surely help.

Please keep this practice going, for those three months close the drift nets and let the turtles continue to thrive, populate, and be free. Thank-you for reading this and at least considering it.

Sincerely,

Judy Skipworth

We have the perfect Group for you. Check out the [handy changes to Yahoo! Groups.](#)

Subject: Save the turtles

From: "Steve Schreifels" <stevesch@sbcglobal.net>

Date: Tue, 31 Oct 2006 22:11:16 -0800

To: <pfmc.comments@noaa.gov>

I want this area to remain safe for turtles by keeping the Pacific Leatherback Conservation Area closed. Every year the Pacific Fishery Management Council decides whether or not to continue closing this area so I emphasize that this closure should remain in place far into the future -- not just for 2006.

Thank you,

Steve Schreifels

Subject:**From:** Earl Rubell <earlkay@earthlink.net>**Date:** Tue, 31 Oct 2006 21:05:40 -0800**To:** pfmc.comments@noaa.gov

The closure of the drift gillnet fishery off the coast of California for 3 months a year since 2001 has obviously been very successful in eliminating the destruction of the Pacific leatherback turtle. It appears that an effort is underway to again allow drift gillnet fishing in the protected areas.

We strongly urge that this area continue to be closed for the foreseeable future.

We owe it to our planet and its ecosystems to avoid the indiscriminate destruction of endangered species.

Thank you,

Earl and Kay Rubell

Subject:

From: <janicelraymond@cox.net>

Date: Tue, 31 Oct 2006 23:41:19 -0500

To: pfmc.comments@noaa.gov

Please keep the sea turtles safe by continuing to ban the harmful fishing during their migration season. Thank you.

Subject: Agenda Item C.3. Drift Gillnet FMP Comment¹.

From: Elin Kelsey <elin@redshift.com>

Date: Tue, 31 Oct 2006 19:49:26 -0800

To: <pfmc.comments@noaa.gov>

CC: <oceanaction2@mbayaq.org>

Dear Pacific Fishery Management Council,

There is no place for drift gill net fisheries in California and Oregon. This indiscriminate fishing practice results in extraordinarily wasteful by-catch, including Pacific Leatherback turtles. I implore you to keep the Pacific Leatherback Conservation Area closed in perpetuity. The short-sighted strategy of effecting year to year closures are surely past. Please close the area now and leave it that way for the future.

Sincerely,

Elin Kelsey, PhD

Elin Kelsey, Ph.D.
Elin Kelsey & Company
The Studio
123 - 17th Street
Pacific Grove, California, 93950
(831) 648-1039
elin@iname.com

Subject: Agenda Item C.3 Drift Gillnet FMP comment

From: "kshaw" <kshaw@xmission.com>

Date: Tue, 31 Oct 2006 20:42:37 -0700

To: <pfmc.comments@noaa.gov>

NO Gillnetting!! The Pacific leatherback turtle needs to be saved. If gillnetting is allowed I feel the Pacific leatherback won't have a chance. It was here long before us - it should be here long after we are gone.

Karen Shaw
4747 Wander Lane
Holladay, Utah 84117
kshaw@xmission.com

Subject: nets

From: "A. chapman" <momchap@hotmail.com>

Date: Wed, 01 Nov 2006 03:34:49 +0000

To: pfmc.comments@noaa.gov

BCC:

We who are alive today have an opportunity to save sea turtles from extinction by banning all fishing nets that trap turtles and drown them. It is critical that we act responsibly by maintaining the ban on all such dangerous nets.

I care about this issue. I want you to care about this issue too.

Sincerely,

A. Chapman

Find a local pizza place, music store, museum and more...then map the best route! <http://local.live.com?FORM=MGA001>

Subject: Agenda Item C.3. Drift Gillnet FMP Comment

From: George Haye <geohaye@yahoo.com>

Date: Tue, 31 Oct 2006 16:56:35 -0800 (PST)

To: pfmc.comments@noaa.gov

Pacific Fishery Mgmt Council,
Good day. I would like to humbly request that as a
Council, you do everything in your power to keep the
Pacific Leatherback Conservation Area closed not just
for the upcoming year, but for at least 10 years.
This is a species which must be protected in this
manner.

Best regards,
George Haye
13766 Long Ridge Road #A
Los Gatos, CA, 95033
geohaye@yahoo.com

Subject: Agenda Item C.3. Drift Gillnet FMP Comment

From: "Nick Colin" <nickcolin@gmail.com>

Date: Tue, 31 Oct 2006 16:44:34 -0800

To: pfmc.comments@noaa.gov

Please ensure that no drift gillnets will be used by keeping the Pacific Leatherback Conservation Area closed! It has been determined that there would be very little economic gain by allowing their use. Leatherback population has dropped by 97% in the past few decades, and we can't afford to lose another animal to careless and destructive fishing practices. Please think of the struggling, endangered species and ban drift gillnets!

Thanks for your time and attention at this critical time in the survival of so many marine mammals.

Nick Colin

Subject: Agenda Item C.3. Drift Gillnet FMP Comment

From: Sandilands Brian <briansandilands@comcast.net>

Date: Tue, 31 Oct 2006 16:15:46 -0800

To: pfmc.comments@noaa.gov

I have just heard that you are considering relaxing the drift gillnet ban during the migration of the pacific leatherback turtle. From what I have read, this closure has had a very positive effect on leatherback conservation.

This closure should remain in effect for the foreseeable future. We continue to see these magnificent creatures decline and we owe it to our descendants that we continue to do all we can to save the last remnants of the leatherback turtles.

Please assure me of your continued enforcement of this closure.

Brian Sandilands

Subject: No gillnetting
From: diane marciniak <finallywest@yahoo.com>
Date: Tue, 31 Oct 2006 16:04:52 -0800 (PST)
To: pfmc.comments@noaa.gov

Please do not allow gillnetting in the PACIFIC LEATHERBACK CONSERVATION AREA.
Please keep it closed to gillnets.

Having the ban on gillnets has done good things, let's keep it up. Please DO NO ALLOW
GILLNETS IN THE PACIFIC LEATHERBACK CONSERVATION AREA.

Thank you.

[Check out the New Yahoo! Mail](#) - Fire up a more powerful email and get things done faster.

Subject: Agenda Item C.3. Drift Gillnet FMP Comment

From: "Ralph Wolf" <rwolf01@earthlink.net>

Date: Tue, 31 Oct 2006 16:04:15 -0800

To: <pfmc.comments@noaa.gov>

Hi,

As a divemaster and underwater photographer I've traveled all over the pacific. I've seen hundreds of hawksbill turtles but very few leatherbacks.

Please "stay the course" and maintain the annual drift gillnet restrictions during leatherback turtle migrations!

The oceans are beautiful and fragile. I have personally witnessed a decline in large fish populations on the California coast over the last 10 years. (no, I haven't done scientific studies, but I know what I see now, and what I saw in the mid 90's...)

In the long run, giving the turtles (and the fish) a break for just 3 months a year will help the fishing industry remain viable. Allowing year round fishing without regulation makes about as much sense as clear cutting our national forests!

Please resist the pressure from the fishing industry to allow over fishing. Say 'NO!' to junk science! Whatever you do, make sure it is based on valid studies and is in the best long term interest of the oceans and the planet.

Thanks for listening and taking care of our oceans!

Regards,

- Ralph Wolf
601 Wellsbury Way
Palo Alto CA 94306

Subject: Agenda Item C.3. Drift Gillnet FMP Comment

From: "William" <william@uts-hawaii.com>

Date: Wed, 1 Nov 2006 06:46:19 -0800

To: <pfmc.comments@noaa.gov>

Dear Pacific Fishery Management Council,

I am writing because I am concerned that drift gillnets might once again be in the paths of Pacific leatherback sea turtles migrating along the coasts of Oregon and California. To reestablish the minefield of gillnets that sea turtles must face would be a crime against our planet and most certainly does not reflect the interests and desires of the people of our great country. The corridor you helped establish is but a small reprieve to a species that faces threats almost everywhere else during its life-cycle and, especially, during its annual migration. Please consider the greater good and continue the annual 3 month drift gillnet closure in perpetuity.

Sincerely,
William Hewson
2908 Blue Spruce Cir.
Thousand Oaks, CA 91360

Subject: Gillnet Closure Policy
From: lindajosher@netscape.net
Date: Thu, 02 Nov 2006 12:51:51 -0500
To: pfmc.comments@noaa.gov
CC: oceanaction2@mbayaq.org

Dear Sir or Madam,

I am writing you today to ask you to keep the three-month drift gillnet closure policy. This policy has been effective in preventing the deaths of not only Leatherback Turtles, but many other marine mammals as well. There is no need to get rid of the policy; it has not hurt fishermen or the economy. Keeping a sensible gillnet policy helps to ensure that Leatherback Turtles will not become extinct.

Thank you,

Linda Osher
Santa Rosa, CA

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Subject: Agenda Item C.3. Drift Gillnet FMP Comment

From: "Katie Phelan" <kathryn.phelan@gmail.com>

Date: Thu, 2 Nov 2006 18:23:39 +0100

To: pfmc.comments@noaa.gov

To whom it may concern,

I am writing to strongly urge you to continue the practice of closing the drift gillnet fisheries off the coast of California and Oregon during the winter, so as to allow free and safe passage to the leatherback turtles during their migration. It is essential that we conserve the lives of these ancient animals, animals which we have brought before to the brink of extinction. One may argue that the economy of the fishing industry is at risk, but the greater risk is to the turtles, who if we take no action in their name, might be lost forever along with countless other species. By closing the area to gillnet fishing, we not only allowing the turtles to migrate and breed safely, but also allow the local fish to regain their numbers.

It is extremely important that we ACT NOW to aid the species in trouble, as we can prevent their demise. Please continue to close the coastal area of California and Oregon for three months during the year, and preserve the lives of the leatherback turtles. Please keep this as regular practice, and not just for this year. It is imperative that we as a stronger species look out for those who we have caused harm in the past.

Thank you for your time,
Katie Phelan
Paris, France

Subject: Agenda Item C.3. Drift Gillnet FMP Comment

From: "Nichole Wong" <NWong@pnbd.com>

Date: Thu, 2 Nov 2006 09:07:40 -0800

To: <pfmc.comments@noaa.gov>

CC: "Jamaica Weiler \ (E-mail\)" <jweiler@mryanlegal.com>, <gluzerman@legal.occoxmail.com>, <canitbe3000@hotmail.com>

Hello,

I want to let you know that I believe it is absolutely necessary for you to continue the ban on drift gillnet fishing as this practice will inevitably lead to the destruction of the Pacific Leatherback Turtle species. I don't think you want to be responsible for the elimination of a species in order to forward commercial gain. Any commercial loss due to the ban on drift gillnet fishing cannot possibly outweigh the cost of eradicating an entire species of turtle. Not only that, to allow this harmful practice once again would negatively affect the natural and delicate environment of the leatherbacks ultimately snowballing into a larger problem affecting many other species and their habitat. Please take action to keep the ban on drift gillnet fishing alive!!

Nichole Wong
Prenovost, Normandin, Bergh & Dawe
2122 North Broadway, Suite 200
Santa Ana, CA 92706
(714) 547-2444 ext. 144
fax: (714) 835-2889

Subject: Agenda Item C.3. Drift Gillnet FMP Comment

From: "Troyer, Sabrina" <STroyer@emdeon.com>

Date: Thu, 2 Nov 2006 11:06:13 -0600

To: pfmc.comments@noaa.gov, bill.hogarth@noaa.gov, jim.lecky@noaa.gov

Hello,

I am writing to request that we follow in the foot steps of Washington, Georgia, and Florida in protecting California's marine life. How can those with the decision making power consciously reopen the Pacific Leatherback Conservation area knowing the automatic destruction to ANY and ALL marine life that will result.

Also, I ask that serious consideration needs to be given to banning drift gillnets as they have no significant scientific or economic benefits.

Please help make the right decision to protect these animals that can not protect themselves.

Sincerely,

Sabrina Troyer
Scottsdale, AZ

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Subject: Pacific Leatherback Turtles

From: "Nichole Wong" <NWong@pnbd.com>

Date: Thu, 2 Nov 2006 09:03:33 -0800

To: <pfmc.comments@noaa.gov>

CC: "Jamaica Weiler \ (E-mail\)" <jweiler@mryanlegal.com>,
<gluzerman@legal.occoxmail.com>, <canitbe3000@hotmail.com>

Hello,

I want to let you know that I believe it is absolutely necessary for you to continue the ban on drift gillnet fishing as this practice will inevitably lead to the destruction of the Pacific Leatherback Turtle species. I don't think you want to be responsible for the elimination of a species in order to forward commercial gain. Any commercial loss due to the ban on drift gillnet fishing cannot possibly outweigh the cost of eradicating an entire species of turtle. Not only that, to allow this harmful practice once again would negatively affect the natural and delicate environment of the leatherbacks ultimately snowballing into a larger problem affecting many other species and their habitat. Please take action to keep the ban on drift gillnet fishing alive!!

Nichole Wong
Prenovost, Normandin, Bergh & Dawe
2122 North Broadway, Suite 200
Santa Ana, CA 92706
(714) 547-2444 ext. 144
fax: (714) 835-2889

Subject: Agenda Item C.3. Drift Gillnet FMP Comment

From: kimberly martin <acidblues5000@yahoo.com>

Date: Thu, 2 Nov 2006 08:51:29 -0800 (PST)

To: pfmc.comments@noaa.gov

Please don't allow drift gillnet fishing again. It does more harm than good. We will probably lose our entire Leatherback Turtle population, along with a countless number of other sea turtles, fin whales, gray whales, elephant seals, California sea lions and dolphins.

Also, the Fisheries Service has concluded that the "economic impact of an increase in (drift gillnet) effort is likely to differ little from zero." In other words, there is no predicted economic gain from this proposed opening.

I urge you to take responsibility, and protect our earth, it's animals, and our future by not allowing drift gillnet fishing ever again.

Respectfully,

Kimberly Martin

Everyone is raving about the all-new Yahoo! Mail
(<http://advision.webevents.yahoo.com/mailbeta/>)

Subject: Agenda Item C.3 - Drift Gillnet FMP Comment

From: Findlay Jamie <jfindlayesq@yahoo.ca>

Date: Thu, 2 Nov 2006 10:40:30 -0500 (EST)

To: pfmc.comments@noaa.gov

Dear Sir/Madam,

I am writing to add my voice to those of the many California citizens who urge that the Pacific Leatherback Conservation Area remain closed to drift gillnet fishing. I live in Canada, but I have been to that area of California and my sister currently resides there. I think it is one of the most wonderful areas for marine life in North America. Please keep the ban on gillnet fishing in place, and keep on protecting the Pacific Leatherback Turtle. Thank you.

Sincerely,
Jamieson Findlay
Ottawa, ON
CANADA

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<http://mail.yahoo.com>

Subject: 'Agenda Item C.3. Drift Gillnet FMP Comment'.
From: Karen Rosenstein <karetaker@catsincharge.com>
Date: Thu, 2 Nov 2006 00:02:14 -0800
To: pfmc.comments@noaa.gov
CC: karetaker@catsincharge.com

Hi!

Please include me with the many hundreds if not thousands of marine mammal lovers who do not want to see drift gillnets being used anywhere along the California coast. As humans, we need to find better more humane ways of fishing than using these types of nets.

Please keep the area designated for the Pacifica Leatherback turtles closed not just for now but for the foreseeable future. We are only now discovering how much damage has been done to our oceans that needs to be dealt with. Let's not continue to damage but begin to repair by keeping this animal habitat area safe for all of its residents.

Sincerely,

Karen Rosenstein
200 Troglia Terrace
Pacifica, CA 94044

Subject: Agenda Item C.3. Drift Gillnet FMP Comment

From: "morgan paull" <mpaull15@gmail.com>

Date: Wed, 1 Nov 2006 22:27:09 -0800

To: pfmc.comments@noaa.gov

Please chose to help the leatherback seaturtle - keep the conservation area to help the turtles.
Thank you!

Subject: Pacific Leatherback Turtles
From: Tamara Reddy <tam_reddy@yahoo.com>
Date: Wed, 1 Nov 2006 21:52:41 -0800 (PST)
To: pfmc.comments@noaa.gov

Hello,

I am writing to request that we follow in the foot steps of Washington , Georgia , and Florida in protecting California 's marine life. How can those with the decision making power consciously reopen the Pacific Leatherback Conservation area knowing the automatic destruction to **ANY and ALL** marine life that will result. Also, I ask that serious consideration needs to be given to banning drift gillnets as they have no significant scientific or economic benefits.

Please help make the right decision to protect these animals that can not protect themselves.

Sincerely,
Tamara A. Reddy

We have the perfect Group for you. Check out the [handy changes to Yahoo! Groups.](#)

Subject: Agenda Item C.3. Drift ,Gillnet FMP Comment

From: Irene DE <irenede@pacbell.net>

Date: Wed, 01 Nov 2006 21:03:53 -0800

To: pfmc.comments@noaa.gov

Dear Sir or Madame,

In 2001 Federal fisheries managers closed the drift gillnet fishery off the coast of California and Oregon for three months of the year. The closure coincides with the leatherback turtle migration, allowing the turtles to safely feed in these waters. The closure has been so effective that not a single leatherback turtle has been recorded caught in the fishery since then!

Please do not open this important area to drift gillnet fishing again. It will have potentially devastating consequences for leatherback sea turtles.

Sincerely Yours,

Irene S. Dick-Endrizzi, PMP
CA homeowner and SCUBA diver
Member, Planet Earth Life

Subject: 'Agenda Item C.3. Drift Gillnet FMP Comment'

From: "Josh Gatti" <joshmg416@hotmail.com>

Date: Wed, 01 Nov 2006 20:05:06 -0800

To: pfmc.comments@noaa.gov

BCC:

Hello This is Josh G,

I agree with the Monterey Bay Aquarium that the Drift Gillnet should not be allowed. This will save many lives of the leatherback turtles and the drift gillnet should be prohibited for not only 2006, but for a longer extended period of time. The drift gillnet kills the lives of animals that are close to extinction that are not intended to be killed.

Thank you for listening and i hope you follow the advice of the Monterey Bay Aquarium,
Josh Gatti

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Subject: 'Agenda Item C.3. Drift Gillnet FMP Comment'.
From: "Katheryn Bwye" <katherynbwye@gmail.com>
Date: Wed, 1 Nov 2006 20:01:50 -0800
To: pfmc.comments@noaa.gov
CC: karen@seaturtles.org

I have read this email over several times and agree entirely, I could not have written it better myself. Therefore, I am signing my name and passing the letter on to other individuals who I believe agree with how disgraceful it is for fisheries managers to allow drift gillnet fishing again – with potentially devastating consequences for leatherback sea turtles and other creatures of the ocean. For those of you who agree with this email please take a minute to copy/paste it, sign your name and resend it to: pfmc.comments@nosa.gov

Dear Mr. Hogarth:

It has recently been brought to my attention that the NOAA plans to reintroduce the drift gillnet vessels to the Pacific Leatherback Conservation Area during the migration season of endangered sea turtles. If my research in the matter is correct, it is my understanding that despite conclusive evidence that conservation effort was a success and can continue to be fruitful, the NOAA plans to push forward and potentially devastate the recovering population of the leatherback turtles and many other ocean species that have existed long before man was roaming the Earth.

This email is being composed in an effort to express my dissatisfaction with this decision and disgust for the disregard of the fragile environment that we now live in. I understand that there is a human factor behind this decision. Fisherman are struggling to support their families and fishing communities are waning away but it must be understood that man has taken this planet and ravished it for centuries. Our commercialism and its impact is present now more than ever. Humans need to evolve with our changing environment and realize that we cannot continue to gain riches (or even a living) off of something that has proven to hurt our wildlife so dramatically.

I am interested to know what research the NOAA has performed in an effort to find alternative methods of swordfish, tuna and thresher shark fishing. Is it proven impossible? If so, I vow to boycott buying swordfish, tuna, thresher shark and any other fish life that is caught and sold from the use of gillnets.

Why can't California join Florida, Georgia and Washington in setting an example of awareness and care for our oceans and ban the use of drift gillnets altogether? I understand that our coast is among the most rich in the world but we cannot continue to gain off another species demise.

It is our time and our duty as human beings and residents of planet Earth to start changing and thinking about what we are doing and how it will impact our children's children. There will be great sacrifices made and there will be errors along the way but we cannot look away at the devastation we face in the future if we continue living as we have.

I have taken the liberty of informing my 300 or so closest friends and family of this matter and I expect them to turn around and inform their friends and family and so forth. It is my hope that they will provide you with emails, faxes and letters showing their strong opposition to interfering with the leatherback turtle's migration.

I beg of you Mr. Hogarth, if you have children or grandchildren, you think about the big picture here and what you can do to change it.

Respectfully,

Jamaica Rose Weiler
Santa Monica, California
cc: Karen Steele karen@seaturtles.org
Jim Lecky jim.lecky@noaa.gov.

Also with respect,
Katheryn Rhiannon Bwye
Redondo Beach, California

Subject: pacific leatherbacks

From: Rebecca Kessin <rebeccakessin@yahoo.com>

Date: Wed, 1 Nov 2006 19:01:23 -0800 (PST)

To: pfmc.comments@noaa.gov

CC: oceanaction2@mbayaq.org

Council,

The Pacific leatherback turtle, the largest of the sea turtles and a species that predates the dinosaurs, is in deep trouble. Over the past 20 years, the population of Pacific leatherbacks has plummeted by 97%. Destructive fishing practices, especially drift gillnets, have pushed Pacific leatherbacks close to extinction.

To address this dire threat, in 2001 Federal fisheries managers closed the drift gillnet fishery off the coast of California and Oregon for three months of the year. The closure coincides with the leatherback turtle migration, allowing the turtles to safely feed in these waters. The closure has been so effective that not a single leatherback turtle has been recorded caught in the fishery since then!

I understand that these fishing practices are going to be reinstituted. I abhor this pointless act. I strongly encourage that you keep the fishery closed during turtle migration, and allow this species to continue unharmed.

I am a registered, regular voter.

Rebecca Kessin

Everyone is raving about the all-new Yahoo! Mail
(<http://advision.webevents.yahoo.com/mailbeta/>)

Subject: Leatherbacks need continuing protection

From: "Karey Kumli" <kkumli@gmail.com>

Date: Wed, 1 Nov 2006 18:43:09 -0800

To: pfmc.comments@noaa.gov

Gentlemen,

I have read of the success of the project to keep gillnetters out of leatherback habitat. Please continue the exclusion. Every species provides a service to the Earth none other can provide. Edward O. Wilson spoke in San Francisco a few weeks ago, and stated our most important task currently is to protect diversity: protect habitat, protect species, provide corridors. We are in the early years of the earth's 6th period of mass extinctions; scientists predict half the planet's species will be gone by the end of the century. Please, with the success of your recent program offering a powerful precedent to other areas, please do not take away this safety for these charismatic and deserving animals!

Thank you.

Sincerely,

Katherine Kumli

Subject: Agenda Item C.3. Drift Gillnet FMP Comment

From: "Lesly Higgins" <lesly@leslyhiggins.com>

Date: Wed, 1 Nov 2006 18:00:31 -0800

To: <pfmc.comments@noaa.gov>

Please keep the closure of drift gillnet fisheries off the coasts of California and Oregon in effect during leatherback turtle migration.

LESLY HIGGINS, M.S.

Executive Coach and OD Consultant

75 Fernwood Drive

San Anselmo, CA 94960-2124

Ofc (415) 457-1644 Cell (415) 336-8478

Fax (415) 457-2894

Email lesly@leslyhiggins.com

Url www.leslyhiggins.com

Subject: Agenda Item C.3. Drift Gillnet FMP Comment

From: "J Weiler" <jweiler@mryanlegal.com>

Date: Wed, 1 Nov 2006 17:40:30 -0800

To: <pfmc.comments@noaa.gov>, <bill.hogarth@noaa.gov>

CC: <jim.lecky@noaa.gov>, <karen@seaturtles.org>

Dear Mr. Hogarth:

It has recently been brought to my attention that the NOAA plans to reintroduce the drift gillnet vessels to the Pacific Leatherback Conservation Area during the migration season of endangered sea turtles. If my research in the matter is correct, it is my understanding that despite conclusive evidence that conservation effort was a success and can continue to be fruitful, the NOAA plans to push forward and potentially devastate the recovering population of the leatherback turtles and many other ocean species that have existed long before man was roaming the Earth.

This email is being composed in an effort to express my dissatisfaction with this decision and disgust for the disregard of the fragile environment that we now live in. I understand that there is a human factor behind this decision. Fisherman are struggling to support their families and fishing communities are waning away but it must be understood that man has taken this planet and ravished it for centuries. Our commercialism and its impact is present now more than ever. Humans need to evolve with our changing environment and realize that we cannot continue to gain riches (or even a living) off of something that has proven to hurt our wildlife so dramatically.

I am interested to know what research the NOAA has performed in an effort to find alternative methods of swordfish, tuna and thresher shark fishing. Is it proven impossible? If so, I vow to boycott buying swordfish, tuna, thresher shark and any other fish life that is caught and sold from the use of gillnets.

Why can't California join Florida, Georgia and Washington in setting an example of awareness and care for our oceans and ban the use of drift gillnets altogether? I understand that our coast is among the most rich in the world but we cannot continue to gain off another species demise.

It is our time and our duty as human beings and residents of planet Earth to start changing and thinking about what we are doing and how it will impact our children's children. There will be great sacrifices made and there will be errors along the way but we cannot look away at the devastation we face in the future if we continue living as we have.

I have taken the liberty of informing my 300 or so closest friends and family of this matter and I expect them to turn around and inform their friends and family and so forth. It is my hope that they will provide you with emails, faxes and letters showing their strong opposition to interfering with the leatherback turtle's migration.

I beg of you Mr. Hogarth, if you have children or grandchildren, you think about the big picture here and what you can do to change it.

Respectfully,

Jamaica Rose Weiler

Santa Monica, California

cc: Karen Steele karen@seaturtles.org

Jim Lecky jim.lecky@noaa.gov.

Subject: Agenda Item C.3. Drift Gillnet FMP Comment

From: "Jennifer Rhodes" <johnandjenrhodes@msn.com>

Date: Wed, 01 Nov 2006 17:10:38 -0800

To: pfmc.comments@noaa.gov

BCC:

To Whom This Concerns

I deeply urge you not to restart the drift gillnet fishing. This turtle is a very important part of the marine ecosystem. The potential chance of you starting this again is extremely alarming and unexceptable.

I want my children to grow up and know that all life is precious little or small, human or mammal, etc. This turtle has lasted and adapted to its environment since before the ages of the dinosaurs. How many know creatures alive today have lasted that long?

Please take this into consideration before making such an impactive deciscion.

Regards,

Jennifer Rhodes & Family
510-557-1641

Subject: Agenda Item C.3. Drift Gillnet FMP Comment

From: Tanya Smart and Brent Wright <wrismart@mcn.org>

Date: Wed, 01 Nov 2006 14:17:51 -0800

To: pfmc.comments@noaa.gov

Dear Pacific Management Council,

I strongly object to reopening the Pacific Leatherback Conservation Area to any drift gillnet vessels as is currently being considered by the National Marine Fisheries Service.

In 2001, the fragile status of Leatherback turtles prompted the National Marine Fisheries Service to put in place a seasonal drift gillnet closure in a large area off the coast of California that would allow leatherback turtles to safely migrate and feed in U.S. waters, including Monterey Bay. The closure -- the Pacific Leatherback Conservation Area -- has been so effective that no leatherback turtles have been reported drowned in the entire fishery since protections were put in place.

The consideration to re-open this area to gillnet vessels is not logical. The gear has not improved. In addition to endangered turtles, dolphins and porpoises, seabirds, seals and sea lions, and even large whales drown in these nets. Between 1996 and 2002, more than 50 turtles, 700 seals and sea lions, over 1,000 dolphins and porpoises, and 35 large whales were killed by drift gillnets. Drift gillnets are so harmful to ocean life that they are banned on the high seas and in the waters of several states, including Washington, Georgia and Florida.

The proposal before the Fisheries Service would open up the protected area as long as there are fishery observers on each vessel and caps on the number of leatherbacks and some whale species that can be killed. These controls may help limit the number of leatherback turtles and certain large whales killed, but for these critically endangered species, even one avoidable death is one too many. My understanding is that there will be no caps on the number of other sea turtles, fin whales, gray whales, elephant seals, California sea lions and dolphins killed or any caps on the amount of fish simply discarded, dead and dying, which in this fishery amounts to more than is kept. This is an irresponsible waste of resources and life.

The proposed reopening is not expected to provide significant economic benefit. The Fisheries Service has concluded that the "economic impact of an increase in (drift gillnet) effort is likely to differ little from zero."

The proposed opening therefore makes no sense for either scientific or economic reasons. It also makes no sense for political reasons, as the public has shown overwhelming opposition. Multi-state agreements such as the Governors' Agreement on Ocean Health, between the states of California, Oregon and Washington have explicitly recognized the need for addressing the declining health of our ocean and the need to sustain marine wildlife populations. The will of this large constituency must be recognized.

Opening the Pacific Leatherback Conservation Area to drift gillnet fishing is irresponsible. We would be re-opening areas in our federal waters to a wasteful and destructive way of fishing, contradicting the recently approved Marine Life Protection Act.

Healthy fisheries are important to California but we need to find ways to have healthy fisheries without wasting the resource or depleting the oceans of other valuable marine organisms. Pacific Leatherback turtles are too valuable to risk for a fishery that has no economic benefit and does such environmental harm.

Sincerely,

Tanya Smart

17660 Redwood Springs Drive
Fort Bragg, CA 95437

Subject: Agenda Item C.3. Drift Gillnet FMP Comment

From: Erik Wilmot <erik_wilmot@yahoo.com>

Date: Wed, 1 Nov 2006 13:18:19 -0800 (PST)

To: pfmc.comments@noaa.gov

Dear Pacific Fisheries Management,

Don't let leatherback turtles become extinct...please continue the drift gillnet ban during their migration season this year (2006), next year (2007), and FOREVER.

Thanks for your care/concern for these cool critters,

Erik Wilmot
290 Joaquin Ave
San Leandro, CA 94577
510-352-5421
erik_wilmot@yahoo.com

Subject: WG: Monterey Bay Aquarium:Sea Turtle Alert
From: Ständer <uc.staender@t-online.de>
Date: Wed, 1 Nov 2006 22:09:47 +0100
To: <pfmc.comments@noaa.gov>
CC: <oceanaction2@mbayaq.org>

Dear ladies and gentlemen,

we are very concerned about the Sea Turtle Alert we received.
So please KEEP AREA CLOSED FOR TURTLES' SAKE

Sincerely

Ständer Family
Ulrich, Christel, Elisabeth, Susanne

Johann Weibhauser Straße 22
D 83413 Fridolfing

Meber of Monterey Bay Aquarium Community since august 2006

-----Ursprüngliche Nachricht-----

Von: Ocean Action Team [mailto:oceanaction2@mbayaq.org]

Gesendet: Dienstag, 31. Oktober 2006 01:13

An: uc.staender@t-online.de

Betreff: Monterey Bay Aquarium:Sea Turtle Alert

Monterey Bay Aquarium



Speak Out NOW for Pacific Leatherback Turtles

The Pacific leatherback turtle urgently needs your help. **Your voice by November 7th could help save this struggling species.**

The Pacific leatherback turtle, the largest of the sea turtles and a species that predates the dinosaurs, is in deep trouble. Over the past 20 years, the population of Pacific leatherbacks has plummeted by 97%. Destructive fishing practices, especially [drift gillnets](#), have pushed Pacific leatherbacks close to extinction.

To address this dire threat, in 2001 Federal fisheries managers closed the drift gillnet fishery off the coast of California and Oregon for three months of the year. The closure coincides with the leatherback turtle migration, allowing the turtles to safely feed in these waters. The closure has been so effective that **not a single leatherback turtle has been recorded caught** in the fishery

since then!

Now fisheries managers are preparing to allow drift gillnet fishing again - with potentially devastating consequences for leatherback sea turtles.

What you can do

Send an email or a fax to the Pacific Fishery Management Council today. Tell them you want this area to remain safe for turtles by keeping the Pacific Leatherback Conservation Area closed. Every year the Pacific Fishery Management Council decides whether or not to continue closing this area so please emphasize that this closure should remain in place far into the future -- not just for 2006.

Your comments must be received by Tuesday, November 7th. Email your comments to pmmc.comments@noaa.gov or fax them to 503- 820- 2299. Use the subject line: 'Agenda Item C.3. Drift Gillnet FMP Comment'.

If you do send an email or fax, we'd love to know! Simply respond to this email, or included us as a Bcc on your comments. Thanks!

Learn more

[Please read this recent Op-Ed that appeared in the Monterey County Herald.](#) Feel free to draw on language from the article or this alert while writing your comments.

Tell a friend

Forward this email to a friend and urge them to write a letter on behalf of the turtles! Encourage them to become Ocean Action Team members so that we can contact them when it is time to speak out on other critical ocean issues.

Thank you for weighing in on behalf of the Pacific leatherback turtles!

Sincerely,

Aimee David and Ken Peterson
Ocean Action Team

email: oceanaction2@mbayaq.org
web: <http://www.oceanactionorg>

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Monterey Bay Aquarium | 886 Cannery Row | Monterey | CA | 93940

Subject: Agenda Item C.3. Drift Gillnet FMP Comment

From: "Kelly Bush" <kelly_bush@hotmail.com>

Date: Wed, 01 Nov 2006 12:34:12 -0800

To: pfmc.comments@noaa.gov

BCC:

Dear Members of the Pacific Fishery Management Council,

I am deeply concerned about the future of the Pacific Leatherback Turtle. This area must remain safe for these turtles and this can be accomplished by keeping the Pacific Leatherback Conservation Area closed. During your annual review of this policy please consider continuing to keep this area closed during this critical time of year as well as many years into the future. Thank you for considering this feedback.

Best regards,
Dr. Kelly Bush

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Subject: Agenda item C.3. Drift Gillnet FMP Comment

From: "Toni Montoya" <tmontoya@stanford.edu>

Date: Wed, 1 Nov 2006 11:24:57 -0800

To: <pfmc.comments@noaa.gov>

CC: <oceanaction2@mbayaq.org>

Dear Pacific Fishery Management Council –

Please continue to close the drift gillnet fishery off the coast of California and Oregon all year long far into the future – not just until 2006. This will protect the leatherback turtle migration, allowing the turtles to safely feed in these waters all year long. The past closure has been so effective that **not a single leatherback turtle has been recorded caught** in the fishery.

Thanks,
Toni Montoya
650.723.6952

Subject: Agenda item C.3

From: Kathryn Paddock <kadalap@sbcglobal.net>

Date: Wed, 1 Nov 2006 10:45:56 -0800 (PST)

To: pfmc.comments@noaa.gov

Over the past 20 years, the population of Pacific leatherbacks has plummeted by 97%. Destructive fishing practices, especially drift gillnets, have pushed Pacific leatherbacks close to extinction.

To address this dire threat, in 2001 Federal fisheries managers closed the drift gillnet fishery off the coast of California and Oregon for three months of the year. The closure coincides with the leatherback turtle migration, allowing the turtles to safely feed in these waters. The closure has been so effective that not a single leatherback turtle has been recorded caught in the fishery since then!

I want this area to remain safe for turtles by keeping the Pacific Leatherback Conservation Area closed. This closure should remain in place far into the future -- not just for 2006.

Thank you for considering my opiniion.

Kathryn Paddock

Subject: Agenda Item C.3. Drift Gillnet FMP Comment

From: Amanda Kahn <a_manahue@yahoo.com>

Date: Wed, 1 Nov 2006 10:35:23 -0800 (PST)

To: pfmc.comments@noaa.gov

Greetings,

My name is Amanda Kahn. I have been keeping track of developments in fisheries management in California and other parts of the world. California has always been at the forefront of innovation, especially regarding the environment. Though our state has lagged in the regulation of its fisheries, it is now aiming for sustainable management, as evidenced by the recently passed Marine Life Protection Act.

Californians are viewing the Marine Life Protection Act as a step toward a more sustainable relationship with our ocean communities. While I understand that the decision to allow gillnetting during turtle migration time is a federal decision, I think that Californians' input is important. Most people, myself included, are seeing this as a step backward in ecological sensitivity. The degree of bycatch that results from drift gillnetting cannot be ignored.

Sustainable fishery practices such as those advocated by the Monterey Bay Aquarium Seafood Watch (including harpooning, hook and lining, and trolling)(http://www.montereybayaquarium.org/cr/cr_seafoodwatch/sfw_gear.asp) should be the only practices that receive increased fishing time. Other destructive methods, once restricted, should not be permitted to expand again. It would be analogous to banning smoking inside of restaurants, and then allowing it a few years later. It is not a healthy practice and, once restricted, should not be released from such restrictions.

In addition to my letter, I would like to refer you to a commentary written by Santi Roberts for the Monterey County Herald (<http://www.montereyherald.com/mld/montereyherald/news/opinion/15765519.htm>).

It is another letter that, more eloquently than I have, examines the possible rationale for lifting restrictions on drift gillnetting.

Thank you for your time, and I hope you decide to keep drift gillnetting restricted during times of turtle migration (or, even better, restrict it further and replace its catch with that obtained from more sustainable fishing practices).

Amanda Kahn
Student, California State University, East Bay
a_manahue@yahoo.com

Everyone is raving about the all-new Yahoo! Mail
(<http://advision.webevents.yahoo.com/mailbeta/>)

Subject: Agenda Item C.3. Drift Gillnet FMP Comment

From: "Deborah Goldstein" <dgoldstein@mbayaq.org>

Date: Wed, 1 Nov 2006 10:34:08 -0800

To: <pfmc.comments@noaa.gov>

Please don't allow drift gillnet fishing again in the Pacific Leatherback Conservation Area! The closure of this area has been so effective over the past five years, it would be a shame to endanger Pacific Leatherback turtles even more by reopening this area to drift gillnet fishing.

Please continue to protect these beautiful animals. They've been around longer than we have!

Thank you.

Deborah

Deborah Goldstein

Grants Manager

Monterey Bay Aquarium

886 Cannery Row, Monterey, CA 93940

P: 831-647-6859 F: 831-644-7554

www.montereybayaquarium.org

Subject: agenda item c.3. drift gillnet FMP comment

From: Gloed98@aol.com

Date: Wed, 1 Nov 2006 13:27:12 EST

To: pfmc.comments@noaa.gov

We strongly urge that this area remain safe for turtles by keeping the Pacific Leatherback conservation area closed

Ed & Gloria Witucki

gloed98@aol.com

Subject: Agenda Item C.3. Drift Gillnet FMP Comment

From: "Terri Bartos" <tlbartos@pacbell.net>

Date: Wed, 1 Nov 2006 10:19:34 -0800

To: <pfmc.comments@noaa.gov>

To the Pacific Fishery Management Council:

I have lived in the Monterey Bay Area (Santa Cruz County) for over 30 years and was born and raised in towns on the California Coast. I have seen what protections in place have done to help restore the valuable marine life that lives along our California Coast. I have also seen what over fishing has done to jeopardize the health of our oceans. I realize that there are many families that rely on the fishing industry to provide their livelihood, but I feel that over fishing is the root cause of the decimation of their own profession. There are other food sources that do not require decimation of marine life and we simply don't need this resource at this ecological cost. Allowing Gillnets back in to the waters will not improve the livelihood of fishermen significantly and will have such a negative effect on the already unstable populations of the non-targeted animals that I urge you to continue to ban them, for all of our sakes.

Sincerely,

Terri Bartos
312 Dakota Ave.
Santa Cruz, CA 95060

Subject: Leatherback turtles

From: "Lyon,Robert" <RLyon@unitedauto.com>

Date: Wed, 1 Nov 2006 10:52:39 -0700

To: <pfmc.comments@noaa.gov>

To whom it may concern,

This should be a no-brainer! This area must remain in protection at all times! Please accept this response as a constant reminder as to how delicate our waters are and it is up to US to make sure that they are protected.

Sincerely,

Robert Lyon

615-476-1006

Subject: 'Agenda Item C.3. Drift Gillnet FMP Comment'

From: Lincoln Shaw <lincolnshaw@sbcglobal.net>

Date: Wed, 1 Nov 2006 09:30:06 -0800 (PST)

To: pfmc.comments@noaa.gov

I'd have to agree with the monterey bay aquarium, please continue to protect the leatherback turtles by keeping the drift gillnet fishery off the coast of California and Oregon

Here's the full message from the Monterey Bay Aquarium:

Speak Out NOW for Pacific Leatherback Turtles

The Pacific leatherback turtle urgently needs your help. Your voice by November 7th could help save this struggling species.

The Pacific leatherback turtle, the largest of the sea turtles and a species that predates the dinosaurs, is in deep trouble. Over the past 20 years, the population of Pacific leatherbacks has plummeted by 97%. Destructive fishing practices, especially drift gillnets, have pushed Pacific leatherbacks close to extinction.

To address this dire threat, in 2001 Federal fisheries managers closed the drift gillnet fishery off the coast of California and Oregon for three months of the year. The closure coincides with the leatherback turtle migration, allowing the turtles to safely feed in these waters. The closure has been so effective that not a single leatherback turtle has been recorded caught in the fishery since then!

Now fisheries managers are preparing to allow drift gillnet fishing again * with potentially devastating consequences for leatherback sea turtles. What you can do

Subject: Agenda Item C.3. Drift Gillnet FMP Comment

From: "Margaret \ (P.J.) Webb" <pjwebb@inreach.com>

Date: Wed, 1 Nov 2006 09:27:41 -0800

To: <pfmc.comments@noaa.gov>

CC: "Beth Cataldo" <bcataldo@ccsf.edu>

Dear People,

With no expected economic gain expected from opening drift gillnet fishing and the extreme hazards to so many species by the use of these nets, I strongly urge you to keep this type of fishing closed. I have seen the effects of wildlife maimed and killed in these destructive nets. The successful protection of the Pacific Leatherback Turtles by the closure proves that we can prevent this needless devastation.

You have it in your power to protect endangered turtles, dolphins, porpoises, endangered seals, sharks, seal lions and whales. Please protect our ocean life.

Sincerely,

Margaret (P.J.) Webb

P.O. Box 702

Cambria, CA 93428

Subject: Drift Gill Net Fishing

From: <susan.tripp@charter.net>

Date: Wed, 1 Nov 2006 9:22:40 -0800

To: pfmc.comments@noaa.gov

Dear PFMC:

Please do not allow drift gill nets back in the waters off the Oregon and California coast. These nets are lethal to many marine mammals and have devastated the leatherback turtle population that needs the nutrient-rich waters of our coast in which to feed. When these animals are gone, they are gone forever. We cannot continue to heavily harvest an ocean that is overexploited. Please give our ocean habitats a chance to recover.

Thank you,

Susan Tripp
654 Mountain View Street
San Luis Obispo, CA 93405

Subject: Agenda Item C.3. Drift Gillnet FMP Comment

From: "Carla de Mos" <carlademos@hotmail.com>

Date: Wed, 01 Nov 2006 17:05:20 +0000

To: pfmc.comments@noaa.gov

CC: oceanaction2@mbayaq.org

BCC:

Dear Sir/Madam,

I am writing to ask you to continue the closure of the drift gillnet fishery in the Leatherback Conservation Area during the turtle's migration period indefinitely. As this closure has proved to be effective against the bycatch of this rare and ancient species, it is imperative that we maintain it.

Sincerely,
Carla de Mos
347 Massol Avenue #207
Los Gatos, CA 95030

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Subject:**From:** "Pablo Ramudo" <pramudo@nmwd.com>**Date:** Wed, 1 Nov 2006 09:01:09 -0800**To:** <pfmc.comments@noaa.gov>

Dear Council members,

I am writing to urge you to keep the Pacific Leatherback Conservation Area closed to gillnet fishing this year and in years to come. Opening this area to such a destructive fishing method will put far too much pressure on the dwindling population of Pacific Leatherbacks, a species so close to extinction. I fully support methods of fishing that are sustainable both economically and ecologically, methods that will not adversely impact non-commercial species as "by-catch". I thank you for your consideration.

Sincerely,

Pablo Ramudo

Water Quality Supervisor
Laboratory Director
North Marin Water district
999 Rush Creek Place
Novato CA, 94945
(415) 897-4133 ext.8521

Subject: NO DRIFT NETS IN CALIFORNIA WATERS

From: David Ellis <davielli22@yahoo.com>

Date: Wed, 1 Nov 2006 08:47:23 -0800 (PST)

To: pfmc.comments@noaa.gov

Seriously... with all of the technology humans have available to them - all of the different kinds of fishing equipment that can be modified to reduce bycatch... you seriously think we still need drift nets?

And you really think we need them in CALIFORNIA WATERS?!! All kinds of species are harmed by these things, including the Pacific Leatherback Turtle which has had its population reduced by 97%, in large part because of these nets.

Really... is that the best you can do?

DO NOT allow drift gill nets anywhere... and ESPECIALLY in California waters!

Dave

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Subject: Possible reintroduction of drift gillnet fishing off of the California coast

From: Michael Kleeman <mkleeman@well.com>

Date: Wed, 1 Nov 2006 08:13:48 -0800

To: pfmc.comments@noaa.gov

I wish to make a public comment on the proposed reintroduction of drift gillnet fishing off some parts of the California coastline. I oppose it and see no logical or strong economic reason for its re-introduction.

The use of drift gillnets has had devastating impacts on the Pacific Leatherback turtle and numerous forms marine mammal life. These nets are not well managed and in all cases there are alternative forms of fishing that are effective and do not have the negative impacts. We have lost over 90% of the Leatherback Turtle and thousands of dolphins and whales to these nets. In 2001 Federal fisheries managers closed the drift gillnet fishery off the coast of California and Oregon for three months of the year. The closure was so effective that not a single leatherback turtle has been recorded caught in the fishery since.

Reintroducing these nets now makes no sense and is tantamount to an agreement to further harm these endangered animals.

I want to request that you keep this area to remain safe for turtles by keeping the Pacific Leatherback Conservation Area closed to drift gillnets and make this a permanent policy during these critical three months.

Thank you.

Michael Kleeman
410 Hilldale Way
Mill Valley, CA 94941

Subject: save the endangered turtles
From: george cosentino-roush <gcr@stanford.edu>
Date: Wed, 1 Nov 2006 08:07:51 -0800
To: pfmc.comments@noaa.gov

--

Dear Sirs,

Please leave the Oregon and California coasts closed to the terrible practice of drift netting, for the complete year of 2006, and ultimately permanently for all time. Let's save these turtles while we can.

Also, the sport anglers I observed are all coming in with huge limits of rockfish and red snapper. I sincerely doubt that these fellows will eat these fish. (Also Ling Cod, and Sturgeon)

While commercial fishermen are starving with restrictions, these anglers are seriously impacting the health of these stocks. At least with the commercial fishermen the resource is put to good use.

So, you see I have mixed feelings about some commercial fisheries--please stop bottom trawling and let's protect the rock cod fish stocks.

PLEASE BAN DRIFT NETTING AND BOTTOM TRAWLING!

George Cosentino-Roush

gcr@stanford.edu

Subject: Pacific Leatherback Conservation Area
From: "Steven Yalowitz" <SYalowitz@mbayaq.org>
Date: Wed, 1 Nov 2006 08:01:53 -0800
To: <pfmc.comments@noaa.gov>

To whom it may concern,

I am writing to urge you to maintain the current effective policy of keeping the Pacific Leatherback Conservation Area closed to drift gillnet fishing during their migration. It seems like this approach has worked successfully so I'm unclear as to why the closure is being reconsidered. Please consider extending this closure far into the future to help these magnificent ocean ambassadors who cannot help themselves.

Sincerely,

Steven S. Yalowitz

Subject: drift gill net fishing

From: Tracy Ross <tmr@sonic.net>

Date: Wed, 1 Nov 2006 06:48:37 -0800

To: pfmc.comments@noaa.gov

Please reject any attempt to reinstitute drift gill net fishing off the coast of California and Oregon during the three months of the Leatherback Turtle migration.

The Pacific leatherback turtle, the largest of the sea turtles and a species that predates the dinosaurs, is in deep trouble. Over the past 20 years, the population of Pacific leatherbacks has plummeted by 97%. Destructive fishing practices, especially drift gillnets, have pushed Pacific leatherbacks close to extinction.

To address this dire threat, in 2001 Federal fisheries managers closed the drift gillnet fishery off the coast of California and Oregon for three months of the year. The closure coincides with the leatherback turtle migration, allowing the turtles to safely feed in these waters. The closure has been so effective that not a single leatherback turtle has been recorded caught in the fishery since then!

This fishing practice not only endangers turtles, but is destructive to marine mammals, who become entangled in these nets and suffer terribly. I urge you to keep our coastline closed.

Thank you for your consideration.

Sincerely,

--Tracy Ross

Subject: Agenda Item C.3. Drift Gillnet FMP Comment

From: Martina Bourbin <martiniexo@sbcglobal.net>

Date: Thu, 2 Nov 2006 10:07:09 -0800 (PST)

To: pfmc.comments@noaa.gov

Dear Mr. Burner,

As a member of the Monterey Bay Aquarium's Ocean Action Team, it has come to my attention that the Council will be voting about drift gillnet's in the near future. I urge you to keep in place the legislation that has allowed Leatherback turtles to migrate freely since 2001. Since the initial act passed **not one Leatherback turtle has been killed** on record. Results such as these are crucial to the survival of this important marine species. Please keep the Pacific Leatherback Conservation Area closed for 2006 and make it a commitment to keep it closed for generations to come. Thank you for your time.

Sincerely,

Martina Smutny

Subject: Agenda Item C.3. Drift Gillnet FMP Comment

From: Duggly9@aol.com

Date: Thu, 2 Nov 2006 14:14:53 EST

To: pfmc.comments@noaa.gov

Please attend my limited comments on sea turtle protection.

It is my understanding that drift gillnets snag and drown sea turtles.

It is my opinion that even one dead sea turtle is much too high a price to pay so that shoppers at the Safeway in Dubuque can have a diversity of choice at the "fresh" seafood counter.

Please maintain or otherwise continue the ban on drift gillnets.

A response to my concern would be appreciated.

Thank you.

Richard Alley

405 N Jefferson

PO Box 368

Converse, IN 46919-0368

765 395-1501

Subject: Agenda Item C.3. Drift Gillnet FMP Comment

From: laura johnson <lauraafrica@yahoo.com>

Date: Thu, 2 Nov 2006 23:06:55 -0800 (PST)

To: pfmc.comments@noaa.gov

Please keep the conservation area closed.

Thanks,
Laura K Johnson

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Subject: Agenda Item C.3. Drift Gillnet FMP
From: Fogel <i.2amonly@yahoo.com>
Date: Thu, 2 Nov 2006 20:22:27 -0800 (PST)
To: pfmc.comments@noaa.gov

Far too many species have been lost already, and so many are doomed. When there is an opportunity to save even one we should do everything possible to do it. If closing an area to save the Pacific Leatherback Turtle can be done in the short term, it would seem that this closure should remain in place far into the future.

Subject: Agenda Item C.3. Drift Gillnet FMP Comment

From: "John Doss" <johndoss78@hotmail.com>

Date: Thu, 02 Nov 2006 19:45:26 -0800

To: pfmc.comments@noaa.gov

BCC:

Pacific leatherback sea turtles have survived on this planet for nearly 100 million years. They have endured ice ages, major volcanic events, meteor impacts, and most every predator in the sea. However, they, and other endangered marine life, cannot survive being caught and drowned in drift gillnets.

Knowing this, in 2001, the National Marine Fisheries Service put into place a three-month drift gillnet closure in a large area off the coast of California that would allow leatherback turtles to safely migrate and feed in U.S. waters, including Monterey Bay. The closure -- the Pacific Leatherback Conservation Area -- has been so effective that no leatherback turtles have been reported drowned in the entire fishery since protections were put in place.

So, why then is the Fisheries Service now considering reopening this area year round to up to 30 drift gillnet vessels?

It's not because the gear has improved. Drift gillnets remain as destructive as they were prior to the 2001 closure. In addition to endangered turtles, dolphins and porpoises, seals and sea lions, and even large whales drown in this fishery. Between 1996 and 2002, more than 50 turtles, 700 seals and sea lions, over 1,000 dolphins and porpoises, and 35 large whales were killed.

These air-breathing animals often die when caught in these huge nets, long enough to loop around a football field six times. In fact, drift gillnets are so harmful to ocean life that they are banned on the high seas and in the waters of several states, including Washington, Georgia and Florida.

The proposal before the Fisheries Service would open up the protected area as long as there are fishery observers on each vessel and caps on the number of leatherbacks and some whale species that can be killed. These controls will help limit the number of leatherback turtles and certain large whales killed.

Unfortunately, with these critically endangered species, the survival of every single one counts. What is more, there will be no caps on the number of other sea turtles, fin whales, gray whales, elephant seals, California sea lions and dolphins killed. Nor will there be any caps on the amount of fish simply discarded, dead and dying, which in this fishery amounts to more than is kept.

It is also not because of economics; the proposed reopening is not expected to provide significant economic benefit. The industry folks argue that the closed area has directly led to the decline in the drift gillnet fishery. But this fishery was waning long before the closure was implemented, with the number of active vessels dropping by half between 1994 and 2000. The Fisheries Service has concluded that the "economic impact of an increase in (drift gillnet) effort is likely to differ little from zero." In other words, there is no predicted economic gain

from this proposed opening.

The proposed opening therefore makes no sense for either scientific or economic reasons. It also makes no sense for political reasons, as the public has shown overwhelming opposition. Further, it would seem to fly in the face of the recent Governors' Agreement on Ocean Health, where the states of California, Oregon and Washington have explicitly recognized the need for addressing the declining health of our ocean and the need to sustain marine wildlife populations.

In California, we pride ourselves on being progressive in ocean management. If the Fisheries Service approves the opening of the Pacific Leatherback Conservation Area, it will be a hugely irresponsible step backward. Just as we are protecting areas in our state waters through the Marine Life Protection Act, we would be re-opening areas in our federal waters to a wasteful and destructive way of fishing.

The question ought not to be how do we open this area, but rather, how can we catch swordfish, tuna and thresher shark without sacrificing so many other marine creatures? If we don't take the time to find that answer, Pacific leatherback sea turtles may go extinct on our watch.

I want this area to remain safe for turtles by keeping the Pacific Leatherback Conservation Area closed. I would also like to emphasize that this closure should remain in place far into the future -- not just for 2006.

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Subject: Leatherback Turtles

From: Roxy Robertson <roxycaly@yahoo.com>

Date: Thu, 2 Nov 2006 18:57:35 -0800 (PST)

To: pfmc.comments@noaa.gov

To whom this may concern,

I am a California resident and an avid lover of the environment. I am also a diver, who very often marvels at the beauty of the underwater world. The Pacific Leatherback Turtle has existed on this planet for 100 million years. I admire at it's survival through huge ecological impacts; volcanoes and meteors. Merciless under the pillage of humans however, it's existence will surely wither away. The fate of the Leatherback Turtle has been placed in the hands our conscious race. It would be immoral and unethical to consciously destroy this wondrous animal. Do not let the conservation area be re-opened to drift gill-netting. It is a step backward in our evolution as conscious and wise beings. Please do not let this happen!

Thank you,

Roxanne Robertson

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Subject: Save Leatherback Turtles

From: "Claudia Vieira" <cvgardendesign@gmail.com>

Date: Thu, 2 Nov 2006 18:38:52 -0800

To: <pfmc.comments@noaa.gov>

I am writing to ask you to please continue to protect the Pacific Leatherback Turtle by keeping the Pacific Leatherback Conservation Area closed to drift gillnet fishing. The number of species on our planet is fast shrinking. Please use your power to protect this one, not just now but for the future!

Thank you,
Claudia Vieira

Subject: Agenda Item C.3. Drift Gillnet FMP Comment

From: "The Winters" <dwinters1@triad.rr.com>

Date: Thu, 2 Nov 2006 21:06:49 -0500

To: <pfmc.comments@noaa.gov>

CC: <oceanaction2@mbayaq.org>

To whom it may concern,

I am an active scuba diver in California and elsewhere. As a physician, biologist and diver I am concerned about the effects of reopening the fisheries off the coast of California and Oregon during the leatherback turtle migration.

The Pacific leatherback turtle population is clearly endangered and may only continue recovery if its migration remains protected. Please do not reopen this fishery during this vital time of the year. It is not adequate to close only for a few years, but to make a commitment to permanent closure during the migration.

Please help preserve this ancient species. Keep the fisheries closed to gill nets during the leatherback turtle migration.

Sincerely

Don Winters, MD

Subject: Pacific Leatherback conservation
From: Kathleen Pyle <ktp5star@sbcglobal.net>
Date: Thu, 2 Nov 2006 17:49:24 -0800 (PST)
To: pfmc.comments@noaa.gov

To the Pacific Fishery Management Council:

Attention Federal Fisheries Managers,

I am writing to express my concerns for the preservation of the Leatherback Sea Turtle. I want the Pacific Leatherback Conservation Area off the coasts of California and Oregon to continue to be closed to "drift gillnet fishing" now and permanently for the future. Please protect our ocean and the Leatherback Sea Turtle.

Thank you,
Kathleen Pyle
Rancho Santa Margarita, California

Subject: Agenda Item C.3. Drift Gillnet FMP Comment

From: "Mary Ann Finger" <mafinger@pacbell.net>

Date: Thu, 2 Nov 2006 17:09:15 -0800

To: <pfmc.comments@noaa.gov>

It is very important to me that you do NOT consider opening the Pacific Leatherback Conservation Area to drift gillnets year round.

While I do not like the killing of seals, sealions, whales and dolphins in these nets, I believe that allowing the killing of endangered marine life like the Pacific Leatherback Turtle is unconscionable.

Sincerely,
Mary Ann Finger
Mill Valley, CA

Subject: drift gillnet

From: "Scott Gursky" <sgursky@san.rr.com>

Date: Thu, 2 Nov 2006 16:56:48 -0800

To: <pfmc.comments@noaa.gov>

Dear Federal Fisheries Managers,

Please keep the closure of the drift gillnet fishery off the coast of California and Oregon for three months of the year. The closure coincides with the leatherback turtle migration, allowing the turtles to safely feed in these waters. The closure has been so effective that not a single leatherback turtle has been recorded caught in the fishery since then!

You can be a Blessing to our planet!

Subject: 'Agenda Item C.3. Drift Gillnet FMP Comment'

From: "Tom Kuntz" <kieslawski70@hotmail.com>

Date: Fri, 03 Nov 2006 00:31:58 +0000

To: pfmc.comments@noaa.gov

BCC:

Hello.

I would like to speak Out NOW for Pacific Leatherback Turtles. The Pacific leatherback turtle urgently needs our help to save this struggling species.

The Pacific leatherback turtle, the largest of the sea turtles and a species that predates the dinosaurs, has been in deep trouble over the last many years. For example, over the past 20 years, the population of Pacific leatherbacks has plummeted by 97%. Destructive fishing practices, especially drift gillnets, have pushed Pacific leatherbacks close to extinction.

Thanks to you the Pacific Fishery Management Council addressing this dire threat in 2001 closing the drift gillnet fishery off the coast of California and Oregon for three months of the year. The closure coincides with the leatherback turtle migration, allowing the turtles to safely feed in these waters. The closure has been so effective that not a single leatherback turtle has been recorded caught in the fishery since then!

I ask you (as do the many supporters in my community who feel the way I do), the fisheries managers, to please keep this area safe for turtles by keeping the Pacific Leatherback Conservation Area closed to drift gillnet fishing. This would eliminate the devastating consequences for leatherback sea turtles, if this plan was dropped, and gillnetting was allowed again.

Thank you for your time.

Tom Koontz

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Subject: 'Agenda Item C.3. Drift Gillnet FMP Comment

From: Nina Richert <ninarich2000@yahoo.com>

Date: Thu, 2 Nov 2006 15:26:22 -0800 (PST)

To: pfmc.comments@noaa.gov

I work with Ca State Parks as a resource monitor for our indangered Ca Least Terns and threatened Western Snowy Plovers. We have seen a very positive impact on the species thanks to the restrictions the Government has placed on human impact and allowed exclosures for the breeding and nesting of these birds.

Due to the success of the restrictions placed on the drift gillnet fishing, I would like to state that I would like to see continued restrictions this coming year. As you are aware the number of leatherback turtles are dangerously close to extinction. This proactive action will play a large part of bringing back this species to a healthy number. The leatherback turtles are able to feed freely during this time of their migration. Thank you for hearing my voice on this critial issue. Lets all work together to perfect this species.

Nina Richert
Oceano Dunes State Park
Oceano, Ca

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Subject: Agenda Item C.3. Drift Gillnet FMP Comment

From: "matt zola" <rockstarzola@hotmail.com>

Date: Thu, 02 Nov 2006 14:53:45 -0800

To: pfmc.comments@noaa.gov

BCC:

Pacific Fishery Management Council ,

Please keep the Pacific Leatherback Conservation Area closed. As humans, the most powerful creatures on earth, it's our responsibility to keep these amazing animals alive. Please keep the drift gillnet fishery off the coast of California and Oregon closed. Please do the right thing.

Thank You,

Matthew Zola

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Subject:

From: "Isabella, Zoe" <isabellaz@BrynMawrSchool.org>

Date: Thu, 2 Nov 2006 15:34:27 -0500

To: <pfmc.comments@noaa.gov>

dear Pacific Fishery Management Council,

The Pacific leatherback turtle population has already suffered too much depletion, please encourage their recovery by keeping the coasts clear of gill netting. The absence of gill netting was successful, we cannot afford to reverse that.

Thank you,

Subject: Agenda Item C.3. Drift Gillnet FMP Comment'

From: "Kristen Morris" <Kristen.Morris@Assurant.com>

Date: Thu, 2 Nov 2006 14:49:56 -0500

To: <pfmc.comments@noaa.gov>

To whom it may concern,

I want this area to remain safe for turtles by keeping the Pacific Leatherback Conservation Area closed.

Pacific leatherback sea turtles have survived on this planet for nearly 100 million years. They have endured ice ages, major volcanic events, meteor impacts, and most every predator in the sea. However, they, and other endangered marine life, cannot survive being caught and drowned in drift gillnets. The Pacific leatherback turtle, the largest of the sea turtles and a species that predates the dinosaurs, is in deep trouble, the cause, humans. Over the past 20 years, the population of Pacific leatherbacks has plummeted by 97% because of an inefficient and genocidal system of catching swordfish, tuna and thresher shark.

The Pacific Leatherback Conservation Area has been so effective that no leatherback turtles have been reported drowned in the entire fishery since protections were put in place. So, why then is the Fisheries Service now considering reopening this area year round to up to 30 drift gillnet vessels?

It's not because the gear has improved:

Drift gillnets remain as destructive as they were prior to the 2001 closure.

In addition to endangered turtles, dolphins and porpoises, seals and sea lions, and even large whales drown in this fishery. Between 1996 and 2002, more than 50 turtles, 700 seals and sea lions, over 1,000 dolphins and porpoises, and 35 large whales were killed.

It is also not because of economics:

The proposed reopening is not expected to provide significant economic benefit. The industry argues that the closed area has directly led to the decline in the drift gillnet fishery. But documented truth is that *the fishery was waning long before the closure was implemented*, with the number of active vessels dropping by half between 1994 and 2000. ***The Fisheries Service has concluded that the "economic impact of an increase in (drift gillnet) effort is likely to differ little from zero."*** In other words, there is no predicted economic gain from this proposed opening.

The question ought not to be how do we open this area, but rather, how can we catch swordfish, tuna, and thresher shark without sacrificing so many other marine creatures?

If we don't take the time to find that answer the Pacific leatherback sea turtles may go extinct on our watch. Explain that one to your children.

Regards,

Kristen K. Morris

Canton, Michigan

Kristen.morris@assurant.com

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Thank you.

Subject: 'Agenda Item C.3. Drift Gillnet FMP Comment'
From: "Banach, Madeline" <Madeline.Banach@associatedfinancialgroup.com>
Date: Thu, 2 Nov 2006 13:47:20 -0600
To: "/a" <pfmc.comments@noaa.gov>
CC: nmbanach@uwm.edu

Please preserve our oceans and keep the wildlife safe for future generations!!

Thank you, Madeline Banach

Madeline Banach, WISC
Commercial Lines Marketing
Associated Financial Group
Employee Benefits. Insurance. HR Solutions.

Office (262) 542-8822 / (800) 837-8822
madeline.banach@associatedfinancialgroup.com

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Subject: Agenda item C.3

From: "Goldstein, Gersham" <GGOLDSTEIN@stoel.com>

Date: Thu, 2 Nov 2006 11:45:16 -0800

To: <pfmc.comments@noaa.gov>

I understand that at your next meeting you will be discussing the closing of the gillnet season for three months to allow the safe migration of sea turtles. I favor the closing of the gillnet season for this purpose not only for this year but for all future years to allow the migration to continue as it has since 2001.

Gersham Goldstein

gershamtax@comcast.net

80 SW Tanglewood Dr.

Lake Oswego, OR 97035

Subject: Please save the leatherback Turtles

From: "Randa" <randath@earthlink.net>

Date: Fri, 3 Nov 2006 07:02:50 -0800

To: <pfmc.comments@noaa.gov>

[Please save the leatherback Turtles.](#)

[Randa Thompson](#)

Subject: Agenda Item C. 3. Drift Gillnet FMP Comment.

From: Jayson Olvera <jaysonolvera@yahoo.com>

Date: Fri, 3 Nov 2006 08:48:58 -0800 (PST)

To: pfmc.comments@noaa.gov

Dear Sir or Madam,

I have recently been made aware of scheduled decision to determine whether or not to allow fishing in the Pacific Leatherback Conservation Area. I believed that it is your responsibility to protect the Leatherback turtles and their habitat from the commercial fishing industry. I would go on to say that you should revoke fishing in these waters not only during the migration season, but continuously and indefinitely. Your actions could preserve and protect the Leatherback for future generations. I thank you for your time and await your decision.

Sincerely,

Jayson Olvera

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Subject: Agenda Item C.3. Drift Gillnet FMP Comment

From: Quellyn L Snead <quellyn@cybermesa.com>

Date: Sun, 05 Nov 2006 17:01:30 -0700

To: pfmc.comments@noaa.gov

November 5, 2006

Pacific Fishery Management Council
7700 NE Ambassador Place, Suite 101
Portland, Oregon 97220-1384

Dear Chair, and Members of the Council:

I am writing to express my support in keeping the Pacific Leatherback Conservation Area closed to drift gillnet fishing. Since 2001, the annual three-month closure of this essential habitat for migrating leatherback turtles has effectively saved lives, preventing further loss of these ancient marine reptiles to the hazards of DGN fishing practices. You have given this species a little breathing room in the fight against extinction. Thank you, and bravo!

So I find myself puzzled when I hear that those responsible for helping the leatherback are considering undoing all their own hard work by re-opening the Conservation Area to year-round DGN fishing.

Could it be that DGN fishing isn't as bad as was previously thought? In my (admittedly layman) view, that doesn't seem likely. While I'm sure more and more fisheries have adopted responsible DGN practices such as using smaller, monofilament nets, conscientiously checking for entangled bycatch species, and posting independent observers on board their vessels, there are still unintended casualties like whales, seals, dolphins, sharks, and of course, turtles. And while the numbers of these victims may not seem large in themselves, we aren't dealing with large populations to begin with. Many bycatch species are critically endangered and the loss of any represents a blow to genetic diversity.

The indiscrimination of DGN is what led to the United Nations banning the practice in international waters, a move followed by some of our own states (Washington, Florida) in managing their own waters. Frankly, I am surprised that California doesn't join their ranks. With its richly diverse marine populations, the danger of impacting endangered species is perhaps as great there as anywhere else in the United States.

Could it be that allowing DGN year-round in the Conservation Area will significantly increase the total catch? That may not be the best idea, with the decline in populations of big-money species such as tuna. If this article which appeared in this week's issue of *Science* (<http://www.sciencemag.org/cgi/content/short/314/5800/721b>) is even remotely on target, it seems to me that we may be forced to close additional areas just to give our target fish species a chance at recovery to harvestable levels.

I realize the difficulty of your job in balancing the interests of commerce, conservation, and the individual lives of fishermen and people like me. I thank you all for your commitment, and

hope you decide to keep the Pacific Leatherback Conservation Area closed during the turtle's annual migration.

Quellyn L Snead

Subject: Agenda Item C.3. - Drift Gillnet FMP Comment

From: "Brent DeWitt" <bdewitt1@san.rr.com>

Date: Sun, 5 Nov 2006 08:21:05 -0800

To: <pfmc.comments@noaa.gov>

CC: <bill.hogarth@noaa.gov>, <jim.lecky@noaa.gov>

To Whom This Concerns:

I would ask that you NOT reopen the Pacific Leatherback Conservation Area! In our modern ERA of so much human damage that is bestowed upon our Earth and its life forms, it appears that even "relatively small" decisions can have far-reaching effects.

Please, please, please continue the closure policy that was adopted in 2001.

Thank you,

Brent DeWitt
San Diego, CA

Subject: Agenda Item C.3. Drift Gillnet FMP Comment

From: "Diane Drewke" <drewke@comcast.net>

Date: Sun, 5 Nov 2006 06:48:51 -0800

To: <pfmc.comments@noaa.gov>

I am vehemently against opening the Pacific Leatherback Conservation Area up to drift gillnet fishing. This area must remain closed to continue to help protect the Pacific Leatherback Turtle. Keeping the drift gillnet fishing out has been a tremendous help to the turtle and should be continued at all costs. I would like to see this a more permanent decision not one that is revisited every year. It seems we should leave it in place for at least the next 5 years before revisiting this yet again.

Sincerely,
Diane Drewke

Subject: Agenda Item C.3. Drift Gillnet FMP Comment

From: JimJam Bonks <suprhax0r52@yahoo.com>

Date: Sun, 5 Nov 2006 04:50:57 -0800 (PST)

To: pfmc.comments@noaa.gov

CC: oceanaction2@mbayaq.org

Please do not end the ban on drift gillnet fishing. If you were to lift the ban there would be no economic benefits. The only thing that would happen as a result would be the deaths of several critically endangered animals such as Pacific leatherback turtles. Even if you were to place caps on the number of endangered sea life killed by drift gillnets, such fishing practices would still do significant damage to turtle stocks. As a concerned resident of the California coast, I beg you to continue the ban on drift gillnet fishing.

Low, Low, Low Rates! Check out Yahoo! Messenger's cheap PC-to-Phone call rates
(<http://voice.yahoo.com>)

Subject: Agenda Item C.3. Drift Gillnet FMP Comment

From: Ljpearsall@aol.com

Date: Sat, 4 Nov 2006 21:39:17 EST

To: pfmc.comments@noaa.gov

CC: bill.hogarth@noaa.gov

Dear Pacific Fishery Management Council members:

I am writing to you in support of a permanent ban on drift gillnet fishing in the Pacific Leatherback Conservation Area.

The area must remain safe for turtles by keeping the area closed, not just for 2006, but far into the future. Responsible management of the dwindling population of leatherback turtles must include a ban on drift gillnet fishing. In addition, there should be habitat restoration, nest protection, and marine pollution and debris management. Such action will benefit other populations of marine mammals as well. We rely upon NOAA for stewardship of our oceans, this ban is extremely important.

This area is a national treasure, and the pacific leatherback turtle is a national resource. Thank you for protecting this important resource for future generations.

Sincerely,

Lorraine J. Pearsall

7708 Takoma Ave, Takoma Park, Maryland 20912

Subject: Agenda Item C.3. Drift

From: mountains@redshift.com

Date: Sat, 4 Nov 2006 16:26:09 -0800 (PST)

To: pfmc.comments@noaa.gov

We are all on the Earth to live in unison. Humans took setep in 2001 to address the threat to the Pacific Leatherback Turtle by closing the dirft gillnet gishery off the coast of California and Oregon during their migration. It has been effective, so much so that not one turtle has been caught in the fishery. Why is it now under consideration for fisheries managers to allow drift gillnet fishing again – with potentially devastating consequences for leatherback sea turtles?

Please prevent this from happening, please help preserve the future of this species for future generations of all beings.

Thank you,

K. Hills
Salinas CA

Subject: Pacific Leatherback Turtles
From: "Melanie McMann" <melaniej@gmail.com>
Date: Sat, 4 Nov 2006 18:23:08 -0500
To: pfmc.comments@noaa.gov

Dear Pacific Fishery Management Council,

I am a student at Cherokee High School, currently taking A.P. Biology. I am very concerned about Pacific leatherback turtles. I sincerely hope that the drift gillnet fishery off the coast of California and Oregon remains closed this year and every year in the future. Keeping the Pacific Leatherback Conservation Area closed has prevented a countless number of needless deaths. Destructive fishing practices, particularly drift gillnets, could potentially cause the extinction of this already threatened species. Thank you.

Sincerely,
Melanie McMann

Subject: Agenda Item C.3. Drift Gillnet FMP Comment'

From: earth-lover@comcast.net

Date: Sat, 04 Nov 2006 22:11:09 +0000

To: pfmc.comments@noaa.gov

I am writing to urge you to close the Pacific Leatherback Conservation off the coast of California and Oregon to drift gillnet fishing not only in 2006, but for at least a decade in order to preserve our Pacific Leatherback turtles.

Since research has shown that ocean sealife is under such stress already, everything you do to maintain the ecosystem is crucially important.

Thank you,

Pat Shelton,

San Rafael, CA

Subject: Agenda Item C.3. Drift Gillnet FMP Comment

From: "Paul Chrostowski" <pc@cpfassociates.com>

Date: Sat, 4 Nov 2006 16:24:53 -0500

To: <pfmc.comments@noaa.gov>, <bill.hogarth@noaa.gov>

CC: <chrostowp@aol.com>, <ljpearsall@aol.com>

Dear Sirs:

I am writing this in support of a permanent ban on drift gillnet fishing in the Pacific Leatherback Conservation Area. To date, this program has been eminently successful in preventing mortality of Pacific leatherbacks. These highly endangered turtles may face total extinction within 10 years. The Pacific population was once believed to be the world's largest, but has crashed within recent years. Factors responsible for the population crash likely include exploitation for eggs and meat by humans and incidental take in numerous commercial fisheries, particularly by fishers employing drift gillnets. The management of this dwindling population must include severe limitations on drift gillnet fishing in addition to habitat restoration, nest protection, and marine pollution and debris management. In addition to the beneficial effects of banning drift gillnets with respect to leatherbacks, a positive effect will be found on populations of marine mammals that are similarly impacted by this fishing method. As the date approaches for your annual decision regarding the closing of the conservation area this year, I recommend that you enforce the closure both this year and permanently into the future.

Paul C. Chrostowski, Ph.D., QEP, FRSH
CPF Associates, Inc.
7708 Takoma Avenue
Takoma Park, MD 20912
P: 301-585-8062
F: 301-585-2117
C: 240-678-8250

Subject: Saving Sea Turtles

From: Suzanne Emery <semery54@sbcglobal.net>

Date: Sat, 4 Nov 2006 12:17:56 -0800 (PST)

To: pfmc.comments@noaa.gov

Greetings from Monterey-

I am writing on behalf of the beautiful Pacific leatherback sea turtle, which is nearing extinction due to us humans.

Please continue with your great efforts to save these creatures from such a fate. Isn't life tough enough- for us humans too?? When we can actually DO something about it, why don't we?

It seems there's no reasonable excuse to once again allow the "drift gillnet" type fishing practice in California. As the Monterey Herald article so perfectly stated,

"The proposed opening therefore makes no sense for either scientific or economic reasons. It also makes no sense for political reasons, as the public has shown overwhelming opposition. Further, it would seem to fly in the face of the recent Governors' Agreement on Ocean Health, where the states of California, Oregon and Washington have explicitly recognized the need for addressing the declining health of our ocean and the need to sustain marine wildlife populations."

Although, personally, there are not enough hours in my life to actively support these necessary things, I *am* concerned, and pray daily for responsible ocean management for the sake of our planet, those animals, my children and their children.

I hope my words will help in some small way to dissuade our government from taking a huge, destructive step backward that will ultimately affect us all...

Thank you for listening,
~Suzanne Emery

Subject: Agenda Item C.3. Drift Gillnet FMP Comment

From: Lisa Dworkin <lisa.dworkin@mindspring.com>

Date: Sat, 4 Nov 2006 14:06:39 -0600

To: pfmc.comments@noaa.gov

Dear members of the council,

I'm writing to urge you to keep the Pacific Leatherback Conservation Area closed so that this area remains safe for turtles. The Pacific leatherback turtle is in deep trouble because over the past 20 years the population of Pacific leatherbacks has plummeted by 97%. Destructive fishing practices, especially drift gillnets, have pushed Pacific leatherbacks close to extinction. The 2001 closure of the drift gillnet fishery coincides with the leatherback turtle migration, allowing the turtles to safely feed in these waters. The closure has been so effective that **not a single leatherback turtle has been recorded caught** in the fishery since then! (Statistics courtesy of the Monterey Bay Aquarium) Please continue this closure in the interest of the turtles.

Thank you for your attention to this matter.

Sincerely,

Lisa Dworkin

Subject: Agenda Item C.3. Drift Gillnet FMP Comment

From: "Kenneth Rohrs" <hkrooster@gmail.com>

Date: Sat, 4 Nov 2006 21:41:16 +0800

To: pfmc.comments@noaa.gov, jim.lecky@noaa.gov, bill.hogarth@noaa.gov

Dear Sir and/or Madam,

In 1977 I watched leatherback turtles lay their eggs on the beach at Rantau Abang, West Malaysia. It was a primeval experience, watching those 6-8 foot turtles doing something that had occurred continuously since the beginning of time. Some of those turtles were tagged and found to swim across vast ocean expanses. Today there are no more leatherback turtles laying eggs on those expansive beaches in west Malaysia.

The few gill net fishermen's economic catches do not match the priceless loss of time immemorial species such as the leatherback. Mankind needs to find sustainable ways to harvest the ocean and still maintain an ecological balance.

Please show forward thinking planning and leadership and not re-open the California coast to large gill netting trawler fishing. Give the oceans a rest to recover, at least until we can figure out how to manage them sustainably for generations to come.

I do vote and will vote in Tuesday's election in California.

Sincerely,
Ken Rohrs

--

Karen and Ken Rohrs-HKRooster@gmail.com

"How you understand something usually depends upon your point of reference."

Subject: Agenda Item C.3. Drift Gillnet FMP Comment

From: "B Erickson" <bae@sonic.net>

Date: Sat, 4 Nov 2006 00:48:14 -0800

To: <pfmc.comments@noaa.gov>

CC: <bill.hogarth@noaa.gov>, <jim.lecky@noaa.gov>

Dear Fisheries Service,

Please renew the 3 month drift gillnet closure in the Pacific Leatherback Conservation Area.

As the only sea turtle likely to be seen at our latitude, the leatherback is a very special inhabitant of our waters. The alarming reduction in population of such a unique creature surely warrants some serious conservation measures. I cannot understand why the 3 month closure, which seems to be effective in eliminating turtle deaths, would be re-considered. With so many other pressures on sea turtles worldwide, the US should set an example, and provide serious protection on a permanent basis.

Bruce Erickson,
Santa Rosa, California

Subject: Agenda Item C.3. Drift Gillnet FMP Comment

From: "" <glmscribe@netscape.com>

Date: Fri, 3 Nov 2006 20:41:08 -0800

To: <pfmc.comments@noaa.gov>

To: pfmc.comments@noaa.gov

Subject: Agenda Item C.3. Drift Gillnet FMP Comment

Dear Pacific Fishery Management Council,

It has been brought to my attention that you are proposing to allow year round drift gillnet fishing in the Pacific Leatherback Conservation area off the California and Oregon coasts. I wish to express my opposition.

I am aware that the proposal requires fishery observers on each vessel and caps on the number of leatherbacks and some whale species that can be killed. While I recognize that these controls will help limit the number of leatherback turtles and certain large whales killed, having just one killed is unnecessary. This is an endangered species!

Beyond the endangered leatherback turtle, there is no protection or limit on the number of other species killed (sea lions, dolphins, elephant seals, fin whales, gray whales, other sea turtles, etc.) I understand the fisheries service concluded there would be no economic impact as a result of year round drift gillnet fishing.

So - if the only result of this change would be unnecessary deaths of endangered sea turtles (that will lead to the species ultimate extinction) and other fish, why is such a proposal being considered?

This area needs to remain safe for turtles (and other sealife), by keeping the Pacific Leatherback Conservation area closed for the three month period while the turtles migrate and feed. Additionally, this approved closure should extend well beyond the year 2006. This closure should be in place for MANY years to come. Such a decision keeps supports California's commitment to healthy progressive ocean management. We protect our state waters, shouldn't we protect our federal waters and sealife as well?

Thank you for listening,

Sincerely,
Gail McNamara

Netscape. Just the Net You Need.

Subject: SAVE THE TURTLES

From: totopspin3@crestcomtech.com

Date: Fri, 3 Nov 2006 22:29:16 -0500

To: pfmc.comments@noaa.gov

Dear Pacific Fishery Management Council,

My name is Tim Olsen. I am a high school student and I am currently taking Advanced Placement Biology. As a part of the curriculum, our class learned about the endangered species of the world, and the reasons why they are endangered. Two of the major causes of extinction in organisms are habitat intrusion and destruction, and the second is poaching or hunting. My concern at the present moment is for the Pacific Leatherback Turtles. This turtle is the largest of all the sea turtles and has lived on this planet 13 times longer than humans, dating back to the dinosaurs 65 million years ago. Due to destructive fishing practices in using drift gill nets, the population of this turtle has dropped 97%. Could you imagine if 97% of the human race was killed by a cause that could be prevented? These turtles, migrating to California and Oregon for three months of the year have been protected by the Federal fisheries managers since 2001 by outlawing the use of these drift gill nets. The turtles have since been able to feed safely in these waters and a trapped turtle has not turned up since! However, now you are preparing to waive this outlaw? With this action, the population of the turtle will most definitely face extreme drops in population and possibly extinction. As a result, I am asking for your help. Please, by all means, continue to keep this area safe for the turtles by keeping the Pacific Leatherback Conservation Area closed. Let this turtle continue to make a come back, so we do not lose one of the oldest turtles, please protect the Pacific Leatherback Sea Turtle.

A concerned citizen and AP Biology student,

Timothy Olsen

Subject: Agenda Item C.3. Drift Gillnet FMP Comment

From: "Kristin Teed" <kristin.teed@comcast.net>

Date: Fri, 3 Nov 2006 16:07:56 -0800

To: <pfmc.comments@noaa.gov>

Dear Pacific Fishery Management Council,

It has been brought to my attention that you are proposing to allow year round drift gillnet fishing in the Pacific Leatherback Conservation area off the California and Oregon coasts. I am writing to oppose this proposal.

I am aware that the proposal requires fishery observers on each vessel and caps on the number of leatherbacks and some whale species that can be killed. While I recognize that these controls will help limit the number of leatherback turtles and certain large whales killed, having just one killed is one TOO MANY. This is an endangered species we're talking about! And beyond the endangered leatherback turtle, there is no protection or limit on the number of other species killed (sea lions, dolphins, elephant seals, fin whales, gray whales, other sea turtles, etc.) Additionally, the fisheries service has concluded that there would be no economic impact as a result of year round drift gillnet fishing.

So - if the only result of this change would be unnecessary deaths of endangered sea turtles (that will lead to the species ultimate extinction) and other fish, why would you consider such a proposal?

I want this area to remain safe for turtles (and all sealift), by keeping the Pacific Leatherback Conservation area closed for the three month period while the turtles migrate and feed. Additionally, this approved closure should extend well beyond the year 2006. This closure should be in place for MANY years to come. I believe this decision keeps in line with California's commitment to progressive ocean management. We protect our state waters, shouldn't we protect our federal waters and sealift as well?

Thank you for your time,

Signed,
Kristin Teed

Subject: Sea Turtle Alert

From: María Guadalupe García Rojas <linda_chez@hotmail.com>

Date: Fri, 03 Nov 2006 16:52:16 -0600

To: pfmc.comments@noaa.gov

BCC:

I want that you keep the Conservation Area closed (California and Oregon) to remain safe for turtles by keeping the Pacific Leatherback, Thanks alot.

BM. María Guadalupe García-Rojas.

Más vale parecer un idiota con la boca cerrada, que abrir la boca y disipar toda duda
(anónimo)

Prodigy/MSN Hotmail Plus. Más espacio, más funcional [Haz clic aquí](#)

Subject: Agenda Item C.3. Drift Gillnet FMP Comment

From: Gattabella3@aol.com

Date: Fri, 3 Nov 2006 16:32:52 EST

To: pfmc.comments@noaa.gov

PLEASE keep the the Pacific Leatherback Conservation Area!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!

Rose Linck

Subject: Agenda Item C.3. Drift Gillnet FMP Comment'

From: MichelleEPowell@aol.com

Date: Sun, 5 Nov 2006 23:02:13 EST

To: pfmc.comments@noaa.gov

CC: oceanaction2@mbayaq.org

Ladies and Gentlemen:

I am concerned about the future of the Leatherback Turtle. I urge you to keep the waters off the coasts of California and Oregon safe for marine life. Please make the right choice by keeping drift gillnets out of the waters. Your decision not only affects the lives of marine animals but the lives of us, our children and future generations.

Please, keep the ocean waters free of drift gillnets.

Sincerely,
Michelle Powell
Edmond, Oklahoma

Subject: Agenda Item C.3. Drift Gillnet FMP Comment

From: Alison Barratt <abarratt@seafoodchoices.org>

Date: Tue, 7 Nov 2006 10:00:52 +0000

To: pfmc.comments@noaa.gov

CC: bill.hogarth@noaa.gov

Dear Pacific Fishery Management Council,

I was dismayed to hear that you are considering re-opening the drift gillnet fishery during the Pacific leatherback migration period. This closure has been a monumental success, with not a single turtle caught in this fishery during the last 3 years.

The Pacific leatherback faces so many threats in its bid to cling to survival on our planet. Many of those threats are outside our sphere of influence - loss of nesting beaches, threats from distant water longline fleets, pollution etc. However, here is a straightforward measure, with a successful outcome, which does not negatively impact the fishery or any other stakeholder.

With no perceived benefit to this change, why would we further wish to threaten the existence of one of the most ancient species to roam our planet? The loss of every single leatherback turtle is immense, when this species is so severely endangered, that it could be extinct within 2 or 3 generations.

I urge you to reconsider and give these animals a chance for continued survival.

Kind regards,

Ali Barratt

Subject: Agenda Item C.3. Drift Gillnet FMP Comment

From: lluvmarbio24@aol.com

Date: Tue, 7 Nov 2006 01:11:25 EST

To: pfmc.comments@noaa.gov

Dear Sir/Madam:

Please continue to protect the leatherback sea turtle by continuing the ban on drift gillnet fishing. Leatherbacks are the largest and most northerly species of sea turtles, and if they are lost - so is an amazing piece of the environment.

Thank you for choosing the future over dollars,

Sarah-Mae Nelson
2823 Lantz Ave.
San Jose, Ca 95124

Subject: Agenda Item C.3. Drift Gillnet FMP Comment

From: "denise balesteri" <queenmessina@hotmail.com>

Date: Mon, 06 Nov 2006 22:45:35 -0700

To: pfmc.comments@noaa.gov

BCC:

Dear Sirs,

The conservation of the Leatherback Sea Turtle is a necessity in the preservation of nature as we know it. To let this species be heartlessly slaughtered for the selfish wants of mankind is unforgivable. We have a responsibility to this planet and every living creature on it as the dominant sentient inhabitants. Please continue to keep the Pacific Leatherback Conservation Area closed, not just for 2006, but as far in to the future as possible. Thank you for your time, it is much appreciated.

Denise Balesteri

Subject: Agenda Item C.3 Drift Gillnet FMP Comment

From: Nadine Smith <allennadine@comcast.net>

Date: Mon, 6 Nov 2006 20:48:11 -0800

To: pfmc.comments@noaa.gov

Dear Pacific Fishery Management Council,

I am requesting that you continue the 3 months closure of drift gill net fishing in order to protect the Pacific Leatherback Turtles and other marine mammals as you have in the past few years.

It seems like such a small time frame each year, to prohibit this type of fishing, in order to help these animals to remain safe. It is the least that we can do for another species.

Sincerely,
Nadine Smith

Subject: Agenda Item C.3. Drift Gillnet FMP Comment

From: Gayle and Jim Cunningham <gjcunning@comcast.net>

Date: Mon, 06 Nov 2006 19:40:14 -0800

To: pfmc.comments@noaa.gov

Please ensure that the 3 month period we currently have for gillnet fishing along the California and Oregon coast line is kept in place. I believe it is making a difference in the population of Leatherback Sea Turtles. I would love to see the population of this breed be something that is not dwindling because of poor management by commercial fish companies. If we don't put legislation in place now, there is nothing stopping these companies from hurting these animals during their migration period.

Gayle Cunningham

Subject: Agenda Item C.3 Drift Gillnet FMP Comment

From: Susan Hunter <hunterstrouble@comcast.net>

Date: Mon, 6 Nov 2006 19:40:02 -0800

To: pfmc.comments@noaa.gov

I urge you to continue the closure of the drift gillnet fishery off the coast of California and Oregon during the leatherback turtle migration. I want tis area to remain safe for turtles by keeping the Pacific Leatherback Conservation Area closed This closure should be permanent.

Subject: Agenda Item C.3. Drift Gillnet FMP Comment

From: Gayle and Jim Cunningham <gjcunning@comcast.net>

Date: Mon, 06 Nov 2006 19:29:00 -0800

To: pfmc.comments@noaa.gov

Hello. My name is Patrick Cunningham and I am in 7th grade. My favorite animal is the leatherback sea turtle. When I grow up I want to be a marine biologist. When ever we go to any sort of aquarium I always see if there is a sea turtle exhibit. Knowing that they are now becoming more threatened devastates me. Although I too am a fish and shrimp lover, I would never eat a fish again if I new it would help the well being of the leatherbacks[and other species]. Wouldn't you stop or try to stop the killing of your favorite animal if you could? This animal will go extinct because of their small numbers, but wouldn't you want to keep an animal on the planet as long as possible? I know I would. More and more animals are becoming extinct because of humans. Once a human wants something they go after it no matter what. We destroy and demolish all in our path. Have you seen the movie Hoot? If you have you know what I mean. The same thing is happening to the turtles. We are making it so that the turtle can't reproduce, and we are doing this to get food too. Why can't you put a fine male fence around the area you fish in and search for anything you don't wish to catch and throw [not literally] the animal to the other side of the fence. You could even put hooks on the top of the fencing and pick it up with your boat. Of course you would need some muscle and maybe a crane, but you would save many species. It would save you in the long run too, you would get a lot fewer fines. Please change your minds and stop gill fishing for a 3 months. From ***the biggest turtle fan in the entire United States***,
Patrick Cunningham

Subject: savin' the sea turtles

From: Gayle and Jim Cunningham <gjccunning@comcast.net>

Date: Mon, 06 Nov 2006 19:23:40 -0800

To: pfmc.comments@noaa.gov

Hello. My name is Patrick Cunningham and I am in 7th grade. My favorite animal is the leatherback sea turtle. When I grow up I want to be a marine biologist. When ever we go to any sort of aquarium I always see if there is a sea turtle exhibit. Knowing that they are now becoming more threatened devastates me. Although I too am a fish and shrimp lover, I would never eat a fish again if I new it would help the well being of the leatherbacks[and other species]. Wouldn't you stop or try to stop the killing of your favorite animal if you could? This animal will go extinct because of their small numbers, but wouldn't you want to keep an animal on the planet as long as possible? I know I would. More and more animals are becoming extinct because of humans. Once a human wants something they go after it no matter what. We destroy and demolish all in our path. Have you seen the movie Hoot? If you have you know what I mean. The same thing is happening to the turtles. We are making it so that the turtle can't reproduce, and we are doing this to get food too. Why can't you put a fine male fence around the area you fish in and search for anything you don't wish to catch and throw [not literally] the animal to the other side of the fence. You could even put hooks on the top of the fencing and pick it up with your boat. Of course you would need some muscle and maybe a crane, but you would save many species. It would save you in the long run too, you would get a lot fewer fines. Please change your minds and stop gill fishing for a 3 months. From ***the biggest turtle fan in the entire United States***,
Patrick Cunningham

Subject: Agenda Item C.3 Drift Gillnet FMP Comment

From: Mary von Tolksdorf <vont@ix.netcom.com>

Date: Mon, 6 Nov 2006 18:48:49 -0800 (GMT-08:00)

To: pfmc.comments@noaa.gov

I am sending this e-mail to you in opposition of allowing gillnet fishing to take place off of our California coastline. The damage that is done to all marine life is appalling and should not be allowed.

Mary von Tolksdorf

Subject: Agenda Item C.3. Drift Gillnet FMP Comment

From: Jeffrey <jjackman@daileyads.com>

Date: Mon, 06 Nov 2006 16:17:03 -0800

To: pfmc.comments@noaa.gov

Pacific Fishery Management Council
To Whom It may Concern:

I am righting this letter to urge to continue the annual ban of Drift Gillnet Fishing off the coasts of California and Oregon. This policy that has been in place since 2001 has helped to eliminate the senseless death of the Pacific Leatherback turtle. It is necessary to continue these types conservations to preserve the wildlife within our oceans. Without proper management and conservation we run the risk of not only depleting the overall supplies of the intended fish species but, also, as collateral damage, risk the reduction of already threaten species of dolphins, whales, and other air breathing animals. Being that the three month ban of Drift Gillnet Fishing has proved to be successful in limited the environmental impact of this practice it only seems natural to allow this ban to continue as long as the Leatherback Turtle and other ocean species remain endangered.

It is important for each of us to do our part to aid in the conservation and prolonging of our natural resources. It is under this ideal that I urge to continue the the annual ban on Drift Gillnet Fishing to allow the Leatherback Turtles and other species to nest and feed freely during this time of year.

Sincerely
Jeffrey Jackman

Subject: Agenda Item C.3. Drift Gillnet FMP Comment

From: "Greg Korelich" <gbkorel@gmail.com>

Date: Mon, 6 Nov 2006 12:49:26 -0800

To: pfmc.comments@noaa.gov

CC: bill.hogarth@noaa.gov, jim.lecky@noaa.gov

Dear Pacific Fishery Management Council,

Please keep the current three month ban on drift gillnet fishing in the Pacific Leatherback Conservation Area intact. It is a very intelligent way of protecting the Pacific Leatherback Turtle. Please consider making the ban more permanent (renew it automatically each year) until the Pacific Leatherback population is again healthy. The Pacific Leatherback Turtle deserves our continued help in making their comeback.

The current three month ban on gillnet fishing is extremely successful at protecting the Pacific Leatherback, please don't change it. The ban also helps the ecosystem in the Pacific Leatherback Conservation Area recover each year from the devastating effect that gillnet fishing (the marine equivalent of strip mining) has on the area.

Thank You,

Greg Korelich
Santa Rosa, California

Subject: agenda item c.3 Drift gillnet PMP comment

From: Debbie Aspenleiter <raspen@cox.net>

Date: Mon, 6 Nov 2006 10:40:40 -0800

To: pfmc.comments@noaa.gov

To whom it may concern,

I would like to express my support for the continued protection of the leatherback turtles from gillnet fishing during their migration period. It has proven to have helped the population growth of the turtles and should be continued.

I am also concerned about gillnet fishing in the Channel Islands National Marine Sanctuary during the summer feeding period of the migrating Humpback Whales. We observed them feeding right next to where the nets were, and it is concern they could be entangled in them.

Sincerely,

Deborah Aspenleiter

Subject: Pacific Leatherback Turtles
From: "Scott, Juliet" <Juliet.Scott@Avnet.com>
Date: Mon, 6 Nov 2006 10:47:26 -0700
To: <pfmc.comments@noaa.gov>

To Whom It May Concern:

I want the Pacific ocean to remain safe for Pacific Leatherback Turtles by keeping the Pacific Leatherback Conservation Area closed. Every year the Pacific Fishery Management Council decides whether or not to continue closing this area so please emphasize that this closure should remain in place far into the future -- not just for 2006.

Thank you,

Juliet Scott
Customer Support Representative
Avnet Technology Solutions
Phone: 877-967-3664 ext 6113
Fax: (480) 794-9640
Email: juliet.scott@avnet.com
"Dedicated to Your Success"

Subject: Pacific Leatherback Conservation Area
From: "Werner Wernicke" <Werner.Wernicke@viwapa.vi>
Date: Mon, 6 Nov 2006 12:47:19 -0400
To: <pfmc.comments@noaa.gov>

TO: Pacific Fishery Management Council

I urge you to keep closed the Pacific Leatherback Conservation Area into the indefinite future, and do not allow driftnet gillnets. The destruction of marine life associated with gillnets is immoral and should not be allowed.

Werner Wernicke

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Subject: Agenda Item C.3. Drift Gillnet FMP Comment'

From: "Lewis, Katie" <klewis@RVC.AC.UK>

Date: Mon, 6 Nov 2006 13:39:55 -0000

To: <pfmc.comments@noaa.gov>

Hi! Please continue to keep the Pacific Leatherback Conservation Area closed to drift gillnets to prevent injury and death to the turtles and other marine life, in 2006 and onwards! Thank you,

Katie

Subject: Agenda Item C.3 Drift Gillnet FMP Comment

From: Sharyn Kovac <beachbumkovac@yahoo.com>

Date: Tue, 7 Nov 2006 06:52:00 -0800 (PST)

To: pfmc.comments@noaa.gov

I was shocked and sickened to hear of thr proposal to allow drift net fishing of the coast of California and Oregon to continue. With the population of Pacific Leatherback turtles down 97% over the past 20 years, you must be completely crazy!! Drift net fishing should be banned all year and everywhere. Please save our turtles!!!

Sharyn Kovac
Pawleys Island
South Carolina

Check out [the all-new Yahoo! Mail](#) - Fire up a more powerful email and get things done faster.

Subject: Agenda Item C.3. Drift Gillnet FMP Comment

From: Alina <alinamk@gmail.com>

Date: Tue, 7 Nov 2006 09:34:49 -0800

To: pfmc.comments@noaa.gov

I want this area to remain safe for turtles. Please keep the Pacific Leatherback Conservation Area closed.

--

Alina

Subject: Agenda Item C.3. Drift Gillnet FMP Comment
From: "ROSE LAURILA" <taichiwanabe@hotmail.com>
Date: Tue, 07 Nov 2006 18:08:27 +0000
To: pfmc.comments@noaa.gov
BCC:

Drift Gillnet Fishing has been proven in to be destructive to many species of ocean animals.
The practice should be permanently abolished.



Rose

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Subject: Agenda Item C.3. Drift Gillnet FMP Comment

From: Alina <alinamk@gmail.com>

Date: Tue, 7 Nov 2006 09:34:49 -0800

To: pfmc.comments@noaa.gov

I want this area to remain safe for turtles. Please keep the Pacific Leatherback Conservation Area closed.

--

Alina

Subject: Agenda Item C.3. Drift Gillnet FMP Comment

From: "Stephanie Danner" <SDanner@mbayaq.org>

Date: Tue, 7 Nov 2006 11:14:03 -0800

To: <pfmc.comments@noaa.gov>

Hello Members of the Pacific Fishery Management Council,

I am sending this email to oppose the reopening of the drift gillnet fishery off the coast of California and Oregon during the Pacific Leatherback migration period. Destructive fishing practices, especially drift gillnets, have pushed Pacific leatherbacks close to extinction. The closure, which was put into place by NMFS in 2001, has been so effective that not a single leatherback turtle has been recorded caught in the fishery since then! Drift gillnets remain as destructive as they were prior to the 2001 closure. Unfortunately, with these critically endangered species, the survival of every single one counts. The proposed reopening is not expected to provide significant economic benefit. The proposed opening therefore makes no sense for either scientific or economic reasons. It also makes no sense for political reasons, as the public has shown overwhelming opposition. Further, it would seem to fly in the face of the recent Governors' Agreement on Ocean Health, where the states of California, Oregon and Washington have explicitly recognized the need for addressing the declining health of our ocean and the need to sustain marine wildlife populations.

Please keep the Pacific Leatherback Conservation Area closed!

Sincerely,
Stephanie Danner

~~~~~

Stephanie Danner  
Seafood Watch Fishery Research Analyst  
Center for the Future of the Oceans  
Monterey Bay Aquarium  
99 Pacific Street  
Suite 100A  
Monterey, CA 93940  
p: (831) 647-6861  
f: (831) 647-6870  
[sdanner@mbayaq.org](mailto:sdanner@mbayaq.org)

[www.seafoodwatch.org](http://www.seafoodwatch.org)

**Subject:** Pacific Leatherback Turtles  
**From:** perronie16@aim.com  
**Date:** Tue, 07 Nov 2006 17:18:39 -0500  
**To:** pfmc.comments@noaa.gov

Dear Pacific Fishery Management Council,

I am writing you to inform you of my feelings on the conservation of the Pacific Leatherback Turtles. It is in my deepest wishes that you will reconsider your preparation to allow drift gillnet fishing again. This summer I took part in a great deal of lectures that really stressed the horrors that humans can do to marine animals and I believe now, more than ever, that something must be done to save these endangered ocean-loving species and you can help. I recognize your generous actions by banning the drift gillnet fishery for a period of three months each year; however, I can't help but be dissatisfied in your plans to put an end to these efforts. Look at how successful it has been. Not a SINGLE Pacific Leatherback Turtle was caught since it was put into effect. Please, allow the Pacific Leatherback Conservation Area to remain a safe environment for turtles. You truly will be making a difference. Thank you for your time.

Sincerely,  
Marissa Perrone

---

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**Subject:** Agenda Item C.3. Drift Gillnet FMP Comment

**From:** Janzebra@aol.com

**Date:** Tue, 7 Nov 2006 16:12:13 EST

**To:** pfmc.comments@noaa.gov

Please keep the Pacific Leatherback Conservation Area closed

I want to voice my opinion that I would like you to keep the Pacific Leatherback Conservation Area closed and safe for turtles. This closure should remain in place far into the future -- not just for 2006.

Thank you.

Janet Epperson

**Subject:** Agenda Item C.3. Drift Gillnet FMP Comment

**From:** "Jim Westbrook" <jwestbrook@mbayaq.org>

**Date:** Tue, 7 Nov 2006 12:11:05 -0800

**To:** <pfmc.comments@noaa.gov>

Please don't allow drift gillnet fishing again in the Pacific Leatherback Conservation Area! The closure of this area has had tremendous results over the past five years, it would be a shame to endanger Pacific Leatherback turtles by reopening this area to drift gillnet fishing.

Please continue to protect these beautiful animals. They've been around longer than we have!

Jim Westbrook

**Subject:** Agenda Item C.3. Drift Gillnet FMP Comment

**From:** "Sheila Bowman" <SBowman@mbayaq.org>

**Date:** Tue, 7 Nov 2006 12:04:45 -0800

**To:** <pfmc.comments@noaa.gov>

It's important to me to protect ocean wildlife. You have it in your means to do so.

With the successful closure of the California and Oregon coast to the drift gill net fishery in 2001, not a single leatherback turtle mortality has been recorded. I am writing to encourage you to please keep this area safe for turtles by keeping the Pacific Leatherback Conservation Area closed – permanently.

In so many cases, a working compromise between wildlife and destructive fishing practices doesn't exist. **In this case, it does.** Let's not take a step backwards. Please move today to permanently close the Pacific Leatherback Conservation Area to drift gillnet fishers.

Sheila Bowman  
Seafood Watch Outreach Manager  
(831) 647-6871  
[SBowman@mbayaq.org](mailto:SBowman@mbayaq.org)  
[www.seafoodwatch.org](http://www.seafoodwatch.org)

**2006 is our “Year of Exploring”! Find out what’s happening this month at [www.montereybayaquarium.org](http://www.montereybayaquarium.org)**

**Subject:** Agenda Item C.3. Drift Gillnet FMP Comment'

**From:** Suzanne Snygg <suzannesnygg@yahoo.com>

**Date:** Tue, 7 Nov 2006 12:02:25 -0800 (PST)

**To:** pfmc.comments@noaa.gov

Dear Staff:

I understand that the Pacific Fishery Management Council is reviewing the possibility of opening drift gillnet fishing off the coasts of California and Oregon for a full 12 months rather than 9. Given the current predictions that the fish population will collapse by 2048 I rather wish that no drift gillnet fishing took place. However, the reason for my particular concern today is in defense of the Pacific Leatherback turtle which migrates through the region during those 3 months that drift gillnet fishing is prohibited. We've seen the population of this species drop 97% in the past 20 years, however I've read that since this practice of closing drift gillnet fishing for 3 months, we haven't lost a single turtle. That is great news, and I ask that you please, please continue this practice of keeping the region closed for the 3 months during the turtles migration.

Thank you for your time and consideration

Suzanne Snygg  
7505 Hihn Road  
Ben Lomond, CA  
95005

**Subject:** Turtles

**From:** "Linarez, Karen" <Karen.Linarez@wellpoint.com>

**Date:** Tue, 7 Nov 2006 14:31:36 -0800

**To:** "pfmc.comments@noaa.gov" <pfmc.comments@noaa.gov>

Please keep the Pacific Leatherback Conservation Area closed. This should not come up every year as they are not going to recover in a years time.

Please give the turtles a chance to complete their migration. The closure has been working and should become policy. Their population has been decimated by 95%.

Thanks

Karen Linarez

Carm., Ca

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**Subject:** Agenda Item C.3. Drift Gillnet FMP Comment  
**From:** "Laura Marshall" <lmarshall@stanfordalumni.org>  
**Date:** Tue, 07 Nov 2006 16:47:23 -0800  
**To:** <pfmc.comments@noaa.gov>

Dear Council,

Please continue to keep the Pacific Leatherback Conservation Area closed to drift gillnet fishing. Not only for this year, but for many many years to come. This is very important to preserve our natural resources and allow populations to continue to recover.

Thank-you,

Laura Marshall

Environmental Engineer and Marine Mammal Center volunteer

---



RECEIVED

OCT 31 2006

Dan Tudor

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From: Dan Tudor [dantudor@tudorwines.com]  
Sent: Tuesday, October 31, 2006 7:57 AM  
To: 'pfmc.comments@noaa.gov'  
Subject: Agenda Item C.3. Drift Gillnet FMP Comment

PFMC

Dear Pacific Fishery Management Council,

Our planet is being destroyed at every corner of the globe. With thousands of species driven to extinction every year this is no time to relax regulations.

The ban on drift gillnets should remain!! If we can't even protect a few turtles, what species is next? Humans. That's right. Take a stand for the turtles and biodiversity on our only planet.

Sincerely,

Dan Tudor

Tudor Wines  
Winemaker/Owner  
P.O. Box 830  
Pacific Grove, CA 93950  
831-224-2116 mobile  
831-855-0147 fax  
[dantudor@tudorwines.com](mailto:dantudor@tudorwines.com)  
[www.tudorwines.com](http://www.tudorwines.com)

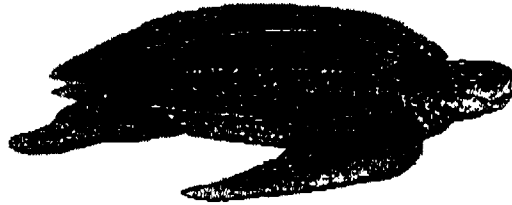
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10/31/2006



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PFMC

**To: Pacific Fishery Management Council**

**From: Deborah Goldstein, Turtle Lover and Ocean Conservationist**

**RE: Agenda Item C.3. Drift Gillnet FMP Comment**

**Fax: 503-820-2299**

**Please save the Pacific Leatherback turtle!!!**

**Don't reopen the Pacific Leatherback Conservation  
Area to drift gillnet fishing. There is no real  
benefit....just damage to our oceans!**



for leatherbacks of the central American region and southern Mexico on their southward post-nesting migration toward South America. Turtles that have been satellite-tracked head toward the Galapagos Islands where they taper into higher concentrations, perhaps in a feeding migration, before dispersing again towards South American waters (Morreale et al., 1996). The clustering of many individuals along this migratory corridor greatly increases the vulnerability of eastern Pacific leatherback turtles to incidental capture in longline fisheries, especially because of the prevalence of shallow-set fishing practices off Mexico and Central America.

Neither the industry sources interviewed nor published sources of information can provide a precise accounting of Hawaii swordfish replacement by country of product origin. After swordfish-style longlining was prohibited in Hawaii, about 20 vessels relocated to the eastern Pacific (NMFS, undated), where they continued to target swordfish and make incidental catches of sea turtles at approximately the same rate as in the Hawaii swordfish-style longline fishery (i.e., 1.7 sea turtle takes per 10,000 hooks from Caretta, 2003).

Sea turtle take rates in U.S. swordfish longline fishing west and east of 150° E latitude are compared by Caretta (2003). The area east of 150 W is the region most utilized by vessels landing in California, although there is overlap with the historic Hawaii-based swordfish vessels. At both per-set and per-1000-hooks levels sea turtle take rates are higher east of 150° W (1.8 takes/10,000 hooks) than in the historic Hawaii swordfish fishery (1.7 takes/10,000 hooks), although the differences are not statistically significant (Caretta, 2003).

Except for California, the other most likely replacement sources of swordfish all have higher associated sea turtle BPUE (Table 21). Thus, it is highly likely that the NMFS-ordered regulations that were in effect from mid-2001 through March 2004 had the indirect effect of increasing sea turtle takes associated with Hawaii swordfish replacement fisheries, rather than achieving the stated objective of reducing sea turtle takes overall.

**Table 21.** Comparison of the number of sea turtle takes per 100 mt of fresh swordfish from Hawaii and imported swordfish that replaced Hawaii swordfish after the 2001 fishery closure.

| Area and Longline fishery                                                       | Sea turtle takes/100 mt fresh swordfish catch <sup>1</sup> |
|---------------------------------------------------------------------------------|------------------------------------------------------------|
| Eastern tropical Pacific offshore of nesting beaches (e.g., Costa Rica, Mexico) | 4310                                                       |
| Eastern tropical Pacific offshore (e.g., Costa Rica, Panama)                    | 1480                                                       |
| South Africa                                                                    | 158                                                        |
| Historic Hawaii Shallow-set swordfish-style                                     | 16                                                         |

<sup>1</sup> Calculated from Tables 9, 10 and 11.

## 7.2 Compare Bycatch Impacts Associated with Pelagic Fish Sources

C/B and B/C ratios have the potential to enable marketers and consumers to compare some of the environmental consequences that they are endorsing when they purchase seafood

CATCH TO BYCATCH RATIOS:  
COMPARING HAWAII'S LONGLINE  
FISHERIES WITH OTHERS.

BY PAUL BARTEAM  
AND JOHN KANUKO

# Transfer function estimation of trade leakages generated by court rulings in the Hawai'i longline fishery

Camilo Sarmiento

*Pacific Institute for Research and Evaluation, Calverton, MD, USA*  
E-mail: [csarmiento@pire.org](mailto:csarmiento@pire.org)

Under the Endangered Species Act (ESA) mandate to protect turtle stocks from incidental contact, the Emergency Interim Rule of August 2000 prohibited Hawai'i permit holders from targeting swordfish in the area from the Equator to 28°N and between 173°E and 137°W. As a result of this interim rule, landings of swordfish in Hawai'i decreased 93% in 2001. This paper implements a transfer function analysis to measure trade leakages generated by this ruling. This case study for the Hawai'i fishery measures the limitations of the ESA when enforcement has jurisdiction on some producers, but not others.

## 1. Introduction

In February 1999, the Center of Marine Conservation (CMC) and the Turtle Island Restoration Network challenged in court the NOAA Fisheries' (NMFS) determination that the Hawai'i longline fishery was not likely to jeopardize the existence of leatherback, loggerhead, olive ridley, hawksbill, or green turtle stocks. The court ruled on 23 November 1999 in favour of the CMC, and established in accordance with the Endangered Species Act (ESA) that 'within 30 days of the order that NMFS close the area north of 20°N between 150°W and 168°W to Hawai'i longline permit holders' (Western Pacific Pelagic Fisheries EIS, pp. 1–6). Several amendments have followed the original court order of 1999 to better enforce protection of turtles under the guidelines of the ESA, which prioritizes protection of endangered species over socio-economic impacts of regulation.

Effects of the CMC challenge and subsequent court orders to the Hawai'i fishery were, nonetheless, minimal until the Emergency Interim Rule of August 2000 that became effective on 15 March 2001. This ruling extended fishing restrictions to the East and West of the 1999 closure area, and prohibited

Hawai'i permit holders targeting swordfish in the area from the Equator to 28°N and between 173°E and 137°W. As a result of this interim rule, landings of swordfish in Hawai'i decreased 93% in 2001. In essence, regulatory action to enforce the ESA ended the swordfish sector in Hawai'i, and most recent biological opinions now focus on the Hawai'i tuna sector.

The outcome of the Emergency Interim Rule, however, may not have had the full intended effect of reducing turtle interaction if fleets from other regions, which are not subject to the area closure restrictions imposed on the Hawai'i fleet, substituted Hawai'i swordfish production with their own production. Intuitively, restricting access to some fishers, but not all, on a valuable resource may induce a transfer effect or trade leakage (Barrett, 2003) with fishers not restricted by the regulation entering into a market and taking up the slack left by the regulated vessels.

This paper tests whether major swordfish producers in the Pacific Rim have taken up the production previously executed by vessels with Hawai'i permits as a result of the Emergency Interim Rule and, second, a transfer function (Enders, 1995) is used

---

Editor.Fishnews@noaa.gov

**Pacific Islands Study Confirms Effectiveness of Measures that Address Sea Turtle Bycatch in the Longline Fishery**

The results of a study recently announced by the Western Pacific Fishery Management Council confirm that new regulations requiring a specific type of fishing hook and bait in the Hawaii-based longline fishery resulted in significant reductions in the capture rates of threatened and endangered sea turtles. Capture rates of leatherback and loggerhead turtles declined by 82% and 90%, respectively, while the catch rate for the primary target species (swordfish) increased by 16%. Catch rates for other species, such as tunas, mahimahi, opah and wahoo declined. The technical report is now available online.

For more information, please read the Council's [announcement](#).

=

932 1003

Table 4-7. West Coast commercial landings of albacore, other tunas, swordfish, and sharks, 1981-2005.

| Year | Landings (round mt) |             |           |        |         |
|------|---------------------|-------------|-----------|--------|---------|
|      | Albacore            | Other Tunas | Swordfish | Sharks | Total   |
| 1981 | 13,712              | 136,036     | 749       | 1,795  | 152,292 |
| 1982 | 5,410               | 107,096     | 1,112     | 2,254  | 115,872 |
| 1983 | 9,578               | 100,913     | 1,761     | 1,660  | 113,912 |
| 1984 | 12,654              | 68,089      | 2,890     | 1,507  | 85,140  |
| 1985 | 7,301               | 21,729      | 3,418     | 1,435  | 33,883  |
| 1986 | 5,243               | 27,781      | 2,530     | 1,336  | 36,890  |
| 1987 | 3,160               | 29,927      | 1,803     | 989    | 35,879  |
| 1988 | 4,908               | 29,204      | 1,636     | 835    | 36,583  |
| 1989 | 2,214               | 23,217      | 1,358     | 782    | 27,571  |
| 1990 | 3,028               | 11,738      | 1,236     | 782    | 16,784  |
| 1991 | 1,676               | 7,707       | 1,029     | 836    | 11,248  |
| 1992 | 4,902               | 7,040       | 1,546     | 457    | 13,945  |
| 1993 | 6,151               | 8,935       | 1,767     | 442    | 17,295  |
| 1994 | 10,686              | 8,163       | 1,700     | 507    | 21,056  |
| 1995 | 6,528               | 10,839      | 1,161     | 406    | 18,934  |
| 1996 | 14,173              | 13,555      | 1,191     | 437    | 29,356  |
| 1997 | 11,292              | 13,189      | 1,459     | 520    | 26,460  |
| 1998 | 13,801              | 13,659      | 1,408     | 477    | 29,345  |
| 1999 | 9,770               | 5,418       | 2,033     | 398    | 17,619  |
| 2000 | 9,042               | 2,338       | 2,657     | 385    | 14,422  |
| 2001 | 11,194              | 963         | 2,195     | 425    | 14,777  |
| 2002 | 10,029              | 803         | 1,714     | 426    | 12,972  |
| 2003 | 16,670              | 885         | 2,135     | 382    | 20,072  |
| 2004 | 14,469              | 836         | 1,186     | 177    | 16,668  |
| 2005 | 9,084               | 1,026       | 294       | 223    | 10,627  |

For the Administrative  
Record

Agenda Item C.3.Drift Gillnet ~~EFF~~ Comment  
November 2006

Dear Mr. Hansen, Dr. McIsaac and Members of the Council:

The Pacific Leatherback sea turtle is an ancient giant on the verge of extinction. These amazing creatures have survived on our planet for nearly 100 million years. Yet their time here could come to an end because of destructive human practices. In the last two decades alone, Pacific leatherback sea turtle populations have declined by 80% or more mainly due to drowning in commercial fishing gear and destruction of nesting sites. Here in the Pacific we can do something about the fishing mortalities.

Knowing this, the agency in charge of protecting leatherbacks, the National Marine Fisheries Service (NMFS), established a Pacific Leatherback Conservation Area off the Oregon and California coasts in 2001 to give leatherbacks a safe place to feed and migrate without threat of drowning in drift gillnets. This time and area closure is working – no Pacific leatherbacks have been reported caught in the fishery since this three month annual closure has been implemented.

Now the Fisheries Service may soon give in to calls by drift gillnetters to re-open the closed area during the times leatherbacks are feeding and migrating along our coasts.

I support the continued closure of the Pacific Leatherback Conservation Area to drift gillnets. The record is clear. The closure works. It would be irresponsible for the agency charged with stewardship of our natural resources to risk worsening the plight of a species already struggling to survive. Indeed, expansion of a fishery with a multitude of bycatch problems – including other species of turtles, dolphins and porpoise, seals and sea lions, large whales, and discards of greater quantity than landed catch – seems inappropriate given the recent West Coast Governors' Agreement on Ocean Health.

As you consider the Drift Gillnet Exempted Fishing Permit for 2007 and beyond, please remember the critically endangered Pacific leatherback sea turtle may be within 30 years of extinction. It would be irresponsible to dissolve the conservation measures currently in place to protect them.

We, the undersigned, believe time is running out to save these amazing creatures.

|    | FIRST     | LAST        | CITY           | STATE | ZIP    |
|----|-----------|-------------|----------------|-------|--------|
| 1  | Dixie     | Belcher     | Juneau         | AK    | 99801  |
| 2  | Jeremiah  | Boone       | Anchorage      | AK    | 99508  |
| 3  | Tina      | Brown       | Juneau         | AK    | 99801  |
| 4  | Jessica   | Cornwell    | Anchorage      | AK    | 99524  |
| 5  | Terry     | Cummings    | Anchorage      | AK    | 99504- |
| 6  | Jebarri   | Dean        | Homer          | AK    | 99603  |
| 7  | Debbie    | Dillivan    | Anchorage      | AK    | 99501  |
| 8  | Deborah   | Elliott     | Anchorage      | AK    | 99517  |
| 9  | sinisa    | hajsok      | varazdin       | AK    | 385    |
| 10 | Joe       | Harvey      | Girdwood       | AK    | 99587  |
| 11 | Lyndsey   | Hura        | Juneau         | AK    | 99801  |
| 12 | Caitlin   | Kroener     | Chugiak        | AK    | 99567  |
| 13 | Tamara    | Loveday     | Sitka          | AK    | 99835  |
| 14 | alan m.   | moore       | fairbanks      | AK    | 99701  |
| 15 | Rebekah   | Riley       | Seward         | AK    | 99664  |
| 16 | Seth      | Roberts     | Anchorage      | AK    | 99507  |
| 17 | Leslie    | Slater      | Homer          | AK    | 99603  |
| 18 | Tina      | Bernath     | Dothan         | AL    | 36303  |
| 19 | Aubrey    | Bolack      | Jacksonville   | AL    | 36265  |
| 20 | John W    | Bowman      | Quinton        | AL    | 35130  |
| 21 | Theresa   | Chevalier   | Anniston       | AL    | 36207  |
| 22 | melissa   | clark       | northport      | AL    | 35475  |
| 23 | Kathryn   | Dalenberg   | Valley Head    | AL    | 35989  |
| 24 | Lisbeth   | Donahoe     | Huntsville     | AL    | 35805  |
| 25 | Jessica   | Duncan      | Gadsden        | AL    | 35904  |
| 26 | Sheryl    | Frank       | Ashville       | AL    | 35953  |
| 27 | Francine  | Hasenbein   | Cullman        | AL    | 35055  |
| 28 | Tammy     | Hayes       | Guntersville   | AL    | 35016  |
| 29 | Jose      | Herrera     | n/a            | AL    | a      |
| 30 | Amanda    | Jackson     | Birmingham     | AL    | 35226  |
| 31 | ANN       | LITTLE      | VESTAVIA HILLS | AL    | 35216  |
| 32 | tifaney   | maloney     | dothan         | AL    | 36305  |
| 33 | tifaney   | maloney     | dothan         | AL    | 36305  |
| 34 | Al        | McCullough  | Birmingham     | AL    | 35235- |
| 35 | Leslie    | McDonald    | Mobile         | AL    | 36608  |
| 36 | Ginger    | McGuire     | Montgomery     | AL    | 36109  |
| 37 | Gail      | McMahon     | Birmingham     | AL    | 35205  |
| 38 | Ally      | Monge       | Tuscaloosa     | AL    | 35486  |
| 39 | Margaret  | Rigsby      | Hazel Green    | AL    | 35750  |
| 40 | Harold    | Robinson    | Talladega      | AL    | 35160  |
| 41 | Erin      | Schoeneman  | birmingham     | AL    | 35242  |
| 42 | Linda     | Sherk       | Vandiver       | AL    | 35176  |
| 43 | Amy       | Smith       | Mobile         | AL    | 36608  |
| 44 | Kay       | Smith       | Birmingham     | AL    | 35222  |
| 45 | Gloria    | Smith Jones | AThens         | AL    | 35613  |
| 46 | Cecil;ia  | Sofie       | Tuscaloosa     | AL    | 35404  |
| 47 | Elizabeth | Tatum       | Auburn         | AL    | 36849  |
| 48 | Nicole    | Truitt      | Auburn         | AL    | 36830  |
| 49 | melissa   | waguespack  | mc calla       | AL    | 35111  |
| 50 | Kim       | Wilkinson   | Bedfordview    | AL    | 2007   |
| 51 | Nancy     | Anglin      | Sherwood       | AR    | 72120  |
| 52 | Henrietta | Baker       | Clinton        | AR    | 72031  |
| 53 | Abbey     | Boeckman    | Benton         | AR    | 72015  |
| 54 | Deborah   | Camaratta   | Norphlet       | AR    | 71759  |
| 55 | Jo        | Crandall    | Eureka springs | AR    | 72632  |
| 56 | Ainslie   | Gilligan    | St. Joe        | AR    | 72675  |
| 57 | Jessica   | Guillory    | Eureka Springs | AR    | 72631  |
| 58 | Denise    | Hacker      | Heber Springs  | AR    | 72543  |
| 59 | Ricky     | Janke       | Ash Flat       | AR    | 72513  |
| 60 | Charlotte | Kaufman     | Little Rock    | AR    | 72205  |
| 61 | sharon    | kilgas      | marion         | AR    | 72364  |
| 62 | Sharon    | Krueger     | Fayetteville   | AR    | 72703  |



|     | FIRST        | LAST                            | CITY                  | STATE | ZIP    |
|-----|--------------|---------------------------------|-----------------------|-------|--------|
| 63  | Tracy        | Oates                           | Fayetteville          | AR    | 72701  |
| 64  | Kim          | Payne                           | Springdale            | AR    | 72762  |
| 65  | Joey         | Potter                          | Bella Vista           | AR    | 72715  |
| 66  | Janice E.    | Powell                          | Eureka Springs        | AR    | 72632  |
| 67  | CARLOS       | RODRIGUEZ                       | LITTLE ROCK           | AR    | 72215  |
| 68  | Michelle     | Shellabarger                    | North Little Rock     | AR    | 72116  |
| 69  | Copley       | Smoak                           | Bonnerdale            | AR    | 71933  |
| 70  | Patti        | Summerville                     | Holiday Island        | AR    | 72631  |
| 71  | Carole       | Tante                           | Hot Springs Village   | AR    | 71909  |
| 72  | Pam          | Thomsen                         | Glendale              | AR    | 85301  |
| 73  | Madeline     | Tucker                          | Cotter                | AR    | 72626  |
| 74  | Samantha     | Alberty                         | Gilbert, Az           | AZ    | 85234  |
| 75  | Alison       | Austin                          | Phoenix               | AZ    | 85032  |
| 76  | Lee          | Basnar                          | Sierra Vista          | AZ    | 85650  |
| 77  | Bobby        | Baxter, Veteran & Marijuana Fel | TUCSON,               | AZ    | 85712  |
| 78  | M L          | Beckham                         | Mesa                  | AZ    | 85211  |
| 79  | Judith       | Begun                           | Mesa                  | AZ    | 85202  |
| 80  | Maurita      | Bernet                          | Phoenix               | AZ    | 85020  |
| 81  | Traci        | Bertjens                        | Chandler              | AZ    | 85224  |
| 82  | Linda        | Bescript                        | Tucson                | AZ    | 85747  |
| 83  | Ruth         | Bescript                        | Tucson                | AZ    | 85747  |
| 84  | Ruth         | Bescript                        | Tucson                | AZ    | 85747  |
| 85  | Claudia      | Bloom                           | Mesa                  | AZ    | 85207  |
| 86  | Debi         | Bradley                         | Chandler              | AZ    | 85248  |
| 87  | Thomas       | Brandenburg                     | Tucson                | AZ    | 85714  |
| 88  | Sarah        | Brandt                          | Tucson                | AZ    | 85712  |
| 89  | James        | Brown                           | Sierra Vista          | AZ    | 85636  |
| 90  | Lori         | Buhlman                         | Phoenix               | AZ    | 85004  |
| 91  | Barbara      | Busse                           | Phx                   | AZ    | 85016  |
| 92  | Irma         | Call                            | Tucson                | AZ    | 85705  |
| 93  | doris        | cassidy                         | yuma                  | AZ    | 85364  |
| 94  | Judith       | Castiano                        | Peoria                | AZ    | 85345  |
| 95  | Lilian       | Caughlin                        | Golden Valley         | AZ    | 86413  |
| 96  | Ericka       | Cero Wood                       | Scottsdale            | AZ    | 85251  |
| 97  | Juan         | Cisneros                        | Mesa                  | AZ    | 85204  |
| 98  | Cherie       | COWAN                           | Scottsdale            | AZ    | 85255  |
| 99  | Laura        | Cruser                          | Tempe                 | AZ    | 85281  |
| 100 | Linda        | Culhane                         | Benson                | AZ    | 85602  |
| 101 | Elaine       | Daniels                         | Peoria                | AZ    | 85382  |
| 102 | Elaine       | Daniels                         | Peoria                | AZ    | 85382  |
| 103 | Elaine       | Daniels                         | Peoria                | AZ    | 85382  |
| 104 | Michelle     | DeFelice                        | Tucson                | AZ    | 85745  |
| 105 | Suki         | DeJong                          | Sedona                | AZ    | 86336  |
| 106 | Gabriel      | Diaz                            | PHOENIX               | AZ    | 85041  |
| 107 | Gabriel      | Diaz                            | Laveen                | AZ    | 85339  |
| 108 | Lisa         | Dirks                           | fountain Hills        | AZ    | 85268  |
| 109 | karen        | dombrowski-Sobel                | Tucson                | AZ    | 85750  |
| 110 | Rita         | Eccles                          | Phoenix               | AZ    | 85014  |
| 111 | Ned          | Egen                            | Tucson                | AZ    | 85719  |
| 112 | Heddi        | Ets Hokin                       | Tucson                | AZ    | 85749  |
| 113 | Chris        | Fike                            | Scottsdale            | AZ    | 85251  |
| 114 | Bob          | Fischella                       | Tucson                | AZ    | 85750  |
| 115 | Marah        | Fogler                          | Tucson                | AZ    | 8 5730 |
| 116 | Debbie       | Friesen                         | Tucson                | AZ    | 85743  |
| 117 | James        | Gilland                         | Tucson                | AZ    | 85742  |
| 118 | Regina       | Gillis                          | TUCSON                | AZ    | 85706  |
| 119 | Camille      | Gittens                         | Phoenix               | AZ    | 85043  |
| 120 | Jean         | Goetinck                        | Tucson                | AZ    | 85746  |
| 121 | Anne         | Goldfeld, MSW, MPH              | Scottsdale            | AZ    | 85255  |
| 122 | Vicki        | Green                           | Anthem                | AZ    | 85086  |
| 123 | Helen        | Greer                           | Tucson                | AZ    | 85705  |
| 124 | Mark Hayduke | Grenard                         | Phoenix, Yuck, Sprawl | AZ    | 85007  |

|     | FIRST            | LAST               | CITY           | STATE | ZIP    |
|-----|------------------|--------------------|----------------|-------|--------|
| 125 | Cami             | Hadley             | Tempe          | AZ    | 85281  |
| 126 | Debra            | Hall               | Gold Canyon    | AZ    | 85218  |
| 127 | Stephanie        | Hammond            | Fountain Hills | AZ    | 85268  |
| 128 | Hashi            | Hanta              | Sells          | AZ    | 85634  |
| 129 | Heidi            | Heiser             | Higley         | AZ    | 85236  |
| 130 | Nancie           | Herbst             | Tucson         | AZ    | 85712  |
| 131 | Jennifer         | Hughes             | Phoenix        | AZ    | 85029  |
| 132 | Teri             | Hunt               | Phoenix        | AZ    | 85085  |
| 133 | HANNAH           | HUNTER             | PRESCOTT       | AZ    | 86305  |
| 134 | Brad             | Jaffe              | Phoenix        | AZ    | 85044  |
| 135 | Tamara           | Jaffe              | Phoenix        | AZ    | 85044  |
| 136 | Julie            | Johnson            | Scottsdale     | AZ    | 85257  |
| 137 | Scott            | Johnson            | Tempe          | AZ    | 85282  |
| 138 | Lisbeth          | Jones              | Tucson         | AZ    | 85730  |
| 139 | Ann              | Khambholja         | Tucson         | AZ    | 85706  |
| 140 | Cynthia          | Knight             | Fort Mohave    | AZ    | 86426  |
| 141 | Miranda          | Knight             | Fort Mohave    | AZ    | 86426  |
| 142 | Louis            | Lagrange           | Cave Creek     | AZ    | 85331  |
| 143 | Mireya           | Landin             | Williams       | AZ    | 86046  |
| 144 | Drena            | LaPointe-Meyer     | Gilbert        | AZ    | 85234  |
| 145 | Geoffrey         | Lawrence           | Cottonwood     | AZ    | 86314  |
| 146 | Patricia         | Lieben             | Tucson         | AZ    | 85730  |
| 147 | Judy             | Lyman              | Surprise       | AZ    | 85387  |
| 148 | kim              | maddox             | tucson         | AZ    | 85719  |
| 149 | Robert           | Maggs              | Phoenix        | AZ    | 85016  |
| 150 | Nanci            | Martino            | Scottsdale     | AZ    | 85251  |
| 151 | Catherine        | McClintock         | Tucson         | AZ    | 85718  |
| 152 | Ann              | McDermott          | Surprise       | AZ    | 85387  |
| 153 | Michele          | McFadden           | Prescott       | AZ    | 86303  |
| 154 | Ross             | McLean             | Chandler       | AZ    | 85225  |
| 155 | Jeff             | Meyer              | Gilbert        | AZ    | 85234  |
| 156 | Nancy            | Miller             | Prescott       | AZ    | 86301  |
| 157 | Dr. R. Jay       | Morey, D.D., Ph.D. | Sierra Vista   | AZ    | 85635  |
| 158 | maria            | nasif              | tucson         | AZ    | 85718  |
| 159 | Mary             | O'Neil             | Scottsdale     | AZ    | 85254  |
| 160 | Lance            | Parker             | glendale       | AZ    | 85308  |
| 161 | Marina           | Parker             | Glendale       | AZ    | 85308  |
| 162 | Callie           | Parkinson          | Tempe          | AZ    | 85282  |
| 163 | DIANNA           | PAULSEN            | PHOENIX        | AZ    | 85016  |
| 164 | Jennifer         | Perez              | Phoenix        | AZ    | 85008  |
| 165 | Barb             | Pinter             | Tucson         | AZ    | 85711  |
| 166 | Carol            | Pippin             | Peoria         | AZ    | 85381  |
| 167 | Leslie           | Purpura            | Tucson         | AZ    | 85730  |
| 168 | Marilyn          | Raybould           | Tucson         | AZ    | 857115 |
| 169 | K.               | Raymer             | Scottsdale     | AZ    | 85267  |
| 170 | Robert           | Reavis             | Glendale       | AZ    | 85302  |
| 171 | Rebecca          | Reese              | Tucson         | AZ    | 85743  |
| 172 | Linda            | Reeves             | Green Valley   | AZ    | 85614  |
| 173 | Mitchell         | Reiss              | Phoenix        | AZ    | 85050  |
| 174 | Jan              | Reiter             | Phoenix        | AZ    | 85064  |
| 175 | Debbie           | Riches             | Flagstaff      | AZ    | 86004  |
| 176 | Anita            | Robeson            | Glendale       | AZ    | 85308  |
| 177 | Saliane          | Robinson           | Tucson         | AZ    | 85710  |
| 178 | Shawn            | Rorke-Davis        | Scottsdale     | AZ    | 85261  |
| 179 | Rich             | Royer              | phoenix        | AZ    | 85032  |
| 180 | Gina             | Rudy               | mesa           | AZ    | 85212  |
| 181 | Jennifer         | Salome             | Phoenix        | AZ    | 85044  |
| 182 | Anthony & Rhonda | Sanchez            | Thatcher       | AZ    | 85552  |
| 183 | Valerie          | Sawyer             | Glendale       | AZ    | 85304  |
| 184 | Kathy            | Schurdevin         | Benson         | AZ    | 85602  |
| 185 | Norman           | Schwartz           | Oro Valley     | AZ    | 85755  |
| 186 | susan            | sciacero           | scottsdale     | AZ    | 85258  |

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|-----|---------------------|-------------|-----------------|-------|--------|
| 187 | AJ                  | Sennett     | Chandler        | AZ    | 85249  |
| 188 | jana                | shiloh      | sedona          | AZ    | 86336  |
| 189 | Clinton             | Speas       | Mesa            | AZ    | 85215  |
| 190 | Kirsten             | Speer       | Tucson          | AZ    | 85711  |
| 191 | Donna               | Steele      | Flagstaff       | AZ    | 86001  |
| 192 | Jennifer            | Stefanow    | Maricopa        | AZ    | 85239  |
| 193 | David               | Stege       | Phoenix         | AZ    | 85020  |
| 194 | Kate                | Storck      | Queen Creek     | AZ    | 85242  |
| 195 | Dustin              | Sulak       | Glendale        | AZ    | 85310  |
| 196 | Deb                 | Szymanski   | Gilbert         | AZ    | 85296  |
| 197 | Linda Lee McEachron | Taylor      | Tucson          | AZ    | 85746  |
| 198 | Susan               | Thing       | Tucson          | AZ    | 85745  |
| 199 | Eric                | Thu         | Tucson          | AZ    | 85718  |
| 200 | Paul                | Torrence    | Flagstaff       | AZ    | 86004  |
| 201 | Gerald              | Vertrees    | Golden Valley   | AZ    | 86413  |
| 202 | heather             | volkoff     | mesa            | AZ    | 85207  |
| 203 | susan               | wagner      | ASH FORK        | AZ    | 86320  |
| 204 | Paul                | Waldman     | Phoenix         | AZ    | 85032  |
| 205 | sandrea             | walter      | tucson          | AZ    | 85751  |
| 206 | Robert              | Warehime    | Mesa            | AZ    | 85201  |
| 207 | Ann                 | Webb        | Apache Jct.     | AZ    | 85219  |
| 208 | Helen               | Weber       | Sierra Vista    | AZ    | 85650  |
| 209 | Felicity            | Wellings    | Phoenix         | AZ    | 85020  |
| 210 | Joanne              | West        | Gold Canyon     | AZ    | 85218  |
| 211 | Elaine M.           | White       | Phoenix         | AZ    | 85012- |
| 212 | Laura               | Wizes       | Scottsdale      | AZ    | 85260  |
| 213 | J. Judson           | Wynne       | Flagstaff       | AZ    | 86001  |
| 214 | Paul                | Zarchin     | Phoenix         | AZ    | 85040  |
| 215 | Katherine           | Zembko      | Glendale        | AZ    | 85306  |
| 216 | GLORIA              | ACKLER      | Clayton         | CA    | 94517  |
| 217 | Michele             | Anderson    | Fillmore        | CA    | 93015  |
| 218 | peter               | anderson    | san francisco   | CA    | 94110  |
| 219 | Kim                 | Anthony     | Sherman Oaks    | CA    | 91423  |
| 220 | mary                | aratounian  | Studio City     | CA    | 91604  |
| 221 | Nancy               | Arbuckle    | Redwood City    | CA    | 94061  |
| 222 | Carmen              | Becktel     | Lake Forest     | CA    | 92630  |
| 223 | Sharon              | Bell        | Pomona          | CA    | 91767  |
| 224 | Vic                 | Bostock     | Nottingham      | CA    | 91011  |
| 225 | Bradley             | Bright      | Laguna Beach    | CA    | 92651  |
| 226 | Kate                | Busby       | San Francisco   | CA    | 94110  |
| 227 | david               | caldwell    | San Francisco   | CA    | 94129  |
| 228 | Joy                 | Campbell    | Homeland        | CA    | 92548  |
| 229 | Ravin               | Carlson     | San Clemente    | CA    | 92672  |
| 230 | Cecelia             | Castleberry | Modesto         | CA    | 95351  |
| 231 | Tom                 | Church      | Oceanside       | CA    | 92054  |
| 232 | Charles Q.          | Couch       | La Mesa         | CA    | 91942  |
| 233 | George              | Courser     | San Diego       | CA    | 92117  |
| 234 | virginia            | cross       | Escondido       | CA    | 92029  |
| 235 | namita              | dalal       | los altos hills | CA    | 94022  |
| 236 | Erin                | Davies      | San Diego       | CA    | 92104  |
| 237 | Diana               | Day         | Monterey        | CA    | 93942  |
| 238 | Elisse              | De Sio      | Redwood City    | CA    | 94063  |
| 239 | Debra               | DenHerder   | Oakland         | CA    | 94611  |
| 240 | Rachael             | Denny       | Bradley         | CA    | 93426  |
| 241 | Dominick J.         | Di Noto     | Cloverdale      | CA    | 95425  |
| 242 | Martha              | Diaz        | Redondo Beach   | CA    | 90277  |
| 243 | Rebecca             | Dickinson   | Oakland         | CA    | 94609  |
| 244 | Julie               | du Bois     | West Hillsq     | CA    | 91304  |
| 245 | Robert              | Erwin       | santa barbara   | CA    | 93117  |
| 246 | Nancy               | Everett     | san diego       | CA    | 92130  |
| 247 | David               | Ewing       | Laguna Niguel   | CA    | 92677  |
| 248 | Alyson              | Falwell     | Los Gatos       | CA    | 95032  |

|     | FIRST        | LAST               | CITY              | STATE | ZIP   |
|-----|--------------|--------------------|-------------------|-------|-------|
| 249 | Christopher  | Fina               | Santa Monica      | CA    | 90403 |
| 250 | Tracy        | Flanagan           | San Diego         | CA    | 92103 |
| 251 | claudia      | flisi              | LA                | CA    | 90048 |
| 252 | Donna        | Fraser             | Sacramento        | CA    | 95825 |
| 253 | Alexander    | Gaos               | San Francisco     | CA    | 94110 |
| 254 | cathy        | gibbs              | crestline         | CA    | 92325 |
| 255 | sydney       | gilner             | los angeles       | CA    | 90042 |
| 256 | Thiago S.    | Gonçalves          | Pasadena          | CA    | 91125 |
| 257 | timothy      | hainley            | long beach        | CA    | 90808 |
| 258 | Chanel       | Hason              | South Pasadena    | CA    | 91030 |
| 259 | Deborah      | Hirsch             | Sacramento        | CA    | 95820 |
| 260 | brent        | hoff               | san Francisco     | CA    | 94129 |
| 261 | Kim          | Hover              | Los Angeles       | CA    | 90066 |
| 262 | Lisa         | Iyer               | Newport Beach     | CA    | 92660 |
| 263 | Lil          | Judd               | Sylmar            | CA    | 91342 |
| 264 | Siddhesh     | Kaushik            | Tustin            | CA    | 92780 |
| 265 | Christopher  | Keller             | North hollywood   | CA    | 91606 |
| 266 | Barbara      | Kelly              | Moraga            | CA    | 94556 |
| 267 | Carmen       | Klucsor            | Sunnyvale         | CA    | 94086 |
| 268 | Kristin      | Knight             | Pasadena          | CA    | 91106 |
| 269 | Julie        | Knoop              | North Hills       | CA    | 91343 |
| 270 | Keith        | Kotka              | Santa Cruz        | CA    | 95065 |
| 271 | Steven       | Kusnitz            | Sherman Oaks      | CA    | 91403 |
| 272 | Bob          | Lastiri            | Concord           | CA    | 94518 |
| 273 | Jody         | Lennon             | Los Angeles       | CA    | 90066 |
| 274 | daniel       | lippin             | burbank           | CA    | 91505 |
| 275 | Sherry       | Lizardo            | Tulare            | CA    | 93274 |
| 276 | Judy         | Ludwick            | Carmichael        | CA    | 95608 |
| 277 | j            | m                  | san jose          | CA    | 95125 |
| 278 | Sonja        | Malmuth            | Santa Ynez        | CA    | 93460 |
| 279 | Jack         | Marden             | Santa Cruz        | CA    | 95060 |
| 280 | Karin        | Menéndez-Delmestre | Pasadena          | CA    | 91107 |
| 281 | Jessica      | Miller             | Pollock Pines     | CA    | 95726 |
| 282 | Wendy        | Miller             | Downey            | CA    | 90241 |
| 283 | Julie        | Murphy             | Huntington Beach  | CA    | 92649 |
| 284 | Geoff        | Nelson             | Napa              | CA    | 94558 |
| 285 | debra        | netkin             | san francisco     | CA    | 94110 |
| 286 | Sheba Audrey | Neuman             | Twentynine Palms  | CA    | 92277 |
| 287 | C.           | Nicholson          | Mira Loma         | CA    | 91752 |
| 288 | marilyn      | o'Neill            | encino            | CA    | 91436 |
| 289 | maris        | o'Neill            | mill valley       | CA    | 94941 |
| 290 | patrice      | o'Neill            | burbank           | CA    | 91505 |
| 291 | Barbara      | Orr                | Northridge        | CA    | 91324 |
| 292 | Debra        | Pena               | San Diego         | CA    | 92154 |
| 293 | sue          | peterman           | palmdale          | CA    | 93551 |
| 294 | deb          | pintacura          | milpitas          | CA    | 95035 |
| 295 | Menkit       | Prince             | Carmichael        | CA    | 95608 |
| 296 | phil         | r                  | o                 | CA    | 95361 |
| 297 | Philip       | Ratcliff           | Cloverdale        | CA    | 95425 |
| 298 | Gretchen     | Reed               | Pasadena          | CA    | 91105 |
| 299 | phil         | Rockey             | oakdale           | CA    | 95361 |
| 300 | Kelle        | Rose               | Bellflower        | CA    | 90706 |
| 301 | mary         | ross[              | santee            | CA    | 92071 |
| 302 | Anne         | Schenk             | Cayucos           | CA    | 93430 |
| 303 | Sally J.     | Segobia            | South Gate        | CA    | 90280 |
| 304 | Jada         | Shapiro            | Los Angeles       | CA    | 91604 |
| 305 | claudie      | shires             | los angeles       | CA    | 90066 |
| 306 | heather      | simmer             | venice            | CA    | 90291 |
| 307 | K.           | St James           | Lake Forest       | CA    | 92630 |
| 308 | Joshua       | Stein              | San Francisco     | CA    | 94117 |
| 309 | Mike         | Tallmadge          | Santa Clara       | CA    | 95051 |
| 310 | Frances      | Tibbits            | Pacific Palisades | CA    | 90272 |

|     | FIRST             | LAST        | CITY              | STATE | ZIP   |
|-----|-------------------|-------------|-------------------|-------|-------|
| 311 | Britton           | Trimmer     | San Francisco     | CA    | 94114 |
| 312 | Rachel            | Tuck        | SAN DIEGO         | CA    | 92103 |
| 313 | melisa            | wallack     | los angeles       | CA    | 90068 |
| 314 | Sarah             | Wheeler     | Petaluma          | CA    | 94952 |
| 315 | dee               | white       | ramona            | CA    | 92065 |
| 316 | Angus             | Whyte       | San Francisco     | CA    | 94117 |
| 317 | angela            | woodcock    | van nuys          | CA    | 91406 |
| 318 | Christopher       | Aamot       | Boulder           | CO    | 80304 |
| 319 | Netia             | Abercrombie | Nunn              | CO    | 80648 |
| 320 | Netia             | Abercrombie | Nunn              | CO    | 80648 |
| 321 | Bobbi             | Adams       | Aurora            | CO    | 80014 |
| 322 | Rich              | Allen       | Denver            | CO    | 80205 |
| 323 | Monica            | Ariowitsch  | Boulder           | CO    | 80305 |
| 324 | Cristine          | Averill     | Crested Butte     | CO    | 81224 |
| 325 | k                 | b           | cs                | CO    | 80907 |
| 326 | Janice            | Barbee      | Morrison          | CO    | 80465 |
| 327 | Sarah             | Barber      | Denver            | CO    | 80205 |
| 328 | Christopher       | Barker      | Fort Lupton       | CO    | 80621 |
| 329 | Lynn              | Barnard     | Golden            | CO    | 80403 |
| 330 | Linn              | Barrett     | Greeley           | CO    | 80634 |
| 331 | Nick              | Bartol      | Pagosa Springs    | CO    | 81147 |
| 332 | Cathi             | Basler      | Parker            | CO    | 80134 |
| 333 | Gwynneth          | Bauer       | Castle Rock       | CO    | 80108 |
| 334 | Julio             | Berlingeri  | Littleton         | CO    | 80123 |
| 335 | Shoshana          | Bernard     | Lakewood          | CO    | 80401 |
| 336 | Deborah           | Bernhardt   | Trinidad          | CO    | 81082 |
| 337 | Deborah           | Bernhardt   | Trinidad          | CO    | 81082 |
| 338 | Linda             | Berry       | Littleton         | CO    | 80128 |
| 339 | Dan               | Bilello     | Lakewood          | CO    | 80228 |
| 340 | Ed                | Billeaud    | Breckenridge      | CO    | 80424 |
| 341 | Kim               | Blubaugh    | Aurora            | CO    | 80010 |
| 342 | Joshua            | Bodden      | Steamboat Springs | CO    | 80487 |
| 343 | Deborah           | Bradford    | Denver            | CO    | 80210 |
| 344 | Molly             | Brown       | Denver            | CO    | 80210 |
| 345 | Martha            | Bushnell    | Boulder           | CO    | 80303 |
| 346 | daniel            | callendale  | Montrose          | CO    | 81401 |
| 347 | Connie            | Campbell    | Littleton         | CO    | 80128 |
| 348 | Joy               | carlsen     | denver            | CO    | 80249 |
| 349 | Barbara           | Catlin      | Cedaredge         | CO    | 81413 |
| 350 | Dorothy & Richard | Chamberlin  | Colorado Springs  | CO    | 80906 |
| 351 | B. Jane           | Christian   | Denver            | CO    | 80260 |
| 352 | James             | Churches    | Nederland         | CO    | 80466 |
| 353 | Della             | Clark       | Black Forest      | CO    | 80908 |
| 354 | Summer            | Colt        | Telluride         | CO    | 81435 |
| 355 | Jan               | Cool        | Colorado Springs  | CO    | 80905 |
| 356 | Leslie            | Coon        | Boulder           | CO    | 80306 |
| 357 | Eileen            | Correia     | Black Hawk        | CO    | 80403 |
| 358 | Kris              | Custer      | Highlands Ranch   | CO    | 80126 |
| 359 | Charles           | Dehn        | Ft. Collins       | CO    | 80524 |
| 360 | John              | DeLuca      | Boulder           | CO    | 80304 |
| 361 | Cynthia           | DeNardo     | Centennial        | CO    | 80015 |
| 362 | Matthue           | DeYarus     | Boulder           | CO    | 80302 |
| 363 | claire            | dick        | denver            | CO    | 80224 |
| 364 | Christine         | Dildine     | Loveland          | CO    | 80538 |
| 365 | chris             | doering     | Trinidad          | CO    | 81082 |
| 366 | John              | Domingue    | Englewood         | CO    | 80113 |
| 367 | rachel            | Drennen     | Nederland         | CO    | 80466 |
| 368 | Linda             | Drescher    | Golden            | CO    | 80401 |
| 369 | Lynette           | Dumont      | Golden            | CO    | 80401 |
| 370 | Terza             | Ekholm      | Colorado Springs  | CO    | 80920 |
| 371 | Cynthia           | Elkins      | Greeley           | CO    | 80631 |
| 372 | Nancy             | Ellis       | TRINIDAD          | CO    | 81082 |

|     | FIRST     | LAST            | CITY             | STATE | ZIP   |
|-----|-----------|-----------------|------------------|-------|-------|
| 373 | jennifer  | farber          | Denver           | CO    | 80212 |
| 374 | Courtney  | Farrell         | Sedalia          | CO    | 80135 |
| 375 | charlie   | french          | Denver           | CO    | 80211 |
| 376 | Jude      | Friend          | Fort Collins     | CO    | 80525 |
| 377 | Cyndi     | Fritzler        | Lakewood         | CO    | 80232 |
| 378 | Wendy     | Fulwider        | Fort Collins     | CO    | 80525 |
| 379 | Sarah     | Gilbert         | Aurora           | CO    | 80013 |
| 380 | clarice   | gilchrist       | cascade          | CO    | 80809 |
| 381 | Virginia  | Gotzmer         | Longmont         | CO    | 80503 |
| 382 | colleen   | gray            | littleton        | CO    | 80123 |
| 383 | Jo Ann    | Green           | Westminster      | CO    | 80031 |
| 384 | Nancy     | Gregory         | Castle Rock      | CO    | 80104 |
| 385 | Kymberlee | Hanna           | Pierce           | CO    | 80650 |
| 386 | Valerie   | Hanratty        | Pueblo           | CO    | 81004 |
| 387 | Kelly     | Harris          | Colorado Springs | CO    | 80916 |
| 388 | gretchen  | hart-vonKeller  | Trinidad         | CO    | 81082 |
| 389 | Tim       | Havens          | Englewood        | CO    | 80113 |
| 390 | Holly     | Hendrickson Yee | Lakewood         | CO    | 80235 |
| 391 | megan     | ingebrigtsen    | lakewood         | CO    | 80215 |
| 392 | Gretchen  | Ives            | Denver           | CO    | 80224 |
| 393 | tom       | jackson         | denver           | CO    | 80219 |
| 394 | Pamela    | Jarvie          | Fort Collins     | CO    | 80524 |
| 395 | jon       | jenkins         | Howrd            | CO    | 81233 |
| 396 | Ana       | Johnson         | Longmont         | CO    | 80503 |
| 397 | Erika     | Johnson         | Fort Collins     | CO    | 80525 |
| 398 | Kyria     | Joyner          | Larkspur         | CO    | 80118 |
| 399 | Arlette   | Julian          | Boulder          | CO    | 80305 |
| 400 | Katherine | Kautz           | Northglenn       | CO    | 80233 |
| 401 | Jim       | Kennison        | Denver           | CO    | 80222 |
| 402 | Leigh     | Kennison        | Denver           | CO    | 80222 |
| 403 | Mandy     | Klehr           | Littleton        | CO    | 80127 |
| 404 | Candice   | Knight          | Boulder          | CO    | 80303 |
| 405 | Jan       | Kochmeister     | Lakewood         | CO    | 80228 |
| 406 | Sharisa   | Kochmeister     | Lakewood         | CO    | 80228 |
| 407 | Erin      | Kolacny         | Littleton        | CO    | 80120 |
| 408 | Ed        | Kraynak         | Denver           | CO    | 80231 |
| 409 | Davin     | Kuhl            | Denver           | CO    | 80237 |
| 410 | Karen     | Larsen          | Littleton        | CO    | 80120 |
| 411 | David     | Lien            | Colorado Springs | CO    | 80906 |
| 412 | Erik      | Lindberg        | Denver           | CO    | 80203 |
| 413 | Karen     | Lorimer         | Boulder          | CO    | 80304 |
| 414 | Rebecca   | Louden          | Littleton        | CO    | 80120 |
| 415 | Janice    | Louderback      | Rocky Ford       | CO    | 81067 |
| 416 | Kelly     | Lyon            | Superior         | CO    | 80027 |
| 417 | Kelly     | Lyon            | Superior         | CO    | 80027 |
| 418 | maleta    | mahalic         | lafayette        | CO    | 80026 |
| 419 | Peter     | Marck           | Centennial       | CO    | 80122 |
| 420 | Joseph    | Martinez        | Alamosa          | CO    | 81101 |
| 421 | Sara      | Martinez        | Brighton         | CO    | 80601 |
| 422 | veronica  | martinez        | WEstminster      | CO    | 80234 |
| 423 | Debra     | Mihal           | boulder          | CO    | 80304 |
| 424 | Richard   | Miller          | Castle Rock      | CO    | 80108 |
| 425 | Jelena    | Milovanovic     | Novi Sad         | CO    | 21000 |
| 426 | Ayako     | Mogen           | Boulder          | CO    | 80305 |
| 427 | Judy      | Moore           | buena vista      | CO    | 81211 |
| 428 | Michele   | Mukatis         | Colorado Springs | CO    | 80909 |
| 429 | Kim       | Murdock         | Denver           | CO    | 80222 |
| 430 | Michael   | Myers           | Lakewood         | CO    | 80226 |
| 431 | Peggy     | Namanny         | Brighton         | CO    | 80603 |
| 432 | Amy       | Nesler          | Fort Collins     | CO    | 80521 |
| 433 | Ambrey    | Nichols         | Lakewood         | CO    | 80226 |
| 434 | Rachel    | Nobrega         | Westminster      | CO    | 80031 |

|     | FIRST             | LAST           | CITY              | STATE | ZIP   |
|-----|-------------------|----------------|-------------------|-------|-------|
| 435 | natalie           | nolan          | new castle        | CO    | 81647 |
| 436 | Carolyn           | Norblom        | Denver            | CO    | 80222 |
| 437 | Josie             | Olivas         | Denver            | CO    | 80219 |
| 438 | Bruce             | Pech           | Boulder           | CO    | 80302 |
| 439 | jacquee           | Peebles        | Littleton         | CO    | 80126 |
| 440 | roger             | peirce         | Lyons             | CO    | 80540 |
| 441 | Susan Silberberg- | peirce         | Lyons             | CO    | 80540 |
| 442 | Suzanne           | Pierson        | Boulder           | CO    | 80305 |
| 443 | James             | Plagmann       | Arvada            | CO    | 80004 |
| 444 | Rose              | Pollock        | Fort Collins      | CO    | 80521 |
| 445 | Julie             | Potisk         | Cortez            | CO    | 81321 |
| 446 | Kim               | Powanda        | Denver            | CO    | 80209 |
| 447 | Eric              | Rechel         | Grand Junction    | CO    | 81503 |
| 448 | Beverly           | Reeves         | Golden            | CO    | 80401 |
| 449 | Jerry             | Rehse          | steamboat SPRINGS | CO    | 80487 |
| 450 | William           | Rivers         | Longmont          | CO    | 80503 |
| 451 | Jerily            | Robinson       | Colorado Springs  | CO    | 80906 |
| 452 | Elisa             | Robyn          | Arvada            | CO    | 80004 |
| 453 | Bernardo J        | Rodriguez      | COcanon city      | CO    | 81215 |
| 454 | Lora              | Roode          | Loveland          | CO    | 80538 |
| 455 | Linda             | Rubright       | Denver            | CO    | 80218 |
| 456 | mark              | rush           | denver            | CO    | 80237 |
| 457 | Nancy             | Schenck        | Evergreen         | CO    | 80439 |
| 458 | Sharon            | Schmidt        | Greeley           | CO    | 80634 |
| 459 | Lori              | Schreiber      | Thornton          | CO    | 80241 |
| 460 | John              | Scott          | Denver            | CO    | 80218 |
| 461 | Mark              | Serour         | Fort Collins      | CO    | 80526 |
| 462 | Kelli             | Shafer         | Littleton         | CO    | 80120 |
| 463 | Wendy             | Sherrock       | Littleton         | CO    | 80125 |
| 464 | Nina              | Shope          | Denver            | CO    | 80218 |
| 465 | Linda             | Sparks         | Lakewood          | CO    | 80227 |
| 466 | Ryan              | Stauffer       | Denver            | CO    | 80220 |
| 467 | Marc              | Stein          | Colorado Springs  | CO    | 80921 |
| 468 | Greg              | Steuck         | Golden            | CO    | 80401 |
| 469 | Barbara           | Swinderman     | Ignacio           | CO    | 81137 |
| 470 | Steve             | Szymanski      | Nederland         | CO    | 80466 |
| 471 | Ann               | Tagawa         | boulder           | CO    | 80302 |
| 472 | brigitte          | tawa           | boulder           | CO    | 80303 |
| 473 | Mary              | Taylor         | Denver            | CO    | 80211 |
| 474 | Mary              | Taylor         | Denver            | CO    | 80211 |
| 475 | peter             | tegstad        | fort collins      | CO    | 80525 |
| 476 | peter             | tegstad        | fort collins      | CO    | 80525 |
| 477 | Steven            | Tempelman      | Lone Tree         | CO    | 80124 |
| 478 | Tim               | Tetreault      | Louisville        | CO    | 80027 |
| 479 | Maryvonne         | Tompkins       | Lakewood          | CO    | 80214 |
| 480 | Traci             | Tomte          | Aurora            | CO    | 80013 |
| 481 | Barbara           | Tunison        | Longmont          | CO    | 80502 |
| 482 | Janneke           | Twombly        | Boulder           | CO    | 80305 |
| 483 | Deborah           | van damme      | colorado springs  | CO    | 80919 |
| 484 | Kenny             | Velasquez      | Aurora            | CO    | 80015 |
| 485 | James             | Verry          | Pueblo West       | CO    | 81007 |
| 486 | Ted               | von Hippel     | Boulder           | CO    | 80304 |
| 487 | Chandra           | Wade-Mayhue    | Thornton          | CO    | 80602 |
| 488 | Summer            | Watkins-Wagner | Castle Rock       | CO    | 80104 |
| 489 | Chris             | Westin         | Aurora            | CO    | 80010 |
| 490 | Paulette          | Whitcomb       | Westminster       | CO    | 80021 |
| 491 | Jeff              | White          | Longmont          | CO    | 80503 |
| 492 | Sharlene          | White          | Colorado Springs  | CO    | 80923 |
| 493 | Amy               | Wilcox         | Lake City         | CO    | 81235 |
| 494 | Amy               | Wilcox         | Lake City         | CO    | 81235 |
| 495 | Robyn             | Wing           | Erie              | CO    | 80516 |
| 496 | Michel            | Wingard        | Mancos            | CO    | 81238 |

|     | FIRST     | LAST           | CITY              | STATE | ZIP   |
|-----|-----------|----------------|-------------------|-------|-------|
| 497 | rebecca   | winters        | Lakewood          | CO    | 80232 |
| 498 | Scherri   | Woodard        | Parker            | CO    | 80138 |
| 499 | melody    | woodward       | cannon            | CO    | 81215 |
| 500 | paul      | Yasinitsky     | Englewood         | CO    | 80113 |
| 501 | paul      | Yasinitsky     | Englewood         | CO    | 80113 |
| 502 | Jeffrey   | Young          | Golden            | CO    | 80403 |
| 503 | Julie     | Young          | Golden            | CO    | 80403 |
| 504 | sonja     | zane           | pueblo            | CO    | 81004 |
| 505 | Tracy     | TRUE           | Greenwood Village | CO    | 80111 |
| 506 | Lynn      | Ahern          | wallingford       | CT    | 6492  |
| 507 | Joshua    | Angelus        | Waterbury         | CT    | 6710  |
| 508 | Vincent   | Bambara        | Vernon            | CT    | 6066  |
| 509 | Raymond   | Belding        | Torrington        | CT    | 6790  |
| 510 | Linda     | Bellofatto     | Ridgefield        | CT    | 6810  |
| 511 | WEndy     | Berg           | Riverton          | CT    | 6065  |
| 512 | Olivia    | Biron          | Mansfield Center  | CT    | 6250  |
| 513 | Joyce     | Bloom          | New Fairfield     | CT    | 6812  |
| 514 | Courtney  | Bourns         | w                 | CT    | 6117  |
| 515 | Kevin     | Brodie         | Coventry          | CT    | 6238  |
| 516 | Joanna    | Campo          | Meriden           | CT    | 6450  |
| 517 | Eileen    | Caulkins       | New London        | CT    | 6320  |
| 518 | Linda     | Cave           | Haddam            | CT    | 6438  |
| 519 | Melanie   | Cipher         | Groton            | CT    | 6340  |
| 520 | Dorothy   | Dankanyin      | Enfield           | CT    | 6082  |
| 521 | Tina      | Dellapina      | Stratford         | CT    | 6614  |
| 522 | David     | Demers         | Orange            | CT    | 6477  |
| 523 | Geraldine | Dickel         | New Haven         | CT    | 6511  |
| 524 | Rosamund  | Downing        | Pawcatuck         | CT    | 6379  |
| 525 | Daniel    | Duncan         | NEW HAVEN         | CT    | 6511  |
| 526 | Kathrin   | Dzimian        | Rocky Hill        | CT    | 6067  |
| 527 | Kristov   | Fir            | Sharon            | CT    | 6069  |
| 528 | Kathryn   | Gallo          | Meriden           | CT    | 6450  |
| 529 | LFJ       | Gill           | Rogers            | CT    | 6263  |
| 530 | Andy      | Ginsberg       | Stamford          | CT    | 8906  |
| 531 | Sandra    | Glynn          | Darien            | CT    | 6820  |
| 532 | Linda     | Goodman        | Derby             | CT    | 6418  |
| 533 | Beverlee  | Goynes         | Ridgefield        | CT    | 6877  |
| 534 | Sara      | Graziosa       | East Canaan       | CT    | 6024  |
| 535 | Myke      | Halpin         | Cromwell          | CT    | 6416  |
| 536 | Linda     | Hayes          | New Britain       | CT    | 6051  |
| 537 | Alan      | Holder         | Redding           | CT    | 6896  |
| 538 | Elke      | Hoppenbrouwers | East Haven        | CT    | 6512  |
| 539 | Janet     | Johnson        | Manchester        | CT    | 6040  |
| 540 | Ines      | Kallmeyer      | Colchester        | CT    | 6415  |
| 541 | LESTER    | KIEHN          | Shelton           | CT    | 6484  |
| 542 | Jennifer  | Kinzel         | Durham            | CT    | 6422  |
| 543 | Lisa      | Koehl          | Brooklyn          | CT    | 6234  |
| 544 | Kevin     | Krauss         | Enfield           | CT    | 6082  |
| 545 | Sarah     | Krauss         | Enfield           | CT    | 6082  |
| 546 | Dorothy   | Krystock       | East Haven        | CT    | 6512  |
| 547 | Patricia  | Kusmierski     | Essex             | CT    | 6426  |
| 548 | Sue       | Le Boutillier  | Ridgefield        | CT    | 6877  |
| 549 | Jae       | Lee            | Greenwich         | CT    | 6830  |
| 550 | Lisa      | LeMere         | West Haven        | CT    | 6516  |
| 551 | nicole    | lilley         | litchfield        | CT    | 6759  |
| 552 | Susan J   | Llorca         | Norwalk           | CT    | 6850  |
| 553 | Ken       | Martin         | Newtown           | CT    | 6470  |
| 554 | Francis   | Mastri         | bridgeport        | CT    | 6601  |
| 555 | Tricia    | Mattiello      | Stamford          | CT    | 6902  |
| 556 | Bud       | McAllister     | lyme              | CT    | 6371  |
| 557 | Kevin     | McGowan        | Danbury           | CT    | 6810  |
| 558 | Keith     | Metzger        | Naugatuck         | CT    | 6770  |



|     | FIRST           | LAST               | CITY              | STATE | ZIP   |
|-----|-----------------|--------------------|-------------------|-------|-------|
| 559 | Chris           | Meyer              | Berlin            | CT    | 6037  |
| 560 | Gian Andrea     | Morresi            | Fairfield         | CT    | 6825  |
| 561 | Stephen & Robin | Newberg            | North Granby      | CT    | 6060  |
| 562 | Karen           | O'Brien            | Windsor Locks     | CT    | 6096  |
| 563 | Barbara         | Phillips           | Chaolin           | CT    | 6235  |
| 564 | Teresa          | Ralabate           | Stratford         | CT    | 6614  |
| 565 | angela          | rico               | milford           | CT    | 6460  |
| 566 | Melissa         | Ritchey            | Georgetown        | CT    | 6829  |
| 567 | Estelle         | Schneider          | Danbury           | CT    | 6810  |
| 568 | Maureen         | Schoenmann         | Somers            | CT    | 6071  |
| 569 | Jesse           | Senko              | monroe            | CT    | 6468  |
| 570 | Miguel          | Silva              | Suffield          | CT    | 6078  |
| 571 | Jennifer        | Sola               | North Haven       | CT    | 6473  |
| 572 | Joyce           | Stowe              | Avon              | CT    | 6001  |
| 573 | James           | Tatum, Jr.         | Darien            | CT    | 6820  |
| 574 | P.              | Tellekamp          | Niantic           | CT    | 6357  |
| 575 | Deb             | Vallario           | Vernon            | CT    | 6066  |
| 576 | Susan & Hubert  | van Asch van Wyck  | Washington        | CT    | 6793  |
| 577 | suzanne         | VAN NOSTRAND       | STAMFORD          | CT    | 6902  |
| 578 | SARA            | WALLER             | MERIDEN           | CT    | 6451  |
| 579 | Amy             | Wiesner            | Stamford          | CT    | 6905  |
| 580 | Ellen           | Williams           | stamford          | CT    | 6903  |
| 581 | BC              | Wood               | Norwalk           | CT    | 6850  |
| 582 | Alison          | Zyla               | Branford          | CT    | 6405  |
| 583 | Doug            | Barker             | Wasington         | DC    | 20011 |
| 584 | Tripti          | Bhattacharya       | Washington        | DC    | 20057 |
| 585 | Peter           | Bock               | Washington        | DC    | 20052 |
| 586 | Sascha          | Bollag             | Washington        | DC    | 20003 |
| 587 | maureen         | bonner             | washington        | DC    | 20009 |
| 588 | Mia             | DeMezza            | Washington        | DC    | 20006 |
| 589 | Wes             | Dias               | Washington        | DC    | 20024 |
| 590 | Niles           | Friedman           | Washington        | DC    | 20001 |
| 591 | Kat             | Hansen             | Washington        | DC    | 20009 |
| 592 | Jennifer        | Hickman            | Washington        | DC    | 20005 |
| 593 | Kenneth         | Hopkins            | Washington        | DC    | 20001 |
| 594 | Kenneth         | Hopkins            | Washington        | DC    | 20001 |
| 595 | Jennifer        | Howard             | Washington        | DC    | 20003 |
| 596 | Brian           | Killen             | Washington        | DC    | 20001 |
| 597 | Erich           | Larisch            | Washington        | DC    | 20002 |
| 598 | SEAN            | O'DONNELL          | WASHINGTON        | DC    | 20016 |
| 599 | Chas            | Offutt             | washington        | DC    | 20010 |
| 600 | dogan           | ozkan              | istanbul turkey   | DC    | 20046 |
| 601 | Linda           | Thomas             | Washington        | DC    | 20037 |
| 602 | Ian             | Thompson           | Washington        | DC    | 20002 |
| 603 | Amy             | Walsh              | Washington        | DC    | 20020 |
| 604 | Carol           | Clapham            | Wilmington        | DE    | 19806 |
| 605 | Jared           | Cornelia           | Hockessin         | DE    | 19707 |
| 606 | Sandra          | Cornell            | Bear              | DE    | 19701 |
| 607 | Deborah         | Costas             | Wilmington        | DE    | 19809 |
| 608 | Kerry           | Dietz              | Claymont          | DE    | 19703 |
| 609 | Kathleen        | Eaton              | Middletown        | DE    | 19709 |
| 610 | Terry           | Green              | Lewes             | DE    | 19958 |
| 611 | RUTH            | KANTOR             | BRIDGEVILLE       | DE    | 19933 |
| 612 | Carol           | Kerns              | Bethany Beach     | DE    | 19930 |
| 613 | Debbie          | Mansry             | Mexico            | DE    | 11000 |
| 614 | Mike            | McCormick          | Wilmington        | DE    | 19804 |
| 615 | PI              | Norton             | Lewes             | DE    | 19958 |
| 616 | dennis          | parkstone          | wilmington        | DE    | 19804 |
| 617 | STEPHEN         | PHILLIPS           | HOCKESSIN         | DE    | 19707 |
| 618 | STEPHEN         | PHILLIPS           | HOCKESSIN         | DE    | 19707 |
| 619 | Susanne         | Schubert           | Fuerstenfeldbruck | DE    | 82256 |
| 620 | Susanne         | Schubert, reporter | Fuerstenfeldbruck | DE    | 82256 |

|     | FIRST           | LAST          | CITY                 | STATE | ZIP   |
|-----|-----------------|---------------|----------------------|-------|-------|
| 621 | Barbara & Vince | Smolinski     | Selbyville           | DE    | 19975 |
| 622 | Merritt         | Tilley III    | Wilmington           | DE    | 19802 |
| 623 | Earl            | Towery        | Newark               | DE    | 19711 |
| 624 | Roxanne         | Acosta        | Miami                | FL    | 33155 |
| 625 | Colleen         | Adomaitis     | Hudson               | FL    | 34667 |
| 626 | Sandy           | Allenon       | Miramar              | FL    | 33025 |
| 627 | Julie           | Altman        | Dunedin              | FL    | 34698 |
| 628 | Dennis          | Amaya         | Davie                | FL    | 33331 |
| 629 | Brian           | Anderson      | Lake Wroth           | FL    | 33460 |
| 630 | William         | Anderson      | Middleburg           | FL    | 32068 |
| 631 | Michael         | Andrews       | Miami Beach          | FL    | 33139 |
| 632 | Jennifer        | Arata         | Naples               | FL    | 34114 |
| 633 | diane           | arrieta       | Jupiter              | FL    | 33458 |
| 634 | diane           | arrieta       | jupiter              | FL    | 33458 |
| 635 | KRISTEN         | AUGUSTINE     | Pensacola            | FL    | 32514 |
| 636 | Barbara         | Bacom         | Edgewater            | FL    | 32132 |
| 637 | Gerald          | Bair          | Miami                | FL    | 33186 |
| 638 | Kerry           | Balanag       | Miami                | FL    | 33130 |
| 639 | Cathy           | Ball          | Tarpon Springs       | FL    | 34689 |
| 640 | Nancy           | Ball          | Tallahassee          | FL    | 32312 |
| 641 | andrew          | bargo         | indian harbour beach | FL    | 32937 |
| 642 | Kinga           | Barry         | DeFuniak Springs     | FL    | 32435 |
| 643 | Barbara         | Bates         | Lantana              | FL    | 33462 |
| 644 | Margaret        | Baylor        | Jacksonville         | FL    | 32217 |
| 645 | Chifuyu         | Beckett       | Naples               | FL    | 34117 |
| 646 | Lisa            | Behm          | Bonita Springs       | FL    | 34134 |
| 647 | John            | Belanger      | Dania                | FL    | 33004 |
| 648 | Jarrett         | Benavidez     | Miami Beach          | FL    | 33139 |
| 649 | Marian          | Benjamin      | Atlantic Beach       | FL    | 32233 |
| 650 | Richard         | Bergmann      | Orlando              | FL    | 32835 |
| 651 | Sara            | Bernardi      | hollywood            | FL    | 33020 |
| 652 | Candice         | Birkenhauer   | St. Petersburg       | FL    | 33713 |
| 653 | Frances         | Blake         | Miami                | FL    | 33157 |
| 654 | Charity         | Blakely       | Lutz                 | FL    | 33559 |
| 655 | Philip          | Blaustein     | Parrish              | FL    | 34219 |
| 656 | Heather         | Bobrick       | Hollywood            | FL    | 33024 |
| 657 | JoAnn           | Boisvert      | Port Charlotte       | FL    | 33952 |
| 658 | Michele         | Bonanni       | Boynton Beach        | FL    | 33436 |
| 659 | Carmen          | Bonilla-Jones | Venice               | FL    | 34293 |
| 660 | William         | Bosso         | Neptune Beach        | FL    | 32266 |
| 661 | Arlene          | Braswell      | Palmetto             | FL    | 34221 |
| 662 | Bridget         | Breland       | Palm Harbor          | FL    | 34684 |
| 663 | Derek           | Brett         | Orlando              | FL    | 32806 |
| 664 | Peter           | Bromer        | Miami                | FL    | 33161 |
| 665 | Bridgett        | Brown         | Miami                | FL    | 33056 |
| 666 | Sanford         | Brown         | Big Pine Key         | FL    | 33043 |
| 667 | Jon             | Buchheim      | Tarpon Springs       | FL    | 34689 |
| 668 | Paulina         | Burdge-Small  | Oviedo               | FL    | 32765 |
| 669 | William         | Burke         | Crestview            | FL    | 32536 |
| 670 | Heather         | Burnett       | Maitland             | FL    | 32751 |
| 671 | Don             | Burns         | Ponte Vedra Beach    | FL    | 32082 |
| 672 | Grace           | Busch         | Bradenton            | FL    | 34211 |
| 673 | ruth            | cahoon        | DBeach               | FL    | 33444 |
| 674 | Carolina        | Calderon      | Miami                | FL    | 33142 |
| 675 | Alexander       | Cameron       | Sarasota             | FL    | 34238 |
| 676 | Larry           | Campbell      | Havana               | FL    | 32333 |
| 677 | Rebecca         | Carlson       | Lutz                 | FL    | 33558 |
| 678 | Claudia         | Carty         | St. Petersburg       | FL    | 33713 |
| 679 | Leslie          | Cascales      | Key West             | FL    | 33040 |
| 680 | Christine       | Cass          | St Petersburg        | FL    | 33701 |
| 681 | Claudia         | Castillo      | Miami                | FL    | 33186 |
| 682 | margaret        | caudill       | dade city            | FL    | 33525 |

|     | FIRST     | LAST           | CITY             | STATE | ZIP   |
|-----|-----------|----------------|------------------|-------|-------|
| 683 | Angela    | Celli-Jones    | Jacksonville     | FL    | 32223 |
| 684 | Stephanie | Cenko          | Fruitland Park   | FL    | 34731 |
| 685 | Alison    | Chabonais      | Bonita Springs   | FL    | 34135 |
| 686 | Celena    | Chalkley       | Palm Coast       | FL    | 32137 |
| 687 | Susan     | Chandler       | Fort Pierce      | FL    | 34946 |
| 688 | Trevor    | Chin           | Tampa            | FL    | 33637 |
| 689 | Emily     | Christie       | Oviedo           | FL    | 32766 |
| 690 | Cindy     | Clark          | Port Charlotte   | FL    | 33981 |
| 691 | Suzette   | Clothier       | Fort Pierce      | FL    | 34981 |
| 692 | Mandy     | Comstock Baily | Cocoa Beach      | FL    | 32931 |
| 693 | A         | Congdon        | sarasota         | FL    | 34230 |
| 694 | Maryanne  | Conlan         | Sarasota         | FL    | 34239 |
| 695 | Paul      | Corogin        | GAINESVILLE      | FL    | 32604 |
| 696 | Sylvia    | Correnti       | satellite beach  | FL    | 32937 |
| 697 | Shelly    | Cotting        | Casselberry      | FL    | 32707 |
| 698 | Laurel    | Covington      | Lutz             | FL    | 33548 |
| 699 | Carrie    | Crady          | Fort Pierce      | FL    | 34982 |
| 700 | Robin     | Craig          | Tallahassee      | FL    | 32309 |
| 701 | Cheryl    | Cross          | Naples           | FL    | 34114 |
| 702 | Carrie    | Cryan          | Deltona          | FL    | 32789 |
| 703 | EDWARD    | CUBERO         | MIAMI BEACH      | FL    | 33139 |
| 704 | Carlos    | Cuevas         | Miramar          | FL    | 33027 |
| 705 | P         | D              | Fort Lauderdale  | FL    | 33332 |
| 706 | D         | Dak            | xxxxxxx          | FL    | 32050 |
| 707 | Lisa      | D'Antonio      | Wellington       | FL    | 33414 |
| 708 | Colleen   | Darlington     | Palm Bay         | FL    | 32905 |
| 709 | RONALD    | DAVIES         | ENGLEWOOD        | FL    | 34223 |
| 710 | Jessica   | Davis          | Naples           | FL    | 34108 |
| 711 | Joshua    | Davis          | Pensacola        | FL    | 32514 |
| 712 | Joshua    | Davis          | Pensacola        | FL    | 32514 |
| 713 | Jennifer  | De Meo         | New Port Richey  | FL    | 34655 |
| 714 | Thomas    | Deasy          | Flagler beach    | FL    | 32136 |
| 715 | Barbara   | Dell           | Sarasota         | FL    | 34243 |
| 716 | Janet     | Deming         | Christmas        | FL    | 32709 |
| 717 | Lauren    | Devine         | Boca Raton       | FL    | 33486 |
| 718 | Lorenzo   | Diaz           | Hialeah          | FL    | 33016 |
| 719 | Kristi    | Dickey         | Merritt Island   | FL    | 32953 |
| 720 | Gretchen  | Dietrich       | Deerfield Beach  | FL    | 33441 |
| 721 | Jessica   | Dietrich       | Deerfield Beach  | FL    | 33441 |
| 722 | Karen     | DiStefano      | Davie            | FL    | 33325 |
| 723 | Elizabeth | Dodd           | Boca Raton       | FL    | 33487 |
| 724 | Gloria    | Donn           | Tamarac          | FL    | 33321 |
| 725 | Diana     | Donovan        | Sarasota         | FL    | 34237 |
| 726 | Anastasia | Doshna         | Cocoa Beach      | FL    | 32931 |
| 727 | nancy     | draper         | pompano beach    | FL    | 33060 |
| 728 | Rhea      | Drysdale       | Neptune Beach    | FL    | 32266 |
| 729 | Jane      | du Brin        | Fort Pierce      | FL    | 34982 |
| 730 | Hugh      | Duey           | Parrish          | FL    | 34219 |
| 731 | Michael   | Duffey         | Ft. Walton Beach | FL    | 32548 |
| 732 | Glenys    | Dukes          | Jacksonville     | FL    | 32225 |
| 733 | Delaney   | Dunlop         | Sarasota         | FL    | 34235 |
| 734 | Matt      | Dunlop         | Sarasota         | FL    | 34235 |
| 735 | Edward    | Dunne          | Tampa            | FL    | 33602 |
| 736 | Dean      | Dye            | Sarasota         | FL    | 34238 |
| 737 | wendy     | dyout          | safety harbor    | FL    | 34695 |
| 738 | Ramona    | Dzindzeleta    | Sanford          | FL    | 32773 |
| 739 | Alex      | Eckelberry     | Clearwatwrr      | FL    | 33767 |
| 740 | Alex      | Eckelberry     | Clearwatwrr      | FL    | 33767 |
| 741 | Sharon    | Eckert         | Ocala            | FL    | 34479 |
| 742 | gretchen  | edgren         | Holmes Beach     | FL    | 34217 |
| 743 | Elaine    | Edwards        | Pembroke Pines   | FL    | 33026 |
| 744 | Randall   | Ellis          | Deltona          | FL    | 32725 |

|     | FIRST        | LAST              | CITY               | STATE | ZIP    |
|-----|--------------|-------------------|--------------------|-------|--------|
| 745 | Leigh        | Emerson-Smith     | S Miami            | FL    | 33143  |
| 746 | Annette      | Escobar           | Miami              | FL    | 33155  |
| 747 | salvador     | escobedo          | bradenton          | FL    | 34210  |
| 748 | Saum         | Eslami            | deland             | FL    | 32720  |
| 749 | Kelsey       | Esteves           | Boynton Beach      | FL    | 33437  |
| 750 | Brenda       | Ewton             | Naples             | FL    | 34104  |
| 751 | Kelly        | Eyler             | Hollywood          | FL    | 33020  |
| 752 | Mark         | Farrell           | Tampa              | FL    | 33616  |
| 753 | Thomas       | Fedorka           | Brooksville        | FL    | 34601- |
| 754 | Thomas       | Fedorka           | Brooksville        | FL    | 34601  |
| 755 | Nela         | Feijoo            | orlando            | FL    | 32809  |
| 756 | Eric         | Fink              | Vero Beach         | FL    | 32963  |
| 757 | Tammy L.     | Fisher            | oakland Park       | FL    | 333334 |
| 758 | Marie        | Fitzsimmons       | Jacksonville       | FL    | 32256  |
| 759 | stanley      | fleming           | largo              | FL    | 33771  |
| 760 | Ann          | Fonfa             | Delray Beach       | FL    | 33446  |
| 761 | Eileen       | Fonferko          | North Fort Myers   | FL    | 33917  |
| 762 | Judy         | Fong              | Middelburg         | FL    | 32068  |
| 763 | Daniel       | Fontaine          | Tampa              | FL    | 33626  |
| 764 | Brian        | Ford              | cocoa              | FL    | 32927  |
| 765 | Kathryn      | Foster            | Valrico            | FL    | 33594  |
| 766 | Richard      | Foster            | Winter Springs     | FL    | 32708  |
| 767 | Luci         | Fowler            | Graceville         | FL    | 32440  |
| 768 | Dorothy      | Freel             | Tampa              | FL    | 33634  |
| 769 | Darlene      | Freeman           | Wesley Chapel      | FL    | 33543  |
| 770 | H.F.         | FRIDRICH          | ESTERO             | FL    | 32928  |
| 771 | Wendi        | Frishman          | Bay Harbor Islands | FL    | 33154  |
| 772 | Anna Louise  | Fulks             | Coral Gables       | FL    | 33134  |
| 773 | Sonda        | Gabriel           | St. Augustine      | FL    | 32080  |
| 774 | Lizabeth     | Gannon            | Ft. Myers          | FL    | 33916  |
| 775 | Noreen       | Gannon            | Ft. Myers          | FL    | 33916  |
| 776 | DENA         | GARCIA            | SAINT CLOUD        | FL    | 34771  |
| 777 | Olga         | Garcia            | cutler bay         | FL    | 33157  |
| 778 | BK           | Gardner,LMT       | miami              | FL    | 33175  |
| 779 | Melissa      | Gaskins           | Tallahassee        | FL    | 32311  |
| 780 | Eva          | Gasser-Sanz, Esq. | Naples             | FL    | 34110  |
| 781 | Kimberlee    | geng              | ft lauderdale      | FL    | 33312  |
| 782 | Rich         | Georg             | Chuluota           | FL    | 32766  |
| 783 | E. Alexander | Gerster           | Miami              | FL    | 33156  |
| 784 | VIRGINIA     | GIBSON            | KEY LARGO          | FL    | 33037  |
| 785 | sherrie      | gill              | tampa              | FL    | 33603  |
| 786 | Richard      | Godinez           | Pembroke Pines     | FL    | 33029  |
| 787 | Rainah       | Goldfeather       | Alachua            | FL    | 32615  |
| 788 | Rosalie      | Goldstein         | N. Fort Myers      | FL    | 33917  |
| 789 | Rob          | Gonzalez          | Davie              | FL    | 33328  |
| 790 | Greg         | Gordon            | Cocoa Beach        | FL    | 32931  |
| 791 | Walter       | Graue             | Lynn haven         | FL    | 32444  |
| 792 | Cheryl       | Green             | Winter Springs     | FL    | 32708  |
| 793 | Donna        | Greene            | Hollywood          | FL    | 33021  |
| 794 | Cynthia      | Greene-Eason      | Hollywood          | FL    | 33019  |
| 795 | Kathryn      | Grindle           | Orlando            | FL    | 32828  |
| 796 | Cheryl       | Gross             | Sarasota           | FL    | 34232  |
| 797 | Marcia       | Guerrero          | Miami,             | FL    | 33015  |
| 798 | Joanne       | Gura              | Naples             | FL    | 34108  |
| 799 | Elsy         | Haddad            | Loxahatchee        | FL    | 33470  |
| 800 | Yukari       | Hagio             | Tallahassee        | FL    | 32306  |
| 801 | Kristine     | Halager           | Pompano Beach      | FL    | 33062  |
| 802 | Bruce        | Hall              | Apalachicola       | FL    | 32320  |
| 803 | Judith       | Hamilton-Schultze | Bradenton          | FL    | 34208  |
| 804 | Donna        | Handforth         | Jacksonville       | FL    | 32218  |
| 805 | Joan         | Hanlon            | Naples             | FL    | 34120  |
| 806 | James        | Hanson            | Winter Park        | FL    | 32789  |

|     | FIRST      | LAST           | CITY               | STATE | ZIP    |
|-----|------------|----------------|--------------------|-------|--------|
| 807 | JEFFREY    | HARDMAN        | WEEKI WACHEE       | FL    | 34607  |
| 808 | Holly      | Harris         | Davie              | FL    | 33314  |
| 809 | Rachael    | Harrison       | Gainesville        | FL    | 32607  |
| 810 | Barbara    | Hayman         | Bellevue           | FL    | 34420  |
| 811 | Shawn      | Heath          | Jacksonville       | FL    | 32218  |
| 812 | andrea     | heine          | st petersburg      | FL    | 33713  |
| 813 | Wendy      | Herrpm         | Ft. Myers Beach    | FL    | 33931  |
| 814 | chere      | high           | jupiter            | FL    | 33458  |
| 815 | Cal        | Hill           | Tampa              | FL    | 33611  |
| 816 | peggy      | hindy          | sunrise            | FL    | 33351  |
| 817 | Lisa       | Hines          | Port Charlotte     | FL    | 33980  |
| 818 | Mark       | Hinnebusch     | Gainesville        | FL    | 32609  |
| 819 | deborah    | hluchanyk      | tampa              | FL    | 33647  |
| 820 | David      | Ho             | West Palm Beach    | FL    | 33416  |
| 821 | Debi       | Hoffman        | Lake Alfred        | FL    | 33850  |
| 822 | Debi       | Hoffman        | Lake Alfred        | FL    | 33850  |
| 823 | Jenny      | Holbrook       | Saint Augustine    | FL    | 32080  |
| 824 | Walter     | Holdsworth     | St. Petersburg     | FL    | 33714  |
| 825 | Miranda    | Hoover         | Fort Pierce        | FL    | 34951  |
| 826 | H. Carlton | Howard, M.D.   | Miami              | FL    | 33133  |
| 827 | Elaine     | Howes          | Land O' Lakes      | FL    | 34638  |
| 828 | LYNN M     | HOWIE          | HOLIDAY            | FL    | 34690  |
| 829 | melissa    | hughes         | monticello         | FL    | 32344  |
| 830 | Tina       | Jacobik        | Ft Myers           | FL    | 33966  |
| 831 | Kathy      | Jacopino       | Lehigh Acres       | FL    | 33972  |
| 832 | Dorothy    | James-Saxton   | Pensacola          | FL    | 32534  |
| 833 | kayleigh   | jamison        | jacksonville       | FL    | 32246  |
| 834 | September  | Jazzborne      | Kissimmee          | FL    | 34745  |
| 835 | William O. | Jenkins        | Port St. Lucie     | FL    | 34953  |
| 836 | Katherine  | Jenkins-Murphy | Port St. Lucie     | FL    | 34983  |
| 837 | mike       | jewett         | jacksonville       | FL    | 32210  |
| 838 | Jose       | Jimenez        | miami              | FL    | 33125  |
| 839 | Eleanore   | Jones          | Sunrise            | FL    | 33322  |
| 840 | Gloria     | Jones          | Hialeah            | FL    | 33015  |
| 841 | janis      | jones          | pembroke pines     | FL    | 33024  |
| 842 | Melissa    | Judge          | Tampa              | FL    | 33607  |
| 843 | Michele    | Kadison        | Miami Beach        | FL    | 33139  |
| 844 | Alan       | Kameron        | Jupiter            | FL    | 33458  |
| 845 | Lauren     | Kanter         | Lakeland           | FL    | 33801  |
| 846 | Alan       | Kardoff        | Palm Bay           | FL    | 32907  |
| 847 | Marcia J   | Kasabian       | Sebastian          | FL    | 32958  |
| 848 | Bernis     | Katz           | Miami              | FL    | 33143  |
| 849 | Scott      | Kaymen         | Pinellas Park      | FL    | 33781  |
| 850 | wendy      | kelley         | palm beach gardens | FL    | 33418  |
| 851 | JEANNE     | KEVER          | BRISTOL            | FL    | 32321  |
| 852 | danny      | king           | west palm beach    | FL    | 33406  |
| 853 | michele    | king           | Gulfport           | FL    | 33707  |
| 854 | Nancy      | Kirby          | Ocala              | FL    | 334476 |
| 855 | Mackie     | Knight         | Tallahassee        | FL    | 32312  |
| 856 | Diane      | Knott          | Fort White         | FL    | 32038  |
| 857 | Monica     | Koler          | Longwood           | FL    | 32750  |
| 858 | Richard    | Kramer         | Miami              | FL    | 33143  |
| 859 | kathy      | krivit         | Fort Lauderdale    | FL    | 33349  |
| 860 | Stan       | Kuczynski      | Orlando            | FL    | 32817  |
| 861 | Robert     | Kuemmerlein    | Ft. McCoy          | FL    | 32134  |
| 862 | Jennifer   | Lackey         | Valrico            | FL    | 33594  |
| 863 | alix       | lafond         | coral gables       | FL    | 33146  |
| 864 | Aimee      | LaLonde        | Cape Coral         | FL    | 33993  |
| 865 | Carla      | Lamarr         | Margate            | FL    | 33063  |
| 866 | Carla      | Lamarr         | Margate            | FL    | 33063  |
| 867 | Sara       | Lambert        | Judson             | FL    | 34674  |
| 868 | Kenn       | Laudenslager   | South Pasadena     | FL    | 33707  |

|     | FIRST         | LAST       | CITY               | STATE | ZIP   |
|-----|---------------|------------|--------------------|-------|-------|
| 869 | Ian           | Lavelle    | Riverview          | FL    | 33569 |
| 870 | Carolina      | Lecours    | Miami Beach        | FL    | 33139 |
| 871 | Loretta       | Leda       | Winter Garden      | FL    | 34787 |
| 872 | Jinny         | Lee        | Melrose            | FL    | 32666 |
| 873 | LISA          | LEIBLE     | Davie              | FL    | 33325 |
| 874 | Joseph M.     | LEPAK, Jr. | Brandon            | FL    | 33511 |
| 875 | Patti         | Levin      | Fort Myers         | FL    | 33908 |
| 876 | Linda         | Lewman     | Marathon           | FL    | 33050 |
| 877 | Mark          | Lewman     | Marathon           | FL    | 33050 |
| 878 | Julie         | Lindsey    | Fort Pierce        | FL    | 34982 |
| 879 | Julie         | Lindsey    | Fort Pierce        | FL    | 34982 |
| 880 | Tiffany       | Llera-Lora | Ft. Lauderdale     | FL    | 33312 |
| 881 | William       | lock       | Cocoa              | FL    | 32927 |
| 882 | Debbie        | Low        | Tavernier          | FL    | 33070 |
| 883 | Joan          | Lynch      | Spring Hill        | FL    | 34609 |
| 884 | Robert        | Lyon       | Miami Beach        | FL    | 33141 |
| 885 | cynthia       | madrid     | Hallandale         | FL    | 33009 |
| 886 | Pat           | Maisonnave | lake worth         | FL    | 33460 |
| 887 | Gerald        | Mann       | Ormond Beach       | FL    | 32176 |
| 888 | Joseph        | Manner     | Orlando            | FL    | 32806 |
| 889 | Joyce         | Maresco    | Big Pine Key       | FL    | 33043 |
| 890 | Drew          | Martin     | Lake Worth         | FL    | 33460 |
| 891 | Marcella      | Matthaei   | St. Augustine      | FL    | 32080 |
| 892 | Bonnie        | Mc Cune    | Miami              | FL    | 33157 |
| 893 | Ann           | McDonald   | Merritt Island     | FL    | 32952 |
| 894 | Katie         | McGuire    | Melbourne          | FL    | 32901 |
| 895 | Julie         | McLaughlin | Naples             | FL    | 34102 |
| 896 | Marcie        | McMillan   | Venice             | FL    | 34293 |
| 897 | Susan         | McMillan   | Wimauma            | FL    | 33598 |
| 898 | Kevin         | McVan      | Clearwater         | FL    | 33762 |
| 899 | Joseph        | McVay      | Delray Beach       | FL    | 33444 |
| 900 | Walt and Toni | Medford    | Gainesville        | FL    | 32606 |
| 901 | Joan          | Mehew      | Marathon           | FL    | 33050 |
| 902 | Becky         | Mendoza    | miami              | FL    | 33175 |
| 903 | Katherine     | Merrill    | Jacksonville beach | FL    | 32250 |
| 904 | Kyle          | Michelson  | Miami              | FL    | 33143 |
| 905 | Ann           | Mikeal     | high springs       | FL    | 32643 |
| 906 | Thomas        | Mikels     | Titusville         | FL    | 32780 |
| 907 | Clifford      | Miller     | Jacksonville       | FL    | 32205 |
| 908 | David         | Miner      | Bradenton          | FL    | 34208 |
| 909 | Brian         | Mitchell   | Naples             | FL    | 34110 |
| 910 | Cheryl        | mitchell   | naples             | FL    | 34101 |
| 911 | Catherine     | Monroe     | Pinellas Park      | FL    | 33782 |
| 912 | Judy          | Moran      | Panama City        | FL    | 32404 |
| 913 | OLYME         | MORENO     | MIAMI              | FL    | 33174 |
| 914 | Leo           | Mori       | Hialeah            | FL    | 33010 |
| 915 | Louis C       | Morris     | Jacksonville       | FL    | 32256 |
| 916 | Ken           | Mundy      | Lakeland           | FL    | 33803 |
| 917 | Joseph        | Murphy     | Ridge Manor        | FL    | 33523 |
| 918 | William       | Murray     | Nokomis            | FL    | 34275 |
| 919 | Colette       | Myers      | Boca Raton         | FL    | 33433 |
| 920 | Satori        | Myers      | Longwood           | FL    | 32750 |
| 921 | Leslie        | Myerw      | Englewood          | FL    | 34223 |
| 922 | Vanessa       | Naas       | Plant City         | FL    | 33566 |
| 923 | Grace         | Naipavel   | Jacksonville       | FL    | 32244 |
| 924 | Marco         | Nardi      | Coral Gables       | FL    | 33146 |
| 925 | David         | Neral      | St. Augustine      | FL    | 32095 |
| 926 | chris         | nicosia    | dunedin            | FL    | 34698 |
| 927 | chris         | nicosia    | dunedin            | FL    | 34698 |
| 928 | Connie        | Nowe       | Port Richey        | FL    | 34668 |
| 929 | Lara          | Nunes      | pensacola          | FL    | 32514 |
| 930 | Isabella      | Obediente  | panama             | FL    | 4322  |

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|-----|------------|-------------|------------------|-------|--------|
| 931 | Dawn       | O'Dell      | Clermont         | FL    | 34711  |
| 932 | Alexa      | Ogami       | Daytona Beach    | FL    | 32118  |
| 933 | Iori       | ottlein     | Flagler Beach    | FL    | 32136  |
| 934 | tricia     | paolucci    | wilton manors    | FL    | 33334  |
| 935 | Maria      | Papazian    | Coral Gables     | FL    | 33146  |
| 936 | Vandy      | Parker      | Pompano Beach    | FL    | 33064  |
| 937 | Robert     | Parkinson   | Fort Lauderdale  | FL    | 33312- |
| 938 | Kay        | Parsons     | Niceville        | FL    | 32578  |
| 939 | Lee        | Patrizzi    | Chuluota         | FL    | 32766  |
| 940 | Bryan      | Paul        | Mims             | FL    | 32754  |
| 941 | nancy      | pearson     | palm harbor      | FL    | 34683  |
| 942 | Hanne      | Pedersen    | Tampa            | FL    | 33625  |
| 943 | Erin Lynne | Pegg        | tampa            | FL    | 33624  |
| 944 | Sumner     | Peirce      | Fort Lauderdale  | FL    | 33309  |
| 945 | Kevin      | Perkins     | Miami Beach      | FL    | 33140  |
| 946 | Emily      | Petitt      | Key west         | FL    | 33040  |
| 947 | Stacy      | Pfeifer     | Miami            | FL    | 33139  |
| 948 | MARIA      | PFLUG       | DEERFIELD BEACH  | FL    | 33064  |
| 949 | Mary       | Phillips    | Sarasota         | FL    | 34237  |
| 950 | Mary       | Phillips    | Sarasota         | FL    | 34237  |
| 951 | Mary       | Phillips    | Sarasota         | FL    | 34237  |
| 952 | sherry     | pitts       | geneva           | FL    | 32732  |
| 953 | Gary       | Pollack     | Tamarac          | FL    | 33321  |
| 954 | Donald     | Porter      | Sarasota         | FL    | 34242  |
| 955 | Jessica    | Prack       | New Port Richey  | FL    | 34653  |
| 956 | Gwendolyn  | Presnell    | Cocoa            | FL    | 32922  |
| 957 | Lynn       | Proenza     | Tampa            | FL    | 33612  |
| 958 | Camila     | Quaresma    | miami beach      | FL    | 33139  |
| 959 | Elaine     | Quinn       | St. Augustine    | FL    | 32080  |
| 960 | Dana       | Radell      | Miami            | FL    | 33173  |
| 961 | george     | radell      | miami            | FL    | 33156  |
| 962 | Atiya      | Rasheed     | Coconut Creek    | FL    | 33063  |
| 963 | Gary       | Reakes      | Satellite Beach  | FL    | 32937  |
| 964 | Caroline   | Reddy       | Winter Park      | FL    | 32789  |
| 965 | robyn      | reichert    | lake worth       | FL    | 33467  |
| 966 | Lance      | Reinoehl    | Lehigh Acres     | FL    | 33972  |
| 967 | Lance      | Reinoehl    | Lehigh Acres     | FL    | 33972  |
| 968 | Edna       | Reynolds    | Fort Lauderdale  | FL    | 33306  |
| 969 | Russell    | Riley       | pensacola        | FL    | 32506  |
| 970 | Troy       | Rippere     | Oviedo           | FL    | 32765  |
| 971 | Mario      | Rivera      | Winter Haven     | FL    | 33881  |
| 972 | Teresa     | Roberts     | Jupiter          | FL    | 33469- |
| 973 | pam        | roche       | longwood         | FL    | 32750  |
| 974 | Carmen     | Rodriguez   | Dania            | FL    | 33004  |
| 975 | julissa    | rodriguez   | hollywood        | FL    | 33025  |
| 976 | Michael    | Rogal       | Gainesville      | FL    | 32607  |
| 977 | Chanda     | Rogers      | Jacksonville     | FL    | 32225  |
| 978 | C          | Rohr        | Palm Coast       | FL    | 32137  |
| 979 | Carol      | Rosas       | Tampa            | FL    | 33612  |
| 980 | Alynn      | Rose        | Hallandale Beach | FL    | 33009  |
| 981 | Heather    | Rose        | Pompano Beach    | FL    | 33060  |
| 982 | Pat        | Rose        | Largo            | FL    | 33771  |
| 983 | StewaRT    | ROSENKRANTZ | POMPANO BEACH    | FL    | 33062  |
| 984 | Bill       | Rosenthal   | Land O' Lakes    | FL    | 34638  |
| 985 | Laura      | Russell     | Tampa            | FL    | 33606  |
| 986 | Lynne      | Russert     | Jacksonville     | FL    | 32225  |
| 987 | suzanne    | sadowski    | sunrise          | FL    | 33351  |
| 988 | Robert     | Salotti     | St. Petersburg   | FL    | 33716  |
| 989 | David      | Samek       | Dunnellon        | FL    | 34432  |
| 990 | ANN        | SANCHEZ     | TITUSVILLE       | FL    | 32781  |
| 991 | Stephen R  | Sanders     | Os[rey           | FL    | 34229  |
| 992 | Karen      | Sands       | Big Pine Key     | FL    | 33043  |

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| 993  | josie      | sange          | miami            | FL    | 33143 |
| 994  | Luiz       | Santos         | Miami            | FL    | 33132 |
| 995  | Jacinda    | Schabauer      | Hollywood        | FL    | 33020 |
| 996  | CLAUDIA    | SCHLEFSTEIN    | palm city        | FL    | 34990 |
| 997  | Ginny      | Schneider      | Osprey           | FL    | 34229 |
| 998  | Joan       | Schulze        | Hobe Sound       | FL    | 33455 |
| 999  | J          | Schumacher     | Clearwater       | FL    | 33757 |
| 1000 | Dawn       | Scire          | Sarasota         | FL    | 34238 |
| 1001 | Amy        | Scott          | Orlando          | FL    | 32828 |
| 1002 | Janet      | Sears          | Palm Harbor      | FL    | 34683 |
| 1003 | Luna       | See            | Lutz             | FL    | 33559 |
| 1004 | Ann        | Seidner        | Davie            | FL    | 33325 |
| 1005 | Dorothy    | Serotta        | Miami Beach      | FL    | 33140 |
| 1006 | colette    | sherrington    | north Ft Myers   | FL    | 33917 |
| 1007 | Betty      | Shipley        | Crystal River    | FL    | 34428 |
| 1008 | Margaret   | Silver         | Atlantic Beach   | FL    | 32233 |
| 1009 | Ronald H.  | Silver, C.E.P. | Atlantic Beach   | FL    | 32233 |
| 1010 | judith     | silverton      | hallandale       | FL    | 33009 |
| 1011 | THERESA    | SISKIND        | ST PETERSBURG    | FL    | 33716 |
| 1012 | Stephen    | Sleeper        | Bonita Springs   | FL    | 34135 |
| 1013 | Bill T     | Smith          | parrish          | FL    | 34219 |
| 1014 | Morgan     | Smith          | Deerfield Beach  | FL    | 33441 |
| 1015 | Nicole     | Smith          | orlando          | FL    | 32807 |
| 1016 | Noel       | Smith          | Sarasota         | FL    | 34235 |
| 1017 | Teri       | Smyth          | Mims             | FL    | 32754 |
| 1018 | Cindy      | Snyder         | St. Petersburg   | FL    | 33702 |
| 1019 | Wanda      | Souza          | Hollywood        | FL    | 33024 |
| 1020 | Nicklaus   | Sparrow        | Orlando          | FL    | 32803 |
| 1021 | Frank      | Starr          | Tampa            | FL    | 33618 |
| 1022 | Alexis     | Starzyk        | oviedo           | FL    | 32765 |
| 1023 | karen      | stein          | st. petersburg   | FL    | 33711 |
| 1024 | Rachael    | Stern          | Tampa            | FL    | 33618 |
| 1025 | Patricia , | Stevens        | Port Charlotte   | FL    | 33954 |
| 1026 | D. H.      | Strong         | Cocoa            | FL    | 32927 |
| 1027 | alan       | strowd         | tallahassee      | FL    | 32312 |
| 1028 | Jamie      | Stutzenburg    | Daytona Beach    | FL    | 32118 |
| 1029 | Nancy      | Subiry         | Maimi            | FL    | 33187 |
| 1030 | rita       | swider         | orlando          | FL    | 32837 |
| 1031 | Alison     | Sylvia         | DeLand           | FL    | 32724 |
| 1032 | alina      | szostak        | miami            | FL    | 33125 |
| 1033 | Dallas     | Tedlock        | Lighthouse Point | FL    | 33064 |
| 1034 | leslie     | tetrault       | sarasota         | FL    | 34231 |
| 1035 | Charlotte  | Thomas         | Lake Butler      | FL    | 32054 |
| 1036 | Donna      | Thomas         | Barefoot Bay     | FL    | 32976 |
| 1037 | Jessica    | Thomas         | St. Petersburg   | FL    | 33714 |
| 1038 | Amy        | Tidd           | Rockledge        | FL    | 32955 |
| 1039 | lee        | towles         | oviedo           | FL    | 32765 |
| 1040 | Barbara    | Tucker         | Wellington       | FL    | 33414 |
| 1041 | Barbara    | Van Tuyl       | Ocala            | FL    | 34482 |
| 1042 | Luis       | Vega           | miami            | FL    | 33173 |
| 1043 | katie      | vore           | Ocoee            | FL    | 34761 |
| 1044 | Debora     | Walker         | Lake Worth       | FL    | 33463 |
| 1045 | Martha     | Waltman        | Newberry         | FL    | 32669 |
| 1046 | sharon     | watkins        | floral city      | FL    | 34436 |
| 1047 | Virginia   | Weinstein      | Plantation       | FL    | 33324 |
| 1048 | KAREN      | WELLS          | LARGO            | FL    | 33774 |
| 1049 | Catherine  | Wendell        | ocala            | FL    | 34478 |
| 1050 | Eric       | West           | Ormond Beach     | FL    | 32174 |
| 1051 | Agnes      | Whalen         | St. Pete Beach   | FL    | 33706 |
| 1052 | Jessica    | Wheeler        | Sarasota         | FL    | 34243 |
| 1053 | Tamara     | White          | Pompano          | FL    | 33062 |
| 1054 | renee      | whitelock      | Lake Worth       | FL    | 33460 |



|      | FIRST            | LAST       | CITY              | STATE | ZIP    |
|------|------------------|------------|-------------------|-------|--------|
| 1055 | duane            | Wicklund   | fruitland park    | FL    | 34731- |
| 1056 | Loren            | Wieland    | Ft. Myers         | FL    | 33912  |
| 1057 | Liz              | Wilton     | Hollywood         | FL    | 33023  |
| 1058 | william & louise | wing       | wildwood          | FL    | 34785  |
| 1059 | Aileena          | Witt       | Jacksonville      | FL    | 32224  |
| 1060 | Arctic           | Wolf       | Altamone Springs  | FL    | 32716- |
| 1061 | robert           | wolf       | naples            | FL    | 34102  |
| 1062 | Mary             | Workman    | Deltona           | FL    | 32725  |
| 1063 | Karen            | Wray       | Clermont          | FL    | 34711  |
| 1064 | Amy              | Wysocki    | Miami             | FL    | 33165  |
| 1065 | Edith            | Yelland    | North Fort Myers  | FL    | 33917  |
| 1066 | alessa           | zaias      | miami beach       | FL    | 33141  |
| 1067 | James            | Zakas      | Port Charlotte    | FL    | 33981  |
| 1068 | Lynn             | Abney      | Atlanta           | GA    | 30360  |
| 1069 | carolyn          | acuff      | DULUTH            | GA    | 30097  |
| 1070 | Valerian         | alexander  | Alpharetta        | GA    | 30022  |
| 1071 | pat              | anderson   | smyrna            | GA    | 30080  |
| 1072 | Vickie           | Anderson   | Stockbridge       | GA    | 30281  |
| 1073 | Anne             | Askren     | Athens            | GA    | 30605  |
| 1074 | ALINE            | AUSTIN     | cairo             | GA    | 39828  |
| 1075 | John             | Barfield   | Atlanta           | GA    | 30329  |
| 1076 | Debra            | Barry      | Jefferson         | GA    | 30549  |
| 1077 | Melissa          | Bauer      | Marietta          | GA    | 30062  |
| 1078 | Rebecca          | Bell       | Jekyll Island,    | GA    | 31527  |
| 1079 | Cary             | Bennett    | Cumming           | GA    | 30040  |
| 1080 | Terri            | Bogart     | Woodstock         | GA    | 30188  |
| 1081 | Natalie          | Bogle      | Dahlonega         | GA    | 30533  |
| 1082 | Laurie           | Brown      | Powder Springs    | GA    | 30127  |
| 1083 | Mary             | Burns      | Richmond Hill     | GA    | 31324  |
| 1084 | Alicia Kai       | Butscher   | Decatur           | GA    | 30030  |
| 1085 | Shannon          | Canada     | Atlanta           | GA    | 30345  |
| 1086 | Shannon          | Canada     | Atlanta           | GA    | 30345  |
| 1087 | D                | Chiu       | Alpharetta        | GA    | 30022  |
| 1088 | Jennifer         | Corry      | Rome              | GA    | 30165  |
| 1089 | sandra           | cramer     | marietta          | GA    | 30062  |
| 1090 | Denise           | Cygan      | Villa Rica        | GA    | 30180  |
| 1091 | Mary Ann         | Daniel     | Evans             | GA    | 30809  |
| 1092 | Pam              | Davis      | Soperton          | GA    | 30457  |
| 1093 | rachael          | dubberly   | athens            | GA    | 30606  |
| 1094 | Ally             | Duffy      | Atlanta           | GA    | 30342  |
| 1095 | Diane            | Evans      | Columbus          | GA    | 31909  |
| 1096 | eugenia          | ferrero    | Smyrna            | GA    | 30082  |
| 1097 | Richard          | Foreman    | ALBANY            | GA    | 31701  |
| 1098 | Kathleen         | Friedman   | Marietta          | GA    | 30067  |
| 1099 | Judy             | Gordon     | Evans             | GA    | 30809  |
| 1100 | Jennifer         | Griffith   | Stone Mountain    | GA    | 30083  |
| 1101 | Lara             | Griffith   | Savannah          | GA    | 31410  |
| 1102 | Brenda           | Grogan     | Centerville       | GA    | 31028  |
| 1103 | m d              | grummon    | Gray              | GA    | 31032  |
| 1104 | Jana             | Hanakova   | Norcross          | GA    | 30093  |
| 1105 | Barry            | Hannah     | St. Simons Island | GA    | 31522  |
| 1106 | Sue              | Harmon     | Flowery Branch    | GA    | 30542  |
| 1107 | Andrew           | Harris     | atlanta           | GA    | 30328  |
| 1108 | Freya            | Harris     | Atlanta           | GA    | 30342  |
| 1109 | Holly            | Hill       | Decatur           | GA    | 30033  |
| 1110 | Richard T        | Hill Jr    | Decatur           | GA    | 30030  |
| 1111 | Liviana          | Hochberger | Peachtree City    | GA    | 30269  |
| 1112 | Jocelyn          | Hyers      | Blackshear        | GA    | 31516  |
| 1113 | Karen            | Kell       | Roswell           | GA    | 30076  |
| 1114 | ernest           | kight      | college park      | GA    | 30349  |
| 1115 | Lynne            | Lanier     | Statesboro        | GA    | 30458  |
| 1116 | SHEILAH          | LUTHI      | COMER             | GA    | 30629  |

|      | FIRST      | LAST          | CITY              | STATE | ZIP    |
|------|------------|---------------|-------------------|-------|--------|
| 1117 | Andy       | Lynn          | Douglasville      | GA    | 30135  |
| 1118 | John       | Mainprize     | Roswell           | GA    | 30076  |
| 1119 | Jim        | Mason         | Monticello        | GA    | 31064  |
| 1120 | elaine     | mccall        | decatur           | GA    | 30033  |
| 1121 | Barbara    | McLendon      | Blairsville       | GA    | 30512  |
| 1122 | J-Anne     | Mize          | Savannah          | GA    | 31419  |
| 1123 | mikasa     | Moss          | Temple            | GA    | 30179  |
| 1124 | Amber      | Myers         | White             | GA    | 30184  |
| 1125 | Steven     | Nelson        | Atlanta           | GA    | 30329  |
| 1126 | Heidi      | Nordberg      | Doraville         | GA    | 30340  |
| 1127 | Lori       | Nye           | Athens            | GA    | 30605  |
| 1128 | Sandra     | Olsen         | Lakeland          | GA    | 31635  |
| 1129 | Ken        | Owen          | Duluth            | GA    | 30096  |
| 1130 | Lisa       | Pelikan       | Alpharetta        | GA    | 30004  |
| 1131 | Janna      | Pinnell       | Watkinsville      | GA    | 30677  |
| 1132 | Maria      | Procopio      | Savannah          | GA    | 31404  |
| 1133 | Nicole     | Rae           | Stockbridge       | GA    | 30281  |
| 1134 | Cheryl     | Ranwez        | Rome              | GA    | 30165  |
| 1135 | Jacqueline | Robinson      | Powder Springs    | GA    | 30127  |
| 1136 | Duane      | Romick        | Douglasville      | GA    | 30135  |
| 1137 | mitzi      | rothman       | atlanta           | GA    | 30306  |
| 1138 | Pedro L.   | Sanabria      | Riverdale         | GA    | 30274  |
| 1139 | Robert     | Sanders       | Temple            | GA    | 30179  |
| 1140 | Walter     | Savage        | Cumming           | GA    | 30040- |
| 1141 | Cara       | Schmidt       | Tucker            | GA    | 30084  |
| 1142 | Jamo       | Smith         | Lawrenceville     | GA    | 30045  |
| 1143 | Tracey     | Smith         | Lithonia          | GA    | 30058  |
| 1144 | Paula      | Stauf         | Decatur           | GA    | 30033  |
| 1145 | Robert     | Stennett      | Athens            | GA    | 30604  |
| 1146 | Reba       | Stone         | St. Simons Island | GA    | 31522  |
| 1147 | Jennifer   | Taylor        | Forest Park       | GA    | 30297  |
| 1148 | Rob        | Temple        | Atlanta           | GA    | 30308  |
| 1149 | Phyllis    | Thakis        | Atlanta           | GA    | 30316  |
| 1150 | clinton    | tharp         | athens            | GA    | 30601  |
| 1151 | Elizabeth  | Trewhitt      | Lookout Mtn.      | GA    | 30750  |
| 1152 | Hal        | Trufan        | Atlanta           | GA    | 30350  |
| 1153 | Lori       | ugolik        | Macon             | GA    | 31220  |
| 1154 | Cathy      | Villalobos    | Gainesville       | GA    | 30506  |
| 1155 | Danna      | Williams      | Athens            | GA    | 30601  |
| 1156 | Shari      | Au            | Honolulu          | HI    | 96822  |
| 1157 | Marilyn    | Axtell        | Lihue             | HI    | 96766  |
| 1158 | Milica     | Barjaktarovic | Wailua            | HI    | 96791  |
| 1159 | Evelyn     | Brakopp       | Kailua            | HI    | 96734  |
| 1160 | Angela     | Breene        | Haleiwa           | HI    | 96712  |
| 1161 | Cindy      | Carroll       | kea'au            | HI    | 96749  |
| 1162 | Cynthia    | Cerny         | Hilo              | HI    | 96721  |
| 1163 | Cher       | Chinen        | Kailua Kona       | HI    | 96740  |
| 1164 | Duane      | Choy          | Honolulu          | HI    | 96821  |
| 1165 | steve      | cunningham    | Haiku             | HI    | 96708  |
| 1166 | Derek      | Dragotis      | Kailua Kona       | HI    | 96740  |
| 1167 | Karen      | Frutchey      | Honolulu          | HI    | 96822  |
| 1168 | Jocelyn    | Garovoy       | Kailua Kona       | HI    | 96740  |
| 1169 | Melissa    | Glennon       | Kihei             | HI    | 96753  |
| 1170 | Beth       | Hansen        | honolulu          | HI    | 96815  |
| 1171 | Catherine  | Hirsch        | Anahola           | HI    | 96703  |
| 1172 | Alissa     | Katz          | Hilo              | HI    | 96720  |
| 1173 | Jacob      | Knecht        | Honolulu          | HI    | 96816  |
| 1174 | katy       | laveck        | makawao           | HI    | 96768  |
| 1175 | Eliz       | Linser        | Kapaa             | HI    | 96746  |
| 1176 | trisha     | lowerre       | kamuela           | HI    | 96743  |
| 1177 | Bonnie     | Marko         | Kihei             | HI    | 96753  |
| 1178 | Courtney   | Martin        | Waipahu           | HI    | 96797  |

|      | FIRST      | LAST               | CITY            | STATE | ZIP       |
|------|------------|--------------------|-----------------|-------|-----------|
| 1179 | Randolph   | McCreight          | Pahoa           | HI    | 96778     |
| 1180 | Kaitlyn    | McKee              | Puhi            | HI    | 96766     |
| 1181 | Michelle   | McLinden           | Haiku           | HI    | 96708     |
| 1182 | Tina       | Montejano          | Kailua Kona     | HI    | 96740     |
| 1183 | Sherrie    | Moore              | Pahoa           | HI    | 96778     |
| 1184 | Claire     | Mortimer           | Kilauea         | HI    | 96754     |
| 1185 | Valerie    | Myles              | Pahoa           | HI    | 96778     |
| 1186 | Michele    | Nihipali           | Hauula          | HI    | 96717     |
| 1187 | Lynn       | Pizzitola          | Kapaa           | HI    | 96746     |
| 1188 | constance  | rose               | Iahaina         | HI    | 96761     |
| 1189 | Glenys     | Spitze             | Kailua-Kona     | HI    | 96740     |
| 1190 | Glenys     | Spitze             | Kailua-Kona     | HI    | 96740     |
| 1191 | Catherine  | Strazzeri          | Honolulu        | HI    | 96822     |
| 1192 | Robin Rae  | Swanson            | Kaneohe         | HI    | 96744     |
| 1193 | Nicholas   | Tillinghast-Lewman | Honolulu        | HI    | 96816     |
| 1194 | Thomas     | Tizard             | Kailua          | HI    | 96734     |
| 1195 | Robert     | Tucker             | Honolulu        | HI    | 96836     |
| 1196 | Stewart    | Wiggers            | Honolulu        | HI    | 96814     |
| 1197 | Ann        | Wilson             | Hawi            | HI    | 96755     |
| 1198 | Ivona      | Xiezopolski        | Kaneohe         | HI    | 96744     |
| 1199 | Carl       | Abrahamson         | Rock Rapids     | IA    | 51246     |
| 1200 | Alta       | Bardsley           | Cedar Rapids    | IA    | 52405     |
| 1201 | Debral     | Baringer           | Woodburn        | IA    | 50275     |
| 1202 | Cindy      | Borske             | Mason City      | IA    | 50401     |
| 1203 | susan      | bremer             | marion          | IA    | 52302     |
| 1204 | susan      | bremer             | marion          | IA    | 52302     |
| 1205 | Susan      | Brittain           | Carter Lake     | IA    | 51510     |
| 1206 | Carolyn J. | Browne             | Wilton          | IA    | 52778     |
| 1207 | Sue        | Christiansen       | Iowa City       | IA    | 52246     |
| 1208 | Mary       | Clark              | Chariton        | IA    | 50049     |
| 1209 | Candace    | Coleman            | Des Moines      | IA    | 50309     |
| 1210 | Jesse      | Counterman         | Sioux City      | IA    | 51104     |
| 1211 | Susan      | Crane              | Des Moines      | IA    | 50312     |
| 1212 | Pamela     | Dannacher          | Davenport       | IA    | 52803     |
| 1213 | Danise     | Flood              | Janesville      | IA    | 50647     |
| 1214 | gary       | grommon            | cedar rapids    | IA    | 52403     |
| 1215 | Janet      | Hopkins            | a               | IA    | 52531     |
| 1216 | Abby       | Hunt               | Pella           | IA    | 50219     |
| 1217 | Ginny      | Jackson            | Ames            | IA    | 50010     |
| 1218 | James H    | Jorgensen          | Ames            | IA    | 50014     |
| 1219 | Susan      | Kappelman          | Pleasantville   | IA    | 502257565 |
| 1220 | Karen      | Karaidos           | Clive           | IA    | 50325     |
| 1221 | Mary       | McBride            | Cedar Rapids    | IA    | 52403     |
| 1222 | Sheri      | McDonald           | Marion          | IA    | 52302     |
| 1223 | Michael    | McFarland          | West Des Moines | IA    | 50266     |
| 1224 | Tasha      | Nuetzman           | Storm Lake      | IA    | 50588     |
| 1225 | Alissa     | Osthoff            | dubuque         | IA    | 52001     |
| 1226 | Belinda    | Overton            | Des Moines      | IA    | 50317     |
| 1227 | Duane      | Richtsmeier        | Ackley          | IA    | 50601     |
| 1228 | Rose       | Riker              | Sioux City      | IA    | 51104     |
| 1229 | Sage       | River              | Iowa City       | IA    | 52245     |
| 1230 | Brenda     | Skoland            | Cylinder        | IA    | 50528     |
| 1231 | Staci      | Stanton            | Knoxville       | IA    | 50138     |
| 1232 | Susan      | Stock              | Webster City    | IA    | 50595     |
| 1233 | Susan      | Stock              | Webster City    | IA    | 50595     |
| 1234 | Natalie    | Swaim              | Indianola       | IA    | 50125     |
| 1235 | Anne       | Thurman-Tate       | cedar rapids    | IA    | 52403     |
| 1236 | Destiny    | York               | Bettendorf      | IA    | 52722     |
| 1237 | BERTI      | YOUNG              | MASON CITY      | IA    | 50401     |
| 1238 | margaret   | alcorn             | boise           | ID    | 83716     |
| 1239 | Wendy      | Barner             | Kellogg         | ID    | 83837     |
| 1240 | Jon        | Cecil              | Meridian        | ID    | 83642     |

|      | FIRST     | LAST          | CITY               | STATE | ZIP   |
|------|-----------|---------------|--------------------|-------|-------|
| 1241 | Debbie    | Cohen         | CDA                | ID    | 83814 |
| 1242 | Leslee    | Doner         | Boise              | ID    | 83709 |
| 1243 | Clyde     | Everton       | BOISE              | ID    | 83703 |
| 1244 | Daniel    | Hawley        | Ketchum            | ID    | 83340 |
| 1245 | Donna     | Hodsdon-Trips | New Plymouth       | ID    | 83655 |
| 1246 | Amy       | Hudson        | Boise              | ID    | 83704 |
| 1247 | Dawn      | Keur          | Sandpoint          | ID    | 83864 |
| 1248 | Devin     | Laky          | Boise              | ID    | 83713 |
| 1249 | jenny     | marowitz      | hayden             | ID    | 83835 |
| 1250 | John      | Pedersen      | Nampa              | ID    | 83686 |
| 1251 | Stephen   | Amraen        | Woodstock          | IL    | 60098 |
| 1252 | Ms.       | Ann           | Des Plaines        | IL    | 60016 |
| 1253 | Nick      | Ardinger      | Chicago            | IL    | 60643 |
| 1254 | Sylvia    | Arnstein      | Chicago            | IL    | 60660 |
| 1255 | Linda     | Baba          | Chicago            | IL    | 60638 |
| 1256 | Mary      | Baechle       | Cary               | IL    | 60013 |
| 1257 | Scott     | Baker         | Chicago            | IL    | 60614 |
| 1258 | maureen   | balluff       | Evanston           | IL    | 60202 |
| 1259 | Renee     | Balzer        | Chicago            | IL    | 60632 |
| 1260 | Kenneth   | Barshney      | Chicago            | IL    | 60625 |
| 1261 | Barbara   | Barta         | Westmont           | IL    | 60559 |
| 1262 | Paul      | Bauer         | Arlington Heights  | IL    | 60004 |
| 1263 | Nancy     | Bent          | LaGrange Highlands | IL    | 60525 |
| 1264 | Victoria  | Bigelow       | Chicago            | IL    | 60625 |
| 1265 | Barbara   | Blaski        | Lindenhurst        | IL    | 60046 |
| 1266 | Lauren    | Blick         | Millstadt          | IL    | 62260 |
| 1267 | jeffrey   | bower         | chicago            | IL    | 60614 |
| 1268 | Loretta   | Brown         | Antioch            | IL    | 60002 |
| 1269 | Sharon    | Buazard       | Rockford           | IL    | 61109 |
| 1270 | Martha    | Burk          | Bloomington        | IL    | 61701 |
| 1271 | Nancy     | Bush          | Chicago            | IL    | 60622 |
| 1272 | Linda     | Cabanban      | Yorkville          | IL    | 60560 |
| 1273 | Scott     | Campbell      | Algonquin          | IL    | 60102 |
| 1274 | Brandy    | Carter        | Dixon              | IL    | 61021 |
| 1275 | Suzy      | Castillo      | Naperville         | IL    | 60540 |
| 1276 | Karen     | Caya          | Waukegan           | IL    | 60085 |
| 1277 | Sara      | Chapperon     | Oswego             | IL    | 60543 |
| 1278 | DEB       | Christensen   | Manteno            | IL    | 60950 |
| 1279 | DEB       | Christensen   | Manteno            | IL    | 60950 |
| 1280 | Jen       | Christensen   | Manteno            | IL    | 60950 |
| 1281 | Taryn     | Clapper       | Desoto             | IL    | 62924 |
| 1282 | Gregory   | Clifton       | Moline             | IL    | 61265 |
| 1283 | Barbara   | Cochrane      | Chicago            | IL    | 60628 |
| 1284 | Joseph    | Coco          | Buffalo Grove      | IL    | 60089 |
| 1285 | Kathy     | Coffman       | Schaumburg         | IL    | 60173 |
| 1286 | Amy       | Cozzi         | Saint Charles      | IL    | 60174 |
| 1287 | jessie    | craigie       | chicago            | IL    | 60607 |
| 1288 | Catherine | Critz         | Creve Coeur        | IL    | 61610 |
| 1289 | Dianne    | Croft, RN     | Bartlett           | IL    | 60103 |
| 1290 | Beth      | Davis         | fox lake           | IL    | 60020 |
| 1291 | Kathleen  | Davis         | Springfield        | IL    | 62702 |
| 1292 | Maria     | DiFiore       | Chicago            | IL    | 60625 |
| 1293 | Stephan   | Donovan       | Chicago            | IL    | 60625 |
| 1294 | Cynthia   | Elliott       | CHICAGO            | IL    | 60622 |
| 1295 | Johanna   | Ellison       | Galesburg          | IL    | 61401 |
| 1296 | Nancy     | Engelsberg    | Chicago            | IL    | 60637 |
| 1297 | Heather   | Falduto       | Chicago            | IL    | 60640 |
| 1298 | Diane     | Fascione      | Oak Park           | IL    | 60302 |
| 1299 | Susan     | Feit          | Glenview           | IL    | 60025 |
| 1300 | Paulette  | Finnegan      | Elmhurst           | IL    | 60126 |
| 1301 | Marlin    | Fourman, Jr.  | Mahomet            | IL    | 61853 |
| 1302 | Lorri     | Francis       | Chicago            | IL    | 60622 |

|      | FIRST        | LAST        | CITY              | STATE | ZIP    |
|------|--------------|-------------|-------------------|-------|--------|
| 1303 | Jari         | Franklin    | Chicago           | IL    | 60634  |
| 1304 | Elizabeth    | friedman    | Evanston          | IL    | 60202  |
| 1305 | Kenneth      | Fugate      | Peoria            | IL    | 61614  |
| 1306 | Marge        | Gamboa      | Hinsdale          | IL    | 60521  |
| 1307 | Carolyn      | Gann        | Steger            | IL    | 60475  |
| 1308 | Theresa      | Garcia      | Elburn            | IL    | 60119  |
| 1309 | Kathy        | Giles       | DeKalb            | IL    | 60115  |
| 1310 | mark         | gillono     | aurora            | IL    | 60503  |
| 1311 | Julia        | Glahn       | Urbana            | IL    | 61801  |
| 1312 | Jennifer     | Gleich      | Briidgeview       | IL    | 60455  |
| 1313 | Rebecca      | Gordon      | Grayslake         | IL    | 60030  |
| 1314 | Nancy        | Grant       | Sullivan          | IL    | 61951  |
| 1315 | Ingrid       | Graudins    | Chicago           | IL    | 60647  |
| 1316 | Lisa         | Griffith    | Chicago           | IL    | 60640  |
| 1317 | Lisa         | Griffith    | Chicago           | IL    | 60640  |
| 1318 | Jacquelyn    | Gross       | Carlinville       | IL    | 62626  |
| 1319 | Ravi         | Grover      | Chicago           | IL    | 60680  |
| 1320 | SARAH        | Gust        | Naperville        | IL    | 60565  |
| 1321 | David        | Gustafson   | Moline            | IL    | 61265  |
| 1322 | Heath        | Hancock     | Rock Island       | IL    | 61201  |
| 1323 | Michelle     | Hansen      | St. Charles       | IL    | 60175  |
| 1324 | Jodi         | Hanson      | Arlington Heights | IL    | 60005  |
| 1325 | melissa      | haug        | macomb            | IL    | 61455  |
| 1326 | Michelle     | Hayes       | Lake Villa        | IL    | 60046  |
| 1327 | Christopher  | Heuman      | Elburn            | IL    | 60119  |
| 1328 | whitney      | hicks       | downers grove     | IL    | 60515  |
| 1329 | Vicki        | High        | Chicago Heights   | IL    | 60411  |
| 1330 | Beth         | Horwitz     | Chicago           | IL    | 60610  |
| 1331 | Jackie       | Huegen      | Sandoval          | IL    | 62882  |
| 1332 | Tina and Tom | Jackson     | Urbana            | IL    | 61801  |
| 1333 | Shawn        | Janzen      | Carpentersville   | IL    | 60110  |
| 1334 | Phyllis      | Judelson    | Chicago           | IL    | 606014 |
| 1335 | Gina         | Kalama      | Mount Prospect    | IL    | 60056  |
| 1336 | DIANE        | KASTEL      | WHEATON           | IL    | 60187  |
| 1337 | DIANE        | KASTEL      | WHEATON           | IL    | 60187  |
| 1338 | DIANE        | KASTEL      | WHEATON           | IL    | 60187  |
| 1339 | Marri        | Kelly-Banks | Elgin             | IL    | 60120  |
| 1340 | Terry        | Kludt       | Chicago           | IL    | 60618  |
| 1341 | Heather      | Knowles     | Oak Brook         | IL    | 60523  |
| 1342 | Karen        | Kortsch     | Lake Bluff        | IL    | 60044  |
| 1343 | Kathy        | Kosabucki   | Chicago           | IL    | 60618  |
| 1344 | LuAnn        | Kowar       | Chicago           | IL    | 60645  |
| 1345 | Judy         | Krach       | Hazel Crest       | IL    | 60429  |
| 1346 | Philip       | Kritzman    | Chicago           | IL    | 60646- |
| 1347 | MaryLu       | Krueger     | Braidwood         | IL    | 60408  |
| 1348 | Pamela       | Kunke       | Minooka           | IL    | 60447  |
| 1349 | Sandra       | Kusch       | Rolling Meadows   | IL    | 60008  |
| 1350 | Maggie       | Lakota-Ryan | Chicago Heights   | IL    | 60411  |
| 1351 | Steven       | Langer      | Park Forest       | IL    | 60466  |
| 1352 | Denise       | Layton      | Moline            | IL    | 61265  |
| 1353 | jo           | laz         | chicago           | IL    | 60623  |
| 1354 | Denise       | Lech        | Monee             | IL    | 60449  |
| 1355 | michael      | lechner     | Downers Grove     | IL    | 60515  |
| 1356 | Doris        | Lein        | Yorkville         | IL    | 60560  |
| 1357 | Mary Jane    | Little      | Glen Carbon       | IL    | 62034  |
| 1358 | Carita       | Lopez       | Milan             | IL    | 61264  |
| 1359 | Tracy        | Lopez       | Westmont          | IL    | 60559  |
| 1360 | Hope "Uma"   | Lovro       | sycamore          | IL    | 60178  |
| 1361 | Nick         | Lovro       | Sycamore          | IL    | 60178  |
| 1362 | laura        | lucas       | hinckley          | IL    | 60520  |
| 1363 | James        | m           | Sycamore          | IL    | 60178  |
| 1364 | Kenton       | Macy        | Charleston        | IL    | 61920  |

|      | FIRST            | LAST               | CITY              | STATE | ZIP    |
|------|------------------|--------------------|-------------------|-------|--------|
| 1365 | Eric             | Malek              | Normal            | IL    | 61761  |
| 1366 | Stavros          | Maltezos           | Clarendon Hills   | IL    | 60514  |
| 1367 | Josh             | Manchester         | chicago           | IL    | 60622  |
| 1368 | Laurie           | Manis              | Rock Island       | IL    | 61201  |
| 1369 | Seth             | Marcus             | Prospect Heights  | IL    | 60070  |
| 1370 | Camille          | McCarthy           | East Peoria       | IL    | 61611  |
| 1371 | Glenda           | McCarthy           | Loves Park        | IL    | 61111  |
| 1372 | Judi             | McClenahan         | Matteson          | IL    | 60443  |
| 1373 | Shelly           | McGrath            | Lansing           | IL    | 60438  |
| 1374 | Kjerstine        | McHugh             | Chicago           | IL    | 60660  |
| 1375 | Tim              | McKeever           | Yorkville         | IL    | 60560  |
| 1376 | Mike             | McWilliams         | Lake Zurich       | IL    | 60047  |
| 1377 | RANDY            | MERMEL             | ROSCOE            | IL    | 61073  |
| 1378 | Tanya            | Milanowski         | Pontiac           | IL    | 61764  |
| 1379 | Shayla           | Miles              | Lockport          | IL    | 60441  |
| 1380 | J. W. & Mary Lee | Milton             | Urbana            | IL    | 61801  |
| 1381 | milton           | modjeski           | tinley park       | IL    | 60477  |
| 1382 | Linda            | Montayne           | Highland          | IL    | 62249  |
| 1383 | Marci            | Moss               | Highland Park     | IL    | 60035  |
| 1384 | Mary             | Moyle              | East Moline       | IL    | 61244  |
| 1385 | Dina             | Muellman           | Chicago           | IL    | 60626- |
| 1386 | sylvia           | myers              | paw paw           | IL    | 61353  |
| 1387 | Sandy            | Nehrling           | Wheaton           | IL    | 60187  |
| 1388 | Cheri            | Newman             | Decatur           | IL    | 62526  |
| 1389 | Robert           | O'Brien            | Chicago           | IL    | 60618  |
| 1390 | Rose             | Ogorzaly           | Chicago           | IL    | 60655  |
| 1391 | Rose             | Ogorzaly           | Chicago           | IL    | 60655  |
| 1392 | La               | Olsen              | wauconda          | IL    | 60084  |
| 1393 | Bridget          | O'Neill            | Champaign         | IL    | 61820  |
| 1394 | Lori             | Oostendorp         | rockton           | IL    | 61072  |
| 1395 | Heather          | Orn                | Rantoul           | IL    | 61866  |
| 1396 | Anita            | Oxley              | Chicago           | IL    | 60659  |
| 1397 | Dennis           | Paige              | Schaumburg        | IL    | 60193  |
| 1398 | Helene           | Palser             | CHICAGO           | IL    | 60618  |
| 1399 | Andy             | Panelli            | Homer Glen        | IL    | 60491  |
| 1400 | Nicolette        | Pawlowski          | Urbana            | IL    | 61801  |
| 1401 | Richard          | Penner             | Lombard           | IL    | 60148  |
| 1402 | Joyce            | Pfennig            | Champaign         | IL    | 61821  |
| 1403 | Becky            | Phillips           | Robinson          | IL    | 62454  |
| 1404 | Gregory          | Pickett            | Villa Park        | IL    | 60181  |
| 1405 | Harold           | Piggott            | Glen Carbon       | IL    | 62034  |
| 1406 | Eric             | Pihl               | Arlington Heights | IL    | 60005  |
| 1407 | Jennifer         | Probst             | Chicago           | IL    | 60657  |
| 1408 | Christine        | Pylypowycz         | Chicago           | IL    | 60707  |
| 1409 | Michael          | Quirk              | Evergreen Park    | IL    | 60805  |
| 1410 | William          | Recher             | Champaign         | IL    | 61821  |
| 1411 | Jack             | Reef               | Naperville        | IL    | 60564  |
| 1412 | Amy              | Robison            | Wood Dale         | IL    | 60191  |
| 1413 | Rachel           | Rogge              | Champaign         | IL    | 61821  |
| 1414 | donna            | roman              | calumet city      | IL    | 60409  |
| 1415 | anne             | romanow            | Schaumburg        | IL    | 60193  |
| 1416 | Jennifer         | Romans             | Lske Forest       | IL    | 60045  |
| 1417 | ellen            | roth               | Chicago           | IL    | 60657  |
| 1418 | Jill             | runnion-gillono    | aurora            | IL    | 60503  |
| 1419 | Jill             | runnion-gillono    | aurora            | IL    | 60503  |
| 1420 | Ronald           | Rutzky             | Homewood          | IL    | 60430  |
| 1421 | Cecelia          | Samp               | Schiller Park     | IL    | 60176  |
| 1422 | Craig            | Scheunemann        | Chicago           | IL    | 60613  |
| 1423 | Peggy            | Schramm            | Waukegan          | IL    | 60085  |
| 1424 | Patricia         | Schreiber          | lansing           | IL    | 60438  |
| 1425 | chris            | schroeer-heiermann | normal            | IL    | 61761  |
| 1426 | Misty            | Schultheis         | Chana             | IL    | 61015  |

|      | FIRST             | LAST         | CITY          | STATE | ZIP    |
|------|-------------------|--------------|---------------|-------|--------|
| 1427 | Paul              | Schutt       | Chicago       | IL    | 60607  |
| 1428 | Roxann            | Shadrick     | Decatur       | IL    | 62526  |
| 1429 | shane             | Shannon      | morris        | IL    | 60450  |
| 1430 | Natasha           | Shpillar     | Chicago       | IL    | 60626  |
| 1431 | Amy               | Shriberg     | Grayslake     | IL    | 60030  |
| 1432 | Roseanne          | Silva        | Chicago       | IL    | 60625  |
| 1433 | Lucille           | Skibinski    | Caseyville    | IL    | 62232  |
| 1434 | Michael           | Skidmore     | Chicago       | IL    | 60660  |
| 1435 | Alison            | Smith        | Blue Island   | IL    | 60406  |
| 1436 | Courtney          | Smith        | Carbondale    | IL    | 62901  |
| 1437 | Dacia             | Soulliere    | DeKalb        | IL    | 60115  |
| 1438 | Eric              | Spielman     | Amboy         | IL    | 61310  |
| 1439 | Stephen           | Spitzer      | Chicago       | IL    | 60626  |
| 1440 | kris              | srail        | geneva        | IL    | 60134  |
| 1441 | Joyce             | Stempinski   | Chicago       | IL    | 60608  |
| 1442 | Mark              | stenftenagel | Elmhurst      | IL    | 60126  |
| 1443 | Florence          | Sullivan     | Chicago       | IL    | 60630  |
| 1444 | Alexandra         | Sweitzer     | Cary          | IL    | 60013  |
| 1445 | Tom               | Szumigalski  | Mokena        | IL    | 60448  |
| 1446 | Camilla           | Taylor       | Chicago       | IL    | 60618  |
| 1447 | Lauren            | Thiesen      | Park Forest   | IL    | 60466  |
| 1448 | Cindy             | Thomsen      | Chicago       | IL    | 60640  |
| 1449 | Amy               | Tournoux     | Mahomet       | IL    | 61853  |
| 1450 | Katie             | Tremaine     | Rockford      | IL    | 61107  |
| 1451 | Kay               | Trevvarthen  | Glenview      | IL    | 60025  |
| 1452 | G.                | Trubow       | Chicago       | IL    | 60610  |
| 1453 | Meredith C.       | Tucker       | Inverness     | IL    | 60067  |
| 1454 | Sharon            | Tucker       | East Peoria   | IL    | 61611  |
| 1455 | SUSAN             | TURNER       | WORTH         | IL    | 60482  |
| 1456 | Deborah           | Uhlman       | Chicago       | IL    | 60611  |
| 1457 | Jeffrey           | van Davis    | Aurora        | IL    | 60506  |
| 1458 | Terri             | Voitik       | Aurora        | IL    | 60502- |
| 1459 | Kathleen          | Volling      | Antioch       | IL    | 60002  |
| 1460 | Judith            | Wagner       | Glendale Hts  | IL    | 60139  |
| 1461 | L.S.              | Wanner       | Milford       | IL    | 60953  |
| 1462 | Terrence          | Ward         | Midlothian    | IL    | 60445  |
| 1463 | Janet             | Waters       | Belvidere     | IL    | 61008  |
| 1464 | Deborah           | Weber        | Chicago       | IL    | 60630  |
| 1465 | Jennifer          | Wegmann      | Chicago       | IL    | 60615  |
| 1466 | Apryll            | White        | Chicago       | IL    | 60657  |
| 1467 | Melissa           | Wilfenger    | Blue Island   | IL    | 60406  |
| 1468 | Teresa            | Williams     | Yorkville     | IL    | 60560  |
| 1469 | Suzanne           | Willis       | DeKalb        | IL    | 60115  |
| 1470 | TODD              | WILSON       | BLOOMINGTON   | IL    | 61701  |
| 1471 | lauretta m        | wolf         | elburn        | IL    | 60119  |
| 1472 | Brett             | Wolfson      | Saint Charles | IL    | 60175  |
| 1473 | DANIEL            | WONG         | chicago       | IL    | 60616  |
| 1474 | Don               | Wood         | Naperville    | IL    | 60565  |
| 1475 | Margaret H.       | Wood         | Naperville    | IL    | 60565  |
| 1476 | katarzyna         | Zalecka      | chicago       | IL    | 60707  |
| 1477 | Mark              | Zollner      | Palatine      | IL    | 60067  |
| 1478 | James             | A Clark Jr   | Indianapolis  | IN    | 46254  |
| 1479 | Elaine            | Abell        | South Bend    | IN    | 46628  |
| 1480 | Elaine            | Abell        | South Bend    | IN    | 46628  |
| 1481 | Bruce             | B            | Lebanon       | IN    | 46052  |
| 1482 | susan             | biggs        | albion        | IN    | 46701  |
| 1483 | Melanie           | Blackburn    | Fort Wayne    | IN    | 46804  |
| 1484 | Steven            | Booher       | South Bend    | IN    | 46614  |
| 1485 | David Paul Xavier | Burch        | South Bend    | IN    | 46614  |
| 1486 | David Paul Xavier | Burch        | South Bend    | IN    | 46614  |
| 1487 | Corinne           | Casey        | Indianapolis  | IN    | 46235  |
| 1488 | Luciana           | Catanzaro    | Yorktown      | IN    | 47396  |

|      | FIRST       | LAST       | CITY           | STATE | ZIP   |
|------|-------------|------------|----------------|-------|-------|
| 1489 | Patricia    | Chang      | Indianapolis   | IN    | 46260 |
| 1490 | Marcella    | Ciucki     | Munster        | IN    | 46321 |
| 1491 | Julie       | Cooper     | Lafayette      | IN    | 47909 |
| 1492 | Danielle    | Cortier    | Muncie         | IN    | 47303 |
| 1493 | H           | Crane      | Indpls         | IN    | 46227 |
| 1494 | Melissa     | Crow       | Indianapolis   | IN    | 46220 |
| 1495 | Judy        | Dolan      | Indianapolis   | IN    | 46236 |
| 1496 | Tina        | Doolen     | Evansville     | IN    | 47715 |
| 1497 | Nancy       | Fischer    | Middletown     | IN    | 47356 |
| 1498 | KATHERINE   | FOX        | evansville     | IN    | 47715 |
| 1499 | Michele     | Gannon     | Mooreville     | IN    | 46158 |
| 1500 | Gabriel     | Gardner    | Fort Wayne     | IN    | 46805 |
| 1501 | Kathryn     | Gray       | Danville       | IN    | 46122 |
| 1502 | Betty Jayne | Gregory    | Lafayette      | IN    | 47909 |
| 1503 | Stephen     | Grimes     | Bloomington    | IN    | 47401 |
| 1504 | Shannon     | Gross      | Indianapolis   | IN    | 46260 |
| 1505 | Katherine   | Hamilton   | Greenfield     | IN    | 46140 |
| 1506 | Rebecca     | Harris     | Logansport     | IN    | 46947 |
| 1507 | Emily       | Heinlen    | Bloomington    | IN    | 47401 |
| 1508 | Doreen      | Howard     | Mishawaka      | IN    | 46544 |
| 1509 | ilene       | howard     | Rochester      | IN    | 46975 |
| 1510 | William     | Iltzsche   | Valparaiso     | IN    | 46383 |
| 1511 | Jeanete     | Johnson    | Indianapolis   | IN    | 46205 |
| 1512 | Jeanete     | Johnson    | Indianapolis   | IN    | 46205 |
| 1513 | Jeanete     | Johnson    | Indianapolis   | IN    | 46205 |
| 1514 | glenn       | kinduell   | fort wayne     | IN    | 46804 |
| 1515 | John        | Kirchner   | Fort Wayne     | IN    | 46807 |
| 1516 | Mary        | Kizer      | Bluffton       | IN    | 46714 |
| 1517 | Amanda      | Langley    | Bloomington    | IN    | 47401 |
| 1518 | Beth        | Laurer     | Crawfordsville | IN    | 47933 |
| 1519 | brennen     | laws       | indianapolis   | IN    | 46234 |
| 1520 | Arlene      | Leas       | Richmond       | IN    | 47374 |
| 1521 | Keith       | Lyle       | Jeffersonville | IN    | 47130 |
| 1522 | Amber       | Mahaffey   | Auburn         | IN    | 46706 |
| 1523 | Nicole      | Marshall   | New Palestine  | IN    | 46163 |
| 1524 | Tami        | Matthews   | Schererville   | IN    | 46375 |
| 1525 | Hannah      | McBrayer   | Merrillville   | IN    | 46410 |
| 1526 | Mike        | McCartin   | Fort Wayne     | IN    | 46804 |
| 1527 | Michele     | McKinley   | Anderson       | IN    | 46011 |
| 1528 | Robin       | McLean     | Lafayette      | IN    | 47904 |
| 1529 | Keith       | Myers      | Indianapolis   | IN    | 46227 |
| 1530 | RaeJean     | Myers      | Martinsville   | IN    | 46151 |
| 1531 | Cynthia     | Nord       | Indianapolis   | IN    | 46268 |
| 1532 | Brad        | Oldfather  | Lafayette      | IN    | 47904 |
| 1533 | rosemarie   | overstreet | Indianapolis   | IN    | 46240 |
| 1534 | Velda       | Overton    | Indianapolis   | IN    | 46219 |
| 1535 | karen       | Paradiso   | Carmel         | IN    | 46033 |
| 1536 | John        | Payne      | Bedford        | IN    | 47421 |
| 1537 | John        | Payne      | Bedford        | IN    | 47421 |
| 1538 | Laura       | Phillips   | Highland       | IN    | 46322 |
| 1539 | reza        | Pishgahi   | bloomigton     | IN    | 47408 |
| 1540 | Ellen       | Popodi     | Bloomington    | IN    | 47401 |
| 1541 | paul        | schneller  | Bloomington    | IN    | 47408 |
| 1542 | Rita        | Schroeder  | Mishawaka      | IN    | 46545 |
| 1543 | Eric        | Shuler     | South Bend     | IN    | 46628 |
| 1544 | Carissa     | Shumaker   | Indianapolis   | IN    | 46236 |
| 1545 | April       | Tchiguka   | Indianapolis   | IN    | 46254 |
| 1546 | Marion      | Tidwell    | Merrillville   | IN    | 46410 |
| 1547 | Diane       | Turner     | Indianapolis   | IN    | 46219 |
| 1548 | James       | Watkins    | Hebron         | IN    | 46341 |
| 1549 | Leslie      | Bissell    | Kansas City    | KS    | 66103 |
| 1550 | Lindsay     | Bollacker  | Manhattan      | KS    | 66502 |



|      | FIRST        | LAST        | CITY          | STATE | ZIP   |
|------|--------------|-------------|---------------|-------|-------|
| 1551 | Katherine    | Borghardt   | Ottawa        | KS    | 66067 |
| 1552 | Martha       | Brand       | smith center  | KS    | 66967 |
| 1553 | David        | Brunner     | Ottawa        | KS    | 66067 |
| 1554 | Terri        | Chartier    | Great Bend    | KS    | 67530 |
| 1555 | J            | Dean        | Shawnee       | KS    | 66216 |
| 1556 | Roberta      | Ferrara     | Oveland Park  | KS    | 66212 |
| 1557 | KENNETH      | GAKELER     | OVERLAND PARK | KS    | 66210 |
| 1558 | Zona         | Hays        | Salina        | KS    | 67401 |
| 1559 | margaret     | hedden      | kansas city   | KS    | 66103 |
| 1560 | Danny        | Helton      | Topeka        | KS    | 66605 |
| 1561 | Cheryl       | Hewitt      | Lawrence      | KS    | 66047 |
| 1562 | Cindy        | Jones       | Overland Park | KS    | 66212 |
| 1563 | Randy        | Kirkpatrick | Cherryvale    | KS    | 67335 |
| 1564 | Randy        | Kirkpatrick | Cherryvale    | KS    | 67335 |
| 1565 | Kori         | Kuehl       | Olathe        | KS    | 66062 |
| 1566 | Mark         | Lesher      | Leavenworth   | KS    | 66048 |
| 1567 | Karen        | Martellaro  | Lenexa        | KS    | 66215 |
| 1568 | Karla        | Mowdy       | Wichita       | KS    | 67212 |
| 1569 | Lucinda      | Nelson      | Salina        | KS    | 67401 |
| 1570 | charles      | raiteri     | lawrence      | KS    | 66044 |
| 1571 | Laura        | Routh       | Lawrence      | KS    | 66046 |
| 1572 | Vanessa      | Sanburn     | Wichita       | KS    | 67216 |
| 1573 | catherine    | steer       | scammon       | KS    | 66773 |
| 1574 | John         | Strickler   | Topeka        | KS    | 66606 |
| 1575 | Frances      | Tan         | Lawrence      | KS    | 66047 |
| 1576 | victoria     | valentine   | norwich       | KS    | 67118 |
| 1577 | Theresa      | Vaughn      | Overland Park | KS    | 66210 |
| 1578 | Christin     | Wasson      | Topeka        | KS    | 66605 |
| 1579 | Maria        | Weir        | Roeland Park  | KS    | 66205 |
| 1580 | Steve        | Wurtz       | Olathe        | KS    | 66062 |
| 1581 | Linda        | Young       | Parsons       | KS    | 67357 |
| 1582 | Natalie      | Abram       | Louisville    | KY    | 40220 |
| 1583 | Wanda        | Baldwin     | Cornettsville | KY    | 41731 |
| 1584 | laura        | Bechtel     | nicholasville | KY    | 40356 |
| 1585 | Angela       | Board       | louisville    | KY    | 40216 |
| 1586 | Thomas       | Board       | Covington     | KY    | 41016 |
| 1587 | Margaret     | Brooks      | Parksville    | KY    | 40464 |
| 1588 | Wendy        | Brown       | Burlington    | KY    | 41005 |
| 1589 | Anthony      | Carpio      | Louisville    | KY    | 40205 |
| 1590 | Emily        | Carr        | Crestwood     | KY    | 40014 |
| 1591 | Christa      | Dailey      | Paducah       | KY    | 42001 |
| 1592 | Carol        | DeYoung     | Richmond      | KY    | 40475 |
| 1593 | Diane        | Ellis       | Florence      | KY    | 41042 |
| 1594 | William      | Flerlage    | Fort Mitchell | KY    | 41017 |
| 1595 | Dave         | Gentry      | Frankfort     | KY    | 40604 |
| 1596 | Lori         | Gentry      | Madisonville  | KY    | 42431 |
| 1597 | Adrien-Alice | Hansel      | Louisville    | KY    | 40202 |
| 1598 | helen        | hastings    | louisville    | KY    | 40214 |
| 1599 | Merissa      | Hatcher     | Louisville    | KY    | 40291 |
| 1600 | Cheryl       | Henderson   | Somerset      | KY    | 42503 |
| 1601 | Denis        | Hildenbrand | Lexington     | KY    | 40504 |
| 1602 | sarah        | holland     | louisville    | KY    | 40205 |
| 1603 | Linda J      | Hopper      | Harrodsburg   | KY    | 40330 |
| 1604 | Virginia     | Johnson     | Morning View  | KY    | 41063 |
| 1605 | Nancy        | Lester      | Elsmere       | KY    | 41018 |
| 1606 | ANNE         | LEWIS       | LEXINGTON     | KY    | 40503 |
| 1607 | Dave         | ILuckens    | Covington     | KY    | 41011 |
| 1608 | Debra        | Lovell      | Monticello    | KY    | 42633 |
| 1609 | Keith        | MacDonald   | Louisville    | KY    | 40218 |
| 1610 | Laura        | Manges      | Berea         | KY    | 40403 |
| 1611 | Moir         | McGrath     | Louisville    | KY    | 40207 |
| 1612 | Linda        | Mikesell    | Louisville    | KY    | 40203 |

|      | FIRST      | LAST            | CITY              | STATE | ZIP   |
|------|------------|-----------------|-------------------|-------|-------|
| 1613 | Robert     | Mitchell        | Lexington         | KY    | 40502 |
| 1614 | Connell    | Morrison        | Louisville        | KY    | 40205 |
| 1615 | Jim        | Oxyer           | Louisville        | KY    | 40203 |
| 1616 | Carlene    | Petty           | Shepherdsville    | KY    | 40165 |
| 1617 | Michael    | Plumley         | Crestwood         | KY    | 40014 |
| 1618 | Joan       | Raines-Phillips | Lawrenceburg      | KY    | 40342 |
| 1619 | Greta      | Ratliff         | Louisville        | KY    | 40245 |
| 1620 | Katherine  | Robinson        | Louisville        | KY    | 40205 |
| 1621 | Susan      | Saunders        | Louisville        | KY    | 40241 |
| 1622 | Anthony    | State           | Louisville        | KY    | 40215 |
| 1623 | Brian K.   | Sutton          | Bardstown         | KY    | 40004 |
| 1624 | Stephanie  | Swartzbaugh     | Newport           | KY    | 41071 |
| 1625 | Cherie     | Townsend        | Louisville        | KY    | 40204 |
| 1626 | Robert     | Zai III         | Ft. Thomas        | KY    | 41075 |
| 1627 | Robert     | Zai III         | Ft. Thomas        | KY    | 41075 |
| 1628 | Stacy      | Araune          | Shreveport        | LA    | 71104 |
| 1629 | Marie      | Badeaux         | Marrero           | LA    | 70072 |
| 1630 | Tamara     | Bannister       | Fort Polk         | LA    | 71459 |
| 1631 | Linda      | Bonura          | Denham Springs    | LA    | 70726 |
| 1632 | Linda      | Bonura          | Denham Springs    | LA    | 70726 |
| 1633 | Roy        | Bonura          | Denham Springs    | LA    | 70726 |
| 1634 | Roy        | Bonura          | Denham Springs    | LA    | 70726 |
| 1635 | Loretta    | Brogan          | Shreveport        | LA    | 71104 |
| 1636 | Frankie    | Cansler         | Avondale          | LA    | 70094 |
| 1637 | Philip     | Chandler        | Baton Rouge       | LA    | 70802 |
| 1638 | Jerrica    | Crosby          | Cut Off           | LA    | 70345 |
| 1639 | Jeffrey    | Dubinsky        | Greenwell Springs | LA    | 70739 |
| 1640 | judy       | dunn            | Raceland          | LA    | 70394 |
| 1641 | Denise     | Evans           | Lake Charles      | LA    | 70607 |
| 1642 | Patricia   | Ferrara         | Bush              | LA    | 70431 |
| 1643 | Nicholas   | Frederick       | Abbeville         | LA    | 70510 |
| 1644 | Roxanne    | Hadnott         | Breaux Bridge     | LA    | 70517 |
| 1645 | Melody     | Halligan        | Slidell           | LA    | 70461 |
| 1646 | Tricia     | Macke           | Luling            | LA    | 70070 |
| 1647 | VINCENT    | MARTINEZ        | MONTZ             | LA    | 70068 |
| 1648 | Donald     | McLellan        | Sun               | LA    | 70463 |
| 1649 | Paola      | Medina          | New Orleans       | LA    | 70118 |
| 1650 | Corinne    | Myers           | Lafayette         | LA    | 70506 |
| 1651 | Kim        | Nunez           | Meraux            | LA    | 70075 |
| 1652 | susanna    | nylander        | vantaa            | LA    | 1350  |
| 1653 | Tim        | Pulley          | Bossier City      | LA    | 71111 |
| 1654 | Timothy    | Pulley          | Natchitoches      | LA    | 71457 |
| 1655 | Janet      | Schmauss        | Waggaman          | LA    | 70094 |
| 1656 | Nancy      | Spears          | Bossier City      | LA    | 71112 |
| 1657 | Helen      | Tanguis         | Baton Rouge       | LA    | 70816 |
| 1658 | Marianne   | Thompson        | New Orleans       | LA    | 70118 |
| 1659 | Karen      | Tschetter       | new orleans       | LA    | 70115 |
| 1660 | Emily      | Venema          | New Orleans       | LA    | 70117 |
| 1661 | David      | Wahl            | River Ridge       | LA    | 70123 |
| 1662 | Angela     | Walden          | Leesville         | LA    | 71446 |
| 1663 | NK         | Acevedo         | Revere            | MA    | 2151  |
| 1664 | Jude       | Ayer            | Worcester         | MA    | 1606  |
| 1665 | Barbara    | Azzalina        | Medford           | MA    | 2155  |
| 1666 | Karen      | Baker           | Harwich           | MA    | 2645  |
| 1667 | Jacob      | Barnett         | marblehead        | MA    | 1945  |
| 1668 | lisa       | barondes        | florence          | MA    | 1062  |
| 1669 | Robert     | Barrington      | Beverly           | MA    | 1915  |
| 1670 | Victoria T | Barstow         | Ashland           | MA    | 1721  |
| 1671 | Jon        | Batchelder      | Braintree         | MA    | 2184  |
| 1672 | Batya      | Bauman          | Amherst           | MA    | 1002  |
| 1673 | Courtney   | Beaulieu        | Pittsfield        | MA    | 1201  |
| 1674 | Christina  | Beck            | Roxbury           | MA    | 2119  |

|      | FIRST        | LAST         | CITY            | STATE | ZIP    |
|------|--------------|--------------|-----------------|-------|--------|
| 1675 | John         | Beck         | Cambridgeq      | MA    | 2141   |
| 1676 | Noel         | Bednaz       | Southwick       | MA    | 1077   |
| 1677 | Ricki        | Bennett      | Somerville      | MA    | 2144   |
| 1678 | Paul         | Bernstein    | boston          | MA    | 2210   |
| 1679 | michaelann   | bewsee       | springfield     | MA    | 1109   |
| 1680 | Holly Martel | Bourbon      | Mattapoisett    | MA    | 2739   |
| 1681 | Kenneth      | Bozek        | South Hadley    | MA    | 1075   |
| 1682 | barbara      | bradley      | wellfleet       | MA    | 2667   |
| 1683 | abbey        | brown        | waltham         | MA    | 24543  |
| 1684 | Catherine    | Brown        | Plymouth        | MA    | 2360   |
| 1685 | Beth         | Bryant       | Watertown       | MA    | 2472   |
| 1686 | Chris        | Buelow       | Hardwick        | MA    | 1037   |
| 1687 | eMILY        | BUMSTEAD     | COHASSET        | MA    | 2025   |
| 1688 | Mary Ellen   | Bunnell      | Yarmouthport    | MA    | 2675   |
| 1689 | Rachel L     | Buswell      | S.Attleboro     | MA    | 2703   |
| 1690 | Caitlin      | Campbell     | Groton          | MA    | 1450   |
| 1691 | Jordan       | Carduner     | Northampton     | MA    | 1060   |
| 1692 | john         | cevasco      | northfield      | MA    | 01360- |
| 1693 | Julia        | Chapin       | Northampton     | MA    | 1060   |
| 1694 | Lori         | Chilcote     | Ludlow          | MA    | 1056   |
| 1695 | linda        | clave        | brighton        | MA    | 2135   |
| 1696 | Wendy        | Clothier     | Pittsfield      | MA    | 1201   |
| 1697 | bruce        | cohen        | worcester       | MA    | 1602   |
| 1698 | linda        | cohen        | west tisbury    | MA    | 2575   |
| 1699 | Peter        | Cohen        | Newton          | MA    | 2467   |
| 1700 | D            | Cooper       | N. Chelmsford   | MA    | 1863   |
| 1701 | Barbara      | Cowan        | Cambridge       | MA    | 2138   |
| 1702 | Eileen M.    | Craffey      | Middleboro      | MA    | 2346   |
| 1703 | anni         | crofut       | housatonic      | MA    | 1236   |
| 1704 | jim          | damiano      | Watertown       | MA    | 2472   |
| 1705 | susan        | Darish       | Malden          | MA    | 2148   |
| 1706 | Sarah        | Dayal        | Auckland        | MA    | 90210  |
| 1707 | Kathleen     | DeLory       | TAunton         | MA    | 2780   |
| 1708 | Cay          | Den Herder   | uxbridge        | MA    | 1569   |
| 1709 | Laurie       | Denis        | Salem           | MA    | 1970   |
| 1710 | Sandra       | Denninger    | East Taunton    | MA    | 2718   |
| 1711 | Kerrie       | D'Ercole     | hingham         | MA    | 2043   |
| 1712 | judy         | desreuisseau | Gill            | MA    | 1354   |
| 1713 | Judy         | Dietel       | South Hadley    | MA    | 1075   |
| 1714 | Katy         | Doan         | South Dartmouth | MA    | 2748   |
| 1715 | Rafal        | Dobrowolski  | Northampton     | MA    | 1060   |
| 1716 | Stephen      | Donnelly     | Easthampton     | MA    | 1027   |
| 1717 | Karen        | Dost         | Saugus          | MA    | 1906   |
| 1718 | Marguerite   | Doyle        | West Roxbury    | MA    | 2132   |
| 1719 | Sharon       | Dudelson     | Brookline       | MA    | 2446   |
| 1720 | Erik         | Duerr        | Groton          | MA    | 1450   |
| 1721 | Angelet      | Dupras       | fall river      | MA    | 2724   |
| 1722 | Anne         | Eberle       | Ashfield        | MA    | 1330   |
| 1723 | Judith       | Embry        | Florida         | MA    | 1247   |
| 1724 | Bonnie       | Faith-Smith  | Cambridge       | MA    | 2139   |
| 1725 | Eva          | Faria        | weymouth        | MA    | 2190   |
| 1726 | Juliet       | Farrell      | Marstons Mills  | MA    | 2648   |
| 1727 | Sheila       | Feilteau     | Salem           | MA    | 1970   |
| 1728 | Ruth         | Fisher       | Acushnet        | MA    | 2743   |
| 1729 | Sally        | Fisher       | Worthington     | MA    | 1098   |
| 1730 | Charlotte    | Fitzgerald   | Weymouth        | MA    | 2188   |
| 1731 | sharon       | florio       | Oak Bluffs      | MA    | 2557   |
| 1732 | Robert L     | Foley Jr     | S.Attleboro     | MA    | 2703   |
| 1733 | Catherine    | Fors         | Chelmsford      | MA    | 1824   |
| 1734 | Heidi        | Foubare      | Framingham      | MA    | 1701   |
| 1735 | william      | galli        | n.adams         | MA    | 1247   |
| 1736 | Celine       | Gandolfo     | Provincetown    | MA    | 2657   |

|      | FIRST      | LAST       | CITY             | STATE | ZIP  |
|------|------------|------------|------------------|-------|------|
| 1737 | Bernard    | Gannon     | Templeton        | MA    | 1468 |
| 1738 | jenna      | garvey     | hardwick         | MA    | 1037 |
| 1739 | Jesse L.   | Gildesgame | Arlington        | MA    | 2476 |
| 1740 | Jesse L.   | Gildesgame | Arlington        | MA    | 2476 |
| 1741 | Ian        | Giles      | Boston           | MA    | 1060 |
| 1742 | Catie      | Gill       | Hanover          | MA    | 2339 |
| 1743 | Diane      | Gilpatrick | Wakefield        | MA    | 1880 |
| 1744 | Deborah    | Giniewicz  | North Oxford     | MA    | 1537 |
| 1745 | Leslie     | Glendye    | Somerset         | MA    | 2725 |
| 1746 | L          | Gols       | Natick           | MA    | 1760 |
| 1747 | Laney      | Goodman    | Bolton           | MA    | 1740 |
| 1748 | Karen      | Gorman     | Arlington        | MA    | 2476 |
| 1749 | Deanne     | Hart       | Walpole          | MA    | 2081 |
| 1750 | Brian      | Hebeisen   | Watertown        | MA    | 2472 |
| 1751 | John       | Hess       | Roslindale       | MA    | 2131 |
| 1752 | Lauren     | Hoffmann   | Waltham          | MA    | 2452 |
| 1753 | Kathryn    | Holland    | Jamaica Plain    | MA    | 2130 |
| 1754 | Susan      | Holland    | Lincoln          | MA    | 1773 |
| 1755 | Alexandra  | Houck      | Cambridge        | MA    | 2140 |
| 1756 | Holiday    | Houck      | Boston           | MA    | 2116 |
| 1757 | sally      | howard     | North Quincy     | MA    | 2171 |
| 1758 | Linda      | Howe       | Belmont          | MA    | 2478 |
| 1759 | Victoria   | I          | Somerville       | MA    | 2145 |
| 1760 | Sanita     | Ippolito   | REHOBOTH         | MA    | 2769 |
| 1761 | Eric       | James      | New Bedford,     | MA    | 2745 |
| 1762 | Catherine  | Jones      | Medford          | MA    | 2155 |
| 1763 | Jenny      | Jones      | Framingham       | MA    | 1702 |
| 1764 | Peter      | Kahn       | Southborough     | MA    | 1772 |
| 1765 | Cristy     | Karner     | Haverhill        | MA    | 1830 |
| 1766 | Isaac      | Kieffer    | Waltham          | MA    | 2453 |
| 1767 | laura      | kohn       | boston           | MA    | 2116 |
| 1768 | Robb       | Laak       | Sandwich         | MA    | 2563 |
| 1769 | Annie      | LaBounty   | west roxbury     | MA    | 2132 |
| 1770 | debra      | lafleur    | springfield      | MA    | 1104 |
| 1771 | james      | lafleur    | springfield      | MA    | 1104 |
| 1772 | Sarah      | Lais       | Great Barrington | MA    | 1230 |
| 1773 | Jane       | Lanzoni    | Plymouth         | MA    | 2360 |
| 1774 | Jessica    | Lanzoni    | Kingston         | MA    | 2364 |
| 1775 | annie      | laurie     | dracut           | MA    | 1826 |
| 1776 | lois       | levin      | waban            | MA    | 2468 |
| 1777 | Kathleen   | Lewis      | North Quincy     | MA    | 2171 |
| 1778 | Linda      | Lombardo   | Marlborough      | MA    | 1752 |
| 1779 | Pei Pei    | Ma         | Cambridge        | MA    | 2140 |
| 1780 | Joao       | Magalhaes  | Boston           | MA    | 2115 |
| 1781 | Anna       | Magnanti   | Wellesley        | MA    | 2481 |
| 1782 | Anna       | Magnanti   | Wellesley        | MA    | 2481 |
| 1783 | Brian      | Mahoney    | Boston           | MA    | 2113 |
| 1784 | Joanne     | Mainiero   | Braintree        | MA    | 2184 |
| 1785 | Barbara    | Malnati    | Richmond         | MA    | 1254 |
| 1786 | Jessica    | Manganello | Arlington        | MA    | 2474 |
| 1787 | Melanie    | McCormick  | Dighton          | MA    | 2715 |
| 1788 | Chad       | McGuire    | New Bedford      | MA    | 2740 |
| 1789 | Keri       | McManus    | Stoneham         | MA    | 2180 |
| 1790 | Patricia A | Medeiros   | Attleboro        | MA    | 2703 |
| 1791 | Lara       | Miletta    | Leominster       | MA    | 1453 |
| 1792 | Roger C.   | Miller     | Quincy           | MA    | 2171 |
| 1793 | Robert     | Mills      | Danvers          | MA    | 1923 |
| 1794 | Robert     | Mills      | Danvers          | MA    | 1923 |
| 1795 | Rebecca    | Monger     | West Barnstable  | MA    | 2668 |
| 1796 | janette    | Morrell    | weymouth         | MA    | 2191 |
| 1797 | William    | Mosso      | Lunenburg        | MA    | 1462 |
| 1798 | Janet      | Nirenberg  | Holliston        | MA    | 1746 |

|      | FIRST      | LAST           | CITY          | STATE | ZIP   |
|------|------------|----------------|---------------|-------|-------|
| 1799 | Elizabeth  | Nollner        | Duxbury       | MA    | 2332  |
| 1800 | Nanette    | Oggiono        | Upton         | MA    | 1568  |
| 1801 | Judy       | Ostertag       | Ashland       | MA    | 1721  |
| 1802 | Deniz      | Ozan-George    | Roxbury       | MA    | 2119  |
| 1803 | Leona      | Pease          | Holden        | MA    | 1520  |
| 1804 | Barbara    | Pelland        | Haydenville   | MA    | 1039  |
| 1805 | mary-ellen | perry          | cambridge     | MA    | 2139  |
| 1806 | Bethanie   | Petitpas       | Tewksbury     | MA    | 1876  |
| 1807 | Ellen      | Podolsky       | Medford       | MA    | 2155  |
| 1808 | Amanda     | Poverchuk      | Medford       | MA    | 2155  |
| 1809 | Susan      | Poverchuk      | Medford       | MA    | 2155  |
| 1810 | KP         | Powers         | Braintree     | MA    | 2184  |
| 1811 | Liz        | Recko-Morrison | Pittsfield    | MA    | 1201  |
| 1812 | Mary       | Reilly         | Beverly       | MA    | 1915  |
| 1813 | Ray        | Riley          | Orange        | MA    | 1364  |
| 1814 | Victoria   | Rose           | Boylston      | MA    | 1505  |
| 1815 | Margaret   | Rydant         | Northborough  | MA    | 1532  |
| 1816 | Joan       | Sadowski       | Wilmington    | MA    | 1887  |
| 1817 | Shawn      | Sargent        | West Yarmouth | MA    | 2673  |
| 1818 | Andrea     | Saunders       | Rockland      | MA    | 2370  |
| 1819 | toni       | siegrist       | cambridge     | MA    | 2138  |
| 1820 | Robyn      | Sliney         | Methuen       | MA    | 1844  |
| 1821 | Peggy      | Sloane         | Holliston     | MA    | 1746  |
| 1822 | Alison     | Smith          | Hingham       | MA    | 2043  |
| 1823 | Nancy      | Smith          | Fall River    | MA    | 2721  |
| 1824 | Elizabeth  | Sokol          | Lowell        | MA    | 1852  |
| 1825 | Rheua S.   | Stakely        | Marblehead    | MA    | 1945  |
| 1826 | marybeth   | stemp          | amesbury      | MA    | 1913  |
| 1827 | Lorraine   | Stepchin       | Groveland     | MA    | 1834  |
| 1828 | Karl       | Steudel        | Ashby         | MA    | 1431  |
| 1829 | Deanna     | Stillings,RN   | Carlisle      | MA    | 1741  |
| 1830 | David      | Strong         | Gardner       | MA    | 1440  |
| 1831 | Amanda     | Thomas         | Chicopee      | MA    | 1013  |
| 1832 | Brian      | Thompson       | Cambridge     | MA    | 2138  |
| 1833 | Bill       | Tower          | Worcester     | MA    | 1604  |
| 1834 | Jami       | Trager         | Raynham       | MA    | 2767  |
| 1835 | jen        | trott          | plymouth      | MA    | 2360  |
| 1836 | Donna      | Tucker         | Chelmsford    | MA    | 1824  |
| 1837 | Jeffrey    | Turner         | Pittsfield    | MA    | 1201  |
| 1838 | Frances    | Tuttle         | Hopkinton     | MA    | 1748  |
| 1839 | Karen      | Vayda          | Easthampton   | MA    | 1027  |
| 1840 | sandra     | veillette      | richmond      | MA    | 1254  |
| 1841 | Paula      | Viera          | Newbury       | MA    | 1951  |
| 1842 | Mary       | Waine          | Taunton       | MA    | 2780  |
| 1843 | Emma       | Ward           | Concord       | MA    | 1742  |
| 1844 | Cindy      | Warner         | Northfield    | MA    | 1360  |
| 1845 | Elizabeth  | Way            | Upton         | MA    | 1568  |
| 1846 | alex       | weiland        | arlington     | MA    | 2474  |
| 1847 | sherry     | weiland        | Arlington     | MA    | 2474  |
| 1848 | Kelley     | Wiley          | West Falmouth | MA    | 2574  |
| 1849 | Mary       | Wilson         | Springfield   | MA    | 1109  |
| 1850 | Susan      | Wozniak        | Winchester    | MA    | 1890  |
| 1851 | Linda      | Zaitlin        | Harvard       | MA    | 1451  |
| 1852 | Eric       | Zeiler         | Hull          | MA    | 2045  |
| 1853 | Art        | Zernis         | Worthington   | MA    | 1098  |
| 1854 | Luba       | Zhaurova       | Waltham       | MA    | 2453  |
| 1855 | dan        | zwicker        | revere        | MA    | 2151  |
| 1857 | Jonathon   | Alexander      | Silver Spring | MD    | 20901 |
| 1858 | Edma       | Antuna         | Rockville     | MD    | 20850 |
| 1859 | Martin     | Antuna         | Rockville     | MD    | 20850 |
| 1860 | stacy      | arnold         | millersville  | MD    | 21108 |
| 1861 | Kristine   | Barbieri       | Columbia      | MD    | 21045 |

|      | FIRST     | LAST              | CITY           | STATE | ZIP    |
|------|-----------|-------------------|----------------|-------|--------|
| 1862 | david     | beam              | baltimore      | MD    | 21206  |
| 1863 | Marlene   | Behrend           | Annapolis      | MD    | 21401  |
| 1864 | Regan     | Blades            | Severn         | MD    | 21144  |
| 1865 | Shelley   | Bobb              | Potomac        | MD    | 20854  |
| 1866 | Philip    | Brill             | Bowie          | MD    | 20715  |
| 1867 | Mark      | Brochman          | Silver Spring  | MD    | 20901  |
| 1868 | Yvonne    | Brunot            | Takoma Park    | MD    | 20912  |
| 1869 | Kathleen  | Carroll           | Wheaton        | MD    | 20902  |
| 1870 | Stacy     | Caulk             | Baltimore      | MD    | 21234  |
| 1871 | Lin       | Chen              | gaithersburg   | MD    | 20850  |
| 1872 | A.        | Chenevert         | Glen Burnie    | MD    | 21061  |
| 1873 | Jennifer  | clagett           | Annapolis      | MD    | 21401  |
| 1874 | Kristina  | Cotten            | North East     | MD    | 21901  |
| 1875 | Kay       | Dellinger         | Baltimore      | MD    | 21214  |
| 1876 | Jessica   | Duggan            | Baldwin        | MD    | 21013  |
| 1877 | Myrna T.  | Estruch , M.D.    | Baltimore      | MD    | 21286- |
| 1878 | Kelly     | Etheridge         | Germantown     | MD    | 20874  |
| 1879 | Kristin   | Fischer           | Pikesville     | MD    | 21208  |
| 1880 | Karen     | Fowler            | Preston        | MD    | 21655  |
| 1881 | Michelle  | Frey              | Silver Spring  | MD    | 20906  |
| 1882 | Robert    | Frey              | silver spring  | MD    | 20906  |
| 1883 | Diana     | Gaitan            | Bowie          | MD    | 20720  |
| 1884 | Deborah   | Galdamez          | Frederick      | MD    | 21703  |
| 1885 | Chrsitina | Gebhard           | Brentwood      | MD    | 20722  |
| 1886 | Brian     | Gibbons           | Greenbelt      | MD    | 20770  |
| 1887 | Tracey    | Glover            | Tracys Landing | MD    | 20779  |
| 1888 | Karen     | Goetze            | Germantown     | MD    | 20874  |
| 1889 | David     | Goodlin           | Walkersville   | MD    | 21793  |
| 1890 | Dori      | Grasso            | Cockeysville   | MD    | 21030  |
| 1891 | Elizabeth | Hammond           | Baltimore      | MD    | 21211  |
| 1892 | Molly     | Hauck             | Kensington     | MD    | 208953 |
| 1893 | Joan      | Heaps             | Whiteford      | MD    | 21160  |
| 1894 | Lillian   | Henry             | Baltimore      | MD    | 21229  |
| 1895 | P         | hickey            | Millersville   | MD    | 21108  |
| 1896 | Patty     | Hopkinson         | Annapolis      | MD    | 21403  |
| 1897 | linda     | hunt              | north east     | MD    | 21901  |
| 1898 | Phillip   | Kalmanson         | Laurel         | MD    | 20707  |
| 1899 | Sharon    | Kennedy           | Baltimore      | MD    | 21227  |
| 1900 | Moiria    | Keogan            | Wheaton        | MD    | 20902  |
| 1901 | Miriam    | Klein             | Silver Spring  | MD    | 20902  |
| 1902 | Ted       | Knight            | Edgewater      | MD    | 21037  |
| 1903 | Serafina  | Krag              | Glen Arm       | MD    | 21057  |
| 1904 | Dorothee  | Krahn             | Silver Spring  | MD    | 20904  |
| 1905 | Linda     | Kruba             | Baltimore      | MD    | 21222  |
| 1906 | Megaera   | Kuny              | Point of Rocks | MD    | 21777  |
| 1907 | Nikki     | Lak               | Rockville      | MD    | 20850  |
| 1908 | Barbara   | Leyser            | Silver Spring  | MD    | 20910  |
| 1909 | Eva       | Lightfoot         | Waldorf        | MD    | 20602  |
| 1910 | Anita M.  | Lutz              | Bethesda       | MD    | 20817  |
| 1911 | Simon     | Mahan             | Silver Spring  | MD    | 20910  |
| 1912 | Kim       | Mari              | Sparks         | MD    | 21152  |
| 1913 | Kate      | Marks             | Baltimore      | MD    | 21231  |
| 1914 | Manuela   | Mathieu           | Hanover        | MD    | 21076  |
| 1915 | Ellen     | McDaniel-Weissler | LaVale         | MD    | 21502  |
| 1916 | Laura     | McGowan           | Lothian        | MD    | 20711  |
| 1917 | James     | miller            | westminster    | MD    | 21158  |
| 1918 | Regina    | Minniss           | Baltimore      | MD    | 21202  |
| 1919 | Janet     | Morrissey         | Baltimore      | MD    | 21239  |
| 1920 | Shannon   | Murphy            | Baltimore      | MD    | 21234  |
| 1921 | Sheridan  | Neimark           | Silver Spring  | MD    | 20904  |
| 1922 | eric      | nylen             | bethesda       | MD    | 20817  |
| 1923 | Martha    | OHarra            | Kensington     | MD    | 20895  |

|      | FIRST              | LAST             | CITY              | STATE | ZIP    |
|------|--------------------|------------------|-------------------|-------|--------|
| 1924 | Julie              | Parcells         | Ellicott City     | MD    | 21042  |
| 1925 | Lesley             | Parker-Rollins   | Lutherville       | MD    | 21093  |
| 1926 | Frances            | Patch            | Takoma Park       | MD    | 20912  |
| 1927 | Candice            | Paulus           | Severn            | MD    | 21144  |
| 1928 | Lisa               | Pisanic          | Columbia          | MD    | 21044  |
| 1929 | Gale & Barbara     | Quist            | Germantown        | MD    | 20876  |
| 1930 | Catherine          | Raymond          | Great Mills       | MD    | 20634  |
| 1931 | Elizabeth          | Reindollar       | Laurel            | MD    | 20708  |
| 1932 | Justin             | Resti            | Bethesda          | MD    | 20817  |
| 1933 | ROSETTA T.         | RIZZO, BSN, MMS  | LUTHERVILLE       | MD    | 21093  |
| 1934 | sawatdee           | sanlavun         | SILVER SPRING     | MD    | 20906  |
| 1935 | Adam               | Savett           | Kensington        | MD    | 20895  |
| 1936 | Debra              | Schubert         | baldwin           | MD    | 21013  |
| 1937 | Jeanne and Winston | Seetoo           | Baltimore         | MD    | 21217  |
| 1938 | Nandita            | Shah             | Highland          | MD    | 20777  |
| 1939 | Joann              | Sheehan          | Pasadena          | MD    | 21122  |
| 1940 | Sage               | Sheldon          | College Park      | MD    | 20740  |
| 1941 | Jude               | Sincoskie        | Columbia          | MD    | 21044  |
| 1942 | Traude             | Smith            | Silver Spring     | MD    | 20902- |
| 1943 | Patricia           | Snowden          | Bethesda          | MD    | 20816  |
| 1944 | Jeff               | Spendelow        | Silver Spring     | MD    | 20904- |
| 1945 | helen              | stamatacos       | cumberland        | MD    | 21502  |
| 1946 | kathleen           | steele           | Glen Burnie       | MD    | 21061  |
| 1947 | Amy                | Stephan          | Berlin            | MD    | 21811  |
| 1948 | sarah              | strange          | annapolis         | MD    | 21403  |
| 1949 | Laurel             | Strassberger     | Baltimore         | MD    | 21212  |
| 1950 | RoseMaria          | Strates Root     | Parkton           | MD    | 21120  |
| 1951 | Desiree            | Swain            | Gaithersburg      | MD    | 20878  |
| 1952 | Deborah            | Thomas           | Baltimore         | MD    | 21207  |
| 1953 | Kimberly           | Tomko            | Baltimore         | MD    | 21214  |
| 1954 | Greg               | Uehlinger        | Baltimore         | MD    | 21212  |
| 1955 | Julianne           | Uehlinger        | Baltimore         | MD    | 21212  |
| 1956 | Briana             | Wagner           | Hagerstown        | MD    | 21740  |
| 1957 | Lydia              | Whitney          | Emmitsburg        | MD    | 21727  |
| 1958 | Alan               | Wojtalik         | Parkville         | MD    | 21234  |
| 1959 | Diane              | Woods            | Silver Spring     | MD    | 20903  |
| 1960 | Mia                | Wyatt            | Ellicott City     | MD    | 21043  |
| 1961 | Mary               | Xakellis Chapman | Greenbelt         | MD    | 20770  |
| 1962 | Marsha             | Zahner           | Baltimore         | MD    | 21221  |
| 1963 | Martha             | Agan             | Cape Elizabeth    | ME    | 4107   |
| 1964 | Jakki              | Austin           | Newport           | ME    | 4953   |
| 1965 | Andre              | Beauchesne       | Biddeford         | ME    | 4005   |
| 1966 | Paul               | Bonsaint         | Brunswick         | ME    | 4011   |
| 1967 | Patricia           | Bredenberg       | Cape Elizabeth    | ME    | 4107   |
| 1968 | Karen              | Brozek           | Old Orchard Beach | ME    | 4064   |
| 1969 | Julie              | Carter           | Scarborough       | ME    | 4074   |
| 1970 | Katherine          | Colby            | South Paris       | ME    | 4281   |
| 1971 | Josie              | Coogan           | Gardiner          | ME    | 4345   |
| 1972 | Shirley            | Davis            | Orono             | ME    | 4473   |
| 1973 | Janet              | Decker-Smith     | Jackson           | ME    | 4921   |
| 1974 | Jane               | Dingman          | Leeds             | ME    | 4263   |
| 1975 | Jane               | Dingman          | Leeds             | ME    | 4263   |
| 1976 | Lawrence           | Fischman         | Yarmouth          | ME    | 4096   |
| 1977 | John               | Grillo           | Bangor            | ME    | 4401   |
| 1978 | Jack               | Harrington       | Deer Isle         | ME    | 4627   |
| 1979 | Michael            | Haskell          | Scarborough       | ME    | 4074   |
| 1980 | Sara               | Irwin            | Waltham           | ME    | 2451   |
| 1981 | Lisa               | Legros           | Arundel           | ME    | 4046   |
| 1982 | Pat                | Malcolm          | Lisbon            | ME    | 4250   |
| 1983 | David              | Mann             | Portland          | ME    | 4101   |
| 1984 | Thomasena          | Negri-Leary      | South Portland    | ME    | 4106   |
| 1985 | Cathy              | Perkins          | Skowhegan         | ME    | 4976   |

|      | FIRST     | LAST        | CITY                | STATE | ZIP   |
|------|-----------|-------------|---------------------|-------|-------|
| 1986 | Stephanie | Rhodes      | Sanford             | ME    | 4073  |
| 1987 | Stephanie | Rhodes      | Sanford             | ME    | 4073  |
| 1988 | Judith    | Scher       | Windham             | ME    | 4062  |
| 1989 | Laurel    | Seaborn     | Sedgwick            | ME    | 4676  |
| 1990 | Kim       | Shine       | Naples              | ME    | 4055  |
| 1991 | Sandra    | Tardiff     | Orono               | ME    | 4473  |
| 1992 | Dean      | Wellman     | Scarborough         | ME    | 4074  |
| 1993 | Laurie    | Yergin      | Lisbon              | ME    | 4250  |
| 1994 | Heather   | Zur         | Brunswick           | ME    | 4011  |
| 1995 | Roberta   | Zur         | S Freeport          | ME    | 4078  |
| 1996 | Kathleen  | Allport     | Sterling Heights    | MI    | 48312 |
| 1997 | Donald    | Angell      | Battle Creek        | MI    | 49014 |
| 1998 | Jo        | Arden       | West Bloomfield     | MI    | 48322 |
| 1999 | Stacey    | Arscott     | Warren              | MI    | 48093 |
| 2000 | Jason     | Artero      | Sterling Heights    | MI    | 48312 |
| 2001 | Neil      | Asselin     | Washington Twp      | MI    | 48095 |
| 2002 | katharine | atto        | Farmington Hills    | MI    | 48331 |
| 2003 | Annette   | B.          | Detroit             | MI    | 48243 |
| 2004 | Gary      | Baun        | Grosse Pointe Woods | MI    | 48236 |
| 2005 | Lorne     | Beatty      | Brighton            | MI    | 48114 |
| 2006 | Ilene     | Beninson    | Berkley             | MI    | 48072 |
| 2007 | David     | Blanding    | Lowell              | MI    | 49331 |
| 2008 | Terry     | Blaylock    | Traverse City       | MI    | 49686 |
| 2009 | Martha    | Boggs       | Ann Arbor           | MI    | 48103 |
| 2010 | Richard   | Booth       | Grosse Ile          | MI    | 48138 |
| 2011 | Cassidy   | Boulan      | Royal Oak           | MI    | 48073 |
| 2012 | Jan       | Callison    | Jackson             | MI    | 49203 |
| 2013 | Jennifer  | Carducci    | Lansing             | MI    | 48911 |
| 2014 | Rebecca   | Carr        | Adrian              | MI    | 49221 |
| 2015 | Michelle  | Carter      | Kentwood            | MI    | 49548 |
| 2016 | Valerie   | Catrice     | Augusta             | MI    | 49012 |
| 2017 | Gloria    | Chacon      | Taylor              | MI    | 48180 |
| 2018 | Holly     | Chisholm    | Oxford              | MI    | 48371 |
| 2019 | Lenny     | Chrostowski | Macomb              | MI    | 48042 |
| 2020 | karen     | chu         | berkley             | MI    | 48072 |
| 2021 | Barbara   | Church      | Caledonia           | MI    | 49316 |
| 2022 | Virginia  | Ciaramitaro | Roseville           | MI    | 48066 |
| 2023 | Peggy S.  | Collins     | Southfield          | MI    | 48075 |
| 2024 | Allan     | Cox         | Grand Rapids        | MI    | 49546 |
| 2025 | Heather   | Cross       | Redford             | MI    | 48240 |
| 2026 | colleen   | cueny       | Rochester Hills     | MI    | 48220 |
| 2027 | Joan      | Cupp        | Ypsilanti           | MI    | 48197 |
| 2028 | Adrienne  | Dale        | Ann Arbor           | MI    | 48105 |
| 2029 | Victoria  | Dart        | Lansing             | MI    | 48910 |
| 2030 | Jeremy    | Dicken      | Beaverton           | MI    | 48612 |
| 2031 | Linda     | Doyle       | Howell              | MI    | 48855 |
| 2032 | K.        | Durkin      | Waterford           | MI    | 48328 |
| 2033 | Jane      | Elliott     | Ann Arbor           | MI    | 48103 |
| 2034 | Rob       | Englund     | Auburn              | MI    | 48611 |
| 2035 | Monica    | Evans       | Kalamazoo           | MI    | 49008 |
| 2036 | Nancy     | Everhart    | Northville          | MI    | 48167 |
| 2037 | Laurel    | Federbush   | Ann Arbor           | MI    | 48104 |
| 2038 | Joe       | Feinstein   | W. Bloomfield       | MI    | 48322 |
| 2039 | David     | Ferger      | Southfield          | MI    | 48034 |
| 2040 | Ann       | Flynn       | Rockford            | MI    | 49341 |
| 2041 | Jeremy    | Forray      | Buchanan            | MI    | 49107 |
| 2042 | Denise    | Fry         | St. Clair Shores    | MI    | 48082 |
| 2043 | Deborah   | Gibbs-Halm  | Grand Blanc         | MI    | 48439 |
| 2044 | joellen   | gilchrist   | beverly hills       | MI    | 48025 |
| 2045 | Herb      | Glahn       | Harbor Springs      | MI    | 49740 |
| 2046 | jennifer  | goewey      | plymouth            | MI    | 48170 |
| 2047 | Allison   | Goodwin     | Birmingham          | MI    | 48009 |



|      | FIRST           | LAST             | CITY                | STATE | ZIP    |
|------|-----------------|------------------|---------------------|-------|--------|
| 2048 | Barton          | Grimm            | Beverly Hills       | MI    | 48025  |
| 2049 | Spencer         | Hamilton         | Port Huron          | MI    | 48060  |
| 2050 | Art             | Hanson           | Lansing             | MI    | 48917  |
| 2051 | Art             | Hanson           | Lansing             | MI    | 48917  |
| 2052 | Natalie         | Hanson           | Lansing             | MI    | 48917  |
| 2053 | Brianne         | Haven            | Ypsilanti           | MI    | 48197  |
| 2054 | Teresa          | Hawkins          | Durand              | MI    | 48429  |
| 2055 | JIM             | HEAD             | BERKLEY             | MI    | 48072  |
| 2056 | Carolyn         | Heines           | Grand Rapids        | MI    | 49506  |
| 2057 | james           | holtz            | farmington, hills   | MI    | 48334  |
| 2058 | Janet           | Houle            | Escanaba            | MI    | 49829  |
| 2059 | nathan          | hurliman         | marquette           | MI    | 49855  |
| 2060 | Joyce           | Janicki          | St. Clair Shores    | MI    | 48081  |
| 2061 | Dan             | Johnson          | Monroe              | MI    | 48161  |
| 2062 | Kim             | Johnson          | Wyandotte           | MI    | 48192  |
| 2063 | Andrew          | Jones            | Gladstone           | MI    | 49837  |
| 2064 | Brent           | Jurjens          | Ypsilanti           | MI    | 48198  |
| 2065 | Cullen          | Kappel           | Gregory             | MI    | 48137  |
| 2066 | Carleton        | Kinney           | Flushing            | MI    | 48433  |
| 2067 | Sonia           | Kitchen          | Ferndale            | MI    | 48220  |
| 2068 | Steven          | Krieger          | Farmington Hills    | MI    | 48331  |
| 2069 | Paul            | Kripli           | Sterling Heights    | MI    | 48314  |
| 2070 | CT              | Kuhr             | West Bloomfield     | MI    | 48322  |
| 2071 | Theresa         | Kulas            | Grand Rapids        | MI    | 49503  |
| 2072 | Lonnie & Sharon | Kuntzman         | Kalamazoo           | MI    | 49009  |
| 2073 | Kyle            | Landis-Marinello | Ann Arbor           | MI    | 48104  |
| 2074 | Connie          | Lawson           | Redford             | MI    | 48240  |
| 2075 | Adina           | Lesperance       | Northville          | MI    | 48167  |
| 2076 | christina       | lirette          | eastpointe          | MI    | 48021  |
| 2077 | Eric            | Lorenz           | Montague            | MI    | 49437  |
| 2078 | Joanne          | Lowery           | Kalamazoo           | MI    | 49001  |
| 2079 | Patty           | Majors           | Petersburg          | MI    | 49270  |
| 2080 | Christine       | Maloney          | Ann Arbor           | MI    | 48108  |
| 2081 | Laura           | Martin           | Sterling heights    | MI    | 48314  |
| 2082 | Sandy           | Martin           | Holland             | MI    | 49423  |
| 2083 | David           | Mason            | Ypsilanti           | MI    | 48198- |
| 2084 | Diane           | McPharlin        | Ann Arbor           | MI    | 48105  |
| 2085 | Jacqueline      | Miller           | St. Clair Shores    | MI    | 48082  |
| 2086 | Joseph          | Miriani          | Ann Arbor           | MI    | 48104  |
| 2087 | Darrell         | Morreau          | Escanaba            | MI    | 49829  |
| 2088 | Matt            | Nelson           | Ann Arbor           | MI    | 48103  |
| 2089 | Sandra          | Nelson           | Warren              | MI    | 48091  |
| 2090 | Jenny           | Nerbonne         | Mt. Pleasant        | MI    | 48858  |
| 2091 | Ruth            | Nowland          | Mt. Pleasant.       | MI    | 48805  |
| 2092 | Deb             | Nykamp           | Holland             | MI    | 49423  |
| 2093 | s               | p                | Farmington Hls.     | MI    | 48335  |
| 2094 | Julia           | Pais             | Southfield          | MI    | 48076  |
| 2095 | Norma           | Palen            | Clarkston           | MI    | 48346  |
| 2096 | Dave            | Pettit           | Flint               | MI    | 48507  |
| 2097 | Lorraine        | Pettit           | Flint               | MI    | 48507  |
| 2098 | Bev             | Pollard          | Richland            | MI    | 49083  |
| 2099 | Richard C.      | Preston          | Lansing             | MI    | 48910  |
| 2100 | Beth            | Prudden          | Grosse Pointe Woods | MI    | 48236  |
| 2101 | Beth            | Prudden          | Grosse Pointe Woods | MI    | 48236  |
| 2102 | Ashleigh        | Reynolds         | Quincy              | MI    | 49082  |
| 2103 | Dolores         | Reynolds         | Bloomingtondale     | MI    | 49026  |
| 2104 | Mark            | Rheinschmidt     | Gowen               | MI    | 49326  |
| 2105 | Beth            | Rich             | Deckerville         | MI    | 48427  |
| 2106 | Niki            | Ridings          | Dewitt              | MI    | 48820  |
| 2107 | Jacqueline      | Rix              | Rochester           | MI    | 48307  |
| 2108 | Michelle        | Robinson         | Montrose            | MI    | 48457  |
| 2109 | Andreew         | Rosenblum        | Ada                 | MI    | 49301  |

|      | FIRST      | LAST         | CITY             | STATE | ZIP    |
|------|------------|--------------|------------------|-------|--------|
| 2110 | betsy      | rosenow      | free soil        | MI    | 49411  |
| 2111 | Shelley    | Rothwell     | Ypsilanti        | MI    | 48197  |
| 2112 | leslie     | rout         | east lansing     | MI    | 48823  |
| 2113 | Joanne     | Scott        | Flushing         | MI    | 48433  |
| 2114 | Matthew    | Shammas      | Pleasant Ridge   | MI    | 48069  |
| 2115 | Maureen    | Sheahan      | Southfield       | MI    | 48033  |
| 2116 | James      | Shepherd     | Rives Junction   | MI    | 49277  |
| 2117 | MEGAN      | SHEPHERD     | JACKSON          | MI    | 49201  |
| 2118 | Cheryl     | Shively      | S. Rockwood      | MI    | 48179  |
| 2119 | melissa    | siepierski   | westland         | MI    | 48185  |
| 2120 | Bahadur    | Singh        | Sterling Heights | MI    | 48310  |
| 2121 | Julie      | Skelton      | Belleville       | MI    | 48111  |
| 2122 | siri       | slagboom     | comstock park    | MI    | 49321  |
| 2123 | Vicki      | Smith        | Rose City        | MI    | 48654  |
| 2124 | Brenda     | Snow-Cathey  | Eaton Rapids     | MI    | 48827  |
| 2125 | Ronald     | Sohn         | Saginaw          | MI    | 48601  |
| 2126 | Tom        | Stalker      | Oscoda           | MI    | 48750  |
| 2127 | SARA       | STANKO       | Marysville       | MI    | 48040  |
| 2128 | Shirley    | Steinman     | Monroe           | MI    | 48162  |
| 2129 | Kris       | Stougaard    | Caledonia        | MI    | 49316  |
| 2130 | Michael    | Studnicka    | Pontiac          | MI    | 48340  |
| 2131 | Chris      | Sullivan     | WARREN           | MI    | 48092  |
| 2132 | Michelle   | Taffe        | Troy             | MI    | 48083  |
| 2133 | IRIS       | TALLEY       | OAK PARK         | MI    | 48237  |
| 2134 | Jennifer   | Tava         | St. Clair Shores | MI    | 48082  |
| 2135 | Charles    | Tazzia       | Grosse Pointe    | MI    | 48236  |
| 2136 | Denise     | Thomas       | Waterford        | MI    | 48327  |
| 2137 | Gordon     | Thompson     | Portland         | MI    | 48875  |
| 2138 | Joanne     | Tioran       | Bloomfield Hills | MI    | 48302  |
| 2139 | Froylan    | Torres       | Jenison          | MI    | 49428  |
| 2140 | Marianne   | Toth         | Marquette        | MI    | 49855  |
| 2141 | Monique    | Toubia       | Ann Arbor        | MI    | 48105  |
| 2142 | Lawrence   | Toush        | Marcellus        | MI    | 49067  |
| 2143 | Carolyn    | Tropp        | Holt             | MI    | 48842  |
| 2144 | Katherine  | Tweedale     | Eastpointe       | MI    | 48021  |
| 2145 | Laurie     | Van Egeren   | Bath             | MI    | 48808  |
| 2146 | David      | Veenstra     | Grand Rapids     | MI    | 49507  |
| 2147 | Suzanne R. | Viinikainen  | Troy             | MI    | 48084  |
| 2148 | Anca       | Vlasopolos   | Grosse Pointe    | MI    | 48230  |
| 2149 | Vickie     | Wagner       | Three Oaks       | MI    | 49128  |
| 2150 | Tisha      | Wardlow      | Comstock Park    | MI    | 49321  |
| 2151 | Mary       | Weeden       | Elsie            | MI    | 48831  |
| 2152 | Robert     | Wilberg      | Kalamazoo        | MI    | 49006  |
| 2153 | Richard    | Wilcox       | Tokyo            | MI    | 171002 |
| 2154 | Debra      | Williamson   | Plymouth         | MI    | 48170  |
| 2155 | Heather    | Wright       | Chassell         | MI    | 49916  |
| 2156 | Jason      | Wrobel       | Dearborn Heights | MI    | 48127  |
| 2157 | Juanita    | Zeinstra     | Belmont          | MI    | 49306  |
| 2158 | Janet      | Ackerman     | Apple Valley     | MN    | 55124  |
| 2159 | Nayeem     | Ahmed        | Blaine           | MN    | 55449  |
| 2160 | Michele    | Anderson     | Scandia          | MN    | 55073  |
| 2161 | Amy Leo    | B arankovich | Minneapolis      | MN    | 55407  |
| 2162 | Jane       | Ball         | Minnetonka       | MN    | 55345  |
| 2163 | Rosanne    | Bane         | Minneapolis      | MN    | 55407  |
| 2164 | Ellen      | Barr         | Roseville        | MN    | 55113  |
| 2165 | lisa       | bergerud     | st. paul         | MN    | 55108  |
| 2166 | Danielle   | Billington   | Minneapolis      | MN    | 55414  |
| 2167 | Lori       | Blauwet      | Rocheser         | MN    | 55901  |
| 2168 | Leslie     | Bohm         | St. Paul         | MN    | 55116  |
| 2169 | Wendy      | Bowman       | Minneapolis      | MN    | 55411  |
| 2170 | Renee      | Brown        | Eden Prairie     | MN    | 55346  |
| 2171 | Emily      | Buchanan     | Duluth           | MN    | 55812  |

|      | FIRST     | LAST            | CITY             | STATE | ZIP    |
|------|-----------|-----------------|------------------|-------|--------|
| 2172 | Lori      | Christenson     | North Mankato    | MN    | 56003  |
| 2173 | Tim       | Conrad          | Minnetonka       | MN    | 55345  |
| 2174 | Kelli     | Cool            | Blaine           | MN    | 55434  |
| 2175 | Shonna    | Crompton        | Ada              | MN    | 56510  |
| 2176 | Carolyn   | Crooke          | Minneapolis      | MN    | 55408  |
| 2177 | Diana     | Cumming         | Minneapolis      | MN    | 55418  |
| 2178 | Robert    | Davis           | Saint Louis Park | MN    | 55416- |
| 2179 | Kay       | Drache          | St.Louis Park    | MN    | 55416  |
| 2180 | Tenaya    | Egbert          | Minnetonka       | MN    | 55345  |
| 2181 | Richard   | Franco          | St. Paul         | MN    | 55104  |
| 2182 | mary      | gaasch          | lauderdale       | MN    | 55113  |
| 2183 | Emily     | Goenner         | Clear Lake       | MN    | 55319  |
| 2184 | Anne      | Griffin-Lewin   | Minneapolis      | MN    | 55418  |
| 2185 | Dale      | Hadler          | St.Paul          | MN    | 55107  |
| 2186 | Ron       | Haglind         | Chanhassen       | MN    | 55317  |
| 2187 | Allie     | Hasselbalch     | Maple Plain      | MN    | 55359  |
| 2188 | Bob       | Haugen          | Crystal          | MN    | 55422  |
| 2189 | Fitzie    | Heimdahl        | Marine           | MN    | 55047  |
| 2190 | Emilia    | Hernando Abejon | Bilbao           | MN    | 48003  |
| 2191 | Timothy   | Holm            | Mounds View      | MN    | 55112  |
| 2192 | Dennis    | Honigs          | Minneapolis      | MN    | 55408  |
| 2193 | S.        | Hork            | Minneapolis,     | MN    | 55435  |
| 2194 | Erin      | Indahl          | MAPLE GROVE      | MN    | 55311  |
| 2195 | Gail      | Jacobson        | St Paul          | MN    | 55113  |
| 2196 | Susan     | Jobe            | Afton            | MN    | 55001  |
| 2197 | Eric      | Johnson         | Duluth           | MN    | 55803  |
| 2198 | Jeffrey   | Johnson         | Lakeville        | MN    | 55044  |
| 2199 | Michelle  | Juneau          | Minneapolis      | MN    | 55404  |
| 2200 | David     | Kolcinski       | Minneapolis      | MN    | 55419  |
| 2201 | Lewis     | Kuhlman         | Minneapolis      | MN    | 55407  |
| 2202 | Paula     | Laudenbach      | Saint Paul       | MN    | 55104  |
| 2203 | Kathy     | Lee             | Woodbury         | MN    | 55125  |
| 2204 | Jess      | Losinger        | Ogilvie          | MN    | 56358  |
| 2205 | Faith     | Lubitz          | St Paul          | MN    | 55104  |
| 2206 | Lora      | Lund            | Saint Paul       | MN    | 55107  |
| 2207 | Jason     | Lynch           | Apple Valley     | MN    | 55124  |
| 2208 | Alexander | Maki            | Duluth           | MN    | 55812  |
| 2209 | Elaine    | Matthew         | Brooklyn Park    | MN    | 55428  |
| 2210 | Alexandra | Mayo-Cullen     | St Paul          | MN    | 55104  |
| 2211 | Harriet   | McCleary        | Minneapolis      | MN    | 55404  |
| 2212 | Jean      | Melom           | Minneapolis      | MN    | 55407  |
| 2213 | Cathleen  | Mertz           | Lakeville        | MN    | 55044- |
| 2214 | Paul      | Moss            | White Bear Lake  | MN    | 55110  |
| 2215 | Joan      | Naeseth         | Minneapolis      | MN    | 55419  |
| 2216 | Donna     | Nelson          | North Saint Paul | MN    | 55109  |
| 2217 | Pam       | Nelson          | Maplewood        | MN    | 55109  |
| 2218 | Sherril   | Nolan           | Bloomington      | MN    | 55431  |
| 2219 | Ryan      | O'Connell       | Virginia         | MN    | 55792  |
| 2220 | TL        | Parson          | Cloquet          | MN    | 55720  |
| 2221 | Jesse     | Petersen        | Minneapolis      | MN    | 55406  |
| 2222 | Carri     | Raiche          | St. Cloud        | MN    | 56303  |
| 2223 | Annie     | Riley           | St. Paul         | MN    | 55105  |
| 2224 | Jessica   | Rocheleau       | Maple Grove      | MN    | 55369  |
| 2225 | Kzena     | Ross            | Ely              | MN    | 55731  |
| 2226 | Juliann   | Rule            | Avon             | MN    | 56310  |
| 2227 | Greg      | Rupert          | Duluth           | MN    | 55803  |
| 2228 | George    | Salner          | Bemidji          | MN    | 56601  |
| 2229 | Michelle  | Schroeder       | Minneapolis      | MN    | 55407  |
| 2230 | muretta   | scott           | Erhard           | MN    | 56534  |
| 2231 | Shawn     | Simonson        | Lake Crystal     | MN    | 56055  |
| 2232 | Barbara   | Stamp           | Eden Prairie     | MN    | 55346  |
| 2233 | nan       | stevenson       | st paul          | MN    | 55106  |

|      | FIRST         | LAST        | CITY             | STATE | ZIP   |
|------|---------------|-------------|------------------|-------|-------|
| 2234 | Edward        | Stewart     | Zimmerman        | MN    | 55398 |
| 2235 | Megan         | Stumm       | Chaska           | MN    | 55318 |
| 2236 | Ann Marie     | Sunderland  | St Paul          | MN    | 55124 |
| 2237 | Theresa       | Terhark     | Cottage Grove    | MN    | 55016 |
| 2238 | Kandyce       | Thompson    | Lakeville        | MN    | 55044 |
| 2239 | Kim           | Tostenson   | Evansville       | MN    | 56326 |
| 2240 | Jeffrey       | Wiles       | Hopkins          | MN    | 55343 |
| 2241 | Rino Follykue | Amenounve   | ST Charles       | MO    | 63301 |
| 2242 | James         | Arneson     | Springfield      | MO    | 65804 |
| 2243 | Janet         | Ayres       | Florissant       | MO    | 63031 |
| 2244 | Cynthia       | Barnard     | Manchester       | MO    | 63021 |
| 2245 | Sandra        | Barnett     | Battlefield      | MO    | 65619 |
| 2246 | Monica        | Barrow      | Pacific          | MO    | 63069 |
| 2247 | Natasha       | Boekholt    | Lake St Louis    | MO    | 63367 |
| 2248 | Thomas        | Bommarito   | Hazelwood        | MO    | 63042 |
| 2249 | Johnathan     | Borrini     | Sullivan         | MO    | 63080 |
| 2250 | Johnathan     | Borrini     | Sullivan         | MO    | 63080 |
| 2251 | Robert        | Borrini     | Sullivan         | MO    | 63080 |
| 2252 | Victoria      | Borrini     | Sullivan         | MO    | 63080 |
| 2253 | S             | Bracken     | Wildwood         | MO    | 63038 |
| 2254 | Kim           | Broers      | Kansas City      | MO    | 64108 |
| 2255 | Dianna        | Brown       | Festus           | MO    | 63028 |
| 2256 | michael       | brown       | st charles       | MO    | 63304 |
| 2257 | Brittanie     | Bryant      | Hawk Point       | MO    | 63349 |
| 2258 | Michael       | Cecil       | Lake St. Louis   | MO    | 63367 |
| 2259 | Joseph        | Civettini   | Saint Louis      | MO    | 63110 |
| 2260 | Victoria      | Cooper      | St Louis         | MO    | 63119 |
| 2261 | Paulette      | Craig       | Kansas City      | MO    | 64111 |
| 2262 | Michael       | Crouch      | Wentzville       | MO    | 63385 |
| 2263 | Martin        | Cunningham  | Lee's Summit     | MO    | 64081 |
| 2264 | Tricia        | Dalton      | Florissant       | MO    | 63034 |
| 2265 | Janet         | Davis       | Joplin           | MO    | 64801 |
| 2266 | Barbara       | Dawson      | Columbia         | MO    | 65201 |
| 2267 | Anthony       | Donnici     | Kansas City      | MO    | 64155 |
| 2268 | Karla         | Donovan     | kansas City      | MO    | 64119 |
| 2269 | Gabriela      | Doural      | Pacific          | MO    | 6369  |
| 2270 | Sandra        | Eppinger    | Centralia        | MO    | 65240 |
| 2271 | Jackie        | Faber       | Hazelwood        | MO    | 63042 |
| 2272 | Angie         | Fite        | St. Louis        | MO    | 63146 |
| 2273 | Emily         | Fite        | St. JOseph       | MO    | 64506 |
| 2274 | James         | Fossard     | SPRINGFIELD      | MO    | 65804 |
| 2275 | Nancy         | Gilbert     | Saint JOseph     | MO    | 64505 |
| 2276 | Tanya         | Goodpasture | Independence     | MO    | 64056 |
| 2277 | Rikki         | Halterman   | Unionville       | MO    | 63565 |
| 2278 | Maria         | Hance       | Pevely           | MO    | 63070 |
| 2279 | Debra         | Harpole     | Troy             | MO    | 63379 |
| 2280 | Karen         | Hastings    | Pacific          | MO    | 63069 |
| 2281 | Lisa          | Haugen      | KEARNEY          | MO    | 64060 |
| 2282 | Jordan        | Heiman      | St Louis         | MO    | 63132 |
| 2283 | Kelsy         | Hoffman     | Ballwin          | MO    | 63021 |
| 2284 | David         | Howenstein  | St. Louis        | MO    | 63122 |
| 2285 | Tanya         | Irby        | Cape Girardeau   | MO    | 63701 |
| 2286 | Linda         | Isbell      | Maryland Heights | MO    | 63043 |
| 2287 | Bonnie        | Jackson     | Moscow Mills     | MO    | 63362 |
| 2288 | Vicki         | Johnson     | Kansas City,     | MO    | 64137 |
| 2289 | Jennifer      | Jones       | Pacific          | MO    | 63069 |
| 2290 | Adran         | Jordan      | moberly          | MO    | 65270 |
| 2291 | Barbara       | Koval       | Lake St.Louis    | MO    | 63367 |
| 2292 | Jean          | kuntz       | Ashland          | MO    | 65010 |
| 2293 | Larry         | Lambeth     | Springfield      | MO    | 65810 |
| 2294 | Robert        | Levitt      | Ballwin          | MO    | 63011 |
| 2295 | Sandy         | Lynn        | St. Louis        | MO    | 63130 |

|      | FIRST           | LAST        | CITY           | STATE | ZIP   |
|------|-----------------|-------------|----------------|-------|-------|
| 2296 | Agnieszka       | Mahan       | Springfield    | MO    | 65809 |
| 2297 | Michelle        | Maxwell     | Kansas City    | MO    | 64133 |
| 2298 | Cheryl          | Morris      | St. Louis      | MO    | 63109 |
| 2299 | Tania           | Newsome     | Ballwin        | MO    | 63021 |
| 2300 | Sandra          | Peterson    | Kansas City    | MO    | 64114 |
| 2301 | Karen           | Pierce      | NIXA           | MO    | 65714 |
| 2302 | Kelly           | Pierce      | kansas city    | MO    | 64114 |
| 2303 | Gail F.         | Reissen     | St. Louis      | MO    | 63109 |
| 2304 | Sheila          | Rekdal      | Independence   | MO    | 64053 |
| 2305 | Michelle        | Ries        | Fenton         | MO    | 63026 |
| 2306 | William         | Rosen       | Kansas City    | MO    | 64114 |
| 2307 | Dawn L.         | Rubbert     | St. Louis      | MO    | 63117 |
| 2308 | Kim             | S           | Saint Louis    | MO    | 63111 |
| 2309 | Carl & Jennifer | Schumacher  | Green Park     | MO    | 63123 |
| 2310 | Deborah         | Stephenson  | Cedarcreek     | MO    | 65627 |
| 2311 | Pat             | Stevenson   | Marionville    | MO    | 65705 |
| 2312 | Jim             | Tornatore   | Saint Louis    | MO    | 63128 |
| 2313 | Richard         | Twillman    | Hazelwood      | MO    | 63042 |
| 2314 | James           | Wall        | Arnold         | MO    | 63010 |
| 2315 | Joy             | Ward        | St. Louis      | MO    | 63118 |
| 2316 | Linda           | Warnock     | Kansas City    | MO    | 64133 |
| 2317 | GREG            | YEARGAIN    | Ironton        | MO    | 63650 |
| 2318 | Arlene          | Coleman     | Meridian       | MS    | 39305 |
| 2319 | Vivian          | Farmer      | Picayune       | MS    | 39466 |
| 2320 | Tracy           | Liddell     | Jackson        | MS    | 39212 |
| 2321 | shannon         | mcnally     | Holly Springs  | MS    | 38635 |
| 2322 | Bennie          | Shallbetter | Picayune       | MS    | 39466 |
| 2323 | Nancy           | Tucker      | Byhalia        | MS    | 38611 |
| 2324 | Sharon          | Vandevender | Olive Branch   | MS    | 38654 |
| 2325 | Madison         | Walker      | Hattiesburg    | MS    | 39406 |
| 2326 | cathy           | yates       | Glen           | MS    | 38834 |
| 2327 | David           | Amnotte     | Bigfork        | MT    | 59911 |
| 2328 | Karen           | Brown       | Billings       | MT    | 59102 |
| 2329 | Sue             | Ellerman    | Missoula       | MT    | 59802 |
| 2330 | Charles         | Fligel      | Butte          | MT    | 59701 |
| 2331 | Barbara         | Gregovich   | Butte          | MT    | 59701 |
| 2332 | Jennifer        | Nitz        | Missoula       | MT    | 59802 |
| 2333 | Toddy           | Perryman    | Corvallis      | MT    | 59802 |
| 2334 | Leroy           | Porter      | Columbia Falls | MT    | 59912 |
| 2335 | joseph          | schembri    | st.pauls bay   | MT    | 59358 |
| 2336 | Wm              | Schultz     | whitefish      | MT    | 59937 |
| 2337 | Rhonda          | Spaulding   | Red Lodge      | MT    | 59068 |
| 2338 | Lisa            | Stanton     | Kila           | MT    | 59920 |
| 2339 | Wildfire        | Wanderning  | Helena         | MT    | 59601 |
| 2340 | Colleen         | Wisinski    | Bozeman        | MT    | 59715 |
| 2343 | T               | Abashian    | Durham         | NC    | 27701 |
| 2344 | Kimberly        | Acquaro     | Clyde          | NC    | 28721 |
| 2345 | BG              | Adams       | Durham         | NC    | 27713 |
| 2346 | Julie           | Allen       | Fuquay Varina  | NC    | 27526 |
| 2347 | Caroline        | Andras      | Pisgah Forest  | NC    | 28768 |
| 2348 | Lois            | Arnold      | Moyock         | NC    | 27958 |
| 2349 | Marcia          | Bailey      | Burnsville     | NC    | 28714 |
| 2350 | Gina            | Banks       | Icard          | NC    | 28666 |
| 2351 | Robert          | Belknap     | Raleigh        | NC    | 27603 |
| 2352 | Darleen         | Benson      | Alexander      | NC    | 28701 |
| 2353 | Erika           | Beqaj       | Shiloh         | NC    | 27974 |
| 2354 | Barbara         | Berrini     | Beaufort       | NC    | 28516 |
| 2355 | Joyce           | Berry       | Canton         | NC    | 28716 |
| 2356 | Bruce           | Blacknight  | Marshall       | NC    | 28753 |
| 2357 | Jacob           | Blum        | Durham         | NC    | 27705 |
| 2358 | Jayne           | Boyer       | Durham         | NC    | 27707 |
| 2359 | Vickie          | Brown       | Franklin       | NC    | 28734 |

|      | FIRST          | LAST                | CITY            | STATE | ZIP    |
|------|----------------|---------------------|-----------------|-------|--------|
| 2360 | Carolyn        | Buckner             | Chapel Hill     | NC    | 27516  |
| 2361 | Laura          | Carpenter           | Charlotte       | NC    | 2827   |
| 2362 | Chrissy        | Chandler            | New London      | NC    | 28127  |
| 2363 | Leigh          | Clark               | Garner          | NC    | 27529  |
| 2364 | Christine      | Collette            | hickory         | NC    | 28601  |
| 2365 | Libby          | Cornett             | Asheville       | NC    | 28805  |
| 2366 | David          | Cosby               | Oriental        | NC    | 28571  |
| 2367 | Megan          | Crotty              | Pleasant Garden | NC    | 27313  |
| 2368 | Judy           | Cupp                | Hope Mills      | NC    | 28348  |
| 2369 | Alice          | Curtis              | Asheville       | NC    | 28803  |
| 2370 | Emily          | Dale                | Franklin        | NC    | 28744  |
| 2371 | Tammy          | Dampier             | Burlington      | NC    | 27217  |
| 2372 | Crystal        | Daugherty           | Raleigh         | NC    | 27608  |
| 2373 | Becky          | Davis               | Vilas           | NC    | 28692  |
| 2374 | Chrystal       | Davis               | Reidsville      | NC    | 27320  |
| 2375 | Cameron        | DeMai               | Raleigh         | NC    | 27609  |
| 2376 | Sara           | Deutsch             | Asheville       | NC    | 28804  |
| 2377 | Steve          | Dunn                | Youngsville     | NC    | 27596  |
| 2378 | Carol          | Elliott             | Hillsborough    | NC    | 27278  |
| 2379 | Christina      | Ethredge            | Coats           | NC    | 27521  |
| 2380 | Nancy          | Fahey               | Wilmington      | NC    | 28405  |
| 2381 | Jeffrey        | Farkas              | Shelby          | NC    | 28150  |
| 2382 | Samantha       | Farkas              | Shelby          | NC    | 28150  |
| 2383 | Lisa           | Francia             | Hendersonville  | NC    | 28739  |
| 2384 | Harriette      | Frank               | Durham          | NC    | 27707  |
| 2385 | Gina           | Fritts              | Asheville       | NC    | 28806  |
| 2386 | Michelle       | Gallavan-Orris      | Fayetteville    | NC    | 28303  |
| 2387 | Heather        | Gibson              | Sylva           | NC    | 28779  |
| 2388 | Mary           | Hackenbrock         | Raleigh         | NC    | 27614  |
| 2389 | Rebecca        | Hamilton            | New bern        | NC    | 28561  |
| 2390 | Stephanie      | Hammond             | Pfafftown       | NC    | 27040  |
| 2391 | Nancy          | Hargrove            | Bryson City     | NC    | 28713  |
| 2392 | S              | Harper              | Wilmington      | NC    | 28403  |
| 2393 | Lisa           | Harris              | Winston Salem   | NC    | 27107  |
| 2394 | Leesa          | Hatlestad           | Jacksonville    | NC    | 28540  |
| 2395 | Catherine      | Haughwout           | Leland          | NC    | 28451  |
| 2396 | Dietrich       | Haugwitz            | Durham          | NC    | 27707  |
| 2397 | Dwayne         | Haus, N.D.          | Raleigh         | NC    | 27624  |
| 2398 | Sandra         | Hays                | Pelham          | NC    | 27311  |
| 2399 | Kristina       | Heiks               | Boone           | NC    | 28607  |
| 2400 | Lillian        | Henderson           | Willow Spring   | NC    | 27592- |
| 2401 | john L         | Hitchcock           | Elon,           | NC    | 27244  |
| 2402 | Sharen         | hoglen              | sylva           | NC    | 28779  |
| 2403 | Georgianna     | Honeycutt           | Godwin          | NC    | 28344  |
| 2404 | Deborah        | Horbert             | Dana            | NC    | 28724  |
| 2405 | William        | Howell              | Bladenboro      | NC    | 28320  |
| 2406 | Mary Elizabeth | Howie               | Durham          | NC    | 27705  |
| 2407 | Amy            | Hux                 | Belmont         | NC    | 28012  |
| 2408 | Mitch          | Hux                 | Belmont         | NC    | 28012  |
| 2409 | DI             | inscoe              | wilmington      | NC    | 28403  |
| 2410 | Jennifer       | Jackson             | Kitty Hawk      | NC    | 27949  |
| 2411 | Aaron          | Johnson             | wilmington      | NC    | 28403  |
| 2412 | Patrick        | Johnson             | Carrboro        | NC    | 27510  |
| 2413 | William        | Kastern             | RANDLEMAN       | NC    | 27317  |
| 2414 | Scott          | Keels               | Flat Rock       | NC    | 28731  |
| 2415 | Jill           | King                | Henderson       | NC    | 27537  |
| 2416 | Stephanie      | Kirkpatrick Conover | Summerfield     | NC    | 27358  |
| 2417 | Nancy          | Kost                | Durham          | NC    | 27705  |
| 2418 | Todd           | Lee                 | Asheville       | NC    | 28805  |
| 2419 | Ann            | Leitgeb             | Asheville       | NC    | 28806  |
| 2420 | Deja           | Lizer               | Asheville       | NC    | 28803  |
| 2421 | Trudy          | Luman               | Summerfield     | NC    | 27358  |

|      | FIRST       | LAST            | CITY             | STATE | ZIP   |
|------|-------------|-----------------|------------------|-------|-------|
| 2422 | Deirdre     | MacAlpine       | Brevard          | NC    | 28712 |
| 2423 | Kelly       | Malloy          | Kill Devil Hills | NC    | 27948 |
| 2424 | Nichols     | Malpass         | Hendersonville   | NC    | 28739 |
| 2425 | j           | marcarelli      | durham           | NC    | 27707 |
| 2426 | Jennifer    | McGroarty       | wilmington       | NC    | 28403 |
| 2427 | Christa     | McTall          | Sylva            | NC    | 28770 |
| 2428 | William     | McVay           | Hendersonville   | NC    | 28792 |
| 2429 | Angela      | McWilliams      | Barnardsville    | NC    | 28709 |
| 2430 | Nelson J.   | Mendoza         | Raleigh          | NC    | 27608 |
| 2431 | Sally       | Moseley         | Tarboro          | NC    | 27886 |
| 2432 | Donna       | Newman          | Raleigh          | NC    | 27606 |
| 2433 | Luke        | Nicholas        | Winston Salem    | NC    | 27106 |
| 2434 | Becca       | Nova            | Hendersonville   | NC    | 28792 |
| 2435 | todd        | o'Buckley       | Durham           | NC    | 27704 |
| 2436 | Kevin       | O'Donnell       | Chapel Hill      | NC    | 27599 |
| 2437 | Anjali      | Orlando         | Rougemont        | NC    | 27572 |
| 2438 | Miri        | Osborne         | Morrisville      | NC    | 27560 |
| 2439 | Marie       | Ostrander       | Fairview         | NC    | 28730 |
| 2440 | Michele     | Pagan           | Charlotte        | NC    | 28277 |
| 2441 | Trinity     | Peacock-Broyles | Asheville        | NC    | 28804 |
| 2442 | Marilyn     | Pearman         | Greensboro       | NC    | 27406 |
| 2443 | Ann         | Peoples         | Winson-Salem     | NC    | 27104 |
| 2444 | JAMES       | PHELPS          | HENDERSONVILLE   | NC    | 28791 |
| 2445 | Joyce       | Pusel           | Durham           | NC    | 27713 |
| 2446 | Debra       | Raymond         | Kannapolis       | NC    | 28081 |
| 2447 | Don         | Richardson      | Brevard          | NC    | 28712 |
| 2448 | deborah     | rickenbach      | lewsville        | NC    | 27023 |
| 2449 | Norma       | Rico            | Mount Holly      | NC    | 28120 |
| 2450 | Pat         | Rittenmeyer     | Wilmington       | NC    | 28409 |
| 2451 | Tammy       | Robinson        | Asheboro         | NC    | 27205 |
| 2452 | Kelly       | Roth            | Beaufort         | NC    | 28516 |
| 2453 | Susan       | Russell         | Hillsborough     | NC    | 27278 |
| 2454 | Michelle    | Salisbury       | Durham           | NC    | 27705 |
| 2455 | Michelle    | Salisbury       | Durham           | NC    | 27705 |
| 2456 | Amanda      | Schwyn          | Monroe           | NC    | 28111 |
| 2457 | Tammy       | Scoggins        | Monroe           | NC    | 28112 |
| 2458 | Melinda     | Scott           | Elizabeth City   | NC    | 27909 |
| 2459 | Karen       | Senechal        | Burnsville       | NC    | 28714 |
| 2460 | Shilpa      | Shah            | Chapel Hill      | NC    | 27516 |
| 2461 | Kimberly    | Shoaf           | Lexington        | NC    | 27292 |
| 2462 | Beth        | Shulman         | Hillsborough     | NC    | 27278 |
| 2463 | Scott       | Simmons         | Chapel Hill      | NC    | 27516 |
| 2464 | Chuck       | Smith           | Rocky Mount      | NC    | 27803 |
| 2465 | colette     | smith           | raleigh          | NC    | 27604 |
| 2466 | colette     | smith           | raleigh          | NC    | 27604 |
| 2467 | Margaret P. | Smith           | henderson        | NC    | 27536 |
| 2468 | Sue         | Stanton         | Durham           | NC    | 27712 |
| 2469 | Paula       | Stober          | GREENSBORO       | NC    | 27410 |
| 2470 | Thomas      | Struhsaker      | Durham           | NC    | 27705 |
| 2471 | susan       | taylor          | seven lakes      | NC    | 27376 |
| 2472 | James       | Thomas          | Chapel Hill      | NC    | 27514 |
| 2473 | Ed          | Thompson        | Marion           | NC    | 2     |
| 2474 | Patti       | Tomasello       | Waxhaw           | NC    | 28173 |
| 2475 | Deirdre     | Toomey          | Mebane           | NC    | 27302 |
| 2476 | Sharon      | Tucker          | Greensboro       | NC    | 27403 |
| 2477 | Sheri       | Varner-Munt     | Clayton          | NC    | 27520 |
| 2478 | Bradley     | Vaughn          | Greensboro       | NC    | 27410 |
| 2479 | Walter      | von Schonfeld   | Durham           | NC    | 27702 |
| 2480 | Karen       | Walden          | Charlotte        | NC    | 28226 |
| 2481 | kathy       | webb            | walkertown       | NC    | 27051 |
| 2482 | Kelly       | Woods           | Wilmington       | NC    | 28403 |
| 2483 | Susan       | Workman         | Winston Salem    | NC    | 27107 |

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|------|-----------------|--------------|----------------|-------|--------|
| 2484 | Bobby           | Wynn         | Hendersonville | NC    | 28739  |
| 2485 | Gareth          | Wynn         | Hendersonville | NC    | 28739  |
| 2486 | Peggy           | Wynn         | Hendersonville | NC    | 28739  |
| 2487 | melissa         | zimmerman    | charlotte      | NC    | 28269  |
| 2488 | July            | Green        | fargo          | ND    | 58103  |
| 2489 | I.james         | lantz        | fargo          | ND    | 58102  |
| 2490 | ruth            | niska        | beulah         | ND    | 58523  |
| 2491 | pauline         | wolf         | finley         | ND    | 58230  |
| 2492 | Steven          | Dawes        | Omaha          | NE    | 68107  |
| 2493 | connie          | golden       | Bellevue       | NE    | 68005  |
| 2494 | Jamie           | Ives         | Lincoln        | NE    | 68524  |
| 2495 | kerry           | julian       | waverly        | NE    | 68462  |
| 2496 | avery           | kuypers      | kearney        | NE    | 68845  |
| 2497 | Marjorie        | Manglitz     | Lincoln        | NE    | 68505  |
| 2498 | Marty           | Mathieson    | Shelton        | NE    | 68876  |
| 2499 | D               | Maxwell      | Omaha          | NE    | 68104  |
| 2500 | Melanie         | McCain       | Omaha          | NE    | 68127  |
| 2501 | Pamela          | McCormick    | Omaha          | NE    | 68144  |
| 2502 | Renae           | McKeon       | Kearney        | NE    | 68845  |
| 2503 | Kayla           | Meyer        | Omaha          | NE    | 68118  |
| 2504 | Mary            | Rainwater    | Fremont        | NE    | 68025  |
| 2505 | Richard         | Shubert      | Lincoln        | NE    | 68508  |
| 2506 | m               | a            | Hudson         | NH    | 3051   |
| 2507 | Kally           | Abrams       | Bow            | NH    | 3304   |
| 2508 | Denise          | Bailat       | Manchester     | NH    | 3101   |
| 2509 | Margaret        | Barrar       | Chichester     | NH    | 3258   |
| 2510 | chris           | beane-martin | Somersworth    | NH    | 03878- |
| 2511 | T               | Cassidy      | Amherst        | NH    | 3031   |
| 2512 | Shannon         | Cavanaugh    | Berlin         | NH    | 3570   |
| 2513 | Carol           | DiPirro      | Merrimack      | NH    | 3054   |
| 2514 | James           | Dupuis       | West Lebanon   | NH    | 3784   |
| 2515 | julia           | flanders     | Iondonderry    | NH    | 3053   |
| 2516 | jack            | fleming      | hampton        | NH    | 3842   |
| 2517 | Janet           | Fotos        | Hollis         | NH    | 3049   |
| 2518 | Leonard         | Greenhalgh   | Hanover        | NH    | 3755   |
| 2519 | Erin            | Groudas      | Plaistow       | NH    | 3865   |
| 2520 | Dennis & Susan  | Kepner       | Hampton        | NH    | 3842   |
| 2521 | Michael         | Letendre     | Portsmouth     | NH    | 3801   |
| 2522 | Donna & Christy | Liolis       | West Franklin  | NH    | 3235   |
| 2523 | Nicole          | Martin       | Mont Vernon,   | NH    | 3057   |
| 2524 | Audrey E        | McSheehy     | Milton         | NH    | 3851   |
| 2525 | a               | metcalf4     | Plymouth       | NH    | 3264   |
| 2526 | Sharon          | Mylott       | Charlestown    | NH    | 3603   |
| 2527 | Brian           | Napier       | Concord        | NH    | 3301   |
| 2528 | Elyse           | Paul         | Dover          | NH    | 3820   |
| 2529 | Natalie         | Reid         | Troy           | NH    | 3465   |
| 2530 | Alison          | Scott        | Francetown     | NH    | 3043   |
| 2531 | Kimberly        | Smith        | Westmoreland   | NH    | 3467   |
| 2532 | Wendy           | Stevens      | Weare          | NH    | 3281   |
| 2533 | Alexis          | Thompson     | littleton      | NH    | 3561   |
| 2534 | Pat             | Webb         | IONDONDERRY    | NH    | 3053   |
| 2535 | Susan           | Wrightsmen   | Wolfeboro      | NH    | 3894   |
| 2536 | Kathleen        | Adams        | Hamilton       | NJ    | 8619   |
| 2537 | Grace           | Agnew        | Highland Park  | NJ    | 8904   |
| 2538 | Loretta         | Aja          | Cherry Hill    | NJ    | 8034   |
| 2539 | Nancy           | Albino       | Rutherford     | NJ    | 7070   |
| 2540 | Jennifer        | Arruda       | Newark         | NJ    | 7105   |
| 2541 | joseph          | attamante    | morristown     | NJ    | 7960   |
| 2542 | Dawn            | Barber       | Fort Dix       | NJ    | 8640   |
| 2543 | john            | beck         | Manahawkin     | NJ    | 8050   |
| 2544 | Tara            | Becker       | Dover          | NJ    | 7801   |
| 2545 | Richard         | Berggren     | Maplewood      | NJ    | 7040   |



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|------|---------------------|-------------|----------------------|-------|--------|
| 2546 | D                   | Berman      | Califon              | NJ    | 7830   |
| 2547 | Rozlyn              | Bess        | Berlin               | NJ    | 8009   |
| 2548 | Melani              | Bolyai      | River Vale           | NJ    | 7675   |
| 2549 | Carlene             | Bonica      | Howell               | NJ    | 7731   |
| 2550 | Patricia            | Boud        | Howell               | NJ    | 7731   |
| 2551 | Allan               | Brief       | Livingston           | NJ    | 7039   |
| 2552 | Erica               | Brinker     | Randolph             | NJ    | 7869   |
| 2553 | Seymour             | Brodsky     | Ridgewood            | NJ    | 7450   |
| 2554 | Elizabeth           | Burke       | New Providence       | NJ    | 7974   |
| 2555 | Janice              | Burke       | North Plainfield     | NJ    | 7060   |
| 2556 | m                   | busch       | rahway               | NJ    | 7065   |
| 2557 | Scott               | Byrne       | Dover                | NJ    | 7801   |
| 2558 | Valerie             | Capezzuto   | Rutherford           | NJ    | 7070   |
| 2559 | diane               | carrick     | Cape May Court House | NJ    | 8210   |
| 2560 | Cynthia             | Casner      | North Brunswick      | NJ    | 8902   |
| 2561 | Deborah             | Chaiken     | Palmyra              | NJ    | 8065   |
| 2562 | Michael             | Chang       | PAlisades Park       | NJ    | 7650   |
| 2563 | Martina             | Clark       | Westampton           | NJ    | 8060   |
| 2564 | Stacey              | Conroy      | Trenton              | NJ    | 8638   |
| 2565 | Dayton              | Cooper      | Pitman               | NJ    | 8071   |
| 2566 | Kenneth J.          | Cooper      | Ocean City           | NJ    | 8226   |
| 2567 | Tina                | Cooper      | Medford              | NJ    | 8055   |
| 2568 | Phil                | Correale    | Seaside Heights      | NJ    | 8751   |
| 2569 | Susan               | Curley      | Mays Landing         | NJ    | 8330   |
| 2570 | Theresa             | Cutuli      | Barrington           | NJ    | 8007   |
| 2571 | Liz                 | D.          | Morris Plains        | NJ    | 7950   |
| 2572 | Beth                | Dallam      | Jersey City          | NJ    | 7303   |
| 2573 | Dennis P            | Daly        | Lake Hiawatha        | NJ    | 7034   |
| 2574 | Sylvia              | Danzig      | Holmdel              | NJ    | 7733   |
| 2575 | Jim                 | Darrar      | Jackson              | NJ    | 8527   |
| 2576 | Louise              | Davies      | Bloomfield           | NJ    | 7003   |
| 2577 | Alice               | Deich       | Ridgefield Park      | NJ    | 7660   |
| 2578 | Anne                | DePoalo     | Manasquan            | NJ    | 8736   |
| 2579 | Randi               | Desiderio   | Hoboken              | NJ    | 7030   |
| 2580 | Helen               | DeSotto     | Palisades Park       | NJ    | 7650   |
| 2581 | Julie               | Diaz        | Dunellen             | NJ    | 8812   |
| 2582 | Andre               | Ditto       | Kearny               | NJ    | 7032   |
| 2583 | Lynn                | Dooley      | Del Haven            | NJ    | 8251   |
| 2584 | Christopher         | Dougherty   | Wanaque              | NJ    | 7465   |
| 2585 | Hilary              | Downing     | Whitehouse Station   | NJ    | 8889   |
| 2586 | Jerome Jay          | Dryer       | Holmdel              | NJ    | 7733   |
| 2587 | Carole              | Duckworth   | Ringwood             | NJ    | 7456   |
| 2588 | Francine            | Duckworth   | Paulsboro            | NJ    | 8066   |
| 2589 | Jennifer            | Duckworth   | Ringwood             | NJ    | 7456   |
| 2590 | Cheri               | Dzubak      | Yardville            | NJ    | 8620   |
| 2591 | LeeAnn              | Edwards     | Salem                | NJ    | 8079   |
| 2592 | Susan               | Elbin       | Parsippany           | NJ    | 07054] |
| 2593 | Sharon              | Ernst       | Princeton            | NJ    | 8540   |
| 2594 | Lamya               | Essemlali   | Belmar               | NJ    | 7720   |
| 2595 | Douglas BlackStream | Estelle     | Lakewood             | NJ    | 8701   |
| 2596 | Douglas BlackStream | Estelle     | Lakewood             | NJ    | 8701   |
| 2597 | Joan                | Faszczewski | Springfield          | NJ    | 7081   |
| 2598 | Suzanne             | Ficara      | Westmont             | NJ    | 8108   |
| 2599 | Erin                | Foley       | Hazlet               | NJ    | 7730   |
| 2600 | Revecca             | Forster     | Bayonne              | NJ    | 7002   |
| 2601 | James & Mary        | Frederick   | Medford              | NJ    | 8055   |
| 2602 | Patricia            | Fulmer      | Cinnaminson          | NJ    | 8077   |
| 2603 | Beth                | Gatlin      | Lincoln Park         | NJ    | 7035   |
| 2604 | Gregory             | Genovese    | Audubon              | NJ    | 8106   |
| 2605 | Andrea              | Greco       | Matawan              | NJ    | 7747   |
| 2606 | Ben                 | Grimwood    | Springfield          | NJ    | 7081   |
| 2607 | Luiza               | Grunebaum   | Fort Lee             | NJ    | 7024   |

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| 2608 | Karin            | Hansen        | Bayonne              | NJ    | 7002   |
| 2609 | Andrea           | Haresign      | Mount Laurel         | NJ    | 8054   |
| 2610 | Michelle         | Hartman       | Wyckoff              | NJ    | 7481   |
| 2611 | Steve            | Henry         | Basking Ridge        | NJ    | 7920   |
| 2612 | Linda            | Henson        | West Collingswood    | NJ    | 8107   |
| 2613 | Maria            | Hernandez     | Howell               | NJ    | 7731   |
| 2614 | B                | Hillermeier   | Ridgefield Park      | NJ    | 7660   |
| 2615 | Joy              | Hlavka-Graham | Clementon            | NJ    | 8021   |
| 2616 | Carla            | Holusha       | Budd Lake            | NJ    | 7828   |
| 2617 | Gerald           | Houlihan      | Rahway               | NJ    | 7650   |
| 2618 | Anthony          | Ivankovic     | Wayne                | NJ    | 7470   |
| 2619 | Jennifer         | Johnston      | Red Bank             | NJ    | 7701   |
| 2620 | Mary             | Jones         | Maple Shade          | NJ    | 8052   |
| 2621 | Donna            | Kachler       | West Milford         | NJ    | 7480   |
| 2622 | Candace          | Kautzer       | Aberdeen             | NJ    | 7747   |
| 2623 | Tim              | Keating       | Jersey City          | NJ    | 7302   |
| 2624 | Robert           | Keller        | Parsippany           | NJ    | 7054   |
| 2625 | Mary             | Kiecal        | Penns Grove          | NJ    | 8069   |
| 2626 | Maryann          | Kirchenbauer  | Elmwood Park         | NJ    | 7407   |
| 2627 | Joan             | Kirsten       | Chatham              | NJ    | 07928- |
| 2628 | Martin           | Klein         | Fort Lee             | NJ    | 7024   |
| 2629 | Patricia         | Knudsen       | Keyport              | NJ    | 7735   |
| 2630 | James            | Koo           | Neptune              | NJ    | 7753   |
| 2631 | Denise           | Kroth         | Wood ridge           | NJ    | 7075   |
| 2632 | carrie           | kunig         | morrisplains         | NJ    | 7950   |
| 2633 | sandra           | kunz          | Princeton            | NJ    | 8540   |
| 2634 | Michelle         | Kwon          | Lyndhurst            | NJ    | 7071   |
| 2635 | Gary             | Ladner        | Succasunna           | NJ    | 7876   |
| 2636 | Jenna            | Leder         | Manalapan            | NJ    | 7726   |
| 2637 | Joan             | Leder         | Manalapan            | NJ    | 7726   |
| 2638 | Suzanne          | Leeson        | Hoboken              | NJ    | 7030   |
| 2639 | Zabrina          | Leith         | Clementon            | NJ    | 8021   |
| 2640 | Laura            | Liebman       | no answer            | NJ    | 7003   |
| 2641 | Lorraine Candela | Mac Cotter    | Harvey Cedars        | NJ    | 8008   |
| 2642 | Janice           | Mackanic      | Jersey City          | NJ    | 7305   |
| 2643 | Kathleen         | Maher         | Ocean                | NJ    | 7712   |
| 2644 | Richard          | marranca      | Roselle Park         | NJ    | 7204   |
| 2645 | John             | Martin        | Riverton             | NJ    | 8077   |
| 2646 | Pablo            | Martinez      | Weehawken            | NJ    | 7086   |
| 2647 | Janet            | Martucci      | Aberdeen             | NJ    | 7747   |
| 2648 | Pauline          | Mavridis      | Hillsdale            | NJ    | 7642   |
| 2649 | Vicki            | McCarty       | Voorhees             | NJ    | 8043   |
| 2650 | Debbie           | McGee         | Wrightstown          | NJ    | 08562- |
| 2651 | amanda           | mercuro       | point pleasant beach | NJ    | 8742   |
| 2652 | Julia            | Merljak       | Neptune              | NJ    | 7753   |
| 2653 | Brian            | Miller        | Saddle Brook         | NJ    | 7663   |
| 2654 | marilyn          | millar        | whiting              | NJ    | 8759   |
| 2655 | Dennis           | Morley        | Old Bridge           | NJ    | 8857   |
| 2656 | Sandra           | Moskovitz     | Princeton            | NJ    | 8540   |
| 2657 | Patricia         | Munn          | Seaville             | NJ    | 8110   |
| 2658 | Heather          | Nemeth        | Ringwood             | NJ    | 7456   |
| 2659 | S.               | O'Brien       | Montclair            | NJ    | 7042   |
| 2660 | Ana              | Ocadiz        | Springfield          | NJ    | 7081   |
| 2661 | Carla            | Ohm           | Lavallette           | NJ    | 8735   |
| 2662 | Jules            | Owsinek       | Jersey City          | NJ    | 7306   |
| 2663 | Amy              | Page          | Pitman               | NJ    | 8071   |
| 2664 | John             | Paggioli      | Rumson               | NJ    | 7760   |
| 2665 | Sudhir           | Pandit        | Emerson              | NJ    | 7630   |
| 2666 | Kristen          | Pantelakis    | Shamong              | NJ    | 8088   |
| 2667 | Arlene           | Patoray       | Paramus              | NJ    | 7652   |
| 2668 | Stephanie        | Pecchio       | Carlstadt            | NJ    | 7072   |
| 2669 | Nilette          | Pecorella     | Toms River           | NJ    | 8753   |

|      | FIRST     | LAST        | CITY            | STATE | ZIP   |
|------|-----------|-------------|-----------------|-------|-------|
| 2670 | lois      | pesce       | ridgefield park | NJ    | 7660  |
| 2671 | Susan     | Platt       | Marlton         | NJ    | 8053  |
| 2672 | Chris     | Pomaski     | Brick           | NJ    | 8724  |
| 2673 | Geraldine | Pritchard   | Leonardo        | NJ    | 7737  |
| 2674 | Tova      | Raab        | cherry hill     | NJ    | 8002  |
| 2675 | Joann     | Ramos       | Iselin          | NJ    | 8830  |
| 2676 | Kelly     | Reice       | Moorestown      | NJ    | 8057  |
| 2677 | Brian     | Reynolds    | Pomona          | NJ    | 8240  |
| 2678 | Steven    | Rosenbaum   | Livingston      | NJ    | 7039  |
| 2679 | Bill      | Rosenblatt  | loch arbour     | NJ    | 7711  |
| 2680 | Enid      | Rosenblatt  | Moorestown      | NJ    | 8057  |
| 2681 | Dawn      | Rubino      | Bayville        | NJ    | 8721  |
| 2682 | Michael   | Rudon       | Basking Ridge   | NJ    | 7920  |
| 2683 | nikki     | russell     | sussex          | NJ    | 7461  |
| 2684 | Eric      | Sachs       | Edison          | NJ    | 8820  |
| 2685 | Allison   | Sammarco    | Ocean Twp       | NJ    | 7712  |
| 2686 | Marc      | Santora     | Wayne           | NJ    | 7470  |
| 2687 | Juliana   | Satmari     | Flemington      | NJ    | 882   |
| 2688 | Roger     | Sauer       | Chester         | NJ    | 7930  |
| 2689 | steve     | scarano     | barnegat        | NJ    | 8005  |
| 2690 | Greg      | Schneider   | Westfield       | NJ    | 7090  |
| 2691 | Brian     | Schwartz    | Dumont          | NJ    | 7628  |
| 2692 | Jack      | Schwartz    | Hazlet          | NJ    | 7730  |
| 2693 | Penelope  | Seale       | Kearny          | NJ    | 7032  |
| 2694 | PJ        | September   | U Saddle River  | NJ    | 7458  |
| 2695 | Allison   | Sherman     | South Amboy     | NJ    | 8879  |
| 2696 | James     | Sickels     | Monmouth Beach  | NJ    | 7750  |
| 2697 | Lynn      | Siebert     | MOrristown      | NJ    | 7960  |
| 2698 | Shalor    | Simonson    | Ringwood        | NJ    | 7456  |
| 2699 | ian       | smith       | gibbstown       | NJ    | 8027  |
| 2700 | DAVE      | SPIELER     | PENNSAUKEN      | NJ    | 8109  |
| 2701 | Martin    | Spindel     | Manalapan       | NJ    | 7726  |
| 2702 | Kandi     | St.Marie    | Collings Lakes  | NJ    | 8094  |
| 2703 | HOLLY     | STARLING    | Jamesburg       | NJ    | 8831  |
| 2704 | Dot       | Stein       | WeeHawken       | NJ    | 7086  |
| 2705 | Dusty     | Stepanski   | Richwood        | NJ    | 8074  |
| 2706 | Lisa      | Stewart     | Wharton         | NJ    | 7885  |
| 2707 | J         | Strait      | Bloomington     | NJ    | 7403  |
| 2708 | Dave      | Sunday      | brigantine      | NJ    | 8203  |
| 2709 | Whitney   | Swain       | Westfield       | NJ    | 7090  |
| 2710 | Lila      | Tarajkowski | Madison         | NJ    | 7940  |
| 2711 | Missy     | Titus       | Mahwah          | NJ    | 7430  |
| 2712 | Maurice   | Tremblay    | Brigantine      | NJ    | 8203  |
| 2713 | j         | turk        | garfield        | NJ    | 7026  |
| 2714 | Jay       | Ullman      | Lodi            | NJ    | 7644  |
| 2715 | Dorina    | VanGuilder  | Flanders        | NJ    | 7836  |
| 2716 | Keith     | Vaughn      | Clementon       | NJ    | 8021  |
| 2717 | Albert    | Vetrini     | Point Pleasant  | NJ    | 8742  |
| 2718 | David     | Vickery     | Hoboken         | NJ    | 7030  |
| 2719 | Robert    | von Giebel  | Belvidere       | NJ    | 7823  |
| 2720 | Pamela    | Votto       | Clark           | NJ    | 7066  |
| 2721 | Sharon    | wakefield   | millville       | NJ    | 8332  |
| 2722 | Jennifer  | Wallace     | Piscataway      | NJ    | 8854  |
| 2723 | Rose      | Wardell     | toms river      | NJ    | 8753  |
| 2724 | Constance | Waters      | Edison          | NJ    | 8820  |
| 2725 | Molly     | Weigel      | Pennington      | NJ    | 8534  |
| 2726 | Jeanetta  | Wenhold     | Garfield        | NJ    | 7026  |
| 2727 | Dan       | White       | union           | NJ    | 7083  |
| 2728 | Theresa   | Williams    | Helmetta        | NJ    | 8828  |
| 2729 | James     | Wohler      | Sea Bright      | NJ    | 7760  |
| 2730 | Lane      | Andress     | ALBUQUERQUE     | NM    | 87114 |
| 2731 | Heidi     | Arp-Adams   | Rio Rancho      | NM    | 87144 |

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|------|-----------|--------------|-----------------|-------|--------|
| 2732 | Dan       | Barkley      | Albuquerque     | NM    | 87110  |
| 2733 | Margaret  | Batty        | Alamogordo      | NM    | 88310  |
| 2734 | Vernon    | Batty        | La Luz          | NM    | 88337  |
| 2735 | Kristina  | Benson       | Ranchos de Taos | NM    | 87557  |
| 2736 | Nancy     | Brillault    | Santa Fe        | NM    | 87501  |
| 2737 | Hety      | Brost        | Medanales       | NM    | 87548  |
| 2738 | Hety      | Brost        | Medanales       | NM    | 87548  |
| 2739 | Linda     | Buckley      | Albuquerque     | NM    | 87120  |
| 2740 | Gretchen  | Byrne        | Albuquerque     | NM    | 87123  |
| 2741 | Jessica   | Campbell     | Rio Rancho      | NM    | 87144  |
| 2742 | Pamela    | Clark        | ABQ             | NM    | 87123  |
| 2743 | Joanne    | Cockerill    | Silver City     | NM    | 88061  |
| 2744 | Bruce     | Donnell      | Santa Fe        | NM    | 87506  |
| 2745 | Clay      | Ellis        | Santa Fe        | NM    | 87505  |
| 2746 | Tanya     | Field        | Albuquerque     | NM    | 87111  |
| 2747 | Mary      | Fletcher     | albuquerque     | NM    | 87106  |
| 2748 | Liz       | Fox          | Taos            | NM    | 87571  |
| 2749 | Liz       | Fox          | Taos            | NM    | 87571  |
| 2750 | JM        | Giles        | Sandia Park     | NM    | 87047  |
| 2751 | Rita      | Guidi        | Santa Fe        | NM    | 87508  |
| 2752 | Leah      | Harrison     | Albuquerque     | NM    | 87109  |
| 2753 | Harriet   | Hehr         | Santa Fe        | NM    | 87505  |
| 2754 | Bettemae  | Johnson      | Albuquerque     | NM    | 87110  |
| 2755 | Barbara   | Karcher      | Alto            | NM    | 88312  |
| 2756 | Larry     | Kehoe        | Santa Fe        | NM    | 87505  |
| 2757 | Ariana    | Kramer       | Taos            | NM    | 87571  |
| 2758 | Isabella  | Kristina     | Ranchos de Taos | NM    | 87557  |
| 2759 | Alex      | Leeson       | Santa Fe        | NM    | 87505  |
| 2760 | Linda     | Lillow       | Albuquerque     | NM    | 87105  |
| 2761 | Crawford  | MacCallum    | Tijeras         | NM    | 87059  |
| 2762 | Robert    | Maxwell      | Deming          | NM    | 88030  |
| 2763 | Kathleen  | Medina       | Santa Fe        | NM    | 87507  |
| 2764 | Sharon    | Morgan       | Silver City     | NM    | 88061  |
| 2765 | Robert    | Morgart      | Santa Fe        | NM    | 87505  |
| 2766 | Iora      | murphy       | rio rancho      | NM    | 87144  |
| 2767 | Anita     | Obermeier    | Albuquerque     | NM    | 87123  |
| 2768 | Lorrie    | Ogren        | Santa Fe        | NM    | 87507  |
| 2769 | Mignon    | Ohmura       | Santa Fe        | NM    | 87502  |
| 2770 | Claudia   | Olivie       | Santa Fe        | NM    | 87505  |
| 2771 | Melva     | Padilla      | San Felipe      | NM    | 87001  |
| 2772 | Sandra    | Padilla      | Albuquerque     | NM    | 87121  |
| 2773 | David     | Patton       | Angel Fire      | NM    | 87710  |
| 2774 | Deborah   | Pflanz       | Rio rancho      | NM    | 87124  |
| 2775 | Sue       | Pienciak     | Silver City     | NM    | 88061  |
| 2776 | George    | Price        | Santa Fe        | NM    | 87506  |
| 2777 | Peter     | Roche        | Santa Fe        | NM    | 87507  |
| 2778 | Sylvia    | Seret        | Santa Fe        | NM    | 87508  |
| 2779 | Magoo     | Shoulderlade | Albuquerque     | NM    | 87106  |
| 2780 | Shareen   | siegrist     | Albuquerque     | NM    | 87111  |
| 2781 | SARAH     | SMITHIES     | RANCHOS DE TAOS | NM    | 87557  |
| 2782 | Cassandra | Suarez       | Albuquerque     | NM    | 87106  |
| 2783 | Rita      | Surdi        | Las Vegas       | NM    | 87701  |
| 2784 | Simon     | Teolis       | Santa Fe        | NM    | 87506  |
| 2785 | Jeanne    | Wheeler      | Ojo Sarco       | NM    | 87521  |
| 2786 | Hamilton  | Williams     | Silver City     | NM    | 88061  |
| 2787 | Deirdre   | Wolf         | Silver City     | NM    | 88062  |
| 2788 | David     | Yoder        | Albuquerque     | NM    | 87104  |
| 2792 | Connie    | Brady        | Las Vegas       | NV    | 89108- |
| 2793 | Nathan    | Brown        | Reno            | NV    | 89502  |
| 2794 | Louis     | Bubala       | Washoe Valley   | NV    | 89704  |
| 2795 | Laura     | Cannon       | Las Vegas       | NV    | 89147  |
| 2796 | Melissa   | Cheung       | Boulder City    | NV    | 89005  |

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|------|--------------|--------------------|-----------------|-------|-------|
| 2797 | Andrea       | Cole               | las vegas       | NV    | 89128 |
| 2798 | Brittany     | Coppola            | las vegas       | NV    | 89128 |
| 2799 | janet        | curtis             | reno            | NV    | 89511 |
| 2800 | janet        | curtis             | reno            | NV    | 89511 |
| 2801 | David        | Dewenter           | Henderson       | NV    | 89009 |
| 2802 | Jen          | DiFeo              | Incline Village | NV    | 89451 |
| 2803 | Linda        | Facque             | Reno            | NV    | 89503 |
| 2804 | donna        | fulkerson          | reno            | NV    | 89504 |
| 2805 | jody         | gill               | las vegas       | NV    | 89131 |
| 2806 | Wendy        | Harper             | Reno            | NV    | 89509 |
| 2807 | melissa      | hatfield           | Henderson       | NV    | 89074 |
| 2808 | Robert       | Johnson            | Las Vegas       | NV    | 89134 |
| 2809 | David        | Kancsar            | Las Vegas       | NV    | 89117 |
| 2810 | constance    | kosuda             | las vegas       | NV    | 89122 |
| 2811 | Donna        | London             | Las Vegas       | NV    | 89120 |
| 2812 | sarah renee' | lynn               | henderson       | NV    | 89015 |
| 2813 | michelle     | marchese           | Las Vegas       | NV    | 89103 |
| 2814 | JUDY         | MARSHAK            | HENDERSON       | NV    | 89012 |
| 2815 | John         | Masrchese          | Henderson       | NV    | 89014 |
| 2816 | Diane        | Meeks              | Las Vegas       | NV    | 89108 |
| 2817 | john         | Molony             | Reno            | NV    | 89506 |
| 2818 | Beckie       | Moore              | Reno            | NV    | 89501 |
| 2819 | Chastity     | Moses              | Las Vegas       | NV    | 89108 |
| 2820 | mary         | ornelas            | las vegas       | NV    | 89120 |
| 2821 | Shelley      | Paddock            | Las Vegas       | NV    | 89108 |
| 2822 | Sheen        | Perkins            | Reno            | NV    | 89510 |
| 2823 | Polly D      | Pitsker            | Gardnerville    | NV    | 89460 |
| 2824 | anthony      | roberts            | las vegas       | NV    | 89117 |
| 2825 | anthony      | roberts            | las vegas       | NV    | 89117 |
| 2826 | Jenna        | Rytina             | Las Vegas       | NV    | 89123 |
| 2827 | Catharine    | Sanders            | Reno            | NV    | 89523 |
| 2828 | Jerry        | Schmer Jr.         | Henderson       | NV    | 89015 |
| 2829 | Megan        | Sells              | Reno            | NV    | 89506 |
| 2830 | sondra       | skipworth          | henderson       | NV    | 89052 |
| 2831 | wendy        | stucky             | reno            | NV    | 89521 |
| 2832 | Arthur       | van der Harten     | Las Vegas       | NV    | 89131 |
| 2833 | Diana        | vonHoldt           | Henderson       | NV    | 89015 |
| 2834 | Karen        | Wallo              | Las Vegas       | NV    | 89102 |
| 2835 | Joanna       | Welch              | Elko            | NV    | 89801 |
| 2836 | Janna        | Wiedemann          | Reno            | NV    | 89523 |
| 2837 | Barbara      | Williams           | Las Vegas       | NV    | 89110 |
| 2838 | Dan          | Williams           | Las Vegas       | NV    | 89110 |
| 2839 | Kirsten      | Wolner             | Henderson       | NV    | 89074 |
| 2840 | Andrew       | Abate              | Lindenhurst     | NY    | 11757 |
| 2841 | carol        | abramsky           | bx              | NY    | 10463 |
| 2842 | Andrea       | Ackerman           | New York        | NY    | 10001 |
| 2843 | J. Stephen   | Adams              | Brooklyn        | NY    | 11222 |
| 2844 | kathleen v   | adamski            | spring valley   | NY    | 10977 |
| 2845 | Leo          | Ahumada            | Flushing        | NY    | 11354 |
| 2846 | Jay          | Albrecht           | Tarrytown       | NY    | 10591 |
| 2847 | Pamela       | Alcid              | Troy            | NY    | 12180 |
| 2848 | Stella M.    | Aleman de Gallardo | Woodside        | NY    | 11377 |
| 2849 | Joseph       | Alfano             | Bayville        | NY    | 11709 |
| 2850 | Diana        | Algarin            | Maybrook        | NY    | 12543 |
| 2851 | Lori         | Alicie             | Rochester       | NY    | 14620 |
| 2852 | Karen        | Allen              | Auburn          | NY    | 13021 |
| 2853 | Nick         | Allen              | New York        | NY    | 10024 |
| 2854 | Judith       | Angelson           | New York        | NY    | 10024 |
| 2855 | Joseph       | Arbo               | New York        | NY    | 10025 |
| 2856 | Nadia        | Arcese             | North Salem     | NY    | 10560 |
| 2857 | Rebecca      | Arndt              | Brooklyn        | NY    | 11211 |
| 2858 | Thomas       | Artin              | Sparkill        | NY    | 10976 |

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|------|------------------|-------------|-----------------|-------|--------|
| 2859 | Julie            | Auriemma    | Amityville      | NY    | 11701  |
| 2860 | Katherine        | Babiak      | New York        | NY    | 10014  |
| 2861 | Alice            | Backing     | Valatie         | NY    | 12184  |
| 2862 | Jacquelyn        | Baetz       | Albany          | NY    | 12203  |
| 2863 | Gideon           | Banner      | New York        | NY    | 10128  |
| 2864 | Theresa          | Barbour     | Spencer         | NY    | 14883  |
| 2865 | Dale             | Barbur      | Oswego          | NY    | 13126  |
| 2866 | Aegina           | Barnes      | Forest Hills    | NY    | 11375  |
| 2867 | Katherine        | Barnhart    | brooklyn        | NY    | 11209  |
| 2868 | Marina           | Barry       | New York        | NY    | 10033- |
| 2869 | Alice            | Bartholomew | Elmira          | NY    | 14905  |
| 2870 | pattie           | bauer       | franklin square | NY    | 11010  |
| 2871 | SHARON           | BAUER       | RENSSELAER      | NY    | 12144  |
| 2872 | linda            | baumgarten  | ny              | NY    | 10023  |
| 2873 | Richard          | Beal        | Ontario         | NY    | 14519  |
| 2874 | David            | Beard       | Syracuse        | NY    | 13224  |
| 2875 | Barbara          | Becker      | Melville        | NY    | 11747  |
| 2876 | Suellyn          | Benzvi      | ny              | NY    | 10002  |
| 2877 | EVELYN           | BERK        | NEW YORK        | NY    | 10012  |
| 2878 | Jan              | Berlin      | Bullville       | NY    | 10915  |
| 2879 | Bryce            | Bermingham  | Jackson Heights | NY    | 11372  |
| 2880 | Janice           | Bernard     | Scarborough     | NY    | 10510  |
| 2881 | Michael          | Bilecki     | Brookhaven      | NY    | 11719  |
| 2882 | Helen            | Bilowus     | Lackawanna      | NY    | 14218  |
| 2883 | Christa          | Bird        | Plainview       | NY    | 11803  |
| 2884 | Kenneth          | Bird        | Rochester       | NY    | 14622  |
| 2885 | Robert           | Bisson      | Stuyvesant      | NY    | 12173  |
| 2886 | Melody           | Blackmore   | Tupper Lake     | NY    | 12986  |
| 2887 | Robin            | Blier       | saugerties      | NY    | 12477  |
| 2888 | jay              | blotcher    | high Falls      | NY    | 12440  |
| 2889 | Ethel            | Bock        | New York        | NY    | 10023  |
| 2890 | Teri             | Bollweg     | Long Beach      | NY    | 11561  |
| 2891 | Dominique        | Borel       | New York        | NY    | 10024  |
| 2892 | Danielle         | Bottinger   | New York        | NY    | 10016  |
| 2893 | robin            | bouchard    | syracuse        | NY    | 13203  |
| 2894 | susie            | brand       | Brooklyn        | NY    | 11217  |
| 2895 | david            | brennan     | new york        | NY    | 10022  |
| 2896 | Jared            | Brenner     | New York        | NY    | 10003  |
| 2897 | Natasha and Noah | Brenner     | Jericho         | NY    | 11753- |
| 2898 | Celia            | Bressack    | New York        | NY    | 10009  |
| 2899 | George           | Brewer      | Watertown       | NY    | 13601  |
| 2900 | Catherine        | Bright      | new york        | NY    | 10014  |
| 2901 | Babette          | Brown       | Beacon          | NY    | 12508  |
| 2902 | Bonnie           | Brown       | New York        | NY    | 10010  |
| 2903 | Craig            | Browne      | Wappinger       | NY    | 12590  |
| 2904 | Tony             | Brungard    | Brooklyn        | NY    | 11201  |
| 2905 | stephanie        | bucalo      | shelter island  | NY    | 11964  |
| 2906 | David            | Buck        | Staten Island   | NY    | 10303- |
| 2907 | Diane            | Bugliarelli | Carmel          | NY    | 10512  |
| 2908 | rbunsick         | bunsick     | new york        | NY    | 10016  |
| 2909 | Susan            | Burian      | Williston Park  | NY    | 11596  |
| 2910 | Joy              | Butch       | Tonawanda       | NY    | 14150  |
| 2911 | M                | Byzz        | Rock Hill       | NY    | 12775  |
| 2912 | Maria            | Caban       | Bronx           | NY    | 10469  |
| 2913 | Paola            | Camarena    | Brooklyn        | NY    | 11201  |
| 2914 | David            | Cambrai     | Shirley         | NY    | 11967  |
| 2915 | Barbara          | Cameron     | Shirley         | NY    | 11967  |
| 2916 | david            | camilleri   | nyc             | NY    | 10011  |
| 2917 | Judith           | Canepa      | New York        | NY    | 10009  |
| 2918 | jeanette         | capotorto   | commack         | NY    | 11725  |
| 2919 | J.               | Capozzelli  | New York        | NY    | 10024  |
| 2920 | R.               | Capozzelli  | Yonkers         | NY    | 10704  |

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|------|----------------|-------------------|--------------------|-------|--------|
| 2921 | Maryann        | Caputo            | Brooklyn           | NY    | 11230  |
| 2922 | Faye           | Carlson-Mackenzie | Stone Ridge        | NY    | 12484  |
| 2923 | Aaron          | Carr              | New York           | NY    | 10069  |
| 2924 | Sandra J.      | Carrubba          | Buffalo            | NY    | 14217  |
| 2925 | Leslie         | Cassidy           | New York           | NY    | 10028  |
| 2926 | Sherri         | Cedeno-Rivera     | Bronx              | NY    | 10465  |
| 2927 | Mikki          | Chalker           | Binghamton         | NY    | 13905  |
| 2928 | Vicki          | Charbonneau       | Cato               | NY    | 13033  |
| 2929 | jeri           | cheraskin         | brooktondale       | NY    | 14817  |
| 2930 | Christine      | Clayton           | kinderhook         | NY    | 12106  |
| 2931 | Karen          | Cleveland         | Round Lake         | NY    | 12151  |
| 2932 | ROBERT         | CLINTON           | HIGHLAND MILLS     | NY    | 10930  |
| 2933 | lynn           | coffey-edelman    | huntington station | NY    | 11746  |
| 2934 | Jonathan       | Cole              | New York           | NY    | 10014  |
| 2935 | M              | collins           | latham             | NY    | 12110  |
| 2936 | Connie         | Colvin            | New York           | NY    | 11369  |
| 2937 | Thomas V.      | Connor SFO        | Wallkill           | NY    | 12589  |
| 2938 | Lauren         | Corridori         | Whitesboro         | NY    | 13492  |
| 2939 | Caryn          | Corriere          | Buffalo            | NY    | 14216  |
| 2940 | James          | Cottone           | Babylon            | NY    | 11702  |
| 2941 | Therese        | Crowley           | Warwick            | NY    | 10990  |
| 2942 | Ana            | Cruz              | Valley Stream      | NY    | 11580  |
| 2943 | Alison         | Cunningham        | Lake Katrine       | NY    | 12449  |
| 2944 | Christine      | Cyriacks          | Bronx              | NY    | 10471  |
| 2945 | Gino           | Czaster           | Buffalo            | NY    | 14214  |
| 2946 | Mark           | Daims             | Chatham            | NY    | 12037  |
| 2947 | Anthony Martin | Dambrosi          | Middletown         | NY    | 10940- |
| 2948 | Pamela         | Danzig            | Bronx              | NY    | 10471  |
| 2949 | Ian            | Darnton-Hill      | New York           | NY    | 10006  |
| 2950 | Leslie         | Davidson          | New York           | NY    | 10128  |
| 2951 | Trevor         | Davis             | Brooklyn           | NY    | 11222  |
| 2952 | Bob            | Dearborn          | Lewiston           | NY    | 14092  |
| 2953 | Val            | DeGrace           | Saranac Lake       | NY    | 12983  |
| 2954 | richard        | deitch            | bronx              | NY    | 10471  |
| 2955 | Taz            | Delaney           | New York City      | NY    | 10028  |
| 2956 | Frankie        | DeMarco           | New York           | NY    | 10014  |
| 2957 | Linda          | Dennis            | New York           | NY    | 10276  |
| 2958 | Richard        | Diaz              | Congers            | NY    | 10920  |
| 2959 | Nathan         | Diegelman         | Cheektowaga        | NY    | 14225  |
| 2960 | Katherine      | Dineen            | Loudonville        | NY    | 12211  |
| 2961 | Susan          | DiRienzo          | Carmel             | NY    | 10512  |
| 2962 | Denise         | Dobbranchin       | Buffalo            | NY    | 14222  |
| 2963 | Trish          | Doherty           | Brooklyn           | NY    | 11205  |
| 2964 | Molly          | Donahue           | New York           | NY    | 10009  |
| 2965 | Joseph M.      | Donaldson         | Kingston           | NY    | 12401  |
| 2966 | Noel           | Dowling           | New York           | NY    | 10025  |
| 2967 | Elizabeth      | Doyle             | Rochester          | NY    | 14624  |
| 2968 | Georgette      | Doyle             | Rochester          | NY    | 14624  |
| 2969 | Beverly        | Drucker           | Tuckahoe           | NY    | 10707  |
| 2970 | Diana          | Drucker           | Ithaca             | NY    | 14850  |
| 2971 | Mary           | Dugan             | Chatham            | NY    | 12037  |
| 2972 | Harriet        | Dunkerley         | New City           | NY    | 10956  |
| 2973 | Lloyd          | Dunn              | Little Neck        | NY    | 11362  |
| 2974 | Nee            | Eagle             | Brooklyn           | NY    | 11204- |
| 2975 | Lucy           | Edwards           | tuxedo Park, NY    | NY    | 10987  |
| 2976 | Sandy          | Eisenberg         | Bronx              | NY    | 10463  |
| 2977 | David          | Eliezer           | New York           | NY    | 10021  |
| 2978 | Jeanne         | Elisha            | Niskayuna          | NY    | 12309  |
| 2979 | Beverly        | Ellingwood        | webster            | NY    | 14580  |
| 2980 | Catherine      | Elliott           | South Salem        | NY    | 10590  |
| 2981 | Cori           | Ellison           | New York           | NY    | 10024  |
| 2982 | Maura          | Ellyn             | High Falls         | NY    | 12440  |

|      | FIRST        | LAST            | CITY             | STATE | ZIP    |
|------|--------------|-----------------|------------------|-------|--------|
| 2983 | Michael      | Epstein         | Brooklyn         | NY    | 11216  |
| 2984 | Stephanie    | Etherton        | New York         | NY    | 10021  |
| 2985 | Theresa      | Everett         | Tarrytown        | NY    | 10591  |
| 2986 | james        | ewing           | water Mill       | NY    | 11976  |
| 2987 | Irene        | Fabin           | New York         | NY    | 10023  |
| 2988 | Patricia     | Fabricant       | New York         | NY    | 10023  |
| 2989 | Emily        | Fano            | New York         | NY    | 10024- |
| 2990 | Monte        | Farber          | East Hampton     | NY    | 11937  |
| 2991 | Lisa         | Farnan          | Queensbury       | NY    | 12804  |
| 2992 | nicole       | feldman         | flushing         | NY    | 11354  |
| 2993 | Remy         | Fenster         | Rochester        | NY    | 14610  |
| 2994 | Enrique      | Fernandez       | New York         | NY    | 10025  |
| 2995 | Christopher  | Fetta           | hicksville       | NY    | 11801  |
| 2996 | Eric         | Fichtl          | Astoria          | NY    | 11102  |
| 2997 | kathleen     | finch           | clarence         | NY    | 14031  |
| 2998 | Bobbie       | Flowers         | New York         | NY    | 10011  |
| 2999 | Leah         | Foster          | Brooklyn         | NY    | 11222  |
| 3000 | Vicki        | Fox             | Beacon           | NY    | 12508  |
| 3001 | Maggie       | Frazier         | Windsor          | NY    | 13865  |
| 3002 | Misha        | Fredericks      | New Paltz        | NY    | 12561  |
| 3003 | Neil         | Freson          | Henrietta        | NY    | 1467   |
| 3004 | Malgorzata   | Gajda           | Nesconset        | NY    | 11767  |
| 3005 | Theresa      | Galvin          | Brooklyn         | NY    | 11231  |
| 3006 | Yolanda      | Garcia          | New York         | NY    | 10032  |
| 3007 | Jackie       | Gardner         | Cortlandt Manor  | NY    | 10567  |
| 3008 | Caroline     | Garrett         | Brooklyn         | NY    | 11238  |
| 3009 | Katie        | Garton          | New York         | NY    | 10001  |
| 3010 | Jay          | Gassman         | CENTEREACH       | NY    | 11720  |
| 3011 | marsha       | gayer           | hollis           | NY    | 11423  |
| 3012 | Linda        | Gazzola         | Tarrytown        | NY    | 10591  |
| 3013 | John         | Gebhardt        | New York         | NY    | 10010  |
| 3014 | Merri        | Gelbard         | Great Neck       | NY    | 11023  |
| 3015 | Frank        | Gentile         | Hawthorne        | NY    | 10532- |
| 3016 | &Mrs. Philip | Georgini        | Brooklyn         | NY    | 11209  |
| 3017 | Christine    | Georgiou        | Bronx            | NY    | 10461  |
| 3018 | Arielle      | Gerard          | Albany           | NY    | 12208  |
| 3019 | Lisa         | Giordano        | Fresh Meadows    | NY    | 11365  |
| 3020 | Richard      | Golding         | White Plains     | NY    | 10603  |
| 3021 | William      | Gonzalez Garcia | Monsey           | NY    | 10952  |
| 3022 | jon          | gordon          | n.Y.             | NY    | 10003  |
| 3023 | Stephen      | Goyon           | Bethpage         | NY    | 11714  |
| 3024 | Elizabeth    | Graci           | Hamburg          | NY    | 14075  |
| 3025 | Steven       | Granger         | Cottekill        | NY    | 12419  |
| 3026 | Claudia      | Greco           | Brooklyn         | NY    | 11234  |
| 3027 | ed           | green jr        | elmira           | NY    | 14901  |
| 3028 | Kimberly     | Greene          | New York         | NY    | 10021  |
| 3029 | Donna        | Greenwell       | Saratoga Springs | NY    | 12866  |
| 3030 | Athanasia    | Gregoriades     | NY               | NY    | 10011  |
| 3031 | Carolyn      | Grey            | New York         | NY    | 10001  |
| 3032 | Thomass      | Grimes          | Schenectady      | NY    | 12304  |
| 3033 | Gary         | Gross           | NYC              | NY    | 10014  |
| 3034 | Janet        | Grossman        | Sag Harbor       | NY    | 11963  |
| 3035 | Amy          | Grys            | Buffalo          | NY    | 14220  |
| 3036 | Angela       | Gunn            | Astoria          | NY    | 11103  |
| 3037 | Dolores      | Guzman          | Bronx            | NY    | 10457  |
| 3038 | Dolores      | Guzman          | Bronx            | NY    | 10457  |
| 3039 | Dolores      | Guzman          | Bronx            | NY    | 10457  |
| 3040 | Dolores      | Guzman          | Bronx            | NY    | 10457  |
| 3041 | Margaret     | Haas            | New York         | NY    | 10011  |
| 3042 | Claire       | Haiman          | NY               | NY    | 10003  |
| 3043 | Than         | Hansen          | forest hills     | NY    | 11375  |
| 3044 | Missy        | Hargraves       | NYC              | NY    | 10023  |



|      | FIRST       | LAST           | CITY             | STATE | ZIP   |
|------|-------------|----------------|------------------|-------|-------|
| 3045 | Amy         | Harlib         | New York         | NY    | 10011 |
| 3046 | Paige       | Harrison, R.N. | New York         | NY    | 10024 |
| 3047 | David       | Haymon         | Brockport        | NY    | 14420 |
| 3048 | Mary        | Hebert         | Cattaraugus      | NY    | 14719 |
| 3049 | Susan       | Heckler        | Jamaica          | NY    | 11432 |
| 3050 | eliza       | hege-man       | ny               | NY    | 10024 |
| 3051 | Jenny       | Heinz          | New York         | NY    | 10024 |
| 3052 | Cynthia     | Heinze         | Flushing         | NY    | 11367 |
| 3053 | Donna       | Henes          | Brooklyn         | NY    | 11238 |
| 3054 | Patricia    | Henry          | deer park        | NY    | 11729 |
| 3055 | alicia      | hewitt         | rochester        | NY    | 14607 |
| 3056 | Rosalie     | Hewitt         | Norwich          | NY    | 13815 |
| 3057 | Cheryl      | Hill           | New York         | NY    | 10025 |
| 3058 | Linda       | Hirdes         | Manhattan        | NY    | 10016 |
| 3059 | Karen       | Hirsch         | New York         | NY    | 10014 |
| 3060 | Kenneth     | Hittel         | New York         | NY    | 10024 |
| 3061 | Barb        | Holtz          | NY               | NY    | 10010 |
| 3062 | Sophia      | Holtz          | New York         | NY    | 10025 |
| 3063 | Michelle    | Hood           | NYC              | NY    | 10003 |
| 3064 | MaryBeth    | Houser         | corning          | NY    | 14830 |
| 3065 | John        | Howard         | New York         | NY    | 10002 |
| 3066 | Anne        | Huibregtse     | Wingdale         | NY    | 12594 |
| 3067 | Karl        | Hunting        | Staten Island    | NY    | 10309 |
| 3068 | Starr       | Hurst          | Clifton Springs  | NY    | 14432 |
| 3069 | Michele     | Hutchsion      | Lockport         | NY    | 14094 |
| 3070 | Jane        | Hymas          | Cooperstown      | NY    | 13326 |
| 3071 | Susan       | Ingraham       | Binghamton       | NY    | 13902 |
| 3072 | Sheila      | Isaacson       | Forest Hills     | NY    | 11375 |
| 3073 | Susanna     | Isbell         | Oneonta          | NY    | 13820 |
| 3074 | Pilar       | Iwankiw        | Rochester        | NY    | 14626 |
| 3075 | Dominique   | Jeannot        | Brooklyn         | NY    | 11203 |
| 3076 | Alex        | Jedd           | new lebanon      | NY    | 12125 |
| 3077 | Robert      | Jereski        | New York         | NY    | 10017 |
| 3078 | Jimmy       | Johnston       | Shirley          | NY    | 11967 |
| 3079 | A.          | Jones          | Canton           | NY    | 13617 |
| 3080 | penelope    | josephides     | New york         | NY    | 10028 |
| 3081 | Gwen        | Jurmark        | Bronx            | NY    | 10463 |
| 3082 | lillian     | just           | buffalo          | NY    | 14210 |
| 3083 | Lauren      | Kaeseberg      | New York         | NY    | 10003 |
| 3084 | terri       | Karnessis      | central islip    | NY    | 11722 |
| 3085 | yelena      | katsen         | New York         | NY    | 10034 |
| 3086 | Jonathan    | Katz           | Northport        | NY    | 11768 |
| 3087 | Roger       | Katz           | Old Westbury     | NY    | 11568 |
| 3088 | Ira         | Kaye           | New York         | NY    | 10024 |
| 3089 | Timothy     | Kelley         | New York         | NY    | 10034 |
| 3090 | Barbara     | Kelly          | Port Jefferson   | NY    | 11777 |
| 3091 | BRUCE       | KERRISON       | LOCKPORT         | NY    | 14094 |
| 3092 | Gerald      | Kestenbaum     | Orangeburg       | NY    | 10962 |
| 3093 | Leah        | Khaghani       | New York         | NY    | 10024 |
| 3094 | vicki       | king           | saratoga springs | NY    | 12866 |
| 3095 | Peter       | Kivic          | Fort Covington   | NY    | 12937 |
| 3096 | Leslie      | Kiwacz         | Staten Island    | NY    | 10304 |
| 3097 | Paul        | Knill          | Suffern          | NY    | 10901 |
| 3098 | rayna       | knobler        | buffalo          | NY    | 14222 |
| 3099 | Ulle        | Koiv           | New York         | NY    | 10011 |
| 3100 | Christopher | Kornmann       | Bronx            | NY    | 10469 |
| 3101 | John        | Kosek          | Hopewell Jct.    | NY    | 12533 |
| 3102 | Diane       | Kraft          | Niagara Falls    | NY    | 14305 |
| 3103 | Phyllis     | Krathaus       | Cheektowaga      | NY    | 14225 |
| 3104 | cynthia     | kravitz        | port jefferson   | NY    | 11777 |
| 3105 | yvonne      | kravitz        | port jefferson   | NY    | 11777 |
| 3106 | eva         | kriz           | brooklyn         | NY    | 11231 |

|      | FIRST       | LAST       | CITY              | STATE | ZIP   |
|------|-------------|------------|-------------------|-------|-------|
| 3107 | Catherine   | Kroczyński | Tonawanda         | NY    | 14150 |
| 3108 | Anthony     | Kropovitch | West Seneca       | NY    | 14224 |
| 3109 | Steve       | Kuhl       | Calverton         | NY    | 11933 |
| 3110 | Andrea      | Kuryak     | Lackawanna        | NY    | 14218 |
| 3111 | Michael     | Laird      | New York          | NY    | 10009 |
| 3112 | Joan        | LaLiberté  | Callicoon         | NY    | 12723 |
| 3113 | Jessica     | Lambert    | marcellus         | NY    | 13108 |
| 3114 | Marlena     | Lange      | Middletown        | NY    | 10940 |
| 3115 | Lynda       | Leibowitz  | Tuxedo Park       | NY    | 10987 |
| 3116 | Melissa     | Lemke      | Glens Falls       | NY    | 12801 |
| 3117 | Richard     | Leonard    | New York          | NY    | 10021 |
| 3118 | Stephen     | Leone      | Smithtown         | NY    | 11787 |
| 3119 | John        | Lettiere   | Ardsley           | NY    | 10502 |
| 3120 | Ellen       | leventhal  | muttontown        | NY    | 11791 |
| 3121 | Jared       | Levin      | New York          | NY    | 10033 |
| 3122 | Abby        | Levine     | Ossining          | NY    | 10562 |
| 3123 | richard     | libbey     | atlantic beach    | NY    | 11509 |
| 3124 | Karen       | Linton     | Fairport          | NY    | 14450 |
| 3125 | Liana       | Liotta     | Stillwater        | NY    | 12170 |
| 3126 | Cynthia     | Liss       | Brooklyn          | NY    | 11228 |
| 3127 | Robert      | Lombardi   | Brooklyn          | NY    | 11234 |
| 3128 | may         | LU         | NEW YORK          | NY    | 10018 |
| 3129 | Jodi        | Luby       | New york          | NY    | 10003 |
| 3130 | karl        | Lucas      | Brooklyn          | NY    | 11231 |
| 3131 | Alison      | Lucon      | New Hyde Park     | NY    | 11040 |
| 3132 | Catherine   | Ludlam     | Oyster Bay        | NY    | 11771 |
| 3133 | Daniella    | Luel       | Holliswood        | NY    | 11423 |
| 3134 | Gary        | Maerz      | Bellerose Terrace | NY    | 11001 |
| 3135 | Sheila      | Mahon      | NY                | NY    | 10022 |
| 3136 | lisa        | malakian   | wingdale          | NY    | 12594 |
| 3137 | Maggie      | Mandzuk    | New York          | NY    | 10009 |
| 3138 | Cathy       | Marczyk    | Highland Mills    | NY    | 10930 |
| 3139 | tracy       | marotta    | brooklyn          | NY    | 11219 |
| 3140 | Fletcher    | Marron Sr  | New Berlin        | NY    | 13411 |
| 3141 | William     | Martel     | Whitehall         | NY    | 12887 |
| 3142 | Brenda      | Martin     | Glendale          | NY    | 11385 |
| 3143 | Melina      | Martin     | Rochester         | NY    | 14617 |
| 3144 | Monica      | Martinez   | Freah Meadows     | NY    | 11365 |
| 3145 | Richard     | Massa      | NEW YORK          | NY    | 10001 |
| 3146 | Robin       | Mayerat    | Hamburg           | NY    | 14075 |
| 3147 | Ken         | McBride    | Rochester         | NY    | 14616 |
| 3148 | Barb        | McCarthy   | Tonawanda         | NY    | 14150 |
| 3149 | Michael     | McCarthy   | Bronx             | NY    | 10471 |
| 3150 | Victoria    | McFadyen   | Brooklyn          | NY    | 11209 |
| 3151 | chris       | mcginn     | new york          | NY    | 10025 |
| 3152 | Susan       | McKenna    | Farmingdale       | NY    | 11735 |
| 3153 | paul        | mckinley   | brooklyn          | NY    | 11236 |
| 3154 | Sharon      | McMenamin  | Long Island City  | NY    | 11101 |
| 3155 | MARITZA     | MEDINA     | queens            | NY    | 11421 |
| 3156 | Barbara     | Menkes     | ny                | NY    | 10012 |
| 3157 | Karla Linn  | Merrifield | Kent              | NY    | 14477 |
| 3158 | Meredith    | Milianta   | Bedford           | NY    | 10506 |
| 3159 | francine    | Miller     | northport         | NY    | 11768 |
| 3160 | Jackie      | Miller     | Buffalo           | NY    | 14222 |
| 3161 | Raquel      | Miller     | Buffalo           | NY    | 14222 |
| 3162 | Christopher | Milone     | Rockville Centre  | NY    | 11570 |
| 3163 | Kathleen    | Mohning    | Buffalo           | NY    | 14222 |
| 3164 | Kevin       | Morgan     | Hauppauge         | NY    | 11788 |
| 3165 | Tammy       | Morgan     | Long Beach        | NY    | 11561 |
| 3166 | Elizabeth   | Mostov     | new york          | NY    | 10024 |
| 3167 | esther      | moux       | queens            | NY    | 11435 |
| 3168 | ryan        | muhammad   | bellerose         | NY    | 11426 |

|      | FIRST       | LAST             | CITY             | STATE | ZIP    |
|------|-------------|------------------|------------------|-------|--------|
| 3169 | Peter       | Muller           | Jamaica          | NY    | 11419  |
| 3170 | Byron       | Munoz            | Jackson Heights  | NY    | 11372  |
| 3171 | Paul        | Murray           | West Babylon     | NY    | 11704  |
| 3172 | Debra       | Myers            | Hammondsport     | NY    | 14840  |
| 3173 | William     | Nage             | Bronx            | NY    | 10471  |
| 3174 | S           | Nam              | New York         | NY    | 10040  |
| 3175 | Laura       | Napoleon         | Little Neck      | NY    | 11362  |
| 3176 | Jonathan    | Nash             | New York         | NY    | 10028  |
| 3177 | Andrea      | Neal             | Cortland         | NY    | 13045  |
| 3178 | Regina      | Negri            | Hillsdale        | NY    | 12529  |
| 3179 | merle       | neidell          | st james         | NY    | 11780  |
| 3180 | Charles     | Neidich          | New York         | NY    | 10033  |
| 3181 | Andrea      | Neiman           | nassau           | NY    | 12123  |
| 3182 | AILEEN      | NELSN            | RONKONKOMA       | NY    | 11779  |
| 3183 | Gregory     | Nerode           | Ithaca           | NY    | 14850  |
| 3184 | Willis      | Neville          | Mount Vernon     | NY    | 10550- |
| 3185 | Blake       | Nicolazzo        | Brooklyn         | NY    | 11217  |
| 3186 | Blake       | Nicolazzo        | Brooklyn         | NY    | 11217  |
| 3187 | Will        | Niermeyer        | Utica            | NY    | 13501  |
| 3188 | jill        | nord             | glendale         | NY    | 11385  |
| 3189 | Cathy       | O'Braoin         | East Hampton     | NY    | 11937  |
| 3190 | Della       | Oliver           | Rego Park        | NY    | 11374  |
| 3191 | pammela     | olson            | wantagh          | NY    | 11793  |
| 3192 | Robert      | Orlando          | Cooperstown      | NY    | 13326  |
| 3193 | Kevin       | O'Rourke         | Camden           | NY    | 13316  |
| 3194 | Sandee      | Ostwind          | Bronx            | NY    | 10463  |
| 3195 | Kristin     | Otto             | Ithaca           | NY    | 14850  |
| 3196 | mark        | owen             | New York         | NY    | 10002  |
| 3197 | Billie      | Ozerengin        | New York         | NY    | 10021  |
| 3198 | Carol       | Painter          | Ithaca           | NY    | 14850  |
| 3199 | Michelle    | Paquette         | Saratoga Springs | NY    | 12866  |
| 3200 | KJ          | Park             | Mt. Kisco        | NY    | 10549  |
| 3201 | Margery A.  | Pasko            | Hammond          | NY    | 13646  |
| 3202 | JOHN        | PEDERSEN         | SAVILLE          | NY    | 11782  |
| 3203 | Liette      | Pedraza-Tucker   | Brooklyn         | NY    | 11218  |
| 3204 | Christopher | Pelham           | Brooklyn         | NY    | 11222  |
| 3205 | K. R.       | Pence            | New York         | NY    | 10012  |
| 3206 | Eileen      | Pepel            | Staten Island    | NY    | 10305  |
| 3207 | Justine M.  | Pepicelli        | Flushing         | NY    | 11354  |
| 3208 | Luiz        | Perez            | East Hampton     | NY    | 11937  |
| 3209 | rita        | persichetty      | staten island    | NY    | 10306  |
| 3210 | James       | Pfitzner         | Lagrangeville    | NY    | 12540  |
| 3211 | Chip        | Phillips         | Sunnyside        | NY    | 11104  |
| 3212 | Melanie     | Picciotti        | Rochester        | NY    | 14606  |
| 3213 | Melanie     | Picciotti        | Rochester        | NY    | 14606  |
| 3214 | CECILIA     | PIPITONE-OLIVETO | STATEN ISLAND    | NY    | 10306  |
| 3215 | Lisa        | Pisano           | Brooklyn         | NY    | 11214  |
| 3216 | Lisa        | Pisano           | Brooklyn         | NY    | 11214  |
| 3217 | Thomas      | Podgurski        | Port Washington  | NY    | 11050  |
| 3218 | kathleen    | potterfield      | New York         | NY    | 10306  |
| 3219 | Laurie      | Puca             | New City         | NY    | 10956  |
| 3220 | Gerryl E.   | Puelle           | New York         | NY    | 10009  |
| 3221 | Jose        | Quinones         | Bronx            | NY    | 10462  |
| 3222 | Jose        | Ramos            | Maspeth          | NY    | 11378  |
| 3223 | David       | Randall          | Port Jefferson   | NY    | 11777  |
| 3224 | Isabella    | Randazzo         | Coram            | NY    | 11727  |
| 3225 | Jackie      | Raven            | New York         | NY    | 10128  |
| 3226 | Patricia    | Reed             | Chappaqua        | NY    | 10514  |
| 3227 | Cynthia     | Reynolds         | New Rochelle     | NY    | 10804  |
| 3228 | Timothy     | Rhone            | New York         | NY    | 10025  |
| 3229 | maria       | rial             | Elmhurst         | NY    | 11373  |
| 3230 | Karen       | Rigatti          | Binghamton       | NY    | 13905  |

|      | FIRST       | LAST           | CITY             | STATE | ZIP    |
|------|-------------|----------------|------------------|-------|--------|
| 3231 | Margo       | Rivers         | Bronx            | NY    | 10473  |
| 3232 | Eileen      | Roberts        | Glenville        | NY    | 12302  |
| 3233 | Donald      | Robins         | Fairport         | NY    | 14450  |
| 3234 | Alexander   | Robinson       | Ridgewood        | NY    | 11385  |
| 3235 | Bina        | Robinson       | Swain            | NY    | 14884  |
| 3236 | James       | Robinson       | Waccabuc         | NY    | 10597  |
| 3237 | Soretta     | Rodack         | New York         | NY    | 10003  |
| 3238 | Sylvia      | Rodriguez      | New York         | NY    | 10003  |
| 3239 | Nicholas    | Romano         | Bronx            | NY    | 10454  |
| 3240 | Nicholas    | Romano         | Bronx            | NY    | 10454  |
| 3241 | robert      | rosenfield     | valley stream    | NY    | 11580  |
| 3242 | Sarah       | Rosengard      | Whitestone       | NY    | 11357  |
| 3243 | Danielle    | Rosenstein     | Wantagh          | NY    | 11793  |
| 3244 | Harvey      | Rosenthal      | Stillwater       | NY    | 12170  |
| 3245 | Sarah       | Rosenthal      | Albany           | NY    | 12203  |
| 3246 | Stuart      | Ross           | Brockport        | NY    | 14420  |
| 3247 | David       | Rosten         | Ithaca           | NY    | 14850- |
| 3248 | bea         | roth           | yonkers          | NY    | 10704  |
| 3249 | jack        | roth           | yonkers          | NY    | 10704  |
| 3250 | pam         | roth           | yonkers          | NY    | 10704  |
| 3251 | Thomas J    | Rowan          | Bronx            | NY    | 10462  |
| 3252 | Joanna      | Roy            | ny               | NY    | 10027  |
| 3253 | Alicia      | Rubi           | Bx.              | NY    | 10463  |
| 3254 | Karen       | Rubino         | S. Huntington    | NY    | 11746  |
| 3255 | Vincent     | Rusch          | Schenectady      | NY    | 12303- |
| 3256 | JoAnne      | Russ           | Buffalo          | NY    | 14222  |
| 3257 | Chris       | Saia           | Astoria          | NY    | 11105  |
| 3258 | Chris       | Saia           | Astoria          | NY    | 11105  |
| 3259 | JEANNEMARIE | SAN DIEGO      | BROOKLYN         | NY    | 11220  |
| 3260 | JOANN       | SANTOS         | BROOKLYN         | NY    | 11215  |
| 3261 | Karen       | Scanlon        | Syracuse         | NY    | 13208  |
| 3262 | Barbara     | Schiano        | New York         | NY    | 10019  |
| 3263 | Pierre      | Schlemel       | Old Bethpage     | NY    | 11804- |
| 3264 | David       | Schlifka       | Clinton          | NY    | 13323  |
| 3265 | Andrea      | Schloeder      | New York         | NY    | 10002  |
| 3266 | Jeremy      | Schneider      | New City         | NY    | 10956  |
| 3267 | Judith      | Schneider      | New York         | NY    | 10011  |
| 3268 | Mary        | Schreck        | Marcy            | NY    | 13403  |
| 3269 | Mark        | Schulman       | Monticello       | NY    | 12701  |
| 3270 | Shani       | Schulman       | Brooklyn         | NY    | 11229  |
| 3271 | Kristin     | Schwalback     | Bay Shore        | NY    | 11706  |
| 3272 | Tamar       | Schwartz       | Astoria          | NY    | 11102  |
| 3273 | Amanda      | Scuder         | New York         | NY    | 10019  |
| 3274 | John        | Seider         | Oneonta          | NY    | 13820  |
| 3275 | Nicole R.   | Seiler         | flushing         | NY    | 11358  |
| 3276 | kenneth     | serco          | chestnut ridge   | NY    | 10977  |
| 3277 | simon       | seven          | nyc              | NY    | 10014  |
| 3278 | Paugh       | Shadow         | Bronx            | NY    | 10458  |
| 3279 | Susan       | Shanley        | Saratoga Springs | NY    | 12866  |
| 3280 | erga        | shelley        | newburgh         | NY    | 12550  |
| 3281 | Zachary     | Shirkey        | Rochester        | NY    | 14620  |
| 3282 | Leonie      | Shoulian       | New York         | NY    | 10025  |
| 3283 | Lisa        | Silver Frankel | North Salem      | NY    | 10560  |
| 3284 | Irina       | Silverfrankel  | New York         | NY    | 10560  |
| 3285 | Ruth        | Silverman      | Stone Ridge      | NY    | 12484  |
| 3286 | dianne      | skilbred       | sag harbor       | NY    | 11963  |
| 3287 | Stacey      | Skole          | New York         | NY    | 10021  |
| 3288 | alison      | Sky            | New York         | NY    | 10012  |
| 3289 | Elaine      | Sloan          | NYC              | NY    | 10017  |
| 3290 | L           | Slotnick       | Douglaston       | NY    | 11362  |
| 3291 | JennyLee    | Smallman       | Fairport         | NY    | 14450  |
| 3292 | Barry       | Smith          | Brooklyn         | NY    | 11230  |

|      | FIRST         | LAST            | CITY               | STATE | ZIP    |
|------|---------------|-----------------|--------------------|-------|--------|
| 3293 | Lisa          | Snow            | Bronx              | NY    | 10458  |
| 3294 | Christine     | Snyder          | Cheektowaga        | NY    | 14225  |
| 3295 | Scott         | Sobel           | New York           | NY    | 10023  |
| 3296 | Carol         | Solari-Ruscoe   | Peru               | NY    | 12972  |
| 3297 | Todd          | Somodevilla     | Brooklyn           | NY    | 11215  |
| 3298 | Janet         | Sorell          | Delmar             | NY    | 12054  |
| 3299 | Nancy         | Sorensen        | Brooklyn           | NY    | 11238  |
| 3300 | Daniel        | Sosa            | New York           | NY    | 10001  |
| 3301 | Madeline      | Sosa            | Brooklyn           | NY    | 11211  |
| 3302 | Madeline      | Sosa            | Brooklyn           | NY    | 11211  |
| 3303 | Gretchen      | sprague         | troy               | NY    | 12180  |
| 3304 | George        | Stadnik         | Long Island City   | NY    | 11103  |
| 3305 | Cedar         | Stanistreet     | Riparius           | NY    | 12862  |
| 3306 | Annie         | Stauber         | New York           | NY    | 10001  |
| 3307 | sharon        | stewart         | hamburg            | NY    | 14075  |
| 3308 | kimberly      | stimmel         | new york           | NY    | 10013  |
| 3309 | Ellen         | Stockdale Wolfe | New York           | NY    | 10027  |
| 3310 | Cynthia & Ted | Story           | New York           | NY    | 10011  |
| 3311 | Jessica       | Stretton        | New York           | NY    | 10040  |
| 3312 | Arthea        | Strongin        | Albany             | NY    | 12054  |
| 3313 | Jane          | Sunshine        | Woodstock          | NY    | 12498- |
| 3314 | Nancy         | Sutherland      | NYC                | NY    | 10011  |
| 3315 | Joel          | Swartout        | Sherman            | NY    | 14781  |
| 3316 | Wayne         | Sygman          | Hicksville         | NY    | 11801  |
| 3317 | Cynthia       | Taha            | New York           | NY    | 10017  |
| 3318 | Christina     | Tarsia          | Long Beach         | NY    | 11561  |
| 3319 | Imogen        | Taylor          | Brooklyn           | NY    | 11238  |
| 3320 | Jeremy        | Taylor          | Ravena             | NY    | 12143  |
| 3321 | Tanya         | Taylor          | Geneva             | NY    | 14456  |
| 3322 | babs          | tedeschi        | selden             | NY    | 11784  |
| 3323 | Olga Valle    | Tetkowski       | New York           | NY    | 10019  |
| 3324 | Barbara       | Tetro           | New York           | NY    | 10029  |
| 3325 | Saji          | Thomas          | East Meadow        | NY    | 11554  |
| 3326 | Corazon       | Tierra          | New York           | NY    | 10029  |
| 3327 | Richard J.    | Treitner        | Pine Hill          | NY    | 12465  |
| 3328 | Joseph        | Trent           | New York           | NY    | 10024  |
| 3329 | Karen         | Trepes          | Hammondsport       | NY    | 14840  |
| 3330 | Mary          | Troland         | Oceanside          | NY    | 11572  |
| 3331 | Sandra        | Tudor           | Floral Park        | NY    | 11001  |
| 3332 | Kevin         | Uehlinger       | Brooklyn           | NY    | 11211  |
| 3333 | Elizabeth     | Ungar           | New York           | NY    | 10023  |
| 3334 | pasquale      | vairo           | NYC                | NY    | 10011  |
| 3335 | Leslie        | Valentine       | Huntington Station | NY    | 11746  |
| 3336 | Durae         | Van Wie         | Binghamton         | NY    | 13903  |
| 3337 | Janet         | Veale           | Kiamesha Lake      | NY    | 12751  |
| 3338 | Warren        | Vieira          | Staten Island      | NY    | 10312  |
| 3339 | Victoria      | Vosburgh        | Burnt Hills        | NY    | 12027  |
| 3340 | Susan         | Wald            | Southampton        | NY    | 11969  |
| 3341 | Leslie        | Waller          | New York City      | NY    | 10025  |
| 3342 | Darryl        | Warner          | Rockaway Beach     | NY    | 11693  |
| 3343 | Kathy         | Warren          | new york           | NY    | 10033  |
| 3344 | Roxanne       | Warren          | New York           | NY    | 10025  |
| 3345 | Scarlet       | Watts           | rockville centre   | NY    | 11570  |
| 3346 | T. Edmund     | Webb            | FAYETTEVILLE       | NY    | 13066  |
| 3347 | Steve         | Weiner          | New York           | NY    | 10012  |
| 3348 | Rich          | Weldgen         | Webster            | NY    | 14580  |
| 3349 | Karena        | Wells           | Brooklyn           | NY    | 11201  |
| 3350 | Lorraine      | Weppler         | Bronx              | NY    | 10463  |
| 3351 | Anne          | Wesp            | Centerport         | NY    | 11721  |
| 3352 | Noreen        | Wheller         | Smithtown          | NY    | 11787  |
| 3353 | Lois          | White           | Shrub Oak          | NY    | 10588- |
| 3354 | aimee         | whitman         | bedford hills      | NY    | 10507  |

|      | FIRST         | LAST          | CITY               | STATE | ZIP   |
|------|---------------|---------------|--------------------|-------|-------|
| 3355 | stephanie     | whittaker     | tonawanda          | NY    | 14150 |
| 3356 | Suzanne       | Wiegand       | Shirley            | NY    | 11967 |
| 3357 | kari          | wilkinson     | port washington    | NY    | 11778 |
| 3358 | John          | Williams      | Manlius            | NY    | 13104 |
| 3359 | Wendy         | Williams      | Westbury           | NY    | 11590 |
| 3360 | Beatrice      | Williams-Rude | New York (Chelsea) | NY    | 10011 |
| 3361 | Seth          | Wilpan        | New York           | NY    | 10280 |
| 3362 | Andrea        | Wilson        | Sound Beach        | NY    | 11789 |
| 3363 | John          | Wolfe         | East Yaphank       | NY    | 11967 |
| 3364 | Erik          | Wood          | Brooklyn           | NY    | 11231 |
| 3365 | Viki          | Worden        | Johnson City       | NY    | 13790 |
| 3366 | Noel          | Wynn          | Staten Island      | NY    | 10306 |
| 3367 | Nancy DuCasse | Yacalis       | Plainedge          | NY    | 11756 |
| 3368 | Carol         | Yost          | New York           | NY    | 10011 |
| 3369 | Courtney      | Young         | Bay Shore          | NY    | 11706 |
| 3370 | Tobi          | Zausner       | NYC                | NY    | 10016 |
| 3371 | Marian        | Zazeela       | New York           | NY    | 10013 |
| 3372 | ELYSE         | ZUCKER        | NEW YORK           | NY    | 10069 |
| 3373 | Eileen        | Zuleta        | Rhinebeck          | NY    | 12572 |
| 3374 | Rachael       | Zur           | Brooklyn           | NY    | 11205 |
| 3375 | Naomi         | Zurcher       | Brooklyn           | NY    | 11201 |
| 3376 | Adam          | ackerman      | Germantown         | OH    | 45327 |
| 3377 | Roger         | Albaugh       | Wilmington         | OH    | 4517  |
| 3378 | Jean          | Antonacci     | Chesterland        | OH    | 44026 |
| 3379 | John W.       | Appleman      | McArthur           | OH    | 45651 |
| 3380 | SUSAN         | BAILEY-PRUC   | HUDSON             | OH    | 44236 |
| 3381 | Donald        | Barris        | Port Clinton       | OH    | 43452 |
| 3382 | F Kay         | Baumann       | Sylvania           | OH    | 43560 |
| 3383 | Laurie        | Beringer      | Lakewood           | OH    | 44107 |
| 3384 | Jeannine      | Berroteran    | Youngstown         | OH    | 44504 |
| 3385 | Mary A        | Blair         | Waynesfield        | OH    | 45896 |
| 3386 | Patricia      | Blochowiak    | East Cleveland     | OH    | 44112 |
| 3387 | Gay           | Boden         | Seville            | OH    | 44273 |
| 3388 | Jeffrey       | Boggs         | Youngstown         | OH    | 44512 |
| 3389 | Kathryn       | Boniface      | Cincinnati         | OH    | 45229 |
| 3390 | Karla         | Boyd          | Lima               | OH    | 45804 |
| 3391 | Melanie       | Boyd          | Miamitown          | OH    | 45041 |
| 3392 | Pamela        | Brooks        | Logan              | OH    | 43138 |
| 3393 | Tamera        | Bryant        | Columbus           | OH    | 43205 |
| 3394 | Cheryl        | Bulone        | Garrettsville      | OH    | 44231 |
| 3395 | Robin         | Burfield      | Bexley             | OH    | 43209 |
| 3396 | Linda         | Burianek      | Columbus           | OH    | 43223 |
| 3397 | Traci         | Bush          | gahanna            | OH    | 43230 |
| 3398 | shaz          | c             | west portsmouth    | OH    | 45663 |
| 3399 | Michael       | Cain          | Cincinnati         | OH    | 45240 |
| 3400 | june          | carter        | galena             | OH    | 43021 |
| 3401 | Randy         | Centner       | Cincinnati         | OH    | 45242 |
| 3402 | nicole        | clark         | mentor             | OH    | 44060 |
| 3403 | Amy           | Clepper       | Hudson             | OH    | 44236 |
| 3404 | Kathleen      | Cole          | Circleville        | OH    | 43113 |
| 3405 | Bob           | Cordasev      | Brooklyn           | OH    | 44144 |
| 3406 | Bob           | Cordasev      | Brooklyn           | OH    | 44144 |
| 3407 | Nancy         | Cordasev      | Brooklyn           | OH    | 44144 |
| 3408 | Mark          | Cosgriff      | Lakewood           | OH    | 44107 |
| 3409 | chuck         | countryman    | rock creek         | OH    | 44084 |
| 3410 | thomas        | cummons       | newark             | OH    | 43055 |
| 3411 | thomas        | cummons       | newark             | OH    | 43055 |
| 3412 | Janet         | Daily         | Doylestown         | OH    | 44230 |
| 3413 | Lori          | Day           | Hayesville         | OH    | 44838 |
| 3414 | Audrey        | DeLong        | Cincinnati         | OH    | 45231 |
| 3415 | Courtney      | Denning       | Athens             | OH    | 4570  |
| 3416 | Tami          | DeNoel        | Columbus           | OH    | 43231 |

|      | FIRST               | LAST           | CITY            | STATE | ZIP   |
|------|---------------------|----------------|-----------------|-------|-------|
| 3417 | John                | Dierig         | Loveland        | OH    | 45140 |
| 3418 | Brenda              | Dillane        | Lakewood        | OH    | 44107 |
| 3419 | Rachel              | Dowell         | Bexley          | OH    | 43209 |
| 3420 | Mary L.             | Doyle          | Xenia           | OH    | 45385 |
| 3421 | Richard             | Ede            | Eastlake        | OH    | 44095 |
| 3422 | Beth                | Eggleston      | Columbus        | OH    | 43232 |
| 3423 | Richard             | Esson          | Olmsted Twp.    | OH    | 44138 |
| 3424 | SUSAN               | EVILSIZER      | ELYRIA          | OH    | 44035 |
| 3425 | Joanne              | Ferguson       | Sheffield Lake  | OH    | 44054 |
| 3426 | Harold              | Floyd          | Cable           | OH    | 43009 |
| 3427 | Dianne              | Flynn          | Hilliard        | OH    | 43026 |
| 3428 | ADRIAN              | FRAZIER        | COLUMBUS        | OH    | 43227 |
| 3429 | Robert              | Girard         | Cuyahoga Falls  | OH    | 44221 |
| 3430 | Peggy               | Gray           | Troy            | OH    | 45373 |
| 3431 | David               | Greene         | Columbus        | OH    | 43209 |
| 3432 | Ryan                | Hahn           | Lebanon         | OH    | 45036 |
| 3433 | anne                | hammond        | solon           | OH    | 44139 |
| 3434 | berton              | harrah         | Hilliard        | OH    | 43026 |
| 3435 | Karryn              | Hart           | DeGraff         | OH    | 43318 |
| 3436 | Natalie             | Hatjes         | Akron           | OH    | 44334 |
| 3437 | Robert              | Hegna          | Beavercreek     | OH    | 45432 |
| 3438 | teresa              | helmig         | middletown      | OH    | 45042 |
| 3439 | STEPHANIE           | HESTON         | AKRON           | OH    | 44304 |
| 3440 | Carolyn             | Hirning        | New Albany      | OH    | 43054 |
| 3441 | Nichole             | Hoch           | Bexley          | OH    | 43209 |
| 3442 | Laura               | Horning        | Westlake        | OH    | 44145 |
| 3443 | Nancy               | Horvath        | Chesterland     | OH    | 44026 |
| 3444 | ERIN                | HUBER          | LAKWOOD         | OH    | 44107 |
| 3445 | Holly               | Hudkins        | Mogadore        | OH    | 44260 |
| 3446 | Donald              | Hyatt          | Columbus        | OH    | 43221 |
| 3447 | Debra               | Ireland        | Oak Harbor      | OH    | 43449 |
| 3448 | Suzanne             | Jenuleson      | Medina          | OH    | 44256 |
| 3449 | Michael             | Johnson        | Westerville     | OH    | 43081 |
| 3450 | Beverly             | Jones          | Tallmadge       | OH    | 44278 |
| 3451 | Barbara             | Juknialis      | Cleveland       | OH    | 44110 |
| 3452 | Lucy                | Jury           | Fairlawn        | OH    | 44333 |
| 3453 | SHOSHANA            | KAUFMAN        | University Hts. | OH    | 44118 |
| 3454 | Sarah               | Keatts, R.N.   | Tallmadge       | OH    | 44278 |
| 3455 | Alison              | Kirby          | Wooster         | OH    | 44691 |
| 3456 | Jenny               | Knap           | Bay Village     | OH    | 44140 |
| 3457 | keith               | kohnke         | twinsburg       | OH    | 44087 |
| 3458 | Andy                | KOosed         | South Euclid    | OH    | 44121 |
| 3459 | Helen               | Kopp           | Grafton         | OH    | 44044 |
| 3460 | Patty               | Koteles        | Broadview Hts.  | OH    | 44147 |
| 3461 | Julie               | Kozel          | Morrow          | OH    | 45152 |
| 3462 | Paula               | Kurth          | Columbus        | OH    | 43212 |
| 3463 | r                   | lamb           | dayton          | OH    | 45403 |
| 3464 | Lorraine            | Langdon        | Perrysburg      | OH    | 43551 |
| 3465 | Beth                | Langhans       | Columbus        | OH    | 43229 |
| 3466 | Keith               | Langston       | Toledo          | OH    | 43614 |
| 3467 | Gary                | Lansinger      | Barberton       | OH    | 44203 |
| 3468 | courtney            | lavses-mearini | Ashtabula       | OH    | 44004 |
| 3469 | Shannon             | Leis           | Columbus        | OH    | 43206 |
| 3470 | Joan & Mike         | Leppla         | Stow            | OH    | 44224 |
| 3471 | Ann                 | Logan          | Columbus        | OH    | 43223 |
| 3472 | Michael             | Loveless       | Marysville      | OH    | 43040 |
| 3473 | Patricia            | Mackura        | South Euclid    | OH    | 44121 |
| 3474 | M                   | Maisenhalter   | Cincinnati      | OH    | 45212 |
| 3475 | sara                | marion         | toledo          | OH    | 43611 |
| 3476 | Diana*AnimalSpirit* | Martz          | Toledo          | OH    | 43605 |
| 3477 | Diana*AnimalSpirit* | Martz          | Toledo          | OH    | 43605 |
| 3478 | Barb                | Mathiss        | Parma           | OH    | 44134 |

|      | FIRST        | LAST           | CITY              | STATE | ZIP   |
|------|--------------|----------------|-------------------|-------|-------|
| 3479 | Kathy        | McClanahan     | Cincinnati        | OH    | 45236 |
| 3480 | Ann C.       | McGill         | Brunswick         | OH    | 44212 |
| 3481 | Sue          | McGrath        | Bay Village       | OH    | 44140 |
| 3482 | Linda        | Meyers         | Defiance          | OH    | 43512 |
| 3483 | Lisa         | Mickley        | North Canton      | OH    | 44720 |
| 3484 | Marilyn      | Milbrandt      | Springfield       | OH    | 45504 |
| 3485 | ginA         | MILITE         | mayfield hts      | OH    | 44124 |
| 3486 | Angela       | Mitchell       | Cincinnati        | OH    | 45204 |
| 3487 | David        | Modarelli      | Richfield         | OH    | 44286 |
| 3488 | Iela         | moroz          | lakewood          | OH    | 44107 |
| 3489 | Vira         | Moroz          | Lakewood          | OH    | 44107 |
| 3490 | Kathleen     | Morris         | Columbus          | OH    | 43214 |
| 3491 | Jeff         | Mullins        | Loveland          | OH    | 45140 |
| 3492 | Nicole       | Mullins        | Loveland          | OH    | 45140 |
| 3493 | CAROL        | NARICK         | BARBERTON         | OH    | 44203 |
| 3494 | jennifer     | nelson         | loveland          | OH    | 45140 |
| 3495 | Sheila       | Peebles        | Berea             | OH    | 44017 |
| 3496 | Judith       | Peterson       | Columbus          | OH    | 43085 |
| 3497 | Patricia     | Phillips       | Kent              | OH    | 44240 |
| 3498 | Patricia     | Piatt          | Cincinnati        | OH    | 45230 |
| 3499 | Sharyn       | Porter         | Worthington       | OH    | 43085 |
| 3500 | Linda        | Promenschenkel | Dublin            | OH    | 43017 |
| 3501 | Connie       | Ralston        | Cincinnati        | OH    | 45230 |
| 3502 | Elizabeth    | Ransford       | Toledo            | OH    | 43612 |
| 3503 | Kelley       | Ray            | Langsville        | OH    | 45741 |
| 3504 | Marc         | Rayburn        | Sunbury           | OH    | 43074 |
| 3505 | Marc         | Rayburn        | Sunbury           | OH    | 43074 |
| 3506 | CANDY        | RIDLER         | PARMA             | OH    | 44134 |
| 3507 | KAREN        | RIGGAR         | RAVENNA           | OH    | 44266 |
| 3508 | Monica       | Riordan-Gentry | New Richmond      | OH    | 45157 |
| 3509 | Warren       | Roark          | Toledo            | OH    | 43609 |
| 3510 | lisa         | rosales        | chillicothe       | OH    | 45601 |
| 3511 | lisa         | rosales        | chillicothe       | OH    | 45601 |
| 3512 | Marsha       | Rowlands       | Centerville       | OH    | 45458 |
| 3513 | dan          | sandman        | chardon           | OH    | 44024 |
| 3514 | Darlene      | Sarver         | Cincinnati        | OH    | 45246 |
| 3515 | Donna        | Schall         | Stow              | OH    | 44224 |
| 3516 | John         | Schmittauer    | Chauncey          | OH    | 45719 |
| 3517 | Amy          | Schumacher     | Kettering         | OH    | 45429 |
| 3518 | dini         | schut          | toledo            | OH    | 43606 |
| 3519 | Katherine    | Schwirzinski   | Toledo            | OH    | 43615 |
| 3520 | Martha       | Scott          | Barberton         | OH    | 44203 |
| 3521 | Edward       | Selent         | North Olmsted     | OH    | 44070 |
| 3522 | David        | Sickles        | Mentor            | OH    | 44060 |
| 3523 | Rodger James | Sillars        | Cleveland Heights | OH    | 44121 |
| 3524 | david        | smith          | junction city     | OH    | 43748 |
| 3525 | LuRonda      | Smith          | Lancaster         | OH    | 43130 |
| 3526 | Mary         | Smith          | Miamisburg        | OH    | 45342 |
| 3527 | mary         | smith          | cleveland         | OH    | 44107 |
| 3528 | Nikita       | Somers         | Middletown        | OH    | 45042 |
| 3529 | Megan        | Steva          | Columbus          | OH    | 43220 |
| 3530 | Hank         | Stevens        | Oxford            | OH    | 45056 |
| 3531 | Janet        | Stone          | Dayton            | OH    | 45458 |
| 3532 | Cindy        | Takaht         | Garfield          | OH    | 44125 |
| 3533 | Kristin      | Tamas          | Cleveland         | OH    | 44130 |
| 3534 | scott        | tanner         | Delta             | OH    | 43515 |
| 3535 | Sarah        | Taylor         | Cleveland Heights | OH    | 44118 |
| 3536 | Julie        | Thomas         | Columbus          | OH    | 43206 |
| 3537 | Meredith     | Thompson       | Elyria            | OH    | 44035 |
| 3538 | Carol        | Trochelman     | Wilmington        | OH    | 45177 |
| 3539 | Ann          | Turk           | Columbus          | OH    | 43219 |
| 3540 | Nadine       | Waddell        | Columbus          | OH    | 43206 |



|      | FIRST      | LAST             | CITY                   | STATE | ZIP    |
|------|------------|------------------|------------------------|-------|--------|
| 3541 | Iataiya    | walker           | DAYTON                 | OH    | 45414  |
| 3542 | Toni       | Waterman         | Glencoe                | OH    | 43928  |
| 3543 | Daniel     | Weiss            | Dayton                 | OH    | 45424  |
| 3544 | Linda      | Wesie            | Massillon              | OH    | 44647  |
| 3545 | Rochelle   | Willis           | Whitehall              | OH    | 43213  |
| 3546 | Kathy      | Wills            | Orient                 | OH    | 43146  |
| 3547 | Dianne     | Wilson           | Lynchburg              | OH    | 45142  |
| 3548 | Janet      | Winemiller       | Barberton              | OH    | 44203  |
| 3549 | Jody       | Wolfe            | South Euclid           | OH    | 44118  |
| 3550 | Ashley     | Wood             | Washington Court House | OH    | 43160  |
| 3551 | Darleen    | Wright           | HAMILTON               | OH    | 45011  |
| 3552 | Sarah      | Young            | Cleveland              | OH    | 44113  |
| 3553 | Ran        | Zirasri          | Kensington             | OH    | 44427  |
| 3554 | Thomas     | Blaney           | Oklahoma City          | OK    | 73179  |
| 3555 | Cindy      | Bruno            | Shawnee                | OK    | 74804  |
| 3556 | Quinn      | Carr             | Ardmore                | OK    | 73401  |
| 3557 | Stanley    | Dow              | Norman                 | OK    | 73072  |
| 3558 | Jenny      | Foster           | Blanchard              | OK    | 73010  |
| 3559 | Lydia      | Garvey           | Clinton                | OK    | 73601  |
| 3560 | Donna      | Goodwin          | Norman                 | OK    | 73072  |
| 3561 | Joseph     | Graham           | Norman                 | OK    | 73069  |
| 3562 | Tammy      | Hebert           | Harrah                 | OK    | 73045  |
| 3563 | Tammy      | Hebert           | Harrah                 | OK    | 73045  |
| 3564 | Lana       | Henson           | Oklahoma City          | OK    | 73118  |
| 3565 | Heidi      | Holeman          | Norman                 | OK    | 73071  |
| 3566 | Esther     | Hutchens         | Stillwater             | OK    | 74074  |
| 3567 | Esther     | Hutchens         | Stillwater             | OK    | 74074  |
| 3568 | Chrissie   | Johnson          | Chickasha              | OK    | 73018  |
| 3569 | Harley     | Knox             | Oklahoma City,         | OK    | 73101  |
| 3570 | Stan G.    | Martin           | Tishomingo             | OK    | 73460  |
| 3571 | Kathryn    | McDaniel         | Mounds                 | OK    | 74047  |
| 3572 | Juli       | Novack           | Wister                 | OK    | 74966  |
| 3573 | Kathy      | Otten            | Eufaula                | OK    | 74432  |
| 3574 | Rebecca    | Poplin           | Tulsa                  | OK    | 74128  |
| 3575 | Sandy      | Reed             | Oklahoma City          | OK    | 73132  |
| 3576 | Garth      | Reese            | Norman                 | OK    | 73071  |
| 3577 | Fumiko     | Sakoda           | Rosston                | OK    | 73855  |
| 3578 | Rita       | Smith            | Oklahoma City          | OK    | 73139  |
| 3579 | Patricia   | Tate             | Tulsa                  | OK    | 74107  |
| 3580 | Stanley    | Tate             | Tulsa                  | OK    | 74107  |
| 3581 | scott      | troy             | tulsa                  | OK    | 74103  |
| 3582 | Trudy      | wick             | OKC                    | OK    | 73034  |
| 3583 | Jill       | Allen            | Oakville               | ON    | L6H    |
| 3584 | Michael    | Ballin           | Toronto,               | ON    | M4V 2K |
| 3585 | Alex       | Benavente        | Toronto                | ON    | M5P 3L |
| 3586 | Michael    | Cozens           | London                 | ON    | N6G 3T |
| 3587 | Susanne    | Di Pucchio Witte | Richmond Hill          | ON    | L4E 3V |
| 3588 | Twyla      | Douaire          | Harwood                | ON    | K0K    |
| 3589 | Darrin     | Drumm            | Hamilton               | ON    | L9B 1A |
| 3590 | nancy      | easun            | toronto                | ON    | M8V3z7 |
| 3591 | Arlene     | Erven            | Chesley                | ON    | N0G 1L |
| 3592 | Arlene     | Erven            | Chesley                | ON    | N0G 1L |
| 3593 | Angelique  | Everitt          | Ottawa                 | ON    | K1K 4R |
| 3594 | Vanessa    | Feo              | Mississauga            | ON    | L4Y 4A |
| 3595 | Doreen     | Forbes           | London                 | ON    | N5Z    |
| 3596 | Cathy      | Gage             | Guelph                 | ON    | N1E 4A |
| 3597 | Janet      | Garfield         | North Bay              | ON    | P1A 1X |
| 3598 | Jessica    | Green            | Bolton                 | ON    | L7E5V4 |
| 3599 | Aleksandra | Grzywaczewska    | Toronto                | ON    | M4P    |
| 3600 | J          | Kochan           | Fergus                 | ON    | N1m 2w |
| 3601 | Aletta     | Kraan            | stayner                | ON    | L0M 1S |
| 3602 | Emily      | Lancaster        | Guelph                 | ON    | N1E 4A |

|      | FIRST     | LAST        | CITY            | STATE | ZIP    |
|------|-----------|-------------|-----------------|-------|--------|
| 3603 | Martha    | Lasichuk    | Bolton          | ON    | L7E 3G |
| 3604 | Andrea    | Levy        | Toronto         | ON    | M3H    |
| 3605 | elizabeth | merriman    | toronto         | ON    | M6H1M5 |
| 3606 | Melanie   | Moore       | Ottawa          | ON    | K1S    |
| 3607 | Cory      | Morningstar | London          | ON    | N6C    |
| 3608 | Sandra    | Morrison    | Hamilton        | ON    | L8R1W2 |
| 3609 | Shirley   | Nelson      | Ottawa          | ON    | K1Y 2H |
| 3610 | Danielle  | Poirier     | Thamesford      | ON    | N0M 2M |
| 3611 | Howard    | Pottins     | Toronto         | ON    | M9W    |
| 3612 | Jamie     | Quinn       | Stoney Creek    | ON    | L8E 3M |
| 3613 | Brenda    | Samuelson   | Whitby          | ON    | L1R2V6 |
| 3614 | Michelle  | Simeunovich | Oshawa          | ON    | L1H 6Z |
| 3615 | Jeanette  | Simon       | Oakville        | ON    | L6H 1G |
| 3616 | Lindsay   | Simpson     | Amherstburg     | ON    | N9V @p |
| 3617 | Lindsay   | Simpson     | amherstburg, on | ON    | N9V 2P |
| 3618 | kim       | smith       | toronto         | ON    | M4S 1G |
| 3619 | Sue       | Smith       | Newmarket       | ON    | L3Y 8C |
| 3620 | Sue       | Spahr       | Woodville       | ON    | K0M 2T |
| 3621 | Renata    | Szczypek    | Scarborough     | ON    | M1B 2J |
| 3622 | Laurel E. | Tate        | Toronto         | ON    | M4Y    |
| 3623 | Safiya    | Thiessen    | Toronto         | ON    | L4N 4Y |
| 3624 | Joanne    | Wheler      | Oakville        | ON    | L6H    |
| 3625 | Anthony   | Albert      | Corvallis       | OR    | 97330  |
| 3626 | Sheri     | Archev      | Salem           | OR    | 97301  |
| 3627 | Jennifer  | Bennett     | Eugene          | OR    | 97402  |
| 3628 | Coralie   | Benton      | Albany          | OR    | 97321  |
| 3629 | arthur    | boucot      | Corvallis       | OR    | 97333  |
| 3630 | Theresa   | Brand       | Eugene          | OR    | 97402  |
| 3631 | Nancy     | Brown       | Molalla         | OR    | 97038  |
| 3632 | Thomas    | Budd        | Eugene          | OR    | 97405  |
| 3633 | Cierra    | Buer        | Sutherlin       | OR    | 97479  |
| 3634 | David     | Burkhart    | Salem           | OR    | 97306  |
| 3635 | liz       | capizzi     | philomath       | OR    | 97370  |
| 3636 | Marty     | Carlson     | Prineville      | OR    | 97754  |
| 3637 | Carmen    | Cook        | Bend            | OR    | 97701  |
| 3638 | Abigail   | Corbet      | Portland        | OR    | 97206  |
| 3639 | Demelza   | Costa       | Sweet home      | OR    | 97386  |
| 3640 | Nina      | Council     | Ashland         | OR    | 97520  |
| 3641 | Renee     | Davis-Born  | Albany          | OR    | 97321  |
| 3642 | Chad      | Derosier    | Ashland         | OR    | 97520  |
| 3643 | Karen     | Dittrich    | Grants Pass     | OR    | 97526  |
| 3644 | Kacey     | Donston     | Florence        | OR    | 97439  |
| 3645 | Dawn      | Farris      | Lincoln City    | OR    | 97367  |
| 3646 | Jim       | Gear        | Medford         | OR    | 97504  |
| 3647 | Gary      | Gilardi     | Hood River      | OR    | 97031  |
| 3648 | Stacy     | Green       | Portland        | OR    | 97214  |
| 3649 | Sarah     | Hafer       | Albany          | OR    | 97322  |
| 3650 | Jill      | Hanns       | Cottage Grove   | OR    | 97424  |
| 3651 | janet     | harris      | hood river      | OR    | 97031  |
| 3652 | Randy     | Harrison    | Eugene          | OR    | 97402  |
| 3653 | Heidi     | Hartman     | lone            | OR    | 97843  |
| 3654 | Lorraine  | Hersey      | Pendleton       | OR    | 97801  |
| 3655 | Robert    | Heydenreich | Portland        | OR    | 97202  |
| 3656 | Barbara   | Hower       | Toledo          | OR    | 97391  |
| 3657 | George B. | Hutchinson  | Newport         | OR    | 97365  |
| 3658 | Jason     | Jones       | Cannon Beach    | OR    | 97110  |
| 3659 | Kim       | Kahl        | Bend            | OR    | 97701  |
| 3660 | Kris      | Karrick     | Beaverton       | OR    | 97007  |
| 3661 | Carter    | Keane       | Eugene          | OR    | 97401  |
| 3662 | Wayne     | Kelly       | Ashland         | OR    | 97520  |
| 3663 | Mary Ann  | Kruse       | Bend            | OR    | 97701  |
| 3664 | Adele     | Kubein      | Corvallis       | OR    | 97339  |

|      | FIRST       | LAST             | CITY         | STATE | ZIP    |
|------|-------------|------------------|--------------|-------|--------|
| 3665 | Jowea       | Lake             | Salem        | OR    | 97305  |
| 3666 | Pat         | LeBaron          | Medford      | OR    | 97504  |
| 3667 | Celinda     | Linscott         | Baker City,  | OR    | 97814  |
| 3668 | David       | Marcy            | Roseburg     | OR    | 97470  |
| 3669 | Julie       | Masters          | Salem        | OR    | 97302  |
| 3670 | Barbara     | McClain          | Philomath    | OR    | 97343  |
| 3671 | Krissie     | McCreery         | Eugene       | OR    | 97402  |
| 3672 | Kristin     | McGee            | Salem        | OR    | 97302  |
| 3673 | m.          | michaels         | ashland      | OR    | 97520  |
| 3674 | Violet      | Miller           | Myrtle Creek | OR    | 97457  |
| 3675 | patricia    | misner           | cannon beach | OR    | 97110  |
| 3676 | Molly       | Monroe           | Corvallis    | OR    | 97333  |
| 3677 | Erin        | Moore            | Astoria      | OR    | 97103  |
| 3678 | Carrie Lynn | Moylan           | Springfield  | OR    | 97478  |
| 3679 | Grace       | Neff             | Albany       | OR    | 97322  |
| 3680 | Dixie       | Negless          | Medford      | OR    | 97504  |
| 3681 | Betty       | Ohman            | North Bend   | OR    | 97459- |
| 3682 | Rochelle    | Ohman            | Springfield  | OR    | 97477  |
| 3683 | Rochelle    | Ohman            | Springfield  | OR    | 97477  |
| 3684 | Frodo       | Okulam           | Portland     | OR    | 97213  |
| 3685 | Andrew      | Orahoske         | Eugene       | OR    | 97403  |
| 3686 | Joseph      | Paraszewski      | Eugene       | OR    | 97404  |
| 3687 | Rachael     | Pecore           | Hood River   | OR    | 97031  |
| 3688 | Lori        | Pollen           | Coos Bay     | OR    | 97420  |
| 3689 | James D.    | Pollock          | Silverton    | OR    | 97381  |
| 3690 | Poosakey    | Poosakey         | Bandon       | OR    | 97411  |
| 3691 | Antar       | Pushkara         | Eugene       | OR    | 97405  |
| 3692 | Connie      | Quay             | Oregon City  | OR    | 97045  |
| 3693 | Leo         | Quirk            | Corvallis    | OR    | 97333  |
| 3694 | gene        | ralph            | north plains | OR    | 97133  |
| 3695 | Amy         | Raven            | Eugene       | OR    | 97405  |
| 3696 | Michelle    | Reitmajer        | Salem        | OR    | 97505  |
| 3697 | Debra       | Saude            | Sweet Home   | OR    | 97386  |
| 3698 | judith      | schlacter        | eugene       | OR    | 97440  |
| 3699 | Neeta       | Simons           | Yoncalla     | OR    | 97499  |
| 3700 | elvira      | skurdal          | jacksonville | OR    | 97530  |
| 3701 | bryan       | smith            | bend         | OR    | 97701  |
| 3702 | Jay         | Smith            | Albany       | OR    | 97322  |
| 3703 | Shirley     | Smith            | Veneta       | OR    | 97487  |
| 3704 | Suzy        | Star             | Springfield  | OR    | 97478  |
| 3705 | Thomas      | Stilwell         | Eddyville    | OR    | 97343  |
| 3706 | J           | Stufflebeam      | Oregon City  | OR    | 97045  |
| 3707 | Alicia      | Swaringen        | Eugene       | OR    | 97402  |
| 3708 | Kathy       | Sweeney          | Bend         | OR    | 97707  |
| 3709 | Judith A    | Thompson         | Ashland      | OR    | 97520  |
| 3710 | Virginia    | Tobin            | Oregon City  | OR    | 97045  |
| 3711 | Edward      | van Aelstyn      | Newport      | OR    | 97365  |
| 3712 | Jory        | VanAntwerp       | Salem        | OR    | 97306  |
| 3713 | Michael     | Vannice          | Phoenix      | OR    | 97535  |
| 3714 | Judith      | Vincent          | Salem        | OR    | 97301- |
| 3715 | John        | Vogele           | Salem        | OR    | 97317  |
| 3716 | Paula       | von Weller       | Cannon Beach | OR    | 97110  |
| 3717 | Jeffrey     | White            | Harrisburg   | OR    | 97446  |
| 3718 | Lois        | White            | Grants Pas   | OR    | 97526  |
| 3719 | Tina        | Withrow-Robinson | Albany       | OR    | 97321  |
| 3720 | David       | Wodtke           | Corvallis    | OR    | 97333  |
| 3721 | Daniel      | Zajic            | Beaverton    | OR    | 97005  |
| 3722 | jill        | alexander        | hatboro      | PA    | 19040  |
| 3723 | Matthew     | Allenbaugh       | Creekside    | PA    | 15732  |
| 3724 | Stephen     | Arbour           | Philadelphia | PA    | 19136  |
| 3725 | katharine   | avarese          | Phila        | PA    | 19128  |
| 3726 | Li          | b                | p            | PA    | 15236  |

|      | FIRST       | LAST         | CITY            | STATE | ZIP   |
|------|-------------|--------------|-----------------|-------|-------|
| 3727 | Patrick     | Bair         | Harrisburg      | PA    | 17110 |
| 3728 | Stephen     | Baker        | York            | PA    | 17402 |
| 3729 | Michael     | Balsai       | Philadelphia    | PA    | 19102 |
| 3730 | Gaza        | Barr         | Conshohocken    | PA    | 19428 |
| 3731 | Jean        | Barrell      | New Hope        | PA    | 18938 |
| 3732 | sherry      | barrett      | doylestown      | PA    | 18901 |
| 3733 | Frank       | Bartell      | Phila.          | PA    | 19123 |
| 3734 | Virginia    | Batson       | philadelphia    | PA    | 19146 |
| 3735 | Angie       | Bean         | Lititz          | PA    | 17543 |
| 3736 | Judith      | Becker       | Philadelphia    | PA    | 19126 |
| 3737 | Donna J.    | Bednar       | Pittsburgh      | PA    | 15218 |
| 3738 | Jeffrey     | Bedrick      | Bryn Mawr       | PA    | 19010 |
| 3739 | Lisa        | Benner       | Mifflin         | PA    | 17058 |
| 3740 | HENRY       | Berkowitz    | Sabinsville     | PA    | 16943 |
| 3741 | Danielle    | Bethell      | Reading         | PA    | 19604 |
| 3742 | Heidi       | Betts        | Kylertown       | PA    | 16847 |
| 3743 | Mark        | Boyle        | Morrisville     | PA    | 19067 |
| 3744 | Michele     | Boyle        | Dallas          | PA    | 18612 |
| 3745 | Stacey      | Bradley      | Hastings        | PA    | 16646 |
| 3746 | Emily       | Bragonier    | Pittsburgh      | PA    | 15201 |
| 3747 | Michele     | Breccia      | Philadelphia    | PA    | 19107 |
| 3748 | Kristina    | Brown        | Jefferson Hills | PA    | 15025 |
| 3749 | Peter       | Brunner      | Jamison         | PA    | 18929 |
| 3750 | David       | Byman        | Clarks Summit   | PA    | 18411 |
| 3751 | Jamie       | Caito        | pittsburgh      | PA    | 15243 |
| 3752 | Dorothy     | Cardlin      | Yardley         | PA    | 19067 |
| 3753 | Gwen        | Carlson      | Penfield        | PA    | 15849 |
| 3754 | Carl        | Cattau       | Pottsville      | PA    | 17901 |
| 3755 | Cheri       | Chwastyk     | Telford         | PA    | 18969 |
| 3756 | Theresa     | Ciavarella   | Altoona         | PA    | 16602 |
| 3757 | Bernadette  | Clark        | Thornhurst      | PA    | 18424 |
| 3758 | REBECCA     | CLARK        | WARRINGTON      | PA    | 18976 |
| 3759 | kimberly    | clemens      | shillington     | PA    | 19607 |
| 3760 | Ariel       | Coff         | Philadelphia    | PA    | 19152 |
| 3761 | Nancy       | Cohen        | easton          | PA    | 18042 |
| 3762 | Richard     | Coleman      | Mechanicsburg   | PA    | 17050 |
| 3763 | Connie      | Conaway      | Canonsburg      | PA    | 15317 |
| 3764 | Eileen      | Conner       | Gillett         | PA    | 16925 |
| 3765 | pats        | conway       | west chester    | PA    | 19380 |
| 3766 | Michelle    | Cox          | Coopersburg     | PA    | 18036 |
| 3767 | Timothy     | Creamer      | Lancaster       | PA    | 17602 |
| 3768 | Odean       | Cusack       | Ply Mtg         | PA    | 19462 |
| 3769 | Loree       | Cygrymus     | Bethel Park     | PA    | 15102 |
| 3770 | Robin       | Daniels      | Flourtown       | PA    | 19031 |
| 3771 | Lynne       | Daub         | Marietta        | PA    | 17547 |
| 3772 | Harold      | Denenberg    | Langhorne       | PA    | 19047 |
| 3773 | Christopher | Derer        | Ardmore         | PA    | 19003 |
| 3774 | Pamela      | Diaconis     | Philadelphia    | PA    | 19147 |
| 3775 | Melinda     | Disque       | Home            | PA    | 15747 |
| 3776 | Beth        | Dorton       | Clarks Summit   | PA    | 18411 |
| 3777 | Denise      | Dost         | Philadelphia    | PA    | 19134 |
| 3778 | Stacey      | Dudek        | Harrisburg      | PA    | 17112 |
| 3779 | Mary        | Dulgeroff    | Pittsburgh      | PA    | 15237 |
| 3780 | Dan         | Dunn         | newtown         | PA    | 18940 |
| 3781 | Marie       | Engle        | New Castle      | PA    | 16101 |
| 3782 | Andrea      | Flowers      | Sunbury         | PA    | 17801 |
| 3783 | Serena      | Fogelberg    | Allenwood       | PA    | 17810 |
| 3784 | CYNTHIA     | FOUTS        | Bedford         | PA    | 15522 |
| 3785 | Susan       | Frankenstein | New Brighton    | PA    | 15066 |
| 3786 | Nick        | Futules      | Verona          | PA    | 15147 |
| 3787 | Thomas      | Genneken     | Thompson        | PA    | 18465 |
| 3788 | Tania       | Glazer       | Harrisburg      | PA    | 17109 |

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|------|-----------|------------|-------------------|-------|--------|
| 3789 | Libby J.  | Goldstein  | Philadelphia      | PA    | 19147  |
| 3790 | Amy       | Grady      | yardley           | PA    | 19067  |
| 3791 | Jeffrey   | Graver     | Malvern           | PA    | 19355  |
| 3792 | Kathy     | Greenage   | Mertztown         | PA    | 19539  |
| 3793 | Ulla      | Greenberg  | Huntingdon Valley | PA    | 19006  |
| 3794 | margaret  | hager      | philadelphia      | PA    | 19128  |
| 3795 | Dorothy   | Hall       | York              | PA    | 17403  |
| 3796 | Brenda    | Harrows    | philadelphia      | PA    | 19107  |
| 3797 | christian | hartleben  | philadelphia      | PA    | 19128  |
| 3798 | Joyce     | Hatala     | Fleetville        | PA    | 18420  |
| 3799 | Elizabeth | Heller     | Drexel Hill       | PA    | 19026  |
| 3800 | Ann       | Heneks     | Glenmoore         | PA    | 19343  |
| 3801 | Lois      | Hluhan     | Eighty Four       | PA    | 15330  |
| 3802 | Michelle  | Hoff       | Kintnersville     | PA    | 18930  |
| 3803 | Carol     | Horvath    | Brownsville       | PA    | 15417  |
| 3804 | Andrew    | Hunsinger  | Catawissa         | PA    | 17820  |
| 3805 | Jennifer  | Hunsinger  | Catawissa         | PA    | 17820  |
| 3806 | Melissa   | HunT       | Ephrata           | PA    | 17522  |
| 3807 | emma      | Hunter     | Malvern           | PA    | 19355  |
| 3808 | Zachary   | Irwin      | Erie              | PA    | 16511  |
| 3809 | Krystal   | Jackson    | Lancaster         | PA    | 17603  |
| 3810 | Krystal   | Jackson    | Lancaster         | PA    | 17603  |
| 3811 | Janine    | Jasko      | Finleyville       | PA    | 15332  |
| 3812 | Lesley    | Johnson    | State college     | PA    | 16803  |
| 3813 | MaryAnn   | Kahl       | Uniontown         | PA    | 15401  |
| 3814 | Hanson    | Kappelman  | Gibsonia          | PA    | 15044  |
| 3815 | Larry     | Kaufman    | Philadelphia      | PA    | 19131  |
| 3816 | Debi      | Keith      | East Berlin       | PA    | 17316  |
| 3817 | Sarah     | Kerr       | Export            | PA    | 15632  |
| 3818 | John      | Kesich     | Millertonp        | PA    | 16936  |
| 3819 | Ken       | Kesslin    | Philadelphia      | PA    | 19146  |
| 3820 | Clarence  | King       | Reading           | PA    | 19605  |
| 3821 | Dawn      | King       | Reading           | PA    | 19605  |
| 3822 | Frank X.  | Kleshinski | Jeannette         | PA    | 15644  |
| 3823 | THOMAS    | KNOTT SR   | moscow            | PA    | 18444  |
| 3824 | Brooke    | Kosar      | Mars              | PA    | 16046  |
| 3825 | Ann Marie | Kotlik     | PITTSBURGH        | PA    | 15209- |
| 3826 | James     | Krupa      | Levittown         | PA    | 19057  |
| 3827 | Michelle  | Kuchta     | Boyertown         | PA    | 19512  |
| 3828 | Michelle  | Kuchta     | Boyertown         | PA    | 19512  |
| 3829 | Eloise    | Laskowski  | Halifax           | PA    | 17032  |
| 3830 | Mark      | Leeson     | Orwigsburg        | PA    | 17961  |
| 3831 | kim       | leonard    | levittown         | PA    | 19056  |
| 3832 | Joyce     | Lin        | Hershey           | PA    | 17033  |
| 3833 | Joyce     | Lin        | Hershey           | PA    | 17033  |
| 3834 | Gregory   | Linn       | Berwyn            | PA    | 19312  |
| 3835 | Sharon    | Lloyd      | Carversville      | PA    | 18913  |
| 3836 | Terrence  | Lobdell    | Townville         | PA    | 16360  |
| 3837 | Genvieve  | Long       | Pittsburgh        | PA    | 15206  |
| 3838 | Lorraine  | Lorenzini  | Philadelphia      | PA    | 19147  |
| 3839 | chuck     | lukens     | Chalfont          | PA    | 18914  |
| 3840 | catherine | maisey     | philadelphia      | PA    | 19111  |
| 3841 | Marion    | Mann       | Rosemont          | PA    | 19010  |
| 3842 | Susan     | Mann       | Bryn Mawr         | PA    | 19010  |
| 3843 | Charles   | Marshall   | Paoli             | PA    | 19301  |
| 3844 | Diana     | Martin     | Red Lion          | PA    | 17356  |
| 3845 | Nathana   | Marunich   | PITTSBURGH        | PA    | 15211  |
| 3846 | lorraine  | mason      | oxford            | PA    | 19363  |
| 3847 | Nicole    | Matz       | Pottstown         | PA    | 19464  |
| 3848 | Judy      | McAuley    | Pittsburgh        | PA    | 15202  |
| 3849 | Joseph    | McCullough | Woodlyn           | PA    | 19094  |
| 3850 | Erik      | McDarby    | Bangor            | PA    | 18013  |

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|------|------------|-------------|------------------|-------|--------|
| 3851 | Maureen    | McDonald    | Springfield      | PA    | 19064  |
| 3852 | Maureen    | McDonald    | Springfield      | PA    | 19064  |
| 3853 | Diana      | McFadden    | Berwick          | PA    | 17815  |
| 3854 | Bob        | McGoldrick  | Linwood          | PA    | 19061  |
| 3855 | Linda      | McGrail     | Philadelphia     | PA    | 19119  |
| 3856 | Joanne     | McLaughlin  | Erdenheim        | PA    | 19038  |
| 3857 | Kelly      | Melichercik | Atlas            | PA    | 17851  |
| 3858 | Kathy      | Melvin      | Drexel Hill      | PA    | 19026  |
| 3859 | Amy        | Mistal      | Bethlehem        | PA    | 18018  |
| 3860 | Phyl       | Morello     | Albrightsville   | PA    | 18210  |
| 3861 | Dorothy    | Morris      | Morrisville      | PA    | 19067  |
| 3862 | Jennifer   | Morse       | Pittsburgh       | PA    | 15218- |
| 3863 | John       | Mullen      | Reading          | PA    | 19606  |
| 3864 | Ana        | Munoz       | Hanover          | PA    | 17331  |
| 3865 | Ryan       | Neill       | Aliquippa        | PA    | 15001  |
| 3866 | Nora       | Nelle       | Phoenixville     | PA    | 19460  |
| 3867 | galia      | nicastro    | east stroudsburg | PA    | 18301  |
| 3868 | ashley     | nottingham  | altoona          | PA    | 16602  |
| 3869 | Deanne     | O'Donnell   | Greensburg       | PA    | 15601  |
| 3870 | Sherry     | Oldham      | Wilmore          | PA    | 15962  |
| 3871 | maria      | Orr         | Bryn Mawr        | PA    | 19010  |
| 3872 | Erszbet    | Osz         | Nanticoke        | PA    | 18634  |
| 3873 | Gregory    | Pais        | Trout Run        | PA    | 17771  |
| 3874 | Doris      | Palumbo     | Lansdale         | PA    | 19446  |
| 3875 | Geoffrey   | Paterson    | Media            | PA    | 19063  |
| 3876 | Irene      | Pendze      | Philadelphia     | PA    | 19134  |
| 3877 | Stanley    | Pendze      | Philadelphia     | PA    | 19134  |
| 3878 | Ellen      | Perchonock  | Haverford        | PA    | 19041  |
| 3879 | Halona     | Perschka    | Girard           | PA    | 16417  |
| 3880 | Emily      | Petrucci    | Media            | PA    | 19063  |
| 3881 | angel      | pieseski    | pittsburgh       | PA    | 15207  |
| 3882 | John       | Polo        | Conneautville    | PA    | 16406  |
| 3883 | Brandon    | Potter      | Wexford          | PA    | 15090  |
| 3884 | Katie      | Purvis      | Evans City       | PA    | 16033  |
| 3885 | Kirk       | Ramble      | York             | PA    | 17404  |
| 3886 | Marjorie   | Rathbone    | Lansdowne        | PA    | 19050  |
| 3887 | Monet      | Raths       | Birchrunville    | PA    | 19421  |
| 3888 | Stephanie  | Reed        | Reading          | PA    | 19606  |
| 3889 | Dana       | Reinert     | Selinsgrove      | PA    | 17870  |
| 3890 | Robert     | Richards    | Greensboro       | PA    | 15338  |
| 3891 | William    | Ridgeway    | Scranton         | PA    | 18504  |
| 3892 | Kelly      | Riley       | Hummelstown      | PA    | 17036  |
| 3893 | Abbie      | Rogers      | Doylestown       | PA    | 18901  |
| 3894 | Frederick  | Ruch        | Bethlehem        | PA    | 18015- |
| 3895 | Charlene   | Rush        | Pittsburgh       | PA    | 15212  |
| 3896 | Joan       | Sage        | Philadelphia     | PA    | 19147  |
| 3897 | Kari       | Samuels     | Pittsburgh       | PA    | 15217  |
| 3898 | Paula      | Sandusky    | Johnstown        | PA    | 15901  |
| 3899 | john       | sappington  | philadelphia     | PA    | 19119  |
| 3900 | Sue        | Schneider   | Dover            | PA    | 17315  |
| 3901 | jared      | schreck     | carversville     | PA    | 18913  |
| 3902 | Barbara    | Schriver    | Philadelphia     | PA    | 19152  |
| 3903 | Dorene     | Schutz      | Wilkes-Barre     | PA    | 18702  |
| 3904 | Evalyn F.  | Segal       | Philadelphia     | PA    | 19119  |
| 3905 | Antoinette | Sellitto    | Philadelphia     | PA    | 19114  |
| 3906 | Antoinette | Sellitto    | Philadelphia     | PA    | 19114  |
| 3907 | George     | Seman       | Scranton         | PA    | 18505  |
| 3908 | Shannon    | Sexton      | Philadelphia     | PA    | 19147  |
| 3909 | Paul D.    | Shanabarger | Bessemer         | PA    | 16112  |
| 3910 | Steve      | Sharkey     | Eddystone        | PA    | 19022  |
| 3911 | jean       | sheats      | pittsburgh       | PA    | 15239  |
| 3912 | Gary       | Shindle     | Conestoga        | PA    | 17516  |

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| 3913 | Rachel       | Simpson-Loizou  | Fombell        | PA    | 16123  |
| 3914 | Darcie       | Sinciline       | Oakdale        | PA    | 15071  |
| 3915 | David        | Skellie         | Erie           | PA    | 16506  |
| 3916 | Frances      | Sonne           | Catasauqua     | PA    | 18032  |
| 3917 | Judith       | Springer        | Exton          | PA    | 19341  |
| 3918 | Melissa      | Starcher        | Pittsburgh     | PA    | 15220  |
| 3919 | Phil         | Starr           | lancaster      | PA    | 17603  |
| 3920 | Suzanne      | Steele          | phila          | PA    | 19102  |
| 3921 | Dawn         | Steelman        | Lancaster      | PA    | 17603  |
| 3922 | Lynn         | Stehr           | Bridgeville    | PA    | 15017  |
| 3923 | Arlene       | Steinberg       | Philadelphia   | PA    | 19115  |
| 3924 | Amy          | Stine           | Pgh            | PA    | 15237  |
| 3925 | Richard      | Strohm          | Boyertown      | PA    | 19512  |
| 3926 | L            | Stump           | Kutztown       | PA    | 19530  |
| 3927 | Mark         | Sugalski        | Malvern        | PA    | 19355  |
| 3928 | Susan        | Super           | pottstown      | PA    | 19464  |
| 3929 | Grace        | T.              | Pittsburgh     | PA    | 15108  |
| 3930 | Bonnie       | Terrill         | Girard         | PA    | 16417  |
| 3931 | Barbara A.   | Thomas          | Spraggs        | PA    | 15362  |
| 3932 | Carol        | Thompson        | South Park     | PA    | 15129  |
| 3933 | cyndi        | thompson        | wellsboro      | PA    | 16901  |
| 3934 | Stephen      | Tomasco         | Glenside       | PA    | 19038  |
| 3935 | Michael      | Trout           | East Berlin    | PA    | 17316  |
| 3936 | Wayne        | Truax           | McConnellsburg | PA    | 17233  |
| 3937 | Brandi       | Turner          | Lancaster      | PA    | 17603  |
| 3938 | J.J.         | Van Name        | Phila.         | PA    | 19119  |
| 3939 | Linda        | VanGuilder      | Greenville     | PA    | 16125  |
| 3940 | Jeremy       | Vincent         | Girard         | PA    | 16417  |
| 3941 | Tara         | Wahl            | Reading        | PA    | 19606  |
| 3942 | Lois         | Weekley         | Belle Vernon   | PA    | 15012  |
| 3943 | Bob          | Weinstein       | Belle Vernon   | PA    | 15012  |
| 3944 | Robert       | Weisz           | Willow Grove   | PA    | 19090  |
| 3945 | Ursula       | White           | Pittsburgh     | PA    | 15241  |
| 3946 | Kelli        | Williams        | Philadelphia   | PA    | 19129  |
| 3947 | Jerry        | Wilson          | Finleyville    | PA    | 15332  |
| 3948 | Charles      | Wright          | Barto          | PA    | 19504  |
| 3949 | jean         | wright          | hellertown     | PA    | 18055  |
| 3950 | Wendi        | Wright          | Levittown      | PA    | 19054  |
| 3951 | charles      | yankel          | bridgeville    | PA    | 15017  |
| 3952 | Melissa      | Yovanov         | Shillington    | PA    | 19607  |
| 3953 | Jessica      | Zasadni         | York Springs   | PA    | 17372  |
| 3955 | Omar         | Adrian          | Bayamon        | PR    | 961    |
| 3956 | Armando      | Chinea          | Bayamon        | PR    | 956    |
| 3957 | Marie-Helene | Delmestre       | San Juan       | PR    | 931    |
| 3958 | Aslyn        | Diaz            | San Juan       | PR    | 929    |
| 3959 | Kristy       | Domenech-Miller | Caguas         | PR    | 727    |
| 3960 | Liliana      | Liceaga         | Trujillo Alto  | PR    | 978    |
| 3961 | Luis Jorge   | Rivera-Herrera  | San Juan       | PR    | 00906- |
| 3962 | Alexandra    | Rosado          | Bayamon        | PR    | 957    |
| 3963 | Stephanie    | Silva           | Cabo Rojo      | PR    | 623    |
| 3964 | Janelle      | Torres          | Villalba       | PR    | 766    |
| 3965 | Israel       | Umpierre        | Gurabo         | PR    | 778    |
| 3966 | Sheila       | Ward            | SanJuan        | PR    | 927    |
| 3967 | Jen          | Allegretto      | Providence     | RI    | 2906   |
| 3968 | Steven       | Branch          | Providence     | RI    | 2906   |
| 3969 | Noel-Anne    | Brennan         | Peace Dale     | RI    | 2879   |
| 3970 | KEITH        | Brynes          | Warwick        | RI    | 2818   |
| 3971 | Kerry        | Demers          | cranston       | RI    | 2905   |
| 3972 | Cynthia      | Garcia Coll     | Providence     | RI    | 2906   |
| 3973 | Mary         | Grossman        | West Warwick   | RI    | 2893   |
| 3974 | Alexandra    | Henshel         | Kingston       | RI    | 2881   |
| 3975 | Barbara      | Henshel         | Kingston       | RI    | 02881- |

|      | FIRST     | LAST        | CITY                | STATE | ZIP   |
|------|-----------|-------------|---------------------|-------|-------|
| 3976 | Ruth      | Hollenbach  | Tiverton            | RI    | 2878  |
| 3977 | michelle  | lafleur     | smithfield          | RI    | 2917  |
| 3978 | Michael   | Lindley     | West Kingston       | RI    | 2892  |
| 3979 | Charlene  | Perreault   | Smithfield          | RI    | 2917  |
| 3980 | Annete    | Rauch       | East Greenwich      | RI    | 2818  |
| 3981 | Eric      | Schmidt     | Charlestown         | RI    | 2813  |
| 3982 | Kathryn   | Shorrock    | North Smithfield    | RI    | 2896  |
| 3983 | Nicole    | Vandais     | Charlestown         | RI    | 2813  |
| 3984 | Una       | Ashcraft    | N. Charleston       | SC    | 29418 |
| 3985 | Derek     | Bleyle      | West Columbia       | SC    | 29169 |
| 3986 | Susie     | Borcuk      | Durham              | SC    | 27707 |
| 3987 | TIMOTHY   | BOYD        | MYRTLE BEACH        | SC    | 29579 |
| 3988 | Jane      | Bryant      | Mauldin             | SC    | 29662 |
| 3989 | Bryon     | Cantrell    | Charleston          | SC    | 29412 |
| 3990 | J.B.      | Coleman     | Easley              | SC    | 29642 |
| 3991 | Jeannine  | Coleman     | Easley              | SC    | 29642 |
| 3992 | Frances   | Cone        | Pawleys Island      | SC    | 29585 |
| 3993 | Kristin   | Connell     | Mt Pleasant         | SC    | 29464 |
| 3994 | Kristi    | Cradit      | Spartanburg         | SC    | 29302 |
| 3995 | Jamie     | Crook       | Seneca              | SC    | 29691 |
| 3996 | Andrea    | Dupree      | Charleston          | SC    | 29407 |
| 3997 | Debra     | Eades       | Greenville          | SC    | 29605 |
| 3998 | James     | Haltiwanger | Columbia            | SC    | 29205 |
| 3999 | Limda     | Harrell     | Yemassee            | SC    | 29945 |
| 4000 | Alison    | Harvey      | Summerville         | SC    | 29483 |
| 4001 | Sharon    | Holcombe    | Anderson            | SC    | 29625 |
| 4002 | Jill      | Hutchinson  | Lexington           | SC    | 29072 |
| 4003 | Stephanie | Jackson     | Summerville         | SC    | 29485 |
| 4004 | June      | Larson      | York                | SC    | 29745 |
| 4005 | kelly     | mcdaniel    | myrtle beach        | SC    | 29577 |
| 4006 | Arthur    | Meeder      | Bluffton            | SC    | 29910 |
| 4007 | Gary      | Moellenhoff | Beaufort            | SC    | 29906 |
| 4008 | Gary      | Moellenhoff | Beaufort            | SC    | 29906 |
| 4009 | Gary      | Moellenhoff | Beaufort            | SC    | 29906 |
| 4010 | Nicole    | Molyneux    | Lexington           | SC    | 29072 |
| 4011 | June      | Nesmmith    | Murrells Inlet      | SC    | 29576 |
| 4012 | Elisha    | Passafero   | Mc Cormick          | SC    | 29835 |
| 4013 | mary beth | pope        | surfside            | SC    | 29587 |
| 4014 | James     | Pruitte     | Greenville          | SC    | 29609 |
| 4015 | Enio E    | Rey         | Anderson            | SC    | 29625 |
| 4016 | Alicia    | Rose        | north myrtle beach  | SC    | 29582 |
| 4017 | Lisa      | Scharin     | Goose Creek         | SC    | 29445 |
| 4018 | George    | Simpson     | Easley              | SC    | 29642 |
| 4019 | Charlotte | Steele      | Irmo                | SC    | 29063 |
| 4020 | Emily     | Surles      | Columbia            | SC    | 29204 |
| 4021 | Regina    | Tallent     | Landrum             | SC    | 29356 |
| 4022 | Mary      | Thomson     | Charleston          | SC    | 29414 |
| 4023 | john      | walker      | beaufort            | SC    | 29902 |
| 4024 | Bonnie    | Wright      | Saint Helena Island | SC    | 29920 |
| 4025 | Lisa      | York        | Columbia            | SC    | 29212 |
| 4026 | Els       | Herten      | Howes               | SD    | 57748 |
| 4027 | Christa   | Hladky      | Colome              | SD    | 57528 |
| 4028 | Kathryn   | Materi      | Aberdeen            | SD    | 57401 |
| 4029 | Louise    | McGannon    | Mitchell            | SD    | 57301 |
| 4030 | Cathy     | Merrill     | Brookings           | SD    | 57006 |
| 4031 | robin     | taylor      | winner              | SD    | 57580 |
| 4032 | Julie     | Turner      | Mobridge            | SD    | 57601 |
| 4033 | Douglas   | Uptain      | RAPID CITY          | SD    | 57702 |
| 4038 | Melinda   | Alden       | Jonesborough        | TN    | 37659 |
| 4039 | kim       | BAILEY      | nashville           | TN    | 37205 |
| 4040 | dawna     | beasecker   | kodak               | TN    | 37764 |
| 4041 | Nicole    | Berkheimer  | Knoxville           | TN    | 37909 |



|      | FIRST     | LAST        | CITY             | STATE | ZIP    |
|------|-----------|-------------|------------------|-------|--------|
| 4042 | LYNNE     | BEYER       | Brentwood        | TN    | 37027  |
| 4043 | sarah     | bigham      | memphis          | TN    | 38105  |
| 4044 | Judith    | Bogan       | Memphis          | TN    | 38112  |
| 4045 | Ruthann   | Booher      | Crossville       | TN    | 38555  |
| 4046 | Mary Nell | Bryan       | Nashville        | TN    | 37209  |
| 4047 | Eugene    | Burr        | Knoxville        | TN    | 37920  |
| 4048 | Caren     | Capuson     | Millington       | TN    | 38053  |
| 4049 | Martha    | Chase       | Johnson Cityt    | TN    | 37601  |
| 4050 | Kathy     | Chiavola    | NASHVILLE        | TN    | 37209  |
| 4051 | Patrick   | Conley      | Murfreesboro     | TN    | 37128  |
| 4052 | sandra    | coope       | maryville        | TN    | 37801  |
| 4053 | David     | Cotton      | Memphis          | TN    | 38112  |
| 4054 | Helen     | Cotton      | Memphis          | TN    | 38111  |
| 4055 | Madeline  | Cotton      | Memphis          | TN    | 38112  |
| 4056 | Emmaly    | Couch       | Nashville        | TN    | 37212  |
| 4057 | Suzanna   | De Coster   | Lisbon           | TN    | 1700   |
| 4058 | Heidi     | deFrank     | Lakeland         | TN    | 38002  |
| 4059 | Patricia  | Dishman     | Nashville        | TN    | 37221  |
| 4060 | Sandie    | Dodson      | Memphis          | TN    | 38134  |
| 4061 | Elaine    | Dunbar      | Crossville       | TN    | 38555  |
| 4062 | Mary      | Ernst       | Bristol          | TN    | 37620  |
| 4063 | Jeffrey   | Erwin       | Memphis          | TN    | 38111  |
| 4064 | Michael   | Finley      | Knoxville        | TN    | 37923  |
| 4065 | Marianna  | Handler     | Sewanee          | TN    | 37375  |
| 4066 | James     | Harrell Jr  | Murfreesboro     | TN    | 37127  |
| 4067 | Laura     | Helfman     | Coalmont         | TN    | 37313  |
| 4068 | Irma      | Hernandez   | Spring Hill      | TN    | 37174  |
| 4069 | phil      | huss        | Franklin         | TN    | 34064  |
| 4070 | melissa   | hyde        | collierville     | TN    | 38017  |
| 4071 | Jeffrey   | Johnston    | Nashville        | TN    | 37209  |
| 4072 | Susan     | Key         | Knoxville        | TN    | 37901  |
| 4073 | Suzanne   | Knight      | Seymour          | TN    | 37865  |
| 4074 | Robert    | Knowles     | Lebanon          | TN    | 37087  |
| 4075 | Richard   | Koger       | Antioch          | TN    | 37013  |
| 4076 | Heather   | Levesque    | Arlington        | TN    | 38002  |
| 4077 | Jeannie   | Martens     | Kingston         | TN    | 37763  |
| 4078 | Richard   | McCrary     | Knoxville        | TN    | 37919  |
| 4079 | Judith    | McKenna     | Pulaski          | TN    | 38478  |
| 4080 | DEBORAH   | MESZAROS    | NASHVILLE        | TN    | 37221  |
| 4081 | Noah      | Moot        | Nashville        | TN    | 37209  |
| 4082 | Mark      | Persons     | Johnson City     | TN    | 37615  |
| 4083 | Trudy     | Rich        | Pulaski          | TN    | 38478  |
| 4084 | Melissa   | Rodgers     | Murfreesboro     | TN    | 37128  |
| 4085 | David     | Saluk       | Signal Mountain  | TN    | 37377  |
| 4086 | Loreen    | Silvarahawk | Tellico Plains   | TN    | 37385  |
| 4087 | Diane     | Snyder      | Cleveland        | TN    | 37312- |
| 4088 | Becky     | Stone       | Kingsport        | TN    | 37664  |
| 4089 | Becky     | Stone       | Kingsport        | TN    | 37664  |
| 4090 | Susie     | stout       | Knoxville        | TN    | 37923  |
| 4091 | Greg      | Suber       | Brentwood        | TN    | 37027  |
| 4092 | Kathleen  | Thompson    | Nashville        | TN    | 37209  |
| 4093 | Roberta   | Thurmond    | Hixson           | TN    | 37343  |
| 4094 | Royal L.  | Tinsley     | Spring City      | TN    | 37381  |
| 4095 | richard   | travis      | memphis          | TN    | 38119  |
| 4096 | Eada      | Webb        | Oak Ridge        | TN    | 37830  |
| 4097 | Karen     | Weidemann   | joelton          | TN    | 37080  |
| 4098 | Cleveland | Wheeler     | Signal Mountain  | TN    | 37377  |
| 4099 | John      | White       | Kingston Springs | TN    | 37082  |
| 4100 | george    | white, jr.  | Knoxville        | TN    | 37914  |
| 4101 | Sarah     | Woodward    | Kodak            | TN    | 37764  |
| 4102 | Frank     | Aaron       | Frisco           | TX    | 75034  |
| 4103 | Melissa   | Acosta      | San Antonio      | TX    | 78211  |

|      | FIRST          | LAST              | CITY              | STATE | ZIP    |
|------|----------------|-------------------|-------------------|-------|--------|
| 4104 | Theresa        | Adams             | Joshua            | TX    | 76058  |
| 4105 | Myla           | Aguilar           | Caldwell          | TX    | 77836  |
| 4106 | Beth           | Almaraz           | Portland          | TX    | 78374  |
| 4107 | Emily          | Alpert            | Brownsville       | TX    | 78520- |
| 4108 | Aubra          | Anthony           | Austin            | TX    | 78751  |
| 4109 | Robert         | Appel             | Dallas            | TX    | 75225  |
| 4110 | Ian            | Aranibar          | McKinney          | TX    | 75070  |
| 4111 | Michael        | Aranibar          | McKinney          | TX    | 75070  |
| 4112 | Patricia       | Aranibar          | McKinney          | TX    | 75070  |
| 4113 | Lillian        | Arboleda          | Houston           | TX    | 77035  |
| 4114 | Heidi          | Arellano          | El Paso           | TX    | 79968  |
| 4115 | Tami           | Augustyn          | Houston           | TX    | 77090  |
| 4116 | Sharon S       | Bailey            | Richardson        | TX    | 75081  |
| 4117 | Graham & Sandy | Baker             | Alvarado          | TX    | 76009  |
| 4118 | Jeannie        | Benash            | Megargel          | TX    | 76370  |
| 4119 | Elaine         | Berg              | Keller            | TX    | 76248  |
| 4120 | Alecia         | Bergeron          | Dripping Springs  | TX    | 78620  |
| 4121 | David          | Berkshire         | Houston           | TX    | 77025  |
| 4122 | Jennifer       | Biggers           | San Antonio       | TX    | 78213  |
| 4123 | Carla          | Bishop            | Brookside Village | TX    | 77581  |
| 4124 | Katie          | Blackshear        | Irving            | TX    | 75039  |
| 4125 | Jennifer       | Blackson-Martinez | wichita falls     | TX    | 76301  |
| 4126 | Clara          | Blair             | Arlington         | TX    | 76013  |
| 4127 | John I.        | Blair             | Arlington         | TX    | 76013  |
| 4128 | Rachel         | Blunt             | Austin            | TX    | 78704  |
| 4129 | Alyssa         | Bond              | Rockport          | TX    | 78382  |
| 4130 | Susan          | Boulden           | austin            | TX    | 78731  |
| 4131 | Florine        | Bowman            | Dallas            | TX    | 75231  |
| 4132 | James          | Bowman            | Austin            | TX    | 78703  |
| 4133 | Frederick      | Brodsky           | Dallas            | TX    | 75229  |
| 4134 | Susan          | Brooks            | Westlake Hills    | TX    | 78746  |
| 4135 | Diane          | Brown             | Corpus Christi    | TX    | 78412  |
| 4136 | Paul           | Buechler          | Rowlett           | TX    | 75088  |
| 4137 | Laura          | Bunton            | Pleasanton        | TX    | 78064  |
| 4138 | Sarah          | Buttrey           | Austin            | TX    | 78705  |
| 4139 | Ieroy          | campbell jr       | houston           | TX    | 77084  |
| 4140 | Dee            | Carroll           | Dallas            | TX    | 75214  |
| 4141 | Richard        | Cedor             | Corpus Christi    | TX    | 78418  |
| 4142 | Clint          | Chamberlain       | San Antonio       | TX    | 78212  |
| 4143 | Kimberly       | Chambers          | Fort Worth        | TX    | 76137  |
| 4144 | Jenette        | Champagne         | The Woodlands     | TX    | 77382  |
| 4145 | Brooke         | Chodzinski        | Beaumont          | TX    | 77706  |
| 4146 | Martha         | Clark             | Denton            | TX    | 76201  |
| 4147 | JODI           | CLARKE            | CARROLLTON        | TX    | 75007  |
| 4148 | Susan          | Clay              | Houston           | TX    | 77057  |
| 4149 | Terry          | Cline             | Rowlett           | TX    | 75088  |
| 4150 | Stefanie       | Collins           | Austin            | TX    | 78705  |
| 4151 | chas           | cook              | ft. worth         | TX    | 76107  |
| 4152 | Lagenia        | Cook              | Dallas            | TX    | 75204  |
| 4153 | Caren          | Corkins           | San Antonio       | TX    | 78247  |
| 4154 | Bruce          | Cox               | San Antonio       | TX    | 78228  |
| 4155 | Linda          | Cox               | Lewisville        | TX    | 75067  |
| 4156 | Michelle       | Cox               | Harker Heights    | TX    | 76548  |
| 4157 | Dave and Rita  | Cross             | Marble Falls      | TX    | 78654  |
| 4158 | Laura          | Cruz Salazar      | Katy              | TX    | 77449  |
| 4159 | Robin          | Culp              | Galveston         | TX    | 77551  |
| 4160 | Zina           | Cunningham        | Mesquite          | TX    | 75150  |
| 4161 | J. Scott       | Daniels           | Houston           | TX    | 77025  |
| 4162 | CHARLENE       | DAVIS             | LaPorte           | TX    | 77571  |
| 4163 | Krishna        | Davis             | Corpus Christi    | TX    | 78412  |
| 4164 | Cathleen       | Day               | Austin            | TX    | 78753  |
| 4165 | erik           | de gregorio       | milan             | TX    | 20146  |

|      | FIRST      | LAST        | CITY          | STATE | ZIP   |
|------|------------|-------------|---------------|-------|-------|
| 4166 | Alejandro  | de la Torre | Houston       | TX    | 77059 |
| 4167 | Sarah      | de Sousa    | Spring Branch | TX    | 78070 |
| 4168 | Eva        | DeRoche     | Beaumont      | TX    | 77713 |
| 4169 | shelley    | deshong     | burleson      | TX    | 76028 |
| 4170 | vanessa    | diaz        | san antonio   | TX    | 78211 |
| 4171 | Lisha      | Doucet      | Houston       | TX    | 77035 |
| 4172 | david      | ducray      | Plano         | TX    | 75025 |
| 4173 | Tim        | Duda        | San Antonio   | TX    | 78209 |
| 4174 | Margaret   | Durham      | Lubbock       | TX    | 79410 |
| 4175 | Holly      | Eaton       | Houston       | TX    | 77082 |
| 4176 | Judy       | El Masri    | Katy          | TX    | 77494 |
| 4177 | Brian      | Ervin       | Austin        | TX    | 78746 |
| 4178 | Diane      | Ethridge    | Conroe        | TX    | 77304 |
| 4179 | April      | Evans       | Mansfield     | TX    | 76063 |
| 4180 | April      | Evans       | Mansfield     | TX    | 76063 |
| 4181 | April      | Evans       | Mansfield     | TX    | 76063 |
| 4182 | Kurt       | Evans       | Mansfield     | TX    | 76063 |
| 4183 | Pam        | Evans       | Kemp          | TX    | 75143 |
| 4184 | Ed         | Fiedler     | Austin        | TX    | 78758 |
| 4185 | tanya      | finney      | El Paso       | TX    | 79912 |
| 4186 | Elaine     | Fischer     | Houston       | TX    | 77054 |
| 4187 | Erin       | Fitzpatrick | houston       | TX    | 77059 |
| 4188 | Gene       | Fowler      | Houston       | TX    | 77019 |
| 4189 | Nita       | Frazier     | Plainview     | TX    | 79072 |
| 4190 | Jan        | Fulton      | Austin        | TX    | 78727 |
| 4191 | Shearle    | Furnish     | Amarillo      | TX    | 79106 |
| 4192 | Brooke     | Gardner     | Dallas        | TX    | 78098 |
| 4193 | Deb        | Gardner     | Austin        | TX    | 78750 |
| 4194 | Jennifer   | Gardner     | Lewisville    | TX    | 75029 |
| 4195 | Dorothy    | Gates       | Lakeside      | TX    | 76135 |
| 4196 | Cynthia    | Genovese    | Webster       | TX    | 77598 |
| 4197 | christy    | gibbens     | floydada      | TX    | 79235 |
| 4198 | Richard    | Gill        | San Antonio   | TX    | 78212 |
| 4199 | Sharon     | Gillespie   | Austin        | TX    | 78703 |
| 4200 | Bonnie     | Glasgoiw    | Dallas        | TX    | 75205 |
| 4201 | Amanda     | Golden      | Conroe        | TX    | 77302 |
| 4202 | Charlotte  | Goncarovs   | houston       | TX    | 77098 |
| 4203 | CHRISTINA  | GONZALEZ    | SAN ANTONIO   | TX    | 78217 |
| 4204 | Gloria     | Gonzalez    | Edinburgt     | TX    | 78539 |
| 4205 | Carol Anne | Gordon      | Plano         | TX    | 75025 |
| 4206 | D.M.       | GORE        | SAN ANTONIO   | TX    | 78296 |
| 4207 | Eugene     | Gourley     | San Antonio   | TX    | 78201 |
| 4208 | Donna      | Greenlee    | Balch Springs | TX    | 75180 |
| 4209 | Phyllis    | Greenspan   | Houston       | TX    | 77089 |
| 4210 | Cindy      | Griffin     | Houston       | TX    | 77043 |
| 4211 | Brenda     | Griggs      | Seagoville    | TX    | 75159 |
| 4212 | joanne     | groshardt   | richardson    | TX    | 75081 |
| 4213 | joanne     | groshardt   | richardson    | TX    | 75081 |
| 4214 | Ilene      | Haddad      | Austin        | TX    | 78704 |
| 4215 | Kim        | Haley       | Austin        | TX    | 78723 |
| 4216 | Suzanna    | Hamilton    | Dallas        | TX    | 75206 |
| 4217 | Mary       | Hammer      | Austin        | TX    | 78753 |
| 4218 | Emily      | Harrison    | Austin        | TX    | 78749 |
| 4219 | John       | Hartsfield  | Arlington     | TX    | 76015 |
| 4220 | Judy       | Hatten      | Austin        | TX    | 78749 |
| 4221 | Patricia   | Haverkamp   | Gainesville   | TX    | 76240 |
| 4222 | Sherell    | Heidt       | Galveston     | TX    | 77551 |
| 4223 | A.T.       | Hernandez   | Plano         | TX    | 75074 |
| 4224 | Bob        | Hershey     | Granbury      | TX    | 76049 |
| 4225 | H.J.       | Hewitt      | Austin        | TX    | 78705 |
| 4226 | Jennifer   | Hill        | Houston       | TX    | 77063 |
| 4227 | seth       | hilliard    | flower mound  | TX    | 75022 |

|      | FIRST           | LAST           | CITY           | STATE | ZIP    |
|------|-----------------|----------------|----------------|-------|--------|
| 4228 | Cynthia         | Hodges         | Bellaire       | TX    | 77401  |
| 4229 | Charles L.      | Holden Sr.     | Point          | TX    | 75472  |
| 4230 | Julia           | Hollar         | leander        | TX    | 78641  |
| 4231 | Rodney          | Hoover, M.S.   | Arlington      | TX    | 76010  |
| 4232 | Nichole         | House          | Ft Worth       | TX    | 76120  |
| 4233 | ANNE            | JACOBSEN       | Sugar Land     | TX    | 77479  |
| 4234 | Steven Slagle & | Jane Spaeth    | New Braunfels  | TX    | 78130  |
| 4235 | Telisa          | Johanson       | Houston        | TX    | 77036  |
| 4236 | Glenna          | Juilfs         | Royce City     | TX    | 75189  |
| 4237 | Caitlyn         | K              | austin         | TX    | 78723  |
| 4238 | Patricia        | Kanter-Kennedy | Houston        | TX    | 77072- |
| 4239 | Kristin         | Kavanagh       | Austin         | TX    | 78745  |
| 4240 | Meredith        | Keelan         | Van Vleck      | TX    | 77482  |
| 4241 | Gay             | Kelly          | Austin         | TX    | 78703  |
| 4242 | Kathi           | Kibbel         | dallas         | TX    | 75208  |
| 4243 | Crystal         | Kinman         | New Braunfels  | TX    | 78130  |
| 4244 | Joan            | Kirby          | Lewisville     | TX    | 75077  |
| 4245 | Debra           | Kirk           | Houston        | TX    | 77091  |
| 4246 | Linda           | Kobler         | Denton         | TX    | 76209  |
| 4247 | Juli            | Kring          | Houston        | TX    | 77099  |
| 4248 | Nikki           | Kruse          | Gardeb Ridge   | TX    | 78266  |
| 4249 | Michael         | Kyle           | Irving         | TX    | 75038  |
| 4250 | JO ANN          | LACKEY         | Weatherford    | TX    | 76085  |
| 4251 | Lindyl          | Lanham         | Houston        | TX    | 77063  |
| 4252 | Louise          | Lanham         | PASADENA       | TX    | 77503  |
| 4253 | David           | Lawhon         | Dallas         | TX    | 75204  |
| 4254 | Kassandra       | Levay          | San Antonio    | TX    | 78240  |
| 4255 | Richard         | Lindsay        | Houston        | TX    | 77008  |
| 4256 | Debbie          | Lopez          | Arlington      | TX    | 76017  |
| 4257 | Neomi           | Malin          | San Antonio    | TX    | 78251  |
| 4258 | Thomas          | Manes          | Wimberley      | TX    | 78676  |
| 4259 | Lisa            | Marshall       | Houston        | TX    | 77070  |
| 4260 | lynn            | matarelli      | keller         | TX    | 76248  |
| 4261 | Mindy           | Mayers         | The Woodlands  | TX    | 77380  |
| 4262 | Patricia        | McCain         | Bryan          | TX    | 77808  |
| 4263 | Elizabeth       | McCarthy       | Denison        | TX    | 75020  |
| 4264 | Theresa         | McConnell      | Arlington      | TX    | 76014  |
| 4265 | Lucy            | McElroy        | Southlake      | TX    | 76092  |
| 4266 | Claire          | McKay          | Austin         | TX    | 78757  |
| 4267 | Kasey           | McKee          | Houston        | TX    | 77019  |
| 4268 | theresa         | mckee          | plano          | TX    | 75074  |
| 4269 | Diane           | McKinnis       | Austin         | TX    | 78745  |
| 4270 | Lindsey         | McMahan        | Conroe         | TX    | 77304  |
| 4271 | Amanda          | McNeese        | Austin         | TX    | 78766  |
| 4272 | Allen           | McReynolds     | Longview       | TX    | 75606  |
| 4273 | Kallie          | Meadors        | Conroe         | TX    | 77301  |
| 4274 | Paulette        | Merritt        | Farmers Branch | TX    | 75234  |
| 4275 | THEODORE        | MERTIG         | EL PASO        | TX    | 79928- |
| 4276 | Evelyn          | Milburn        | Houston        | TX    | 77083  |
| 4277 | Toni-Ann        | Mistretta      | Houston        | TX    | 77035  |
| 4278 | JOANNA          | MONTERO        | HOUSTON        | TX    | 77070  |
| 4279 | Ramsey          | Montigny       | Austin         | TX    | 78704  |
| 4280 | Shannon         | Moore          | Austin         | TX    | 78749  |
| 4281 | April           | Morehead       | Houston        | TX    | 77034  |
| 4282 | Norma           | Morgan         | Forney         | TX    | 75126  |
| 4283 | Elaine          | Munoz          | San Antonio    | TX    | 78280  |
| 4284 | Murray          | Myers          | Houston        | TX    | 77077  |
| 4285 | srinivas        | nedunuri       | austin         | TX    | 78751  |
| 4286 | bonnie          | neidlinger     | McKinney       | TX    | 75069  |
| 4287 | Kathy B.        | Newman         | San Antonio    | TX    | 78238  |
| 4288 | SAMANTHA        | newman         | Austin         | TX    | 78751  |
| 4289 | Patricia        | Nicoll         | San Antonio    | TX    | 78216  |

|      | FIRST      | LAST         | CITY           | STATE | ZIP   |
|------|------------|--------------|----------------|-------|-------|
| 4290 | Rael       | Nidess, M.D. | Marshall       | TX    | 75672 |
| 4291 | brianna    | nobles       | Del rio        | TX    | 78840 |
| 4292 | Carlii     | Oelrich      | Arlington      | TX    | 76014 |
| 4293 | Jennifer   | Oppenheim    | Austin         | TX    | 78723 |
| 4294 | William    | O'Rourke     | Houston        | TX    | 77019 |
| 4295 | Fred       | Ortiz        | Round Rock     | TX    | 78664 |
| 4296 | Natalie    | Osborn       | Austin         | TX    | 78759 |
| 4297 | Sandra     | Osborn       | Dallas         | TX    | 75232 |
| 4298 | Joseph     | O'Sullivan   | Austin         | TX    | 78751 |
| 4299 | judith     | otoole       | cleveland      | TX    | 77328 |
| 4300 | michele    | ozuna        | Houston        | TX    | 77036 |
| 4301 | Karin      | Paris        | Ennis          | TX    | 75119 |
| 4302 | Erika      | Parker       | Conroe         | TX    | 77384 |
| 4303 | GORDON     | PARKER       | CorpusChristi  | TX    | 78418 |
| 4304 | Tamara R   | Pearlman     | Keller         | TX    | 76248 |
| 4305 | Joel       | Perkins      | Denton         | TX    | 76209 |
| 4306 | Deborah    | Petersen     | Austin         | TX    | 78748 |
| 4307 | alexandra  | pharmakidis  | austin         | TX    | 78704 |
| 4308 | Franklin   | Platizky     | Denton         | TX    | 76209 |
| 4309 | gary       | poppins      | houston        | TX    | 77072 |
| 4310 | Rebecca    | Puckett      | Mount Vernon   | TX    | 75457 |
| 4311 | Tim        | Purcell      | Houston        | TX    | 77207 |
| 4312 | lynda      | quadland     | san antonio    | TX    | 78209 |
| 4313 | c          | rea          | Dickinson      | TX    | 77539 |
| 4314 | c          | rea          | Dickinson      | TX    | 77539 |
| 4315 | Campbell   | Read         | Dallas         | TX    | 75206 |
| 4316 | calvin     | reeves       | lewisville     | TX    | 75057 |
| 4317 | Karen      | Richard      | Spring         | TX    | 77389 |
| 4318 | Iva        | Riddle       | Arlington      | TX    | 76013 |
| 4319 | Sissy      | Riffin       | Waco           | TX    | 76710 |
| 4320 | Judith     | Riojas       | Deer Park      | TX    | 77536 |
| 4321 | Mary       | Robbins      | Richardson     | TX    | 75081 |
| 4322 | Debra      | Robertson    | La Porte       | TX    | 77571 |
| 4323 | MICHAEL    | ROBINS       | HOUSTON        | TX    | 77098 |
| 4324 | Judy       | Robinson     | Houston        | TX    | 77098 |
| 4325 | Jennifer   | Rodriguez    | Granbury       | TX    | 76049 |
| 4326 | Melissa    | Rodriguez    | Weslaco        | TX    | 78596 |
| 4327 | Lori       | Rosas        | Corpus Christi | TX    | 78410 |
| 4328 | Tammy      | Rosser       | Galveston      | TX    | 77551 |
| 4329 | Tammy      | Rosser       | Galveston      | TX    | 77551 |
| 4330 | Leslie     | Ruby         | Cedar Hill     | TX    | 75104 |
| 4331 | Kathleen   | Rueppel      | San Antonio    | TX    | 78218 |
| 4332 | Corinne    | Sabo         | San Antonio    | TX    | 78212 |
| 4333 | Valerie    | Sadorra      | Austin         | TX    | 78753 |
| 4334 | Teresa     | Santos       | eulless        | TX    | 76039 |
| 4335 | Karen      | Schieb       | Houston        | TX    | 77077 |
| 4336 | Laurie     | Schrupp      | Dallas         | TX    | 75026 |
| 4337 | MARY       | SEATON       | DAYTON         | TX    | 77535 |
| 4338 | Mary       | Self         | Bryan          | TX    | 77802 |
| 4339 | Jennifer   | Sellers      | Richardson     | TX    | 75081 |
| 4340 | Patricia   | Sheridan     | McKinney       | TX    | 75070 |
| 4341 | Christiaan | Siano        | Austin         | TX    | 78722 |
| 4342 | Estelle    | Silverstein  | Katy           | TX    | 77450 |
| 4343 | Jason      | Simmons      | Corpus Christi | TX    | 78414 |
| 4344 | MJ         | Sisco        | Austin         | TX    | 78737 |
| 4345 | Tim        | Sisco        | Austin         | TX    | 78737 |
| 4346 | Sue        | Sjolin       | Spring         | TX    | 77379 |
| 4347 | Grace      | Slaughter    | Burleson       | TX    | 76028 |
| 4348 | Janice     | Smith        | Kingsville     | TX    | 78363 |
| 4349 | Charles    | Soffar       | Houston        | TX    | 77072 |
| 4350 | Ana Yong   | Soler        | El Paso        | TX    | 79925 |
| 4351 | Diane      | Stepakof-Fay | Cedar Park     | TX    | 78613 |

|      | FIRST        | LAST         | CITY                 | STATE | ZIP   |
|------|--------------|--------------|----------------------|-------|-------|
| 4352 | ROBERT       | STOVALL      | TAYLOR               | TX    | 76574 |
| 4353 | Charlotte    | Stowers      | Flower Mound         | TX    | 75028 |
| 4354 | robert       | strebeck     | eules                | TX    | 76039 |
| 4355 | Lesha        | Stull        | Sachse               | TX    | 75048 |
| 4356 | lizeth       | swartz       | el paso              | TX    | 79912 |
| 4357 | Patricia     | Swenson      | Allen                | TX    | 75002 |
| 4358 | Ann          | Taylor       | Springtown           | TX    | 76082 |
| 4359 | Bruce        | Taylor       | Corpus Christi       | TX    | 78411 |
| 4360 | stacey       | tecot        | Austin               | TX    | 78705 |
| 4361 | Jacqueline   | Thomas       | Austin               | TX    | 78756 |
| 4362 | Randy        | Thomas       | Richardson           | TX    | 75080 |
| 4363 | Jeanna       | Thompson     | Austin               | TX    | 78753 |
| 4364 | anna         | trebo        | milan                | TX    | 20146 |
| 4365 | Lynda        | Turley       | Baytown              | TX    | 77521 |
| 4366 | Michelle     | Upchurch     | Carrollton           | TX    | 75007 |
| 4367 | Marie Sophia | Vassilakidis | Houston              | TX    | 77006 |
| 4368 | Marie        | Villarreal   | Houston              | TX    | 77035 |
| 4369 | Debra        | Waldron      | North Richland Hills | TX    | 76180 |
| 4370 | Michael      | Waldron      | North Richland Hills | TX    | 76180 |
| 4371 | Philip       | Walker       | Kyle                 | TX    | 78640 |
| 4372 | Ed           | Walsh        | Houston              | TX    | 77024 |
| 4373 | Terri        | Walsh        | Denison              | TX    | 75020 |
| 4374 | Paul         | Warner       | San Antonio          | TX    | 78250 |
| 4375 | Mike         | Webb         | austin               | TX    | 78704 |
| 4376 | Rhonda       | West         | Copperas Cove        | TX    | 76522 |
| 4377 | Ramona       | Wheeler      | Farmers Branch       | TX    | 75234 |
| 4378 | Sandra       | Whelan       | New Braunfels        | TX    | 78130 |
| 4379 | kelli        | whinery      | Electra              | TX    | 76360 |
| 4380 | John         | White        | Tyler                | TX    | 75701 |
| 4381 | Laura        | White        | El Paso              | TX    | 79904 |
| 4382 | Lee Anne     | Wilde        | Seabrook             | TX    | 77586 |
| 4383 | Emily        | Williamson   | Corpus Christi       | TX    | 78412 |
| 4384 | Maria        | Williamson   | Highlands            | TX    | 77562 |
| 4385 | Teresa       | Williamson   | Sanger               | TX    | 76266 |
| 4386 | AnnMarie     | wilson       | Garland              | TX    | 75043 |
| 4387 | Thomas       | Windberg     | Spicewood            | TX    | 78669 |
| 4388 | Katie        | Wooten       | Snyder               | TX    | 79549 |
| 4389 | Deborah      | Wray         | Pflugerville         | TX    | 78660 |
| 4390 | Ginger       | Young        | Spring               | TX    | 77379 |
| 4391 | Natalie      | Youngberg    | Spring               | TX    | 77373 |
| 4392 | Sherry       | Zamot        | San Antonio          | TX    | 78250 |
| 4393 | Misti        | Zoch         | Dallas               | TX    | 75233 |
| 4394 | Loretta      | Zoldak       | Dallas               | TX    | 75217 |
| 4395 | Jennifer     | Ahlstrom     | Park City            | UT    | 84060 |
| 4396 | fritz        | bachman      | south salt lake      | UT    | 84115 |
| 4397 | Pamela       | Baker        | Moab                 | UT    | 84532 |
| 4398 | Belinda      | Bergener     | Sandy                | UT    | 84094 |
| 4399 | Donna        | Bills        | Salt Lake            | UT    | 84118 |
| 4400 | Michelle     | Cohn         | Salt Lake City       | UT    | 84105 |
| 4401 | Pamela       | Cox          | Ogden                | UT    | 84404 |
| 4402 | Amy          | Craig        | Saint George         | UT    | 84770 |
| 4403 | Kayla        | Cunningham   | midvale              | UT    | 84047 |
| 4404 | Carol        | Curtis       | Salt Lake City       | UT    | 84106 |
| 4405 | Virginia     | Curtis Lee   | Salt Lake City       | UT    | 84105 |
| 4406 | Erik         | Dunn         | wvc                  | UT    | 84128 |
| 4407 | Heather      | Finch        | Logan                | UT    | 84321 |
| 4408 | Marilyn      | Gold         | Holladay             | UT    | 84124 |
| 4409 | Jon          | Hager        | RIVERTON             | UT    | 84065 |
| 4410 | Chip         | Henneman     | Draper               | UT    | 84020 |
| 4411 | Lori         | Levise       | Amalga               | UT    | 84335 |
| 4412 | Suzanne      | Liese        | Oakley               | UT    | 84055 |
| 4413 | Elana        | Maurin       | SLC                  | UT    | 84102 |

|      | FIRST         | LAST               | CITY             | STATE | ZIP   |
|------|---------------|--------------------|------------------|-------|-------|
| 4414 | sue           | mcMahan            | holladay         | UT    | 84117 |
| 4415 | Ann           | McMullen           | Sandy            | UT    | 84093 |
| 4416 | rich          | otterstrom         | Salt Lake City   | UT    | 84121 |
| 4417 | lisa          | peterson           | north salt lake  | UT    | 84054 |
| 4418 | joan          | smith              | Salt Lake City   | UT    | 84105 |
| 4419 | Richard       | Spotts             | St. George       | UT    | 84770 |
| 4420 | jean          | tabin              | park City        | UT    | 84098 |
| 4421 | G             | Tabish             | Salt Lake City   | UT    | 84157 |
| 4422 | Kim           | Tietje             | Sandy            | UT    | 84093 |
| 4423 | Richard       | Vander Velden      | Kearns           | UT    | 84118 |
| 4424 | Pattie        | Woods              | Logan            | UT    | 84341 |
| 4425 | Cynthia       | Yates              | Ogden            | UT    | 84401 |
| 4426 | Ian Nazarenko | and Ms. Mari Tigie | Glen Allen       | VA    | 23060 |
| 4427 | Rozella       | Baker              | linden           | VA    | 22642 |
| 4428 | Frances       | Barber             | Bland            | VA    | 24315 |
| 4429 | Deborah       | Barnes             | Leesburg         | VA    | 20175 |
| 4430 | melinda       | bashen             | arlington        | VA    | 22219 |
| 4431 | Nancy         | Berger             | Midlothian       | VA    | 23112 |
| 4432 | Sean          | Bourgeois          | Virginia Beach   | VA    | 23455 |
| 4433 | Donna         | Brannan            | Manassas         | VA    | 20111 |
| 4434 | bartow        | bridges            | virginia beach   | VA    | 23454 |
| 4435 | Stephanie     | Brock              | Fairfax Sttation | VA    | 22039 |
| 4436 | Leslie        | Buckman            | Norfolk          | VA    | 23517 |
| 4437 | Andre         | Bureman            | Locust Grove     | VA    | 22508 |
| 4438 | Heather       | Burns              | Richmond         | VA    | 23228 |
| 4439 | Lori          | C.                 | Virginia Beach   | VA    | 23464 |
| 4440 | John          | Cannon             | Front Royal      | VA    | 22630 |
| 4441 | Betty         | Clark              | Smithfield       | VA    | 23430 |
| 4442 | CHELLE        | CORTEZ             | KING WILLIAM     | VA    | 23086 |
| 4443 | Alexandra     | Cousteau           | Arlington        | VA    | 22202 |
| 4444 | Philippe      | Cousteau           | Arlington        | VA    | 22202 |
| 4445 | Shannon       | Cowett             | Chantilly        | VA    | 20151 |
| 4446 | Patricia      | Daniels            | Manassas         | VA    | 20109 |
| 4447 | Jim           | Derzon             | Falls Church     | VA    | 22044 |
| 4448 | Patricia      | Desmarais          | Roanoke          | VA    | 24016 |
| 4449 | Danielle      | Devereux           | Charlottesville  | VA    | 22911 |
| 4450 | Jessica       | Donaldson          | Roanoke          | VA    | 24020 |
| 4451 | Nida          | Duckett            | South Riding     | VA    | 20152 |
| 4452 | Sue           | Eanes              | Col.Hgts.        | VA    | 23834 |
| 4453 | Doug          | English            | McLean           | VA    | 22101 |
| 4454 | Karen         | Fedorov            | Bealeton         | VA    | 22712 |
| 4455 | Rachel        | Felver             | Alexandria       | VA    | 22310 |
| 4456 | Paula         | Ferguson           | Hopewell         | VA    | 23860 |
| 4457 | Rachel        | Fletcher           | Roanoke          | VA    | 24012 |
| 4458 | Joyce         | Foster             | Salem            | VA    | 24153 |
| 4459 | Effie         | Fox                | Warrenton        | VA    | 20186 |
| 4460 | Pamela        | Freybler           | Bristow          | VA    | 20136 |
| 4461 | Sara          | Gann               | Arlington        | VA    | 22205 |
| 4462 | Sylvia        | gLOVER             | Alexandria       | VA    | 22302 |
| 4463 | Lynn          | Goldberg           | Alexandria       | VA    | 22310 |
| 4464 | Nicole        | Hamilton           | Waterford        | VA    | 20197 |
| 4465 | Del           | Hardesty           | Alexandria       | VA    | 22306 |
| 4466 | Julie         | Harper             | Richmond         | VA    | 23228 |
| 4467 | Tiffany       | Harville           | petersburg       | VA    | 23805 |
| 4468 | Nancy         | Hey                | Arlington        | VA    | 22203 |
| 4469 | Sharon        | Hill               | Richmond         | VA    | 23221 |
| 4470 | Jim           | Holt               | Arlington        | VA    | 22205 |
| 4471 | Stuart        | Horner             | Arlington        | VA    | 22204 |
| 4472 | Michael       | Hudson             | Blacksburg       | VA    | 24060 |
| 4473 | Robert        | Huisman            | Manassas         | VA    | 20109 |
| 4474 | Susan         | Huisman            | Manassas         | VA    | 20109 |
| 4475 | Quinn         | Huitz              | Fairfax          | VA    | 22031 |

|      | FIRST       | LAST         | CITY            | STATE | ZIP    |
|------|-------------|--------------|-----------------|-------|--------|
| 4476 | Denise      | Hunt         | Partlow         | VA    | 22534  |
| 4477 | Kahtlene    | Jarrett      | Richmond        | VA    | 23236  |
| 4478 | jennifer    | jen          | roanoke         | VA    | 24018  |
| 4479 | Richard     | Jereski      | Alexandria      | VA    | 22301  |
| 4480 | Linda       | Johnson      | Courtland       | VA    | 23837  |
| 4481 | Mary Ethel  | Kabisch      | Alexandria      | VA    | 22303  |
| 4482 | Susan       | Kalan        | Orange          | VA    | 22960  |
| 4483 | Jessica     | Kaplan       | Alexandria      | VA    | 22306  |
| 4484 | Paul        | Kavitz       | Oakton          | VA    | 22124  |
| 4485 | Kristine    | Keefer       | Fairfax         | VA    | 22031  |
| 4486 | gamine      | kelly        | blacksburg      | VA    | 24060  |
| 4487 | lisa        | kingsley     | norfolk         | VA    | 23507  |
| 4488 | KATHRYN     | KNIGHT       | VIRGINIA BEACH  | VA    | 23454  |
| 4489 | Robin       | Koenig       | Middleburg      | VA    | 20118  |
| 4490 | FARRAH      | KUSMIN       | ASHBURN         | VA    | 20147  |
| 4491 | Tracy       | Labriola     | Fairfax Station | VA    | 22039  |
| 4492 | Mark        | Langley      | Williamsburg    | VA    | 23185  |
| 4493 | Andrea      | Leonard      | Midlothian      | VA    | 23113  |
| 4494 | Lacey       | Levitt       | Charlottesville | VA    | 22903  |
| 4495 | Sallie      | Levitt       | Suffolk         | VA    | 23434  |
| 4496 | Sylvia      | Liu          | Virginia Beach  | VA    | 23455  |
| 4497 | Andrew      | Luckett      | Roanoke         | VA    | 24014  |
| 4498 | Louise      | Mann         | Petersburg      | VA    | 23803- |
| 4499 | Richard     | Marten       | Virginia Beach  | VA    | 23451  |
| 4500 | Mary Ann    | McFarland    | Lorton          | VA    | 22079  |
| 4501 | Kathleen    | McLane       | Woodbridge      | VA    | 22192  |
| 4502 | Nazen       | Merjian      | Charlottesville | VA    | 22903  |
| 4503 | Shirley     | Mitchell     | Harrisonburg    | VA    | 22802  |
| 4504 | John        | Mize         | Lynchburg       | VA    | 24504  |
| 4505 | Veronica    | Moreno       | Arlington       | VA    | 22204  |
| 4506 | Christopher | Morrow       | Leesburg        | VA    | 20176  |
| 4507 | JL          | Mulligan     | Charlottesville | VA    | 22911  |
| 4508 | KIM         | MUMMERT      | STAFFORD        | VA    | 22556  |
| 4509 | Patricia    | Nelson       | Fairfax         | VA    | 22033  |
| 4510 | Michelle    | Noonan       | Leesburg        | VA    | 20176  |
| 4511 | Tracy       | Norcutt Eley | hampton         | VA    | 23661  |
| 4512 | Elizabeth   | North        | Arlington       | VA    | 22205  |
| 4513 | Bonnie      | O'Donnell    | Richmond        | VA    | 23220  |
| 4514 | Larry       | O'Neal       | Virginia Beach  | VA    | 23456  |
| 4515 | Robyn       | O'Neill      | Richmond        | VA    | 23227  |
| 4516 | lauren      | otto         | stafford        | VA    | 22556  |
| 4517 | Tami        | Palacky      | Springfield     | VA    | 22153  |
| 4518 | R. Brent    | Palmer       | Palmyra         | VA    | 22963  |
| 4519 | Penny       | Peed         | Hampton         | VA    | 23666  |
| 4520 | Lelia       | Pendleton    | Richmond        | VA    | 23225  |
| 4521 | Nancy       | Peterson     | Yorktown        | VA    | 23693  |
| 4522 | Sandra      | Peterson     | Newport News    | VA    | 23601  |
| 4523 | Tamara      | Pincus       | Alexandria      | VA    | 22310  |
| 4524 | Denise      | Preuss       | Roanoke         | VA    | 24018  |
| 4525 | Eric        | Rardin       | Alexandria      | VA    | 22301  |
| 4526 | Melinda     | Richards     | Amissville      | VA    | 20106  |
| 4527 | Tamara      | Richards     | Portsmouth      | VA    | 23701  |
| 4528 | Martha Jane | Ripple       | Great Falls     | VA    | 22066- |
| 4529 | Rhonda      | Rose         | Buchanan        | VA    | 24066  |
| 4530 | tracy       | rose         | manassas        | VA    | 20108  |
| 4531 | Linda       | Rosen        | Fairfax         | VA    | 22030  |
| 4532 | David       | Roth         | Arlington       | VA    | 22204  |
| 4533 | leonardo    | Sarli        | Arlington       | VA    | 22207  |
| 4534 | Robin       | Savage       | Exmore          | VA    | 23350  |
| 4535 | theresa     | scott        | king george     | VA    | 22485  |
| 4536 | Janet       | Setchel      | Chester         | VA    | 23836  |
| 4537 | Tim         | Shaw         | Alexandria      | VA    | 22301  |



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|------|------------|---------------|-------------------|-------|-------|
| 4538 | charles    | shelton       | grottoes          | VA    | 24441 |
| 4539 | Judith     | Shematek      | Seaford           | VA    | 23696 |
| 4540 | Barre      | Simmons       | Springfield       | VA    | 22151 |
| 4541 | Debbie     | Slack         | Lynchburg         | VA    | 24502 |
| 4542 | Bonnie     | Smith         | Christiansburg    | VA    | 24073 |
| 4543 | Jessica    | Smith         | Richmond          | VA    | 23230 |
| 4544 | Stacey     | Snow          | Sp[ringfield      | VA    | 22152 |
| 4545 | M.         | Soltis        | Arlington         | VA    | 22205 |
| 4546 | Kimberly   | Stevens       | Chesapeake        | VA    | 23321 |
| 4547 | Marjorie   | Streeter      | Reston            | VA    | 20191 |
| 4548 | JR         | Summers       | Richmond          | VA    | 23294 |
| 4549 | Cynthia    | Tatem         | Virginia Beach    | VA    | 23452 |
| 4550 | Michael    | Torosian      | Falmouth          | VA    | 22403 |
| 4551 | Michael    | Torosian      | Falmouth          | VA    | 22403 |
| 4552 | Jim        | Traweek       | Springfield       | VA    | 22151 |
| 4553 | L          | Walters       | Virginia Beach    | VA    | 23462 |
| 4554 | R          | Walters       | Virginia Beach    | VA    | 23462 |
| 4555 | Lawrence   | Warner        | Fishersville      | VA    | 22939 |
| 4556 | J          | Weikert       | Richmond          | VA    | 23229 |
| 4557 | Dustie     | Werner        | Virginia Beach    | VA    | 23451 |
| 4558 | jennifer   | wilberger     | winchester        | VA    | 22602 |
| 4559 | Martha     | Williams      | Roanoke           | VA    | 24036 |
| 4560 | Kristen    | Willis        | Norfolk           | VA    | 23503 |
| 4561 | Melissa    | Winkel        | Alexandria        | VA    | 22305 |
| 4562 | Sheryl     | Winkler       | Fredericksburg    | VA    | 22407 |
| 4563 | J          | Winther       | Williamsburg      | VA    | 23188 |
| 4564 | Margaret   | Wood          | Suffolk           | VA    | 23434 |
| 4565 | Peter      | Wright        | Richmond          | VA    | 23229 |
| 4566 | Sara       | Zaza          | Alexandria        | VA    | 22305 |
| 4567 | Becky      | Dayhuff       | St. Thomas        | VI    | 802   |
| 4568 | Ryan       | Smith         | Christiansted     | VI    | 822   |
| 4569 | Kristin    | Burch         | Windsor           | VT    | 5089  |
| 4570 | James      | Burde         | Jericho           | VT    | 5465  |
| 4571 | Alessandra | DeMarchis     | Burlington        | VT    | 5401  |
| 4572 | Andrew     | Fahy          | Starksboro        | VT    | 5487  |
| 4573 | Judith     | Hazelton      | Bennington        | VT    | 5201  |
| 4574 | JOHN       | HEWITT        | SPRINGFIELD       | VT    | 5156  |
| 4575 | Lynn       | Morin         | Springfield       | VT    | 5156  |
| 4576 | Donald     | Morrison      | West Windsor      | VT    | 5089  |
| 4577 | F          | Noyes         | Brattleboro       | VT    | 5301  |
| 4578 | Lindsay    | Perry         | Pittsford         | VT    | 5763  |
| 4579 | Lance      | Polya         | Jericho           | VT    | 5465  |
| 4580 | Ellen      | Powell        | South Burlington  | VT    | 5403  |
| 4581 | Ken        | Rosenblad     | Shelburne         | VT    | 5482  |
| 4582 | Melody     | Szulanczyk    | Brattleboro       | VT    | 5301  |
| 4583 | Chad       | Wawrzyniak    | Northfield        | VT    | 5663  |
| 4584 | jerry      | Williams      | Montpelier        | VT    | 5602  |
| 4585 | Jack       | Zeilenga      | Montpelier        | VT    | 5602  |
| 4586 | Bill       | Zuccareno     | South Burlington  | VT    | 5403  |
| 4587 | Sarah      | Adamson       | Mountlake Terrace | WA    | 98043 |
| 4588 | cari       | aida          | puyallup          | WA    | 98373 |
| 4589 | Betsy      | Alaniz        | Bainbridge Island | WA    | 98110 |
| 4590 | Carla      | Alzuro        | Seattle           | WA    | 98103 |
| 4591 | Elizabeth  | Andersen      | Sammamish         | WA    | 98074 |
| 4592 | Gilia      | Angell        | Seattle           | WA    | 98112 |
| 4593 | Ellen      | Atkinson      | Pacific           | WA    | 98047 |
| 4594 | Yovonne    | Autrey-Schell | Ocean Shores      | WA    | 98569 |
| 4595 | Stephani   | Ayers         | Seattle           | WA    | 98101 |
| 4596 | bonnie     | backus-myers  | centralia         | WA    | 98531 |
| 4597 | Euel       | Ball          | Medical Lake      | WA    | 99022 |
| 4598 | Jake       | Barnes        | Spokane           | WA    | 99208 |
| 4599 | Victoria   | Beach         | Lakewood          | WA    | 98499 |

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|------|------------|----------------|---------------|-------|--------|
| 4600 | Joanna     | Behrens        | Kettle Falls  | WA    | 99141  |
| 4601 | Joan       | Beldin         | Pt. Townsend  | WA    | 98368  |
| 4602 | Brooke     | Bell           | Tumwater      | WA    | 98512  |
| 4603 | Liane      | Benson         | Ocean Shores  | WA    | 98569  |
| 4604 | Julie      | Betterley      | Bellevue      | WA    | 98007  |
| 4605 | Seana      | Blake          | Ellensburg    | WA    | 98926  |
| 4606 | Taiya      | Boni           | Bremerton     | WA    | 98312  |
| 4607 | Len        | Bordeaux       | Seattle       | WA    | 98105  |
| 4608 | Harold     | Boswell        | Seattle       | WA    | 98107  |
| 4609 | Ruth       | Bramall        | Lake Stevens  | WA    | 98258  |
| 4610 | Sidney     | Brinckerhoff   | Bellevue      | WA    | 98005  |
| 4611 | Melissa    | Britton        | Seattle       | WA    | 98125  |
| 4612 | Jerry      | Broadbent      | Bucoda        | WA    | 98530  |
| 4613 | Alexa      | Brown          | Renton        | WA    | 98059  |
| 4614 | Rebecca    | Buell-Silsbee  | YAKIMA        | WA    | 98902  |
| 4615 | Jennifer   | Bundy          | Seattle       | WA    | 98133  |
| 4616 | ryan       | burkett        | Seattle       | WA    | 98121  |
| 4617 | Anthony    | Burns Ph.D.    | Bremerton     | WA    | 98310  |
| 4618 | Maria      | Butler         | Mount Vernon  | WA    | 98274  |
| 4619 | Heather    | Campbell       | Seattle       | WA    | 98116  |
| 4620 | Isabel     | Campbell       | Gig Harbor    | WA    | 98335  |
| 4621 | Isaac      | Campos         | Seattle       | WA    | 98103  |
| 4622 | Gwen       | Carlson        | Richland      | WA    | 99352  |
| 4623 | Judith     | Carter         | Friday Harbor | WA    | 98250  |
| 4624 | Leslie     | Chertok        | Tacoma        | WA    | 98407  |
| 4625 | Phyllis    | Christofferson | Seattle       | WA    | 981115 |
| 4626 | Jennifer   | Clark          | Bothell       | WA    | 98012  |
| 4627 | Lori       | Clemente       | Cle Elum      | WA    | 98922  |
| 4628 | Leana      | Clothier       | Shoreline     | WA    | 98155  |
| 4629 | Susan      | Colby          | Port Ludlow   | WA    | 98365  |
| 4630 | Cheryl     | Cook           | Marysville    | WA    | 98270  |
| 4631 | matthew r. | courter        | seattle       | WA    | 98178  |
| 4632 | Brittney   | Curtis         | Bremerton     | WA    | 98311  |
| 4633 | Sandra     | Cutter         | Oak Harbor    | WA    | 98277  |
| 4634 | marc       | daniel         | mount vernon  | WA    | 98273  |
| 4635 | Susan      | Deaton         | Everett       | WA    | 98204  |
| 4636 | Barbara    | DelGiudice     | Burien        | WA    | 98146  |
| 4637 | Barbara    | DelGiudice     | Burien        | WA    | 98146  |
| 4638 | Jeanne     | Deller         | Issaquah      | WA    | 98027  |
| 4639 | sophie     | deruiter       | yelm          | WA    | 98597  |
| 4640 | Christina  | Dickinson      | Port Orchard  | WA    | 98366  |
| 4641 | Del E.     | Domke          | Bellevue      | WA    | 98008  |
| 4642 | Hollee     | Donavan        | REDMOND       | WA    | 98052  |
| 4643 | Holly      | Donovan        | Bellingham    | WA    | 98225  |
| 4644 | Barbara    | Douma          | Seattle       | WA    | 98117  |
| 4645 | Share      | DuFresne       | Everett       | WA    | 98204  |
| 4646 | Miriam     | Dyak           | Seattle       | WA    | 98136  |
| 4647 | Frances    | Elder          | Snohomish     | WA    | 98290  |
| 4648 | Christine  | Elliott        | Kent          | WA    | 98030  |
| 4649 | Greg       | Enright        | Poulsbo       | WA    | 98370  |
| 4650 | Jennifer   | Ertel          | Issaquah      | WA    | 98029  |
| 4651 | Franklin   | Eventoff       | Bow           | WA    | 98232  |
| 4652 | Alicia     | Faires         | Puyallup      | WA    | 98374  |
| 4653 | Georgann   | Falotico       | Suquamish     | WA    | 988392 |
| 4654 | Adriana    | Faria          | Puyallup      | WA    | 98375  |
| 4655 | Bob        | Farrell        | Seattle       | WA    | 98136  |
| 4656 | Rebecca    | Ferrell        | Bellevue      | WA    | 98008  |
| 4657 | Desiree    | Fisher         | Olympia       | WA    | 98506  |
| 4658 | Diane      | Fowler         | Seattle       | WA    | 98119  |
| 4659 | Sandra     | Fowler         | REnton        | WA    | 98058  |
| 4660 | Vicki      | Francks        | Kenmore       | WA    | 98028  |
| 4661 | Lisaa      | Gelder         | Wenatchee     | WA    | 98801  |

|      | FIRST            | LAST          | CITY              | STATE | ZIP   |
|------|------------------|---------------|-------------------|-------|-------|
| 4662 | Greg             | Gille         | Bellevue          | WA    | 98008 |
| 4663 | Melissa          | Gonzalez      | Walla Walla       | WA    | 99362 |
| 4664 | Judith           | Gorman        | Langley           | WA    | 98260 |
| 4665 | Shilah           | Gould         | Port Townsend     | WA    | 98368 |
| 4666 | Lynn             | Graham        | Bellingham        | WA    | 98225 |
| 4667 | Lori             | Greenfield    | Mukilteo          | WA    | 98275 |
| 4668 | Aka              | Grimm         | Seattle           | WA    | 98133 |
| 4669 | Duane            | Grindstaff    | Kent              | WA    | 98042 |
| 4670 | Orion            | Gudgell       | Seattle           | WA    | 98117 |
| 4671 | Stephanie        | Hager         | Maple Falls       | WA    | 98266 |
| 4672 | Susan            | Hampel        | Sequim            | WA    | 98382 |
| 4673 | JUDITH           | Hanna-McInnis | Yakima            | WA    | 98903 |
| 4674 | Catrina          | Hansen        | Wenatchee         | WA    | 98801 |
| 4675 | Hugh             | Harkins       | Kent              | WA    | 98032 |
| 4676 | Martha           | Harris        | Renton            | WA    | 98058 |
| 4677 | Jess             | Hart          | Lynnwood          | WA    | 98087 |
| 4678 | Charles          | Hartik        | Tonasket          | WA    | 98855 |
| 4679 | bj               | hedahl        | camano is         | WA    | 98282 |
| 4680 | Trravis & Denise | Hood          | Bellingham        | WA    | 98229 |
| 4681 | Keith            | Houser        | Bellevue          | WA    | 98006 |
| 4682 | Charlie          | Howe          | Shoreline         | WA    | 98177 |
| 4683 | Laura            | Huddleston    | Seattle           | WA    | 98106 |
| 4684 | Keith            | Humphreys     | Kirkland          | WA    | 98033 |
| 4685 | Lisa             | Humphreys     | Kirkland          | WA    | 98033 |
| 4686 | Diana            | Husmann       | Woodinville       | WA    | 98077 |
| 4687 | Ray              | Hutchinson    | Seattle           | WA    | 98199 |
| 4688 | Virginia         | Huupponen     | Rainier           | WA    | 98576 |
| 4689 | Debbie           | Inglehart     | Spokane           | WA    | 99210 |
| 4690 | Lura             | Irish         | Lakebay           | WA    | 98349 |
| 4691 | Maggie           | Jahn          | seattle           | WA    | 98133 |
| 4692 | Gayle            | Janzen        | Seattle           | WA    | 98133 |
| 4693 | Robert           | Jenusaitis    | Port Townsend     | WA    | 98368 |
| 4694 | Don              | Johnson       | Kent              | WA    | 98031 |
| 4695 | david h          | jones         | seattle           | WA    | 98103 |
| 4696 | Phillip          | Joyner        | Kenmore           | WA    | 98028 |
| 4697 | Barbara          | Jurgens       | Kirkland          | WA    | 98033 |
| 4698 | Cameron          | Karsten       | Bainbridge Island | WA    | 98110 |
| 4699 | Katie            | Kennedy       | Seattle           | WA    | 98109 |
| 4700 | Jerry            | King          | Spokane           | WA    | 99223 |
| 4701 | Karen            | Klein         | Sequim            | WA    | 98382 |
| 4702 | Marianne         | Kooiman       | Anacortes         | WA    | 98221 |
| 4703 | Cheryl           | Kopec         | Tacoma            | WA    | 98444 |
| 4704 | Dina             | Kovarik       | Seattle           | WA    | 98133 |
| 4705 | Nancy            | Kreider       | Kalama            | WA    | 98625 |
| 4706 | Nicole           | Laurent       | Issaquah          | WA    | 98027 |
| 4707 | Patricia         | Layden        | SeaTac            | WA    | 98188 |
| 4708 | Howard           | Lazzarini     | Everett           | WA    | 98208 |
| 4709 | Toan             | Le            | Vashon            | WA    | 98070 |
| 4710 | Toan             | Le            | Vashon            | WA    | 98070 |
| 4711 | Lynn             | Ledgerwood    | Olympia           | WA    | 98501 |
| 4712 | Anton            | Levandowsky   | Seattle           | WA    | 98116 |
| 4713 | Nancy            | Lewis         | Seattle           | WA    | 98133 |
| 4714 | PJ               | Lewis         | Spokane           | WA    | 99218 |
| 4715 | Sarah            | Leyrer        | SEATTLE           | WA    | 98199 |
| 4716 | NANCY            | LILL          | SPOKANE           | WA    | 99223 |
| 4717 | Mont             | Livermore     | Dayton            | WA    | 99328 |
| 4718 | Carol            | Long          | Bellevue          | WA    | 98007 |
| 4719 | Steve            | Lovelace      | Wilkeson          | WA    | 98396 |
| 4720 | David            | Luxem         | burien            | WA    | 98166 |
| 4721 | Jay and Sandy    | Lynch         | Bremerton         | WA    | 98311 |
| 4722 | Jimmy            | Magiasis      | Seattle           | WA    | 98102 |
| 4723 | virginia         | mann          | spokane           | WA    | 99201 |

|      | FIRST       | LAST       | CITY             | STATE | ZIP   |
|------|-------------|------------|------------------|-------|-------|
| 4724 | Carolyn     | Marshall   | Mercer Island    | WA    | 98040 |
| 4725 | melodie     | martin     | seattle          | WA    | 98102 |
| 4726 | Stephen     | Matera     | Seattle          | WA    | 98105 |
| 4727 | Darcia      | Matulewicz | arlington        | WA    | 98223 |
| 4728 | C           | McCabe     | Graham           | WA    | 98338 |
| 4729 | Sandra      | McCarthy   | Seattle          | WA    | 98102 |
| 4730 | Heather     | McFarland  | Federal Way      | WA    | 98003 |
| 4731 | Amy         | McKay      | Lynden           | WA    | 98264 |
| 4732 | Ryan        | McKnight   | Bothell          | WA    | 98012 |
| 4733 | Brenda      | Michaels   | Issaquah         | WA    | 98027 |
| 4734 | Armand      | Micheline  | Seattle          | WA    | 98155 |
| 4735 | Amanda      | Mikalson   | Farmington       | WA    | 99128 |
| 4736 | Claire      | Mikalson   | Farmington       | WA    | 99128 |
| 4737 | Sheri       | Miklaski   | Lopez            | WA    | 98261 |
| 4738 | Jeffery     | Miller     | seattle          | WA    | 98102 |
| 4739 | Martha      | Miller     | Fife             | WA    | 98424 |
| 4740 | Ronald      | Monson     | Renton           | WA    | 98057 |
| 4741 | wynne       | moore      | Blaine           | WA    | 98230 |
| 4742 | thor        | Myhre      | Bellingham       | WA    | 98226 |
| 4743 | Charles     | Nafziger   | Bow              | WA    | 98232 |
| 4744 | Debbie      | Nelson     | Federal Way      | WA    | 98003 |
| 4745 | Nance       | Nicholls   | Davenport        | WA    | 99122 |
| 4746 | amanda      | niles      | gig harbor       | WA    | 98329 |
| 4747 | Gwen        | Nolte      | Lakewood         | WA    | 98496 |
| 4748 | Kristofer   | Nystrom    | Tacoma           | WA    | 98403 |
| 4749 | Ranell      | Nystrom    | Tacoma           | WA    | 98403 |
| 4750 | Florence    | O'Brien    | Issaquah         | WA    | 98029 |
| 4751 | Julie       | O'Donnell  | Seattle          | WA    | 98177 |
| 4752 | Kim         | Orcutt     | Port Orchard     | WA    | 98366 |
| 4753 | Tracy       | Ouellette  | Bow              | WA    | 98232 |
| 4754 | Carol       | Parry      | Lake Forest Park | WA    | 98155 |
| 4755 | Corlean     | Payne      | Renton           | WA    | 98056 |
| 4756 | Matthew     | Payne      | Seattle          | WA    | 98102 |
| 4757 | Matthew     | Payne      | Seattle          | WA    | 98102 |
| 4758 | Pam         | Perry      | Issaquah         | WA    | 98029 |
| 4759 | Andrea      | Pike       | Bow              | WA    | 98232 |
| 4760 | Christine   | Pittman    | Wilkeson         | WA    | 98396 |
| 4761 | laura       | potter     | moses lake       | WA    | 98837 |
| 4762 | Alice       | Prescott   | Pullman          | WA    | 99163 |
| 4763 | Janet       | Price      | Yelm             | WA    | 98597 |
| 4764 | Ashley      | R.         | Bellevue         | WA    | 98006 |
| 4765 | Mary        | Rausch     | Lynnwood         | WA    | 98087 |
| 4766 | Larry       | Rayburn    | Colville         | WA    | 99114 |
| 4767 | Bruce       | Reed       | Seattle          | WA    | 98101 |
| 4768 | Melinda     | Renken     | Seattle          | WA    | 98133 |
| 4769 | Jeanne      | Ripp       | Bellingham       | WA    | 98225 |
| 4770 | David       | Rodgers    | Bothell          | WA    | 98011 |
| 4771 | Patricia    | Rodgers    | Bothell          | WA    | 98011 |
| 4772 | constance   | rodman     | seattle          | WA    | 98121 |
| 4773 | David       | Rogge      | Port Townsend    | WA    | 98368 |
| 4774 | Dwight      | Rousu      | Redmond          | WA    | 98052 |
| 4775 | Sylvia      | Sage       | Elma             | WA    | 98541 |
| 4776 | natalie     | sanchez    | bremerton        | WA    | 98310 |
| 4777 | Indira      | Santiago   | Tacoma           | WA    | 98409 |
| 4778 | Alixine     | Sasonoff   | Burien           | WA    | 98166 |
| 4779 | tom         | sayre      | Tacoma           | WA    | 98422 |
| 4780 | tom         | sayre      | Tacoma           | WA    | 98422 |
| 4781 | Barbara     | Schneider  | Seattle          | WA    | 98102 |
| 4782 | Nancy       | Schneider  | Puyallup         | WA    | 98374 |
| 4783 | Steven      | Schroder   | Spokane          | WA    | 99212 |
| 4784 | Christopher | Senn       | Orcas            | WA    | 98280 |
| 4785 | Sharon      | Shadbolt   | Tahuya           | WA    | 98588 |

|      | FIRST                | LAST        | CITY           | STATE | ZIP   |
|------|----------------------|-------------|----------------|-------|-------|
| 4786 | Diane                | Shaughnessy | Auburn         | WA    | 98002 |
| 4787 | Mattie               | Shaw        | Seattle        | WA    | 98115 |
| 4788 | Julia                | Sheppard    | Woodinville    | WA    | 98072 |
| 4789 | Randy                | Shriver     | Spokane Valley | WA    | 99206 |
| 4790 | Angela               | Smith       | SeaTac         | WA    | 98168 |
| 4791 | Diana                | Smith       | Seattle        | WA    | 98125 |
| 4792 | lucia                | smith       | yelm           | WA    | 98597 |
| 4793 | Stephanie            | Smith       | Kettle Falls   | WA    | 99141 |
| 4794 | Deb                  | Smucker     | Seattle        | WA    | 98144 |
| 4795 | Sylvia               | South       | Seattle        | WA    | 98121 |
| 4796 | Shannan              | St.Clair    | Federal Way    | WA    | 98023 |
| 4797 | Mary                 | Stack       | Lummi Island   | WA    | 98262 |
| 4798 | Robert               | Stagman     | Mercer Island  | WA    | 98040 |
| 4799 | Jack                 | Stansfield  | Stanwood       | WA    | 98292 |
| 4800 | duncan               | Stewart     | gig harbor     | WA    | 98335 |
| 4801 | Michaela             | Stranik     | Seattle        | WA    | 98007 |
| 4802 | Susan                | Stross      | Seattle        | WA    | 98102 |
| 4803 | Brian                | Sullivan    | Lakewood       | WA    | 98498 |
| 4804 | Jodi                 | Swanson     | Ridgefield     | WA    | 98642 |
| 4805 | Anne                 | Tarpey      | Seattle        | WA    | 98105 |
| 4806 | kathryn              | thomas      | white salmon   | WA    | 98672 |
| 4807 | kathryn              | thomas      | white salmon   | WA    | 98672 |
| 4808 | Maryanna             | Thompson    | Olympia        | WA    | 98506 |
| 4809 | Michael              | Thompson    | Olympia        | WA    | 98502 |
| 4810 | vanessa              | Timmons     | Vancouver      | WA    | 98664 |
| 4811 | Kelli                | Turner      | Seattle        | WA    | 98168 |
| 4812 | Christina            | Urquhart    | Blaine         | WA    | 98230 |
| 4813 | -                    | Valentinah  | Yelm           | WA    | 98597 |
| 4814 | Lisa                 | Vandermay   | Renton         | WA    | 98058 |
| 4815 | Amy                  | Ventura     | Everett        | WA    | 98201 |
| 4816 | Elizabeth            | Vignali     | Bellingham     | WA    | 98225 |
| 4817 | ANA                  | VOLLMANN    | RAINIER        | WA    | 98576 |
| 4818 | Jacqueline           | Vreeland    | Lacey          | WA    | 98503 |
| 4819 | Ricki                | Walsh       | Spokane        | WA    | 99203 |
| 4820 | J                    | Waters      | Bellevue       | WA    | 98008 |
| 4821 | Brian                | Weatherby   | Bremerton      | WA    | 98312 |
| 4822 | Diane                | Weinstein   | Issaquah       | WA    | 98029 |
| 4823 | AE                   | White       | Seattle        | WA    | 98112 |
| 4824 | Bruce                | White       | Kirkland       | WA    | 98034 |
| 4825 | Karen                | Wible       | Woodland       | WA    | 98674 |
| 4826 | Gay                  | Williamson  | Shelton        | WA    | 98584 |
| 4827 | Kevin B              | Willson     | Seattle        | WA    | 98133 |
| 4828 | Marguerite           | Winkel      | Spokane        | WA    | 99201 |
| 4829 | Linda                | Witkowski   | Seattle        | WA    | 98108 |
| 4830 | Gordon               | Wood        | Seattle        | WA    | 98144 |
| 4831 | Allison              | Woodfill    | Seattle        | WA    | 98146 |
| 4832 | doug                 | woodzy      | fox island     | WA    | 98333 |
| 4833 | doug                 | woodzy      | fox island     | WA    | 98333 |
| 4834 | ELAINE               | WRINKLE     | LAKE STEVENS   | WA    | 98258 |
| 4835 | jan                  | yakish      | Soap Lake      | WA    | 98851 |
| 4836 | donna                | yancey      | Seattle        | WA    | 98103 |
| 4837 | David                | Yao         | Seattle        | WA    | 98133 |
| 4838 | Glen                 | Zorn        | Seattle        | WA    | 98102 |
| 4839 | Wayne                | Adams       | Wautoma        | WI    | 54982 |
| 4840 | Jill                 | Armentrout  | Lake Mills     | WI    | 53551 |
| 4841 | David L. and Tami R. | Ballard     | Wausau         | WI    | 54403 |
| 4842 | Darlene              | Bialeck     | Adams          | WI    | 53910 |
| 4843 | Trudy                | Blakely     | Burlington     | WI    | 53105 |
| 4844 | Kenneth              | Bluma Jr    | Kenosha        | WI    | 53142 |
| 4845 | Paul                 | Boettcher   | Milwaukee      | WI    | 53233 |
| 4846 | Nicole               | Boltz       | marinette      | WI    | 54143 |
| 4847 | Tamara               | Boneck      | Waukesha       | WI    | 53188 |

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|------|------------|-------------------|-----------------|-------|--------|
| 4848 | David      | Bragg             | Abbotsford      | WI    | 54405  |
| 4849 | Corina     | Brandeen-Cichon   | MADISON         | WI    | 53713  |
| 4850 | Geraldine  | Brylski           | Lake Tomahawk   | WI    | 54539  |
| 4851 | JANICE     | BURGI             | SUN PRAIRIE     | WI    | 53590  |
| 4852 | Chris      | Casper            | Oconomowoc      | WI    | 53066  |
| 4853 | Mitch      | Cholewa           | Holmen          | WI    | 54636  |
| 4854 | Dennis Lee | Cleven            | Madison         | WI    | 53703  |
| 4855 | Kelly      | Coffey            | Milwaukee       | WI    | 53213  |
| 4856 | deb        | congdon           | galesville      | WI    | 54630  |
| 4857 | M. Scott   | Connor            | Eagle           | WI    | 53119  |
| 4858 | Mari       | Dickson           | Oconomowoc      | WI    | 53066  |
| 4859 | Andrea     | Drosen            | Oak Creek       | WI    | 53154  |
| 4860 | Crystal    | Ebert             | Bonduel         | WI    | 54107  |
| 4861 | Anna       | Eckmann           | Milwaukee       | WI    | 53207  |
| 4862 | Carol      | Edgerton          | Madison         | WI    | 53704  |
| 4863 | R. Michael | Ehr               | Milwaukee       | WI    | 53211  |
| 4864 | Barbara    | Eisenberg         | Milwaukee       | WI    | 53212  |
| 4865 | David      | Eppelsheimer, Sr. | Wauwatosa       | WI    | 53213  |
| 4866 | Andrea     | Finch             | Madison         | WI    | 53715  |
| 4867 | Katie      | Flodquist         | Colfax          | WI    | 54730  |
| 4868 | frank      | florin            | Boyceville      | WI    | 54725  |
| 4869 | Jessica    | Foster            | Milwaukee       | WI    | 53207  |
| 4870 | Katherine  | Fulkerson         | Middleton       | WI    | 53562  |
| 4871 | Schuyler   | Gardner           | Appleton        | WI    | 54911  |
| 4872 | Schuyler   | Gardner           | Appleton        | WI    | 54911  |
| 4873 | Nancy      | Gathing           | Madison         | WI    | 53714- |
| 4874 | Mary Jo    | Giudice-Bowler    | Verona          | WI    | 53593  |
| 4875 | Sarah      | Griph             | Cudahy          | WI    | 53110  |
| 4876 | Susan      | Haebig            | Wausau          | WI    | 54401  |
| 4877 | Dee        | Hale              | Appleton        | WI    | 54914  |
| 4878 | Heather    | Halvorson         | Madison         | WI    | 53715  |
| 4879 | rocio      | harms             | De Forest       | WI    | 53532  |
| 4880 | June       | Harrington        | Milwaukee       | WI    | 53224  |
| 4881 | Paul       | Haugan            | Milwaukee       | WI    | 53225  |
| 4882 | Carolyn    | Hawk              | New Franken     | WI    | 54229  |
| 4883 | Elizabeth  | Hoch              | Brookfield      | WI    | 53005  |
| 4884 | Amy        | Holt              | Madison         | WI    | 53704  |
| 4885 | Michelle   | Huiras            | Jackson,        | WI    | 53037  |
| 4886 | Sarah      | Hunt              | Richland Center | WI    | 53581  |
| 4887 | Frances C  | Ibarley           | Sinsinawa       | WI    | 53824  |
| 4888 | Heather    | Jennings          | Manitowoc       | WI    | 54220  |
| 4889 | Juanita    | Juerisson         | Franklin        | WI    | 53132  |
| 4890 | christine  | konjura           | hartford        | WI    | 53027  |
| 4891 | Jennifer   | Kostro            | Oshkosh         | WI    | 54902  |
| 4892 | brad       | kramer            | depere          | WI    | 54115  |
| 4893 | bruce      | krawisz           | marshfield      | WI    | 54449  |
| 4894 | Inna       | Larsen            | Madison         | WI    | 53705  |
| 4895 | Joseph     | Lazarsky          | milwaukee       | WI    | 53211  |
| 4896 | Barbara    | L'heureux         | Onalaska        | WI    | 54650  |
| 4897 | Jacob      | Louden            | Union Grove     | WI    | 53182  |
| 4898 | Jeremy     | Lundquist         | Eau Claire      | WI    | 54701  |
| 4899 | Molly      | McElligott        | Milwaukee       | WI    | 53202  |
| 4900 | juanita    | mONTANO           | Kenosha         | WI    | 53144  |
| 4901 | VINNIE     | MONTEZ            | BARABOO         | WI    | 53913  |
| 4902 | Debra      | Mueller           | Brookfield      | WI    | 53005  |
| 4903 | Joseph     | Multhauf          | Greenfield      | WI    | 53221  |
| 4904 | Sandra     | Pearson           | Wales           | WI    | 53183  |
| 4905 | Clara      | Pfeiffer          | Beloit          | WI    | 53511  |
| 4906 | Kat        | Pierquet          | Muskego         | WI    | 53150  |
| 4907 | Carol      | Portwine          | Avoca           | WI    | 53506  |
| 4908 | Mary       | Raines            | Weyauwega       | WI    | 54983  |
| 4909 | Cindy      | Risvold           | Fond du Lac     | WI    | 54937  |

|      | FIRST      | LAST             | CITY             | STATE | ZIP   |
|------|------------|------------------|------------------|-------|-------|
| 4910 | Leah       | Rittenhouse      | Fort Atkinson    | WI    | 53538 |
| 4911 | Annette    | Robertson        | Milwaukee        | WI    | 53217 |
| 4912 | Colleen    | Robinson         | Madison          | WI    | 53713 |
| 4913 | Andrew     | Rothman          | Columbus         | WI    | 53925 |
| 4914 | Karen      | Rusch            | Washburn         | WI    | 54891 |
| 4915 | Deborah    | Schraven         | Monroe           | WI    | 53566 |
| 4916 | KARIN      | SCHUTTENHELM     | BURLINGTON       | WI    | 53105 |
| 4917 | mandy      | shipler          | janessville      | WI    | 53545 |
| 4918 | Jack       | Siepert          | Madison          | WI    | 53704 |
| 4919 | CYMONE     | SIMMONS          | MILWAUKEE        | WI    | 53218 |
| 4920 | Lisa       | Simon            | Balsam Lake      | WI    | 54810 |
| 4921 | Debra      | Skup             | Sturgeon Bay     | WI    | 54235 |
| 4922 | Carol      | Springman Austin | Oregon           | WI    | 53575 |
| 4923 | marcella   | starzewski       | menasha          | WI    | 54952 |
| 4924 | sue        | steinmann        | arena            | WI    | 53503 |
| 4925 | Susan      | StPeter          | Neenah           | WI    | 54956 |
| 4926 | Pamela     | Swensen          | Kaukauna         | WI    | 54130 |
| 4927 | Pete       | Swinford         | Milwaukee        | WI    | 53208 |
| 4928 | Adriana    | Teodoro-Dier     | Woodruff         | WI    | 54568 |
| 4929 | Daniella   | Teodoro-Dier     | Woodruff         | WI    | 54568 |
| 4930 | Courtenay  | Teska            | Pleasant Prairie | WI    | 53158 |
| 4931 | Emily      | Thiem            | Appleton         | WI    | 54911 |
| 4932 | Leann      | Tigges           | Madison          | WI    | 53705 |
| 4933 | Jason      | Triest           | Oconto           | WI    | 54153 |
| 4934 | Lynne      | Van Treeck       | Neenah           | WI    | 54956 |
| 4935 | Margaret   | Welke            | Madison          | WI    | 53704 |
| 4936 | Betty      | Williams         | Adams            | WI    | 53910 |
| 4937 | Kevin      | Zellmer          | Milwaukee        | WI    | 53211 |
| 4938 | Sandra     | Ashley           | Ripley           | WV    | 25271 |
| 4939 | Katey      | Buckland         | Saint Albans     | WV    | 25177 |
| 4940 | Bradford   | Buddenberg       | Fayetteville     | WV    | 25840 |
| 4941 | Cindy      | Crouch           | Culloden         | WV    | 25510 |
| 4942 | Lynn       | Haynes           | Huntington       | WV    | 25701 |
| 4943 | Angie      | Hughes           | St. Albans       | WV    | 25177 |
| 4944 | Deborah    | Jones            | Mill Creek       | WV    | 26280 |
| 4945 | Suzanne    | Kruger           | Harpers Ferry    | WV    | 25425 |
| 4946 | Catherine  | Lambeau          | Huntington       | WV    | 25705 |
| 4947 | Gloria     | Lee              | Harpers Ferry    | WV    | 25425 |
| 4948 | Kathryn    | Madison          | Morgantown       | WV    | 26501 |
| 4949 | Jeannie    | O'Halloran       | French Creek     | WV    | 26218 |
| 4950 | Teresa     | Parcell          | Elkview          | WV    | 25071 |
| 4951 | Heather    | Pauley           | milton           | WV    | 25541 |
| 4952 | Carol      | Reuther          | Wheeling         | WV    | 26003 |
| 4953 | Phyllis    | Snead            | Camp Creek       | WV    | 25820 |
| 4954 | toby       | vernon           | morgantown       | WV    | 26505 |
| 4955 | Catherine  | Walter           | Morgantown       | WV    | 26501 |
| 4956 | joan       | white            | red jacket       | WV    | 25692 |
| 4957 | lynn       | white            | red jacket       | WV    | 25692 |
| 4958 | Callie     | Ellsworth        | Gillette         | WY    | 82716 |
| 4959 | Rick       | Flory            | Jackson          | WY    | 83002 |
| 4960 | Shelley Jo | Graham           | Mountain View    | WY    | 82939 |
| 4961 | Kim        | Johnson          | Wilson           | WY    | 83014 |
| 4962 | Matthew    | Kendall          | Cheyenne         | WY    | 82001 |
| 4963 | Sandra     | Materi           | Casper           | WY    | 82604 |
| 4964 | Jack       | Runnels          | Cheyenne         | WY    | 82001 |
| 4965 | Diana      | Schuetz          | Casper           | WY    | 82609 |
| 4966 | Jamie      | Terrill          | Cheyenne         | WY    | 82001 |

## ***Federation of Independent Seafood Harvesters***

PO Box 352  
Bridgewater Corners, VT 05035



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November 8, 2006

Chairman Donald Hansen  
Pacific Fishery Management Council  
7700 NE Ambassador Place, Suite 200  
Portland, OR 97220

Re: DGN and LL EFP's

Dear Don,

**FISH asks the Council to support the DGN EFP for 2007 under the same terms and conditions previously established.**

First and foremost, FISH thanks the Council family and NMFS Southwest Region staff for all of the work that has been done in order to conduct the 2006 DGN EFP. Unfortunately, procedural issues have delayed the issuance of a required MMPA 101(a)(5)(E) permit by NMFS Headquarters, which in turn has delayed approval and issuance of the DGN EFP by NMFS Southwest Region. There is no point in issuing the DGN EFP for 2006 at this late date. However, since NEPA and ESA procedural requirements are complete, and when the MMPA 101(a)(5)(E) permit is issued, FISH asks the Council to support the DGN EFP for 2007 under the same terms and conditions as established for 2006.

FISH understands that there is no future for a fishery that cannot operate within conservation limits established under federal law. In meeting these conservation limits, FISH strives to ensure that DGN fishery impacts are judged according to the best available scientific information and procedures. FISH believes that the leatherback sea turtle take rate estimations contained in the 2000 Biological Opinion—which form the sole justification for the establishment of the time/area closure—do not represent the best available scientific information and procedures. Specifically, the regulation enacted in 1997 requiring the top of driftnets to be a minimum distance of 36 feet below the sea surface—allowing a space for surface swimming marine mammals to pass over—also



reduces sea turtle interactions. Such a reduction is cited in the 1997 Biological Opinion and is supported by available data: The observed take rate for leatherbacks from 1998 to 2004, the time during which the minimum net depth regulation was in effect, is .0015 per set. The take rate for the period 1990 to 1997, when the minimum net depth requirement was not in effect, is .088 per set. The observed leatherback take rate before the minimum net depth requirement was enacted is 5.9 times greater than after this regulation was implemented. The fact that there have been no observed leatherback takes in a four-year period since implementation of the time/area closure when the 2000 Biological Opinion estimated that 8 takes would have occurred suggests that the time/area closure implemented in 2001 was overly restrictive. Hence, FISH proposed the DGN EFP to test the accuracy of the estimated leatherback take rate contained in the 2000 Biological Opinion, which resulted in the regulatory establishment of the time/area closure.

In keeping with its intent to ensure that the DGN fishery is judged according to the best available scientific information and procedures, FISH originally proposed utilizing EFP procedures to test the estimated leatherback take rates contained in the 2000 Biological Opinion because, by utilizing EFP procedures, strict controls to ensure compliance with conservation limits established by federal law—such as hard caps on leatherback takes—could be established and easily enforced. The Council took such controls a step further when it approved the DGN EFP for 2006 to include limiting DGN effort to 300 sets, and setting hard caps on endangered humpback, and sperm whales, as well as the short-finned pilot whale.

In sum, the Council and NMFS correctly supported the DGN EFP which will eventually produce sufficient data to provide a statistically significant answer to the question of whether or not the 36-foot minimum net depth regulation reduces sea turtle entanglement, and give the Council and NMFS a more robust scientific basis to structure the appropriate protective measures.

As seems to be their pattern, several so-called conservation groups have purposefully mischaracterized the Council and NMFS's support for the DGN EFP. Press releases from groups such as Turtle Island Restoration Network call the time/area closure the "Pacific Leatherback Conservation Area," to make it look like the time/area closure is something akin to a permanently established wildlife sanctuary. In this way, the Council and NMFS's support for the DGN EFP is made to seem like an abuse of wildlife protection measures. Unfortunately, neither the general public nor the media is sophisticated enough to understand the regulatory processes at issue and see the intended subterfuge of this ploy. Fortunately, the Council and NMFS are sophisticated enough to see this subterfuge, and give it the weight it deserves.

#### **FISH asks the Council to join the World Wildlife Fund in supporting the 2007 LL EFP.**

The second EFP, submitted by Pete Dupuy, and supported by FISH, will test whether or not pelagic longline is an economically viable substitute for DGN gear for the harvest of swordfish within the west coast EEZ. There is little question that, relative to

finfish bycatch or marine mammal and sea turtle interactions, longline is a cleaner gear than DGN. The question is whether longline swordfish harvest levels are economically sufficient as a substitute for DGN gear. This EFP allows limited effort from a single vessel, 100% observer coverage, utilizing gear configuration, seabird protections, and sea turtle protections adopted by the Hawaii longline fishery. FISH believes that this EFP will answer the economic viability question and may give the Pacific Council and NMFS another management option to consider for reducing DGN fishery resource impacts. The World Wildlife Fund, in a February 2006 letter to the Pacific Council in support of the longline EFP, states: "Approval of this EFP would provide further means of testing gear improvements, with funding already appropriated by NOAA Southwest Fisheries Center to support this EFP."

On behalf of DGN fishermen, FISH thanks you again for your hard work and dedication to HMS fishery management issues. The Council's decision to use the EFP processes to investigate resource protection methods and alternatives for the DGN fishery is consistent with current law as well as with NMFS policy and practice. FISH looks forward to a successful outcome from this work.

Respectfully,

Chuck Janisse, for FISH, on behalf of DGN fishermen.

# Pacific Fishery Management Council & National Marine Fisheries Service Drift Gillnet and Longline EFPs



Ben Enticknap. November 14, 2006

| <b>Species</b>                      | <b>Estimated Mortality</b> |
|-------------------------------------|----------------------------|
| <b>Dall's porpoise</b>              | <b>44</b>                  |
| <b>Pacific whitesided dolphin</b>   | <b>61</b>                  |
| <b>Risso's dolphin</b>              | <b>19</b>                  |
| <b>Common dolphin (shortbeaked)</b> | <b>861</b>                 |
| <b>Common dolphin (longbeaked)</b>  | <b>54</b>                  |
| <b>Northern right whale dolphin</b> | <b>151</b>                 |
| <b>Shortfinned pilot whale</b>      | <b>7</b>                   |
| <b>Sperm whale</b>                  | <b>7</b>                   |
| <b>Fin whale</b>                    | <b>5</b>                   |
| <b>Minke whale</b>                  | <b>12</b>                  |
| <b>Gray whale</b>                   | <b>11</b>                  |
| <b>California sea lion</b>          | <b>553</b>                 |
| <b>Northern elephant seal</b>       | <b>150</b>                 |
| <b>Unidentified pinniped</b>        | <b>11</b>                  |
| <b>Leatherback turtle</b>           | <b>33</b>                  |
| <b>Loggerhead turtle</b>            | <b>18</b>                  |
| <b>Northern fulmar</b>              | <b>13</b>                  |
| <b>Unidentified bird</b>            | <b>6</b>                   |

## **Estimates of Marine Mammal, Sea Turtle, and Seabird Mortality in the California Drift Gillnet Fishery, 1996-2002**

Carretta, J.V., et al. 2005. Mar Fish Rev. 66(2).

# Catch of marine mammals in “pingered” nets

|                                      |            |
|--------------------------------------|------------|
| <b>Dolphin, short-beaked common</b>  | <b>112</b> |
| <b>Dolphin, long-beaked common</b>   | <b>6</b>   |
| <b>Dolphin, northern right whale</b> | <b>22</b>  |
| <b>Dolphin, Pacific white-sided</b>  | <b>7</b>   |
| <b>Dolphin, Risso's</b>              | <b>9</b>   |
| <b>Dalls Poropoise</b>               | <b>1</b>   |
| <b>Sea lion, California</b>          | <b>84</b>  |
| <b>Seal, Northern Elephant</b>       | <b>17</b>  |
| <b>Whale, Fin</b>                    | <b>1</b>   |
| <b>Whale, Gray</b>                   | <b>3</b>   |
| <b>Whale, Humpback</b>               | <b>2</b>   |
| <b>Whale, Minke</b>                  | <b>1</b>   |
| <b>Whale, short-finned pilot</b>     | <b>1</b>   |
| <b>Whale, Sperm</b>                  | <b>2</b>   |

Total catch of managed and monitored fish species, May 1 – January 31,  
2003/2004 & 2004/2005

|                       | 2003/2004 |           | 2004/2005 |           |
|-----------------------|-----------|-----------|-----------|-----------|
|                       | Caught    | Discarded | Caught    | Discarded |
| <b>Swordfish</b>      | 309       | 8         | 561       | 48        |
| <b>Striped Marlin</b> | 27        | 27        | 2         | 2         |
| <b>Albacore Tuna</b>  | 163       | 9         | 163       | 16        |
| <b>Skipjack Tuna</b>  | 1093      | 623       | 492       | 302       |
| <b>Blue Shark</b>     | 373       | 373       | 250       | 250       |
| <b>Bat Ray</b>        | 1         | 1         | 4         | 4         |
| <b>Common Mola</b>    | 1720      | 1720      | 2787      | 2787      |
| <b>Pacific Bonito</b> | 46        | 37        | 263       | 209       |

## 300 sets North of Point Conception:

- 900 swordfish
  - 1,884 mola
  - 1,989 blue shark
  - 2,422 albacore
  - 438 bluefin tuna
  - 727 skipjack tuna
  - 144 shortfin mako shark

“We don’t need to study this problem to learn how much bycatch there is. We already know the Leatherbacks are declining fast, so the goal is no dead Leatherbacks.” Martín Hall, IATTC



Leatherback in Monterey Bay. Photo: J. Sorensen

- Quoted in, C. Safina. [Voyage of the Turtle](#)



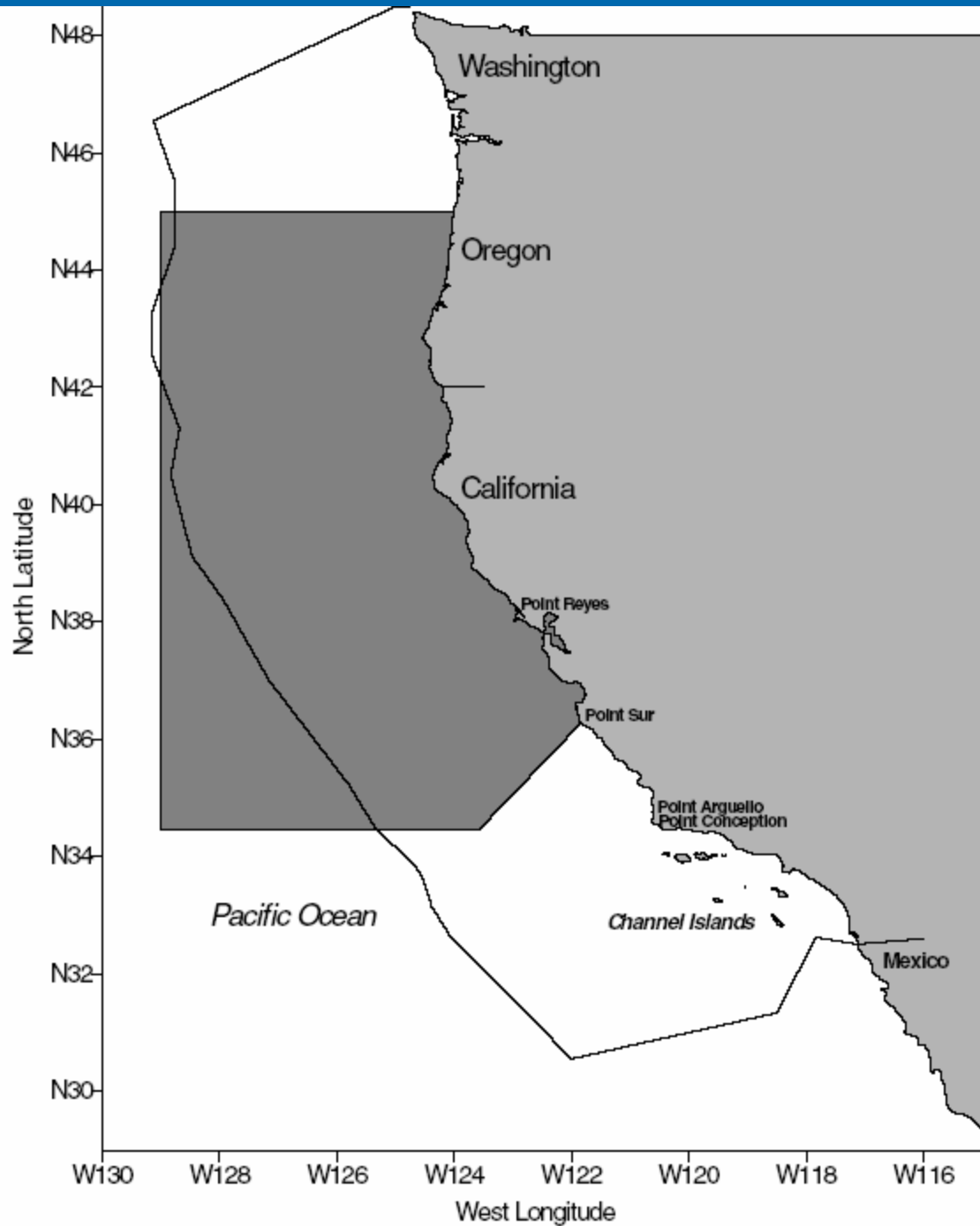
“Specifically the goal of the EFP is to:

- Demonstrate the existing DGN regulations requiring the top of the net to be a minimum distance of 36 feet below the surface reduces the incidental take of leatherback sea turtles to an anticipated level.” – EFP applicant, September 11, 2005

Between 1991 and 1999:

- 17 observed leatherback takes with 36' extender lines.
- 6 observed takes with nets using extender lines less than 36'.

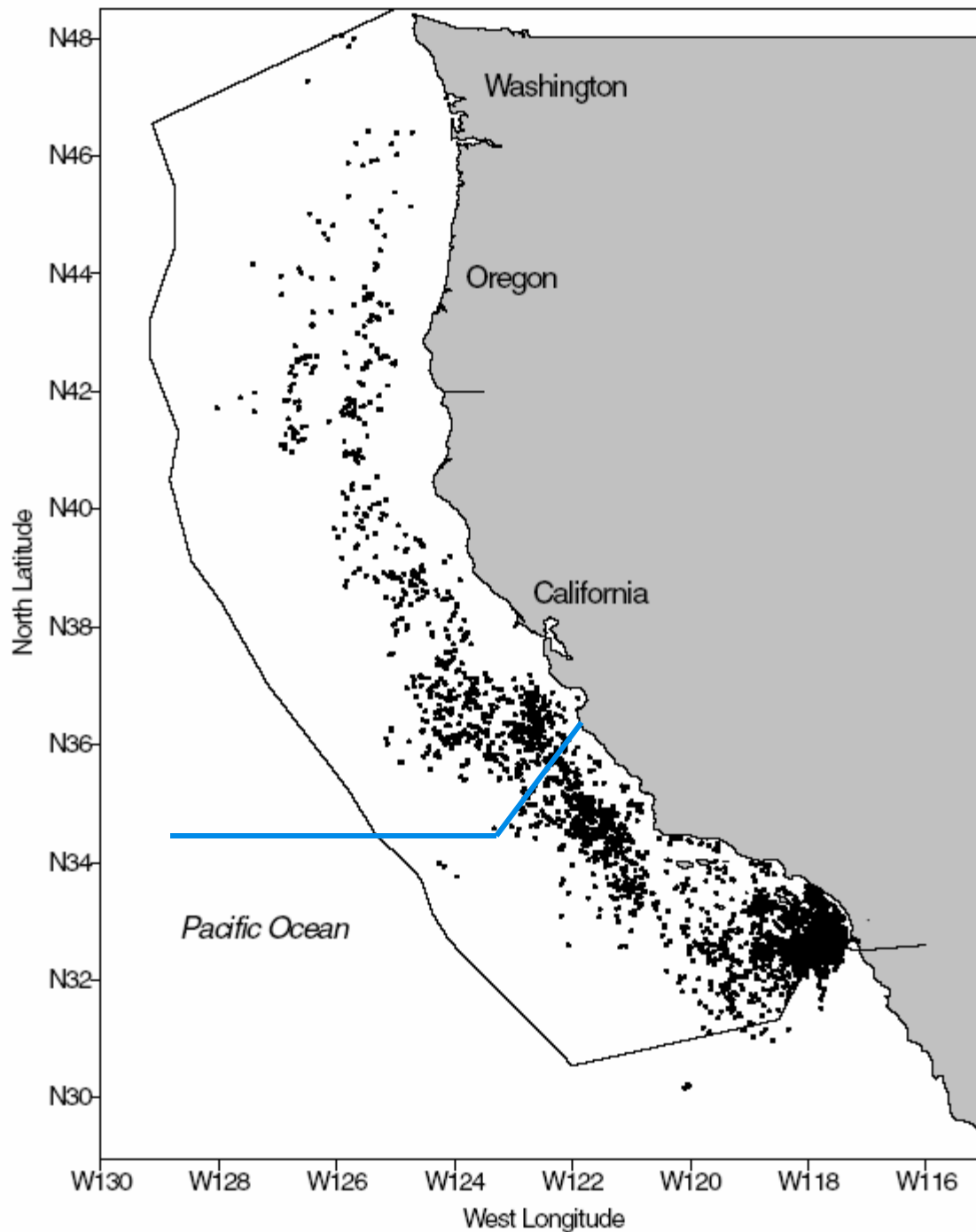




California/ Oregon  
drift gillnet time/area  
closure

August 15-Nov 15  
each year since 2001

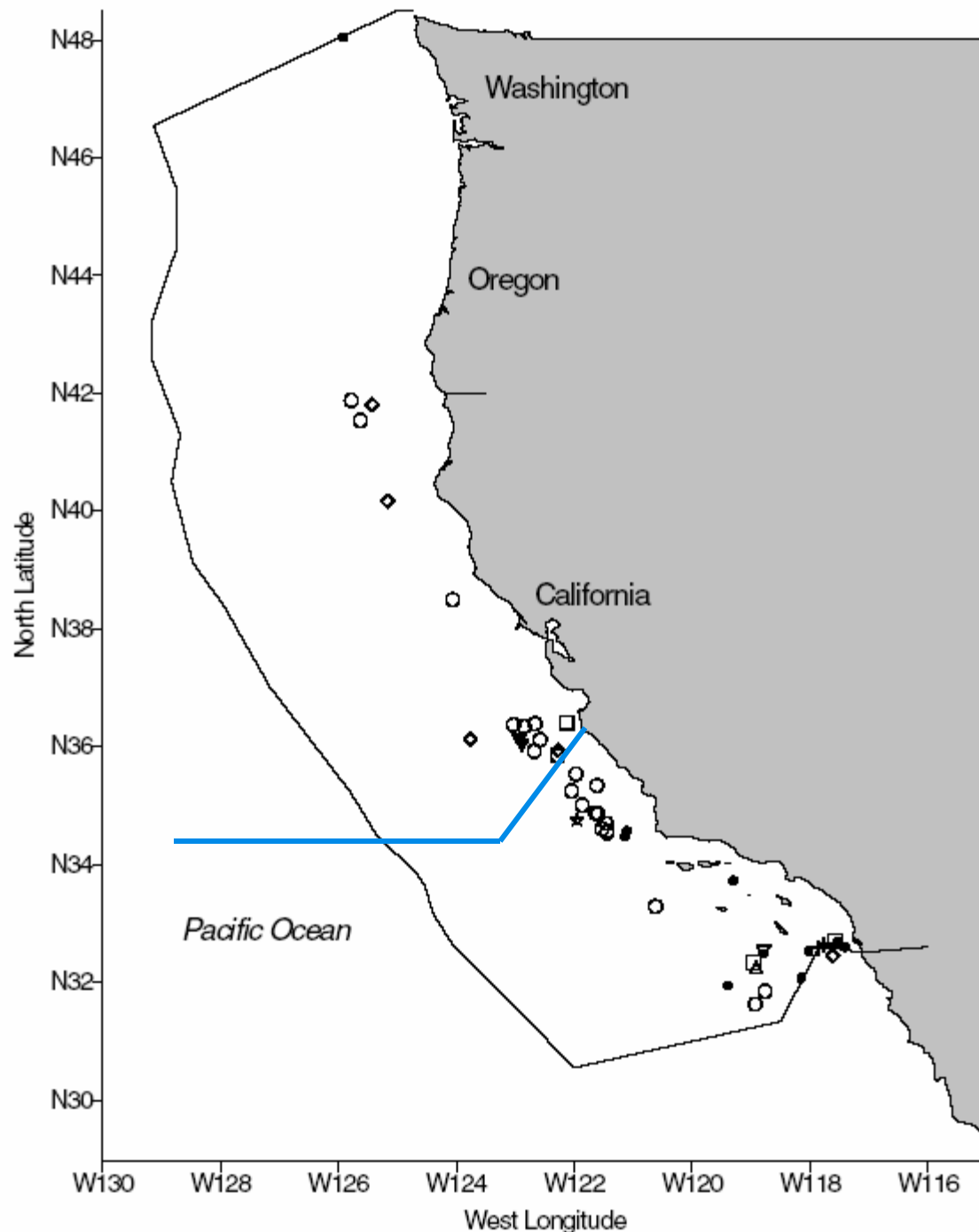
Carretta, J.V., et al. 2005. Mar Fish  
Rev. 66(2).



## Locations of 3,369 observed sets in the drift gillnet fishery, 1996-2002

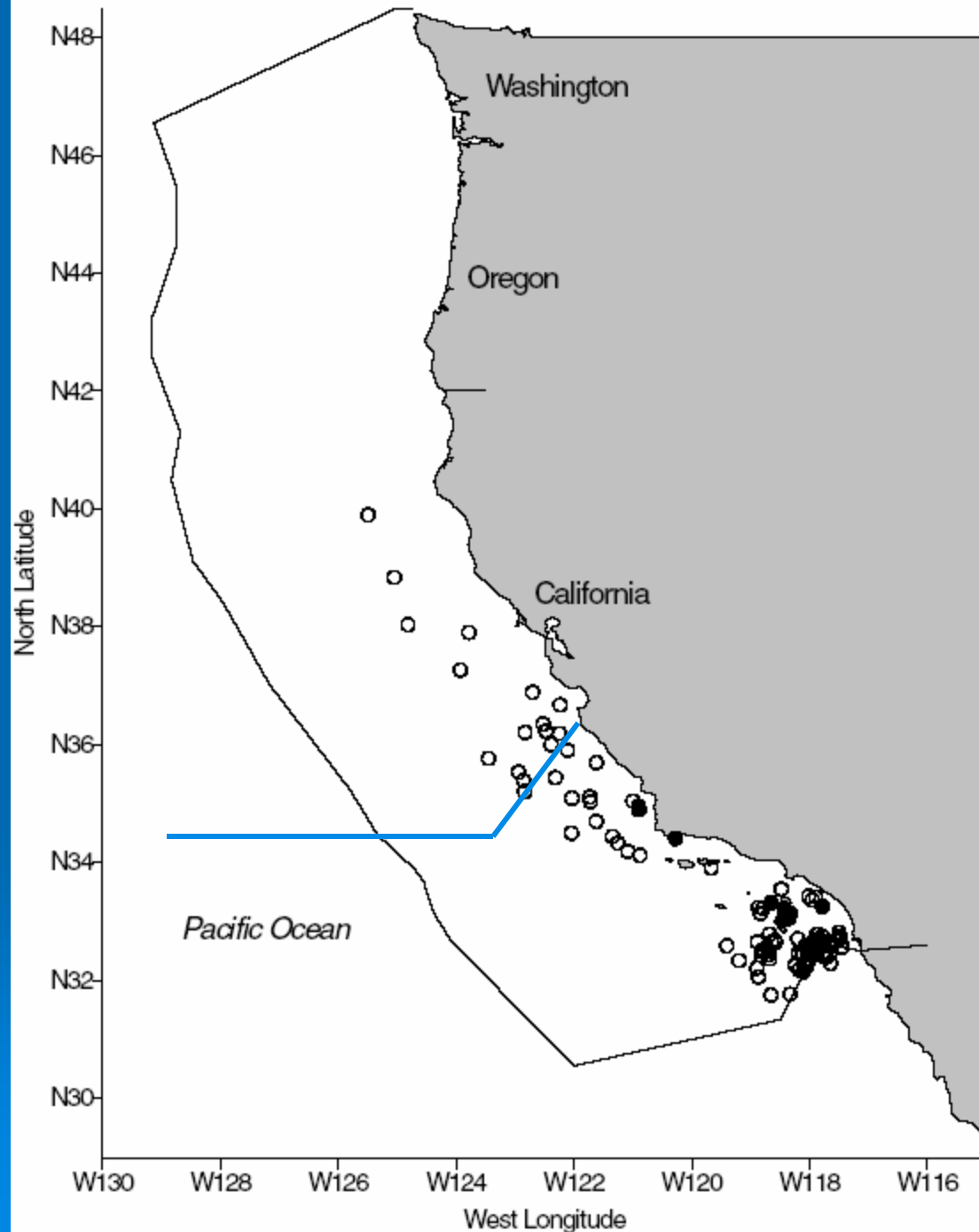
Carretta, J.V., et al. 2005. Mar Fish  
Rev. 66(2).

## Locations of observed cetacean kills in the drift gillnet fishery

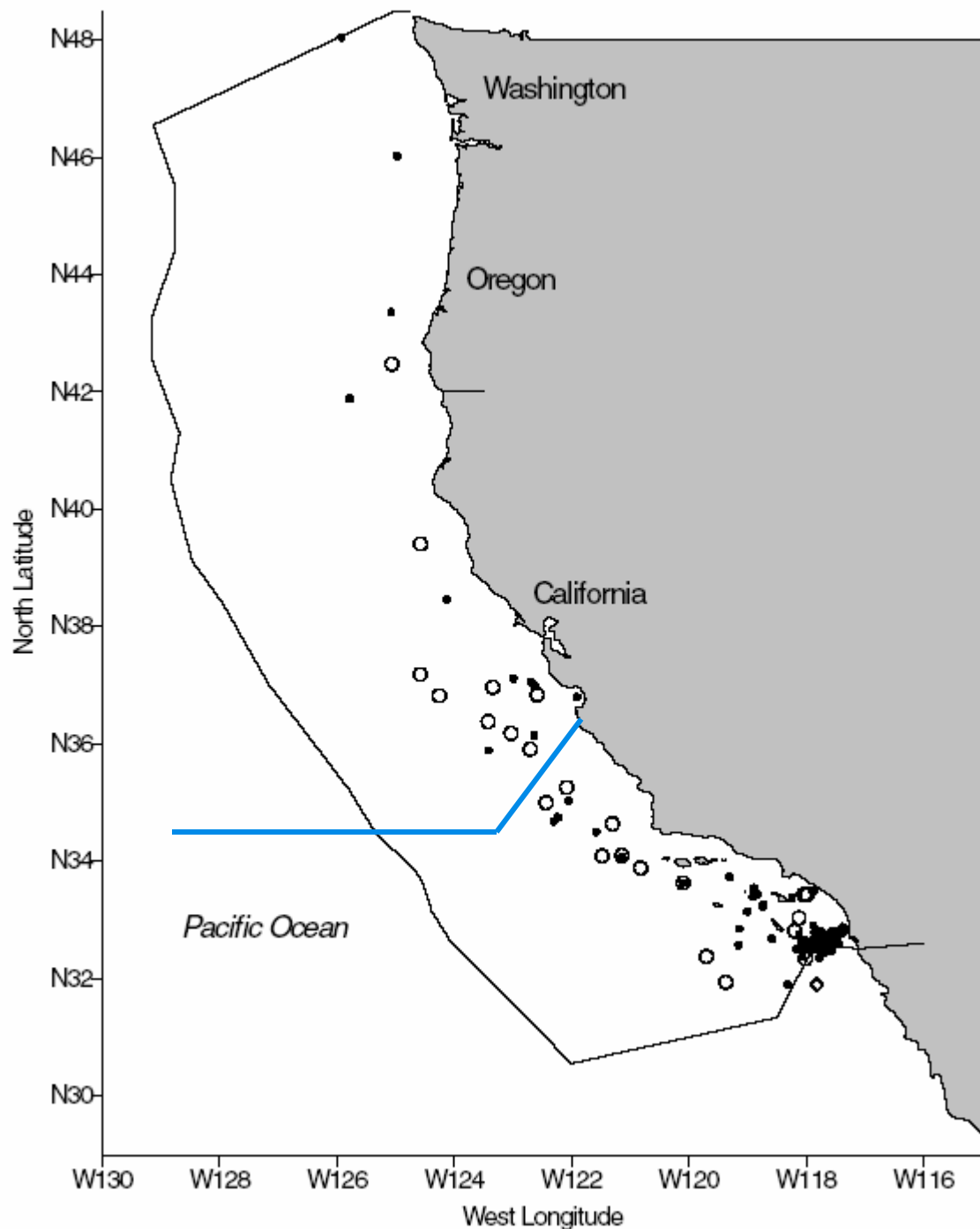


Carretta, J.V., et al. 2005. Mar Fish Rev. 66(2).

## Locations of observed common dolphin kills in the drift gillnet fishery



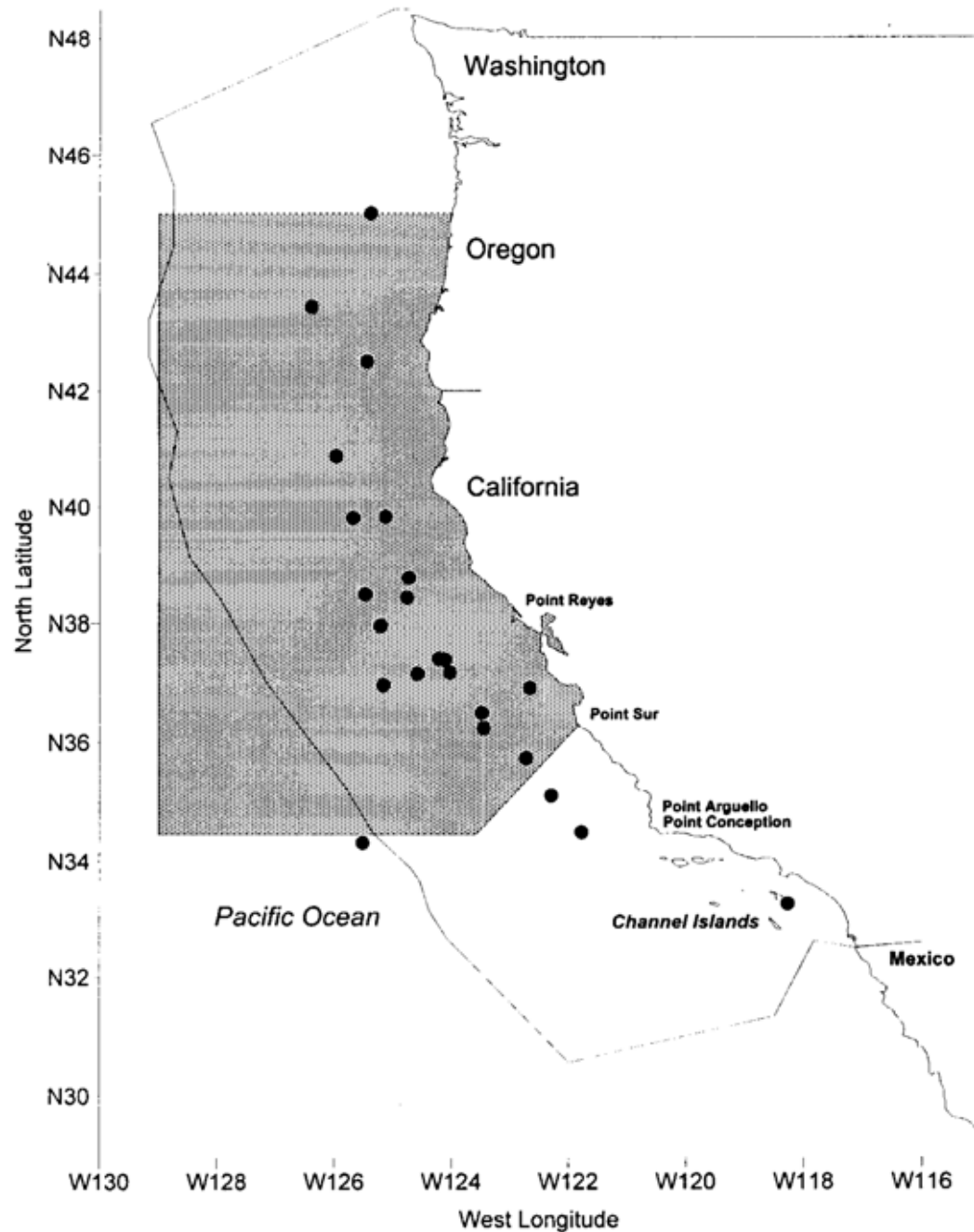
Carretta, J.V., et al. 2005. Mar Fish Rev. 66(2).



## Locations of observed pinniped kills in the drift gillnet fishery

Carretta, J.V., et al. 2005. Mar Fish  
Rev. 66(2).

## Locations of observed Leatherback takes in the drift gillnet fishery



Agenda Item J.3.a  
Supplemental Attachment 4.  
March 2006. J. Carretta,  
NMFS.



PHOTO: SCOTT ECKERT





**Total catch of marine mammals and seabirds, May 1 – January 31, 2003/2004  
& 2004/2005**

|                                    | 2003/2004 |      | 2004/2005 |      |
|------------------------------------|-----------|------|-----------|------|
|                                    | Caught    | Dead | Caught    | Dead |
| <b>Short-beaked common dolphin</b> | 19        | 19   | 4         | 4    |
| <b>Grey Whale</b>                  | 0         | 0    | 1         | 1    |
| <b>Humpback Whale</b>              | 0         | 0    | 1         | 0    |
| <b>California Sea Lion</b>         | 4         | 4    | 7         | 6    |
| <b>N. right whale dolphin</b>      | 1         | 1    |           |      |
| <b>Risso's dolphin</b>             | 4         | 4    |           |      |
| <b>Short-finned pilot whale</b>    | 1         | 1    |           |      |
| <b>Unidentified whale</b>          | 1         | 0    |           |      |
| <b>N. elephant seal</b>            | 1         | 1    |           |      |
| <b>N. Fulmar</b>                   | 14        | 1    |           |      |
| <b>Cassin's Auklet</b>             | 1         | 1    |           |      |

**FISHERY MANAGEMENT PLAN AMENDMENT 1:  
OVERFISHING RESPONSE FOR BIGEYE TUNA**

National Marine Fisheries Service (NMFS) notified the Council and the Western Pacific Fishery Management Council (WPFMC) that they must take action to address overfishing of bigeye tuna by June 14, 2005. The Council has considered their response to this notification at their March 2005, June 2005, September 2005, November 2005, March 2006, April 2006, and September 2006 meetings. During these meetings, the Council has identified recommendations for addressing bigeye tuna overfishing at the international level and considered amending the Fishery Management Plan (FMP) for U.S. West Coast Fisheries for Highly Migratory Species (HMS). At their last meeting (September 2006), the Council concluded that it could take final action to either adopt an FMP amendment or concur with the measures identified in Amendment 14 to the FMP for the Pelagic Fisheries of the WPFMC. National Oceanic and Atmospheric Administration General Counsel has advised that the Pacific Council formally concurring with WPFMC Amendment 14 would obviate the need to incorporate duplicate measures into the HMS FMP. The WPFMC Amendment 14 is a “Pacific-wide response” to bigeye overfishing, including recommendations for both the Eastern Pacific Ocean (EPO) and Western and Central Pacific Ocean (WCPO), whereas the Pacific Council recommendations apply only to the EPO.

Attachment 1 describes alternatives for Council final action, based on previous discussion and guidance. Four alternatives are described, including No Action. The three action alternatives are: 1) amend the HMS FMP based on previous Council recommendations; 2) amend the HMS FMP to incorporate measures in WPFMC Pelagics FMP Amendment 14 specific to the EPO; or 3) concur with the measures identified in WPFMC Pelagics FMP Amendment 14 (no separate amendment to the HMS FMP would be done). Attachment 1 includes proposed amendment text (i.e., actual changes to the FMP) for those alternatives that would amend the FMP.

If the Council decides to amend the HMS FMP, a broad, “non-substantive” reorganization of the FMP is also proposed. This reorganization is presented in Attachment 2. Currently the HMS FMP is combined with the final environmental impact statement (FEIS) that evaluated its adoption, and is awkward in that it includes alternatives not selected by the Council as well as substantial analysis not necessary for a direct policy document like an FMP. The reorganization would extract those elements specific to the management plan while moving descriptive elements to appendices and removing the analysis of alternatives, which is no longer relevant. (It should be noted that the original combined FMP/FEIS will remain a public document for reference purposes.) The amended, reorganized FMP would be a more streamlined, “user-friendly” document.

**Council Task:**

- 1. Decide whether to amend HMS FMP at this time.**
- 2. If amending the HMS FMP, take final action to identify the contents of the amendment with regard to text relative to bigeye tuna overfishing.**
- 3. If amending the HMS FMP, provide guidance on the proposed “non-substantive” reorganization of the document.**

Reference Materials:

1. Agenda Item C.4.a, Attachment 1: Alternatives for Amending the HMS FMP to Address Bigeye Tuna Overfishing.
2. Agenda Item C.4.a, Attachment 2: Proposed Non-substantive Reorganization of the HMS FMP.

Agenda Order:

- a. Agenda Item Overview
  - b. Reports and Comments of Advisory Bodies
  - c. Public Comment
  - d. **Council Action:** Adopt Final Preferred FMP Amendment Alternative
- Kit Dahl

PFMC  
10/24/06

**Excerpt from the Western Pacific Regional Fishery Management  
Council's Draft Pelagic Fishery Management Plan Amendment 14  
November, 2006**

**8.0 Management Recommendations for International Fisheries to Address  
Overfishing of Pacific-wide Bigeye Tuna and WCPO Yellowfin Tuna**

Sections 8 through 11 have been prepared as an Environmental Assessment in accordance with the requirements of the National Environmental Policy Act (NEPA) of 1969, to assess the impacts on the human environment that may result from the proposed Federal action. This Environmental Assessment examines a range of alternatives designed to address issues related to overfishing of Pacific-wide bigeye and WCPO yellowfin tuna. It also incorporates by reference the cover sheet (page ii), table of contents (page vii), list of agencies (page 1), public review process and schedule (page 1), list of preparers (page 2), discussion of the purpose and need for action (page 2), list of references (page 183), and additional text from other sections of this document as indicated.

The goal of the Council is to take appropriate action to address its statutory requirement under the Magnuson-Stevens Act to end overfishing of Pacific bigeye and WCPO yellowfin tunas in a cost-effective and equitable manner. Following general management, research and monitoring recommendations for Pacific bigeye and WCPO yellowfin tunas, management alternatives to end overfishing of both species are presented. How these alternatives would address the reduction of fishing mortality in the WCPO and the EPO are discussed separately, however, as each are subject to different management authorities (the WCPFC in the Western and Central Pacific and the IATTC in the Eastern Pacific). Recommendations for domestic fisheries are discussed in Section 9.0.

The Council recommends that the United States promote the following measures in the international arena.

**8.1 General Recommendations for the Management, Monitoring and Research of  
Bigeye and Yellowfin Tunas in the Pacific Ocean**

These recommendations are consistent with requirements of the MSA and its National Standards. For example, providing consistency between the WCPO and EPO is appropriate under National Standards 3, 5, and 7. Further it is essential to avoid confusion and potential conflict between the WCPFC and the IATTC with respect to management measures regarding bigeye and yellowfin tunas. Moreover, the areas of competence of these two RFMOs overlap in the South Pacific so it is essential that management measures are harmonized as far as possible.

## DRAFT

Recommendations such as focusing on the fisheries with the greatest impacts and on the regions of highest catches and spawning areas, reducing surplus capacity and restricting the use of purse seine FADs are designed to identify those measures that will have a measurable impact on bigeye and yellowfin tuna conservation. Similarly, an exemption for those fleets that catch less than 1% of the total from some or all measures recognizes the need to avoid overly burdening those fleets and countries which are peripheral in generating fishing mortality for bigeye tuna

Reduction of fishing capacity is a recognized goal and NMFS has stated that its target is to eliminate or significantly reduce overcapacity in 25% of federally managed fisheries by the end of 2009 and in a substantial majority of fisheries in the following decade (NMFS 2004)<sup>1</sup>. There is known to be an excess of purse seine capacity for skipjack tuna, as recognized by a 2001 resolution by the World Tuna Purse Seine Organization to achieve a 35% reduction in fishing effort by member countries. Although the purse seine vessels are targeting skipjack rather than bigeye tuna, they are a major contributor to fishing mortality through catches of bigeye and yellowfin juveniles around FADs. Consequently reduction of purse seine fishing capacity overall would likely have a marked conservation benefit for bigeye and yellowfin tuna. In this regard, the IATTC promulgated resolutions in 2000 and 2003 to limit fishing capacity of purse seine vessels operating in the Eastern Pacific. The IATTC established a target of 158,000 m<sup>3</sup> (well volume) for the total purse seine fleet in the Eastern Pacific, but which took into account stock status and the rights of coastal States and other States with a longstanding and significant interest in the tuna fisheries of the Eastern Pacific to develop and maintain their own tuna fishing industries.

Restricting the use of FADs by purse seine vessels in the Pacific, to aggregate skipjack tuna, will reduce the overall catch of bigeye and yellowfin tunas, and specifically the catches of juvenile bigeye and yellowfin tunas, which also aggregate beneath FADs. It is expected that this reduction in juvenile bigeye catch will likely improve recruitment of bigeye tuna to the longline fishery, where fish are caught at larger sizes and at higher value. It is also likely that a reduction in FAD-associated harvests of juvenile and sub-adult yellowfin tuna will improve recruitment of yellowfin to longline fisheries and purse seine landings of larger, higher value yellowfin. Improvements to spawning stock biomass for both species would also result. Similarly, any measure designed to develop time/area closures in spawning grounds or areas of high juvenile bigeye and yellowfin tuna densities would reduce fishing mortality on spawning fish and reduce the catch of juvenile fish before they had a chance to recruit to the longline fishery. The area of the southern Philippines, Indonesia and Papua New Guinea (PNG) are highly relevant as they have large-scale longline and FAD-based surface fisheries and are situated in the core area of WCPO spawning and juvenile development for both species. While fishery data collection and reporting mechanisms are well developed in PNG, significant improvements to species specific catch and effort data in the Philippines and Indonesia are urgently required.

The MSA's National Standard 1 established a process for the use of biomass based reference points and fishing mortality limits to determine whether fisheries are overfished or subject to overfishing. In the absence of existing reference points from the RFMOs, the Council's reference points for bigeye and yellowfin tunas should be advanced for consideration by the WCPFC

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<sup>1</sup> United States National Plan Of Action for the Management of Fishing Capacity August 2004 Department of Commerce National Oceanic and Atmospheric Administration National Marine Fisheries Service

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and the IATTC. This will be useful to the Council as, at this time, outputs from these stock assessments generate the estimates of indicators used in the Council's overfishing control rule. In addition, the Pacific Council also has similar status reference points for highly migratory species such as bigeye and yellowfin tunas in the Eastern Pacific Ocean. Moreover, the United States as a member of regional fishery management organizations should establish and adhere to general principles to guide the U.S. in developing and promoting conservation and management programs and associated monitoring and compliance, The Council recommends the following:

### *General recommendations for management and monitoring:*

- i. **Use science-based measures that consider historical participation, and provide for sustained participation by local communities.**
- ii. **Strive for consistent measures (e.g. WCPO and EPO) where possible.**
- iii. **Focus on fisheries with greatest impacts.**
- iv. **Focus on regions of highest catches and spawning areas.**
- v. **Reduce surplus capacity.**
- vi. **Restrict the use of purse seine FADs.**
- vii. **Consider exempting fleets that catch less than 1% of the total from some or all measures.**
- viii. **Improve species specific fishery monitoring.**
- ix. **Establish standardized vessel registry system for the WCPO.**
- x. **To the extent practicable the U.S. should seek RFMO decisions that are consistent with National Standard 1 of the MSA and its guidelines as codified.**

Half of the elements in this list, (ii-vi) are concerned with minimizing fishing mortality of bigeye and yellowfin tunas in the WCPO, while the remainder are concerned with participation, monitoring and management of pelagic fishing. With respect to principles and priorities for research and data collection, the Council recommends that the U.S. should also promote the following:

### *General recommendations for research:*

- i. **Determine consistent science-based reference points that are appropriate for management use. In the absence of international reference points, promote the establishment and application of MSY based reference points and associated control rules with respect to preventing and ending overfishing.**
- ii. **Improve stock assessments that provide region specific information and understanding of recruitment.**
- iii. **Promote pan-Pacific assessments that provide region specific information.**
- iv. **Improve understanding of responses to FADs.**
- v. **Investigate gear and fishing characteristics of vessels with above-average CPUE.**
- vi. **Collect and define vessel and gear attributes useful for effort standardization for all fleets.**
- vii. **Define total costs of management on governments and participants.**

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### 8.2 Council Management Protocol for Pacific Bigeye and Yellowfin Tunas

The role of Pacific-based domestic fishery management Councils has become particularly important with the advent of the Western and Central Pacific Fisheries Commission in 2004, as the entire Western Pacific Region's EEZ waters are contained within the boundaries of the WCPFC area of management competence, although some longline fishing by Hawaii-based longline vessels does occur in the EPO. The Inter-American Tropical Tuna Commission has already begun to implement management measures for bigeye tuna, commencing with seasonal closures of purse seine fishing and bigeye tuna quotas for U.S. longline vessels (both Hawaii-based and California-based) for the years 2004-2006. The IATTC may at some point in the future introduce management measures for yellowfin tuna. Moreover, the measures adopted by the IATTC for Pacific bigeye tuna could also have a limiting effect on WCPO yellowfin landings. A formal Council management protocol for the development of input and recommendations that will be provided to the U.S. delegations and U.S. representatives to the RFMOs is needed to ensure that both the WPRFMC and PFMC are informed and afforded the opportunity to substantively participate in all of the activities leading up to the development and implementation of U.S. proposals for international management<sup>2</sup>.

The adoption of a formal management protocol creates a mechanism and a timetable for the Council to review the status of stocks, to consider and advise on impending RFMO actions, to deliberate on the Council's own proposals for conservation and management, to inform NMFS and the Department of State about the Council's positions and concerns, to participate in international meetings, and to apply their expertise in the subsequent implementation of any resultant agreements. The amendment is intended to provide a solid basis for collaboration of the Council with its partners (NMFS, DOS) to ensure

- effective involvement of the Council on behalf of its constituents and members in the development of U.S. positions in RFMOs;
- a good track record for the Council's use in generating inputs to the U.S. positions and for the Council's subsequent use in determining what if any conservation and management measures are needed; and
- a process that NMFS and DOS can point to as having obtained solid advice from constituents in carrying out U.S. obligations under international treaties.

This management protocol must be synchronized with both RFMO and Council meetings to ensure adequate review prior to and following RFMO meetings. Without such a process, the Council would have to continue to respond in an *ad hoc* manner to fishery management requirements stemming from RFMOs in the Pacific. The Council would still seek the opportunity to review and comment on management proposals and to advance its own recommendations for U.S. proposals to RFMOs, but an *ad hoc* process is inefficient and untimely, and runs the risk of marginalizing the Councils' role in developing proposals for international management.

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<sup>2</sup> . During the drafting of this amendment, staff from the Western Pacific Regional Fishery Management Council were included in the delegations to the June 2005 and June 2006 meetings of the IATTC and the Western and Central Pacific Fishery Commission's second meeting in December 2005.

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Moreover, an *ad hoc* process does not provide a framework for collaboration between the Department of State, NMFS and the Councils that is necessary to ensure that the Councils' views are fully considered.

The following issues and criteria were considered in the development of the protocol

- Likelihood of effectiveness in RFMOs
- Timeliness
- Completeness of inputs
- Transparency of decision making
- Linkage of international and MSA authorities
- Credibility with stakeholders

*Council recommended protocol for international management of Pacific highly migratory pelagic species:*

- a. **The Council participates in U.S. delegations to Regional Fishery Management Organizations (RFMOs e.g. IATTC and WCPFC) in the Pacific Ocean and is included in all pre and post meetings and negotiations.**
- b. **The Council and NMFS monitor RFMO meetings and actions and relevant fisheries, Council becomes aware of a need for management action or receives notice from NMFS or the RFMO directly of a need for such action, with supporting documentation.**
- c. **The Council reviews information from RFMO, NMFS, and other sources concerning stock assessment, area of consideration, fishery issues and data supporting determinations, and the role of U.S. fisheries in causing or contributing to overfishing.**
- d. **NMFS provides formal notice of overfishing determination or other management concerns and the time frame for Council action within MSA and RFMO frameworks.**
- e. **The Council refers information to its Pelagics Plan Team, Advisory Panel(s), SSC and other advisors for review and advice with focus on:**
  - **Definition and condition of the stock or other fishery management unit, and the issue of concern (e.g., overfishing, bycatch, allocation, etc.),**
  - **Possible reasons for the situation including fishery and environmental conditions that may be relevant to the stock condition or other management concern,**
  - **Relative role of U.S. fisheries in overall stock harvests and management situation,**
  - **Existing conservation and management measures of the RFMO with jurisdiction over the stock or fishery involved,**
  - **Possible multi-lateral measures to avoid or end overfishing, rebuild the stock, or resolve other management concerns.**



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- f. The Council's PPT, AP, SSC and other advisory bodies recommend possible domestic and international fishery conservation and management measures, including a comparison and evaluation of alternative measures including distinctions between Pacific-wide, regional, and local measure's effects and effectiveness.**
- g. The Council makes initial decision on how to address problem (initial action).**
- h. The Council distributes a draft background and action document for public review and advice.**
- i. The Council makes formal recommendations to NMFS and the Department of State on:**
  - domestic regulations,**
  - international actions.**
- j. The Council drafts a position paper on how RFMOs should address the situation (the position paper should clearly and forcefully state the Council's recommendation on every substantial issue).**
- k. The Council presents its position within the U.S. delegation to the RFMO.**
- l. The RFMO meets and acts on fishery conservation and management needs in the international arena.**
- m. The Council considers the RFMO's actions, U.S. government positions and requirements under applicable treaties and the MSA.**
- n. The Council determines its appropriate regulatory response for domestic fisheries consistent with international agreements and the MSA.**
- o. The Council takes final action (if any) to recommend regulations for NMFS' approval and implementation.**
- p. NMFS implements approved recommendations.**

### **8.3 Recommendations to Address International Overfishing of Pacific-wide Bigeye and WCPO Yellowfin Tuna**

Three alternatives were developed to address international overfishing of Pacific bigeye and WCPO yellowfin tuna as follows:

#### **International Alternative 1. No action**

Under International Alternative 1 (No action), the Council would not take any action to address the international overfishing of Pacific-wide bigeye tuna and WCPO yellowfin tuna, and WCPO

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and EPO tuna fishing would continue to operate under current conditions as described in Section 10.8.

### **International Alternative 2. End overfishing immediately (Preferred)**

Under International Alternative 2 (preferred), the Council would transmit a recommendation for the immediate specified reductions in fishing mortality to NMFS, the Department of State, and the U.S delegations to the Pacific tuna RFMOs. Based on stock assessments conducted in 2005 (WCPFC 2005) and 2006 (IATTC 2006a), fishing mortality on Pacific bigeye and WCPO yellowfin stocks by both longlines and purse seines needs to be reduced in the WCPO by 20% from 2001-2003 levels for each gear type. In the Eastern Pacific Ocean (EPO) fishing mortality on Pacific bigeye by longline vessels needs to be reduced by 30% and purse seine fishing mortality by 38% as compared to 2003-2004 fishing levels (IATTC 2006a). All measures must consider traditional participation and emerging island fisheries. These measures are cumulative across the two regions since although Pacific bigeye tuna is thought to be a single population, it is managed as two segments of the same population, fished by different fisheries and managed by two separate RFMOs

### **International Alternative 3. Phase out overfishing over a maximum of 10 years**

Under International Alternative 3, the Council would transmit a recommendation for a phased approach for achieving this action's objectives for reductions in fishing mortality (as described above and in Section 6) to NMFS, the Department of State, and the U.S delegations to the Pacific tuna RFMOs. Actions included to achieve this phased approach are described below. All measures must consider traditional participation and emerging island fisheries.

#### **A. Output controls**

##### ***WCPO (for Pacific-wide bigeye and WCPO yellowfin)***

- If required, implement quotas on a country level basis with domestic allocation left to each country
- Gradually (over a maximum of 10 years) reduce quotas to achieve objectives

##### ***EPO (for Pacific-wide bigeye)***

- Implement an EPO bigeye longline quota equal to 1999 harvests
- Provide the U.S. longline fleet with EPO bigeye quota of 250 mt
- Exempt fleets that take less than 1% or 550 mt of EPO annual bigeye catch
- Exempt U.S. longline vessels not targeting bigeye tuna from the annual EPO quota
- Gradually (over a maximum of 10 years) reduce quotas to achieve objectives

#### **B. Input controls**

##### ***WCPO (for Pacific-wide bigeye and yellowfin)***

- Gradually decrease longline fishing effort (number of vessels), starting with rollback to 1999 levels

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- Register and limit the use of purse seine FADs
- Gradually (over a maximum of 10 years) increase input controls to achieve objectives

### *EPO (for Pacific-wide bigeye)*

- Gradually reduce EPO purse seining on bigeye by 38%
- Gradually (over a maximum of 10 years) increase input controls to achieve objectives

## **9.0 Recommendations to Address Overfishing of Pacific Bigeye and WCPO Yellowfin Tuna in Domestic WPRFMC Fisheries**

### **9.1 Recommendations for WPRFMC Pelagic Longline and Purse Seine Fisheries**

Existing longline vessels managed by the Council (those based in Hawaii and American Samoa) caught only 2.3% of total reported Pacific bigeye landings in 2003 and 0.22% of total reported Pacific yellowfin landings (see Table 22). This is largely because both of these fleets are managed under limited entry programs that include caps on the numbers of vessels as well as on vessel lengths. No foreign fishing is allowed in EEZ waters under the Council's jurisdiction and portions of EEZ waters around Hawaii and Guam are closed to domestic longliners. Given these regulatory controls in place for these fisheries (and associated low bigeye and yellowfin catch levels), and the fact that the necessary international actions required to end Pacific-wide overfishing are underway, the Council has determined that it should continue to seek substantive participation (see Section 8) in the international management fora that are necessary to develop effective solutions to the Pacific-wide overfishing of bigeye and yellowfin tunas. The Council also determined that further unilateral management actions for these domestic fisheries would be premature and would not have a meaningful effect on the Pacific-wide overfishing problem. Moreover, it would also be inconsistent with MSA Section 304(e)(4)(C), which states that actions to address overfishing in fisheries managed under international agreements shall "reflect traditional participation in the fishery, relative to other nations, by fishermen of the United States". The Council intends to manage overfishing by these fisheries through its international management protocol described in Section 8.2. However, given the potential for the development of domestic longline fisheries based in Guam or CNMI, as well as the potential for domestic purse seiners to fish in WPRFMC EEZ waters, the Council made the following recommendation:

**Establish a control date of June 2, 2005 for domestic longline and purse seiners fishing under open access programs in U.S. EEZ waters in the Western Pacific region, including developing longline fisheries in Guam and CNMI.<sup>3</sup>**

This control date would apply to vessels that are or may begin fishing under open-access programs and would not bind the Council to establishing limited access or other management programs for these fisheries, but it would notify current and prospective fishery participants that additional management measures may be taken by the Council for these fisheries. The implementation of a control date is in recognition of the fact that unlimited expansion of purse seining and longline fishing is untenable with the conservation of bigeye and yellowfin tuna.

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<sup>3</sup> Notification of this control date was published August 15, 2005 in the Federal Register, Vol. 70, No. 156

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### **9.2 Recommendations for Other WPRFMC Pelagic Fisheries**

Regarding commercial small boat pelagic fisheries (i.e. non-longline and non-purse seine) managed by the Council in the Western Pacific region, based on their low catches of bigeye (0.13% of Pacific-wide 2004 catches) and yellowfin (0.13% of Pacific-wide catches, see Table 22), the Council made no new recommendations regarding the activities of these fisheries. However, although reported and estimated bigeye and yellowfin tuna catches by Hawaii-based small boats are low; data for some sectors is believed to be incomplete due to non-reporting and is certainly often many months behind in collection, inputting, processing and availability to fishery scientists and managers. Recreational landings are unknown as there are no reporting requirements for these vessels. Preliminary data from NMFS' Marine Recreational Fishing Statistics Survey (MRFSS) is currently under review by NMFS following the release of an external review of this program by the National Research Council which questioned the sampling and extrapolations methodologies used by NMFS (NRC 2006). As such the Council has recommended that MRFSS catch estimates should not be used for management purposes until these problems have been resolved. Thus the Council considered a range of regulatory and non-regulatory measures designed to improve the availability of data regarding bigeye and yellowfin catch and effort by these fisheries. In sum, the Council considered the following alternatives for the management of the region's pelagic small boat commercial and recreational fisheries:

#### **Small boat Alternative 1. No action**

Under this alternative the Council would not take any action to address the role of small boat domestic pelagic fisheries in the overfishing of Pacific-wide bigeye and WCPO yellowfin tunas, and these fisheries would continue to operate under current conditions as described in Section 10.9.

#### **Small boat Alternative 2. Implement fishery controls**

Under this alternative the Council would implement limits to fishing for Pacific bigeye and WCPO yellowfin tuna by small boat domestic pelagic fisheries. These could include measures such as fleet-wide quotas, trip limits, or time and area closures.

#### **Small boat Alternative 3. 3 Establish control date<sup>4</sup> (Preferred)**

Under this alternative, the Council would implement a June 2, 2005 control date for entry into small boat commercial pelagic fisheries (i.e. non-longline and non-purse seine) in U.S. EEZ waters around Hawaii. This control date does not bind the Council to establishing limited access or other management programs for these fisheries, but it does notify current and prospective fishery participants that additional management measures may be taken by the Council for these fisheries.

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<sup>4</sup> Notification of this control date was published August 15, 2005 in the Federal Register, Vol. 70, No. 156

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### **Small boat Alternative 4. Increase data collection (Preferred)**

Under this alternative, the Council would a) require federal permits and logbooks for all Hawaii-based small boat commercial pelagic fishermen; b) implement a voluntary reporting system for Hawaii-based small boat recreational pelagic fishermen; c) implement a targeted survey of all Hawaii-based small boat pelagic owners and operators to obtain information on their fishing effort and catches. Although the Council considered these measures in a comprehensive context (i.e. wherever such vessels operate) legal counsel has stated that the Council's authority does not extend into state waters and thus any resultant regulations would not apply in those areas.

### **9.3 Alternatives Considered but not Analyzed in Detail**

#### **Closure of all Council fisheries that catch bigeye or yellowfin tunas in the Pacific Ocean**

Closing all fisheries under the Council's jurisdiction that catch bigeye or yellowfin tunas in the Pacific Ocean would appear to address the contribution to overfishing by U.S. vessels. However, as discussed above this unilateral action would place an unfair burden on U.S. fishermen and would not result in any significant impact on reducing bigeye and yellowfin fishing mortality. This is not consistent with the Council's objective of addressing overfishing in a cost-effective and equitable manner, or with the MSA Section 304(e)(4)(C) as described above. For these reasons this alternative was not analyzed in detail.

#### **Time area closures of spawning areas or areas with high concentrations of juvenile bigeye or yellowfin tunas**

The major fishing mortality impact on bigeye is generated by longline vessels; although the impact of purse seine caught juvenile bigeye has greatly exacerbated the overfishing problem on this species. By contrast, purse seine and other surface fisheries (pole-and-line etc.) are the main source of mortality for yellowfin tuna. One possible management approach might therefore be to look at areas of the ocean where juvenile bigeye and yellowfin tuna are caught in substantial quantities and develop time/area closures to minimize catches. However, a preliminary analysis investigating the catch of juvenile bigeye and yellowfin tunas by different purse seine fleets for the years 1989 through 2003 (SPC 2005), failed to identify any such juvenile 'hot spots' in the Western and Central Pacific. The IATTC has also analyzed time area closures for the Eastern Pacific for reducing purse seine catches of bigeye tuna. The IATTC has also tried to manage purse seine fishing around FADs in the Eastern Pacific since 1998, however, this was found to be difficult to implement due to disputes over when a purse seine set was actually a FAD set. Accordingly, the IATTC decided to simply close all purse seine fishing for two six week periods in 2004, 2005 and 2006. Similarly, the WCPFC has opted to follow the example of the IATTC to limit purse seine fishing effort by a combination of Vessel Day Scheme for PNA member countries, limitation of effort to either 2004 levels or the average of 2001 to 2004 for other CCMs and to develop a proposal for temporary purse seine closures at the third session of the WCPFC in December 2006.

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### **Moratorium on the expansion of longline fisheries in other parts of the Western Pacific Region ( i.e. open access fisheries in Guam and CNMI)**

Longline fishing is not currently conducted by fishermen based in other parts of the Council's jurisdiction. A blanket moratorium on future expansion of longlining in these areas was not analyzed in detail as it would be inequitable and discriminatory to allow longline fishing only in some parts of the Western Pacific. It would also be inconsistent with Section 2 (a)(10) which states that "Pacific Insular Areas [including Guam and CNMI] contain unique historical, cultural, legal, political, and geographical circumstances which make fisheries resources important in sustaining their economic growth". However, the control date recommended by the Council can be used to check unconstrained expansion of longline fishing in these areas.

# **Alternatives to Address Bigeye Tuna Overfishing Pacific Fishery Management Council November 2006**

## **1.0 Introduction**

This paper describes the range of alternatives for Pacific Fishery Management Council (PFMC) final action to address overfishing on bigeye tuna (*Thunnus obesus*) in the Eastern Pacific Ocean (EPO). (A version of this paper was posted on the Council's website on October 6, 2006, for public review; an updated version was posted on October 17.) The description of the alternatives has two components: 1) an overview of the action to be taken, and 2) as appropriate, draft FMP amendment language. The draft amendatory language shows how the text of the Fishery Management Plan for U.S. West Coast Fisheries for Highly Migratory Species (HMS FMP) would actually be changed to incorporate the elements of the alternatives as described. These substantive changes are in addition to a proposed non-substantive reorganization of the FMP. The whole reorganized FMP will be provided under separate cover.

### **1.1 Proposed Action**

The Pacific Fishery Management Council addresses overfishing of Pacific bigeye tuna (*Thunnus obesus*), by developing an amendment to the HMS FMP (Amendment 1) or by other means.

### **1.2 Purpose and Need for Action**

The purpose of the proposed action is to articulate a strategy that, together with Amendment 14 of the Fishery Management Plan for the Pelagic Fisheries of the Western Pacific (Pelagics FMP Amendment 14) would end overfishing of bigeye tuna throughout the Pacific Ocean. The specific actions to actually end overfishing would have to be developed by multilateral cooperation through appropriate regional fishery management organizations (RFMOs), and, as necessary, domestic regulation. This action is needed because both the PFMC and the Western Pacific Fishery Management Council (WPFMC) were notified by letter from National Marine Fisheries Service (NMFS) dated December 15, 2004, that the Secretary of Commerce had determined that overfishing of bigeye tuna was occurring Pacific-wide. As required by the Magnuson-Stevens Fishery Conservation and Management Act (MSA), and reflected in the implementing regulations for MSA National Standard 1 (50 CFR 600.310(e)(3)), both Councils were requested to take remedial action (i.e., recommend to NMFS an amendment to their respective fishery plans governing fishing for bigeye tuna) within one year of the identification by the Secretary.

## **2.0 History of Action**

### **2.1 PFMC Action**

In response to the overfishing determination, NMFS Southwest Region staff provided PFMC with an *Analysis of Management Options for Development of a Plan to End Overfishing of Pacific Bigeye Tuna in the Eastern Pacific Ocean* (Management Options paper) to support the development of a U.S. West Coast position on how to control fishing mortality of bigeye tuna in the EPO. (This paper was originally provided as Agenda Item G.1.a, at the April 2006 PFMC meeting and is included here as Appendix A.) In April 2006, PFMC adopted the recommendations of the Highly Migratory Species Management Team (HMSMT), which were based on this management options analysis. These recommendations were

forwarded to the U.S. delegation to the Inter-American Tropical Tuna Commission (IATTC) in advance of their June 2006 meeting, and to the WPFMC. The U.S. West Coast recommendations adopted are as follows:

- The actions described in Management Option 3 (See Management Options paper referenced above) with the exclusion of an exemption for fleets that catch one percent or less of the total Pacific bigeye tuna landings described under that option. PFMC may reconsider application of such an exemption, but believes that at this point there is insufficient information available to define the full necessities of such an exemption;
- Establish a definition for a nation's fleet which includes all of the vessels fishing under one nation regardless of area, or gear type;
- Establish an exemption for U.S. small purse seine vessels (less than 400-short ton carrying capacity) that fish in the near shore environment of the coast of California. These vessels primarily target coastal pelagic species (anchovy, sardine, mackerel), but occasionally fish for tropical tunas when these species enter West Coast waters during the months of May through October. A similar exemption could be applied to other gear types or sectors that incidentally catch negligible amounts of bigeye tuna; and
- Support international action (as opposed to unilateral action) that would end bigeye tuna overfishing in the EPO.

## **2.2 Subsequent IATTC Action**

The IATTC has since adopted Resolution C-06-02, *A Resolution for a Program on the Conservation of Tuna in the Eastern Pacific Ocean for 2007* (Appendix B). This resolution contains similar management requirements for the purse seine fishery as the previous resolution (Resolution C-04-09) (Appendix C); however, a change in longline requirements was issued. The U.S., along with other smaller IATTC parties, was granted an annual catch of 500 mt of bigeye, or their respective 2001 catch levels, whichever is higher.

## **2.3 WPFMC Pelagics FMP Amendment 14**

Subsequent to the overfishing notification, WPFMC developed Pelagics FMP Amendment 14. This document is currently under review by NMFS Pacific Islands Regional Office. NMFS is expected to make a final decision to approve, disapprove, or partially approve Amendment 14 in early 2007. Amendment 14 addresses overfishing of bigeye tuna throughout the Pacific Ocean.

WPFMC, after receiving PFMC's West Coast position addressing bigeye tuna overfishing in the EPO, described above, revised Amendment 14 to reflect PFMC's position. The updated version of Amendment 14 now includes the estimated reductions in fishing mortality that would be required to end overfishing of bigeye tuna Pacific-wide. Amendment 14, in accordance with PFMC's recommendations to reduce fishing on bigeye in the EPO, comports with the conservation and management recommendations put forth by staff scientists of the IATTC.

Amendment 14, if approved by NMFS, would not amend the West Coast HMS FMP, impose regulations on West Coast fishermen, or transfer any authority to the WPFMC. If Amendment 14 is approved, then it could be considered the Pacific-wide approach to ending bigeye tuna overfishing. An action (such as an FMP amendment) by PFMC to address overfishing in the EPO would be considered in the context of Amendment 14, if approved.



## 3.0 Range of Alternatives

Considering previous PFMC discussion and recommendations, along with particular items contained in Amendment 14, NMFS, in coordination with PFMC staff prepared a range of alternatives for Council consideration, which are described in this section. Subsequent action will include PFMC taking final action to adopt a preferred alternative at the November 2006 Council meeting, after which regulatory action may be required.

The preferred alternative is one that would be expected to achieve the following objectives for the proposed action:

- Meet the requirement under the MSA to end overfishing of Pacific bigeye tuna Pacific-wide; and
- Establish management protocol for both Councils to participate in the development and implementation of U.S. proposals for international management.

### 3.1 Alternative 1 (No Action)

PFMC would not develop an FMP amendment to end overfishing in the EPO in support of a Pacific-wide strategy, nor submit comments, or participate in the future development and input of recommendations on the conservation and management of Pacific bigeye to the U.S. Department of State, or the U.S. delegation to the IATTC.

#### 3.1.1 *Comments and Considerations*

IATTC staff scientists determined that under the current exploitation patterns, and assuming recruitment at recent average levels, yields of bigeye tuna are expected to decline to levels below the average maximum sustainable yield (AMSY), potentially leading to an overfished condition in the near future.

If PFMC chooses Alternative 1, (i.e., fails to implement measures that would end overfishing) and no other plan is adopted that ends overfishing (such as Pelagics FMP Amendment 14), NMFS would be obligated under the MSA to develop a Secretarial amendment to end overfishing. Furthermore, without substantial international action, it is likely that a continued decline in Pacific bigeye stock is likely, and would lead to an overfished status. If Pelagics FMP Amendment 14 were determined to be sufficient to end overfishing, and is approved by NMFS, that plan could serve as the sole plan to end overfishing.

#### 3.1.2 *FMP Amendment Text*

Because the FMP is not amended to include a Council strategy to end bigeye tuna overfishing in the EPO, no amendment text is offered.

### 3.2 Alternative 2: Previous PFMC Actions Taken

Under Alternative 2, PFMC would expand on previous actions taken at their April 2006 meeting in Sacramento, California, by adopting an FMP amendment based on them. Specifically, Alternative 2 includes the actions as they appear in Management Option 3 of the Management Options paper (Appendix A), as modified by the recommendations provided by the HMSMT, which formed the basis of the West Coast position that is referenced above. (The HMSMT report, including their recommendations, is provided as Appendix D.) In comparison to Management Option 3, this excludes the exemption for fleets that capture 1 percent or less of the total Pacific bigeye tuna landings and includes a definition of national fleet in the HMS FMP, consistent with PFMC's April 2006 recommendations.

### *3.2.1 Comments and Considerations*

The specific EPO recommendations described in the Management Options paper, which formed the basis of the West Coast position, are a result of recommendations that staff scientists at the IATTC made for a multi-annual program for the conservation of tunas in the EPO. Those measures were specific to the conservation of bigeye (and yellowfin) tuna in years 2004–06. Since that time, IATTC staff scientists have determined that the restrictions included in Resolutions C-04-09 will not be sufficient to improve stock status and therefore in June of 2006 issued a more conservative recommendation for a future resolution to cover years 2007–09. If PFMC chooses Alternative 2 as their preferred alternative, the recommended restrictions and reductions in effort included in the Management Options paper and the West Coast position may need to be updated to reflect the more recent IATTC staff scientists' conservation and management recommendations. The recommendations in Alternative 2 address overfishing in the EPO only, which by itself, would not meet the requirement of ending overfishing Pacific-wide. However, in concert with Pacific-wide strategy in Pelagics FMP Amendment 14 these recommendations would meet that requirement.

Also of consideration, if NMFS approves Pelagics FMP Amendment 14, which deals with overfishing Pacific-wide, and then is confronted with a different recommendation for the EPO from the PFMC, then that may put NMFS in a position where it would need to consider both plans and possibly try to harmonize them.

If PFMC chooses Alternative 2 as their preferred alternative, next steps would include PFMC staff developing an Environmental Assessment (EA) in accordance with the requirements of the National Environmental Policy Act (NEPA), to assess the impacts on the human environment that may result from the proposed Federal action described in Section 1.0.

### *3.2.2 FMP Amendment Text*

Text would be added to the HMS FMP at the end of Chapter 4, which under the proposed reorganization is entitled Preventing Overfishing and Achieving Optimum Yield:

Both the Pacific and Western Pacific Fishery Management Councils were notified by letter from NMFS dated December 15, 2004, that the Secretary of Commerce had determined that overfishing of bigeye tuna was occurring Pacific-wide. In response, the Council has articulated a strategy that, together with Amendment 14 of the Fishery Management Plan for the Pelagic Fisheries of the Western Pacific, would end overfishing of bigeye tuna Pacific-wide. The specific actions to actually end overfishing would have to be developed by multilateral cooperation through appropriate regional fishery management organizations (RFMOs), and, as necessary, domestic regulation.

The Council's strategy to end overfishing on bigeye tuna addresses overfishing in the EPO is part of a coordinated Pacific-wide strategy, which includes recommendations made by the WPFMC for fisheries in the WCPO. The elements of the Council's strategy are described below.

As part of its strategy the Council recognizes that restrictions applied to a single fishery are insufficient to allow the stock to achieve average MSY (AMSY). Therefore, restrictions on both longline and purse-seine fisheries are necessary to rebuild the stock to the AMSY level in ten years.

Working through the IATTC, the U.S. will develop measures to achieve a large (in the neighborhood of 50 percent) reduction in bigeye effort from the purse-seine fishery to allow the stock to rebuild towards the AMSY level in ten years. The Council, working through NOAA, will recommend to the Department of State that this should be achieved through a combination of the following management

measures:

- Continuation on an annual basis, as necessary to end overfishing and achieve AMSY, a six-week purse seine fishery closure in the EPO consistent with the measures described in IATTC Resolutions C-04-09 and C-06-02. The resolutions allow member nations to choose between two different consecutive six week periods to close their purse seine fishery in the Convention Area. The closure is intended to target fishing activity that results in high catches of juvenile tuna, and thus the closure should result in improved yields from the stock in subsequent years.
- Reduction of purse seine fishing effort on Pacific bigeye by 50 percent on an annual basis, as necessary to end overfishing and achieve AMSY, with one or more of the following management measures:
  - Close the purse seine fishery for six consecutive months in the area between 8° N and 10° S latitude west of 95° W longitude; and/or
  - Close the purse seine fishery on floating objects (including fish aggregation devices, or FADs) for six consecutive months in the area west of 95° W longitude; and/or
  - Limit the total annual catch of bigeye by each purse seine vessel that is required to carry an observer to 500 metric tons, estimated either by the observer or, at the request of the fishing vessel's captain, by scientific sampling of the vessel's catch conducted by IATTC staff at the time of unloading. If this latter option is chosen, the vessel would be responsible for the costs of the sampling.
  - These additional purse seine fishery closures would not occur simultaneously with the six-week EPO closure described above.

For EPO longline fisheries, the Council's strategy is to reduce and hold catches by all nations to 1999 levels, as necessary to end overfishing and achieve AMSY. The Council makes no recommendation on a formula to exempt nations whose longline fisheries represent a small proportion of total EPO bigeye catch. However, the Council does not oppose the exemption formula outlined in IATTC Resolution C-06-02.

The Council recommends that the U.S. work with the IATTC to establish an annual international fishing quota (total allowable catch) which would be subdivided among all IATTC Parties, cooperating non-parties, fishing entities, or regional economic integration organizations (collectively "CPCs") catching bigeye tuna in the EPO. Each CPC's quota will be based on national catch history.

The Council recommends that the U.S. work with the IATTC to develop, as appropriate, minimum size limits to reduce fishing mortality on juvenile bigeye tuna.

For the purposes of the Council's strategy, a national fleet comprises all vessels sailing under a given nation's flag that target HMS in the Pacific Ocean. The Council does not advocate defining sub-national fleets based on gear type, area fished, or other criteria. This definition of national fleet would be applicable when assigning any national quotas that may be established by multilateral agreement.

Notwithstanding the preceding definition of national fleet, under the Council's strategy, the U.S. would exempt coastal purse seine vessels from the definition of the national fleet for the purpose of allocating any national quota or applying other measures that are part of this strategy. Coastal purse seine vessels are generally defined as those vessels holding a CPS limited entry permit as described at

50 CFR 660.512 and/or less than 400 short tons carrying capacity.

The Council may modify elements of its strategy, consistent with recommendations from IATTC staff or other scientific advisory bodies (such as the Council's SSC), in order to further support ending overfishing on bigeye tuna in the EPO and Pacific-wide.

### **3.3 Alternative 3: Adopt Elements of Amendment 14 Specific to EPO Management**

Under Alternative 3, PFMC would adopt elements contained within International Alternative 2 (end overfishing immediately) of Pelagics FMP Amendment 14 that address overfishing of bigeye tuna in the EPO. The analysis of fishing effort reductions contained in International Alternative 2 states that it is expected that this alternative would achieve the objective and result in the most rapid improvement to the bigeye tuna stock. The WPFMC notes that if resource conditions change significantly, the Councils and RFMOs may make additional recommendations in response.

Under the WPFMC's International Alternative 2, the PFMC and WPFMC would work together to develop and deliver recommendations to the delegations to the Pacific RFMOs to reduce international fishing mortality as recommended by the scientific staff of the IATTC, which has the potential to result in the most immediate reduction of international overfishing on Pacific-wide bigeye tuna. To achieve this, both Councils would need to coordinate on future recommendations for reductions in bigeye tuna and/or other tropical tuna fishing mortality to NMFS, the Department of State, and the U.S. delegations to the Pacific tuna RFMOs. Such action would ensure that both Councils are informed and afforded the opportunity to substantively participate in a unified manner in all activities leading up to the development and implementation of U.S. proposals for international management. Pelagics FMP Amendment 14 suggests a protocol by which such future recommendations can be developed and delivered, which is outlined in Appendix E.

#### **3.3.1 Comments and Considerations**

The preferred alternative in Amendment 14 (International Alternative 2) contains recommendations made by IATTC staff scientists and reviewed by NMFS' Pacific Islands Fishery Science Center, and preliminarily considered to be sufficient to end overfishing Pacific-wide, per the charge contained in the notification letter dated December 15, 2004, by the Secretary.

If PFMC chooses Alternative 3 as their preferred alternative, and NMFS approves Amendment 14 as the Pacific-wide approach to ending overfishing on bigeye tuna, and makes a "finding of no significant impact" (FONSI) based on the EA contained within Amendment 14, then PFMC/NMFS would likely not have to prepare an additional EA. Agency guidance, NOA 216-6, section 6.03a(4), Special Circumstances, would apply: "Management plan amendments may address an action that has been fully analyzed by a previous EIS or EA. These actions cannot expand the original action and the previously reviewed action.... These actions require only a new FONSI statement based on the existing NEPA document(s)."

#### **3.3.2 FMP Amendment Text**

Text would be added to the HMS FMP at the end of Chapter 4, which under the proposed reorganization is entitled Preventing Overfishing and Achieving Optimum Yield:

Both the Pacific and Western Pacific Fishery Management Councils were notified by letter from NMFS dated December 15, 2004, that the Secretary of Commerce had determined that overfishing of bigeye tuna was occurring Pacific-wide. In response, the Council has articulated a strategy that,

together with Amendment 14 of the Fishery Management Plan for the Pelagic Fisheries of the Western Pacific, would end overfishing of bigeye tuna Pacific-wide. The specific actions to actually end overfishing would have to be developed by multilateral cooperation through appropriate regional fishery management organizations (RFMOs), and, as necessary, domestic regulation.

The Council's strategy to end overfishing on bigeye tuna addresses overfishing in the EPO is part of a coordinated Pacific-wide strategy, which includes recommendations made by the WPFMC for fisheries in the Western and Central Pacific Ocean (WCPO). The elements of the Council's strategy are described below.

As part of its strategy the Council recognizes that restrictions applied to a single fishery are insufficient to allow the stock to achieve average MSY (AMSY). Therefore, restrictions on both longline and purse-seine fisheries are necessary to rebuild the stock to the AMSY level in ten years.

The Council recommends that the U.S. work with the IATTC to establish management goals to guide any necessary reductions in fishery-specific catch/effort in the EPO. These goals will be consistent with IATTC staff recommendations and a Pacific-wide strategy that includes the WPFMC recommendations. For 2007, IATTC staff recommended a 38 percent reduction in purse seine fishery effort on floating objects (including fish aggregation devices, or FADs) in the EPO. The WPFMC strategy is intended to be consistent with IATTC staff recommendations and additionally includes a reduction in longline fishery effort in the EPO by 30 percent from current levels. Specific catch/effort management goals may be revised over time to be consistent with changes in stock status.

For EPO longline fisheries, the Council's strategy is reduce and hold catches by all nations to 1999 levels, as necessary to end overfishing and achieve  $B_{MSY}$ .

As part of any limits on longline catches, the strategy includes a formula to exempt nations whose longline fisheries represent a small proportion of total EPO bigeye catch. Any of the following terms could be used singly or in combination in such a formula:

- Exempt fleets that take less than 1 percent of the total bigeye tuna catch in the EPO.
- For fleets that take less than 1 percent of the total bigeye tuna catch in the EPO provide an annual quota of 500 mt for the 2007-2009 period.
- Exempt fleets that catch less than 550 mt of bigeye tuna annually in the EPO.
- Provide the U.S. longline fleet with a quota of 250 mt of EPO bigeye tuna.
- Exempt U.S. longline vessels not targeting bigeye tuna in the EPO from the annual bigeye quota.

Notwithstanding these terms, the Council does not oppose the exemption formula outlined in IATTC Resolution C-06-02.

An additional exemption would permit the landing of a small volume of bigeye (e.g., 20-25 fish) when a quota is exceeded to minimize bycatch and waste by longliners not targeting bigeye.

Any measures agreed to through the IATTC or other multilateral agreement should provide sufficient flexibility for nations to administer the longline quota in accordance with national legislation and sovereignty. This provision accommodates domestic allocation of national quotas through the

Council process.

The Council may modify elements of its strategy, consistent with recommendations from IATTC staff or other scientific advisory bodies (such as the Councils' SSC), in order to further support ending overfishing on bigeye tuna in the EPO and Pacific-wide.

In addition, text would be added to the HMS FMP at the end of Chapter 5, which under the proposed reorganization is entitled Periodic Specification of Management Measures:

The Council may develop an Operating Procedure to facilitate effective coordination and communication of management advice, in concert with the WPFMC and through the appropriate U.S. delegation, between the Councils and RFMOs involved in HMS management in the Pacific Ocean. The Operating Procedure may include specific decision-making schedules and criteria in order to harmonize PFMC, WPFMC, and RFMO processes.

### **3.4 Alternative 4: Concurrence with Pelagics FMP Amendment 14**

Under this alternative, PFMC notifies NMFS that it recognizes Pelagics FMP Amendment 14 as the sole Pacific-wide response to bigeye tuna overfishing. This concurrence would be made in writing and NMFS would describe, for the record, how this action sufficiently addresses the original notification of bigeye overfishing. PFMC does not amend the HMS FMP but could continue to make recommendations to NOAA and, through the appropriate U.S. delegation, to RFMOs on measures to end overfishing of bigeye tuna in the EPO and/or Pacific-wide. Under the HMS FMP, PFMC would continue to consider and develop appropriate management measure to govern U.S. West Coast-based fisheries that harvest bigeye tuna.

#### **3.4.1 Comments and Considerations**

Discussion at the September Council meeting indicated that PFMC concurrence with Pelagics FMP Amendment 14 was a viable response to the original overfishing notification. This alternative would result in no change in the statutory authority and obligation of the PFMC to develop management measures to govern fisheries under the HMS FMP. Unlike Alternative 3 (or Alternative 2) the Council strategy would not be articulated in the HMS FMP. This approach is contingent on ultimate Secretarial approval of Pelagics FMP Amendment 14. The workload associated with this option would be less than Alternatives 2 and 3 because no FMP amendment would need to be transmitted and, like Alternative 3, it would not be necessary to prepare an EA.

#### **3.4.2 FMP Amendment Text**

Because the FMP is not amended to include a Council strategy to end bigeye tuna overfishing in the EPO, no amendment text is offered.

## **4.0 References**

Inter-American Tropical Tuna Commission. 2004. Resolution C-04-09: Resolution for a multi-annual Program on the Conservation of Tuna in the Eastern Pacific Ocean for 2004, 2005, and 2006. [http://www.iattc.org/PDFFiles2/C-04-09\\_Tuna\\_conservation\\_2004-2006.pdf](http://www.iattc.org/PDFFiles2/C-04-09_Tuna_conservation_2004-2006.pdf).

Inter-American Tropical Tuna Commission. 2006. Document IATTC-74-05 Staff Recommendations on Conservation. Presented at the 74<sup>th</sup> annual meeting in Busan, Korea. <http://www.iattc.org/PDFFiles2/IATTC-74-05-Staff-conservation-recommendations-2006.pdf>.

Inter-American Tropical Tuna Commission. 2006. Resolution C-06-02: Resolution for a Program on the Conservation of Tuna in the Eastern Pacific Ocean for 2007. <http://www.iattc.org/PDFFiles2/C-06-02-Conservation-of-tunas-2007.pdf>.

# **Appendix A: Analysis of Management Options for Development of a Plan to End Overfishing of Pacific Bigeye Tuna in the Eastern Pacific Ocean**

Originally presented as Agenda Item G.1.a, Attachment 1, April 2006

## **PREFACE**

Pacific bigeye tuna are subject to overfishing Pacific-wide and this document sets out alternatives that potentially could be used to end overfishing. Bigeye tuna, like other highly migratory species (HMS) are nomadic in behavior, thus do not recognize boundaries that management, policy, or science have established. Bigeye tuna are fished by many nations in addition the United States, thus future efforts to reduce fishing mortality on bigeye tuna in the Eastern Pacific Ocean (EPO) will require coordination and communication among all relevant regional fisheries stakeholders. The capacity for unilateral action by the United States to prevent overfishing, as required under National Standard 1 of the Magnuson-Stevens Act (16 U.S.C. 1851(a)(1)), is limited, as is the capacity of the Pacific Fishery Management Council (Council), which is required to develop a plan to end overfishing, under 50 CFR 600.310(e)(4)(i)).

Pacific-wide, the U.S. annually lands approximately 10,000 metric tons (mt) (Table 3), or about five percent of the total bigeye catch. The Pacific-wide catch for bigeye tuna in the EPO between years 1999 and 2003 was between 88,000 mt and 142,000 mt. The U.S. West Coast commercial catch for this period was less than one percent; hence any unilateral action by U.S. fisheries to end overfishing would have little effect on the stock. Multilateral management action is essential to ensure that overfishing on bigeye tuna in the Pacific Ocean ends.

The current resolution that places conservation and management measures on fishing nations in the EPO for bigeye tuna is set to expire in 2006; for that reason this document provides future management options that would address overfishing of Pacific bigeye tuna in the EPO. The Council will choose a West Coast position to advance to the U.S. delegation to the Inter-American Tropical Tuna Commission (IATTC), as domestic management for 2007 and beyond depends on international management actions to reduce fishing on bigeye tuna stocks.

## **1.0. PURPOSE AND NEED FOR ANALYSIS**

### **1.1 Purpose and Need**

This document is intended to provide the Council with information needed to form a position on how to control fishing mortality on Pacific bigeye tuna in the EPO. Management and conservation options are a shared responsibility of both domestic and international fisheries management entities, and thus the requirement to reduce fishing mortality will dictate that the United States find an appropriate balance between protecting the resource and achieving sustainable utilization of the resource within its straddling jurisdictions. Once the Council approves a strategy to reduce fishing mortality it will be presented to the U.S. delegation for consideration by the IATTC. Any new conservation and management measures adopted by the IATTC, as a result of its June 2006 meeting will be implemented domestically.

After consideration of this document, the Council will determine its preferred strategy for the conservation and management of bigeye tuna in the EPO. In the event that regulatory action is considered, the Council will direct the preparation of a management document for public review, including environmental analysis consistent with the National Environmental Policy Act (NEPA). This will ensure adequate consideration of the impacts of a broad range of alternatives as the Council formulates



recommendations.

## **1.2 History of Action**

NOAA's National Marine Fisheries Service (NMFS) notified the Council that it must take action to address overfishing of bigeye tuna by June 14, 2005. A similar notification was given to the Western Pacific Fishery Management Council. At the June 2005 meeting, the Council moved to begin work on Amendment 1 to the FMP for U.S. West Coast Fisheries for HMS as the proper response to address this issue. NMFS Southwest Region agreed to take lead responsibility on developing the amendment package for Council consideration. At its November 2005 meeting, the Council was to have adopted a preliminary range of alternatives for public review. However, because of time constraints at that meeting, the agenda item was deferred for a future meeting. This has also allowed NMFS staff, who initiated the preparation of an environmental assessment (EA) containing the alternatives and analysis of them, to provide a more complete document for the Council to review.

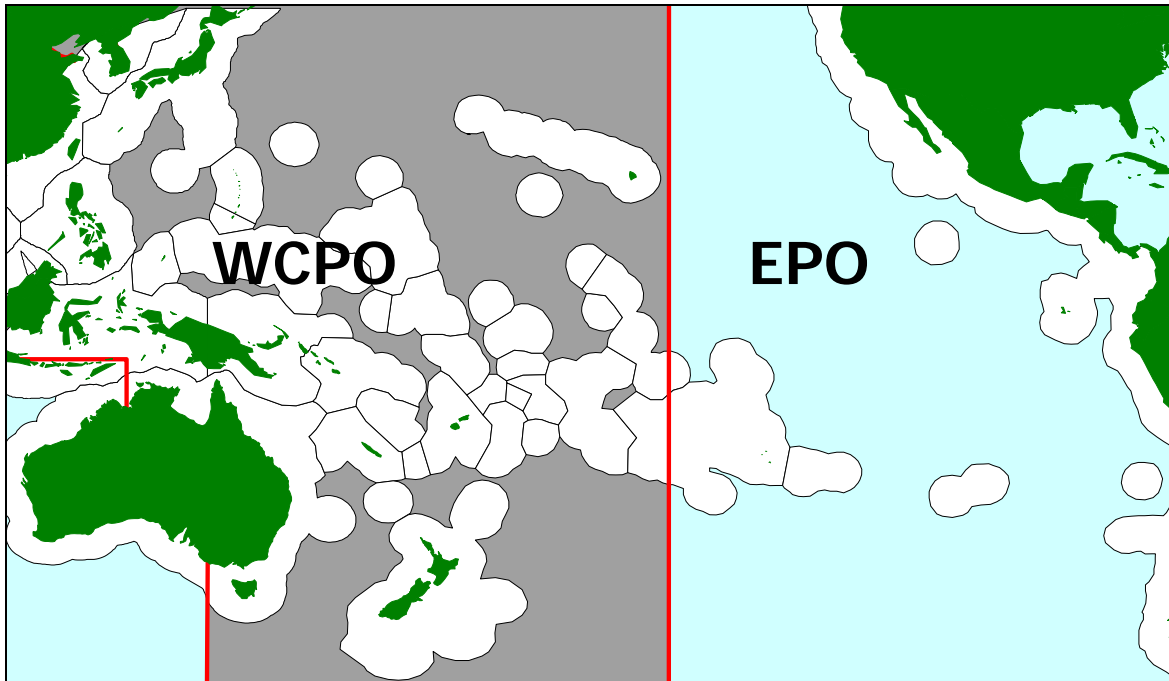
Shortly after NMFS staff began the development of the EA, it was determined that no regulatory action would result from an amendment since future actions are dependent on conservation and management measures adopted internationally. Therefore, at this juncture, a management options analysis for the development of a West Coast position on how to control fishing mortality on Pacific bigeye tuna in the eastern Pacific is a more relevant approach than is an environmental effects analysis of proposed conservation and management measures. The management options analysis will provide the Council with the information needed to form a position, which has the potential to influence any new conservation and management decisions adopted by the relevant international bodies governing bigeye tuna stocks in the eastern Pacific, in future years.

## **1.3 Current Management Controls**

Primary management of Pacific bigeye tuna occurs internationally by the IATTC in the EPO and by the Convention on the Conservation and Management of Highly Migratory Fish Stocks in the Western and Central Pacific Ocean (WCPFC). The IATTC was established by international convention in 1950 and is responsible for the conservation and management of tuna fisheries and other species taken by tuna fishing activity in the EPO. The organization consists of a Commission in which each member country may be represented by up to four commissioners and a Director of Investigations, or the Director who is responsible for drafting research programs, budgets, administrative support, directing technical staff, coordination with other organizations and preparing reports to the Commission.

Staff scientists at the IATTC coordinate and conduct research, observer programs, and the collection, compilation, analysis and dissemination of fishery data and scientific findings. The work of the IATTC research staff is divided into two main groups: The IATTC Tuna-Billfish Program and the IATTC Tuna-Dolphin Program. Current membership of the IATTC includes Costa Rica, Ecuador, El Salvador, France, Guatemala, Japan, Mexico, Nicaragua, Panama, Peru, Spain, USA, Vanuatu, Venezuela, and Korea. Canada, China, the European Union, Honduras, and Chinese Taipei are Cooperating Non Parties or Cooperating Fishing Entities.

On September 5, 2000, the WCPFC was adopted. The Convention, which is subject to ratification, establishes a Commission that would adopt management measures for HMS throughout their ranges. The U.S. has yet to deposit its instrument of ratification of the Convention, but is participating as a cooperating non-member. Both Commissions affect West Coast-based HMS fisheries. Figure 1 illustrates the geographical delineation of the WCPO and the EPO.



**Figure 1. The geographical delineation of the Western and Central Pacific from the Eastern Pacific Ocean for statistical purposes.**

The West Coast HMS FMP provides a management context to carry out recommendations of the IATTC. In particular and of interest to the FMP, regulations are in place to collect data on vessels harvesting HMS in the Convention Area, with the intent of assisting the IATTC in monitoring international fisheries as well as enforcing conservation measures. The vessels register system is also intended to assist the Council in monitoring West Coast based HMS fisheries north Pacific albacore, yellowfin, bigeye, skipjack, Pacific bluefin, common thresher shark, pelagic thresher, bigeye thresher, shortfin mako, blue shark, striped marlin, Pacific swordfish and dolphinfish.

In June of 2004, the IATTC adopted Resolution C-04-09 on Tuna Conservation Measures. The resolution established a multi-annual program to protect tuna in the EPO for years 2004 through 2006. The resolution includes conservation measures for yellowfin, bigeye, and skipjack tunas. Purse seine vessels fishing in the EPO are affected by these conservation measures. The conservation resolution includes a national choice of one of two possible six week closures of the Convention Area. The possible choices are either a six-week closure in the summer or winter. Longline vessels fishing for bigeye tuna will be restricted to a national catch not to exceed their national catch for the year 2001. The 2004 conservation resolution introduced a precedent-setting multi-year management framework with a review of the stock(s) response in 2005 and 2006. The multi-annual plan allows the industry to plan and minimize economic impacts. Pole-and-line and sportfishing vessels are not subject to this resolution. Also, members of the IATTC agreed to compliance measure prohibiting landings, transshipments, and commercial transactions involving tunas caught in contravention of the conservation measures in this resolution.

#### **1.4 Management Option Process**

**March 2006 Council Meeting:** Management Options for a West Coast Strategy to Address Overfishing of Bigeye Tuna in the Eastern Pacific Ocean document goes out for Council and public review. At this time the Council reports on its preferred management option.

**April 2006 Council Meeting:** Report on Public Comment.

**April 2006 – May 15<sup>th</sup> 2006:** Finalize document.

**May 16<sup>th</sup>:** Submission to the GAC for their review, contemplation, and consideration as an agenda item for their June 1<sup>st</sup> meeting.

The expectation here is that the GAC will embrace the Council's preferred strategy in part or whole as a part of their strategy and advice to the U.S. Section of the IATTC, which meets in late June to discuss future management options for bigeye tuna.

**June 1<sup>st</sup> 2006:** 5<sup>th</sup> meeting of the GAC.

**June 22 – 30<sup>th</sup> 2006:** IATTC meeting in Korea. Any new multi-year resolution adopted would need to be implemented via the Tuna Conventions Act or with an amendment to the West Coast HMS FMP.

## **2.0 SUMMARY OF THE MANAGEMENT OPTIONS**

### **2.1 Management Objective**

The Council will choose a strategy for the establishment of a West Coast position to end overfishing of bigeye tuna in the EPO. The strategy should include measures that meet requirements to end overfishing contained in the MSA as well as meet international obligations. Conservation and management measures to explore include time/area closures for fishing effort in the EPO; limits on mortality of juvenile bigeye associated with fishing on floating objects; and finally, if successful, the United States would then implement the IATTC program for bigeye tuna through quotas and/or time/area closures.

As specified in the West Coast HMS FMP, the Council has the option to provide analysis and documentation to NMFS and the Department of State supporting its recommendation for action under any new international agreement to end or prevent overfishing (Ch. 8, Pg. 4). It is expected that the Department of State and U.S. delegation, in coordination with NMFS, will consider the Council's preferred management option in developing U.S. positions for presentation to the IATTC, and will keep the Council informed of actions by the IATTC to end or prevent overfishing. These actions will be taken into account by the Council in completing its rebuilding plan, and in developing its recommendation to NMFS as to what additional U.S. regulations, if any, may be necessary to end or prevent overfishing. The Council's rebuilding plan will reflect traditional participation in the fishery, relative to other nations, by fishers of the United States, consistent with Section 304(e)(4)(C) of the Magnuson-Stevens Act, 16 U.S.C. §1854(e)(4)(C).

### **2.2 Description of Vessels/fleets Utilizing Tuna Fisheries in the EPO**

Within the IATTC, the usage of "fleet" describes a Nation's fleet. For each nation Party to the IATTC, a fleet consists of all of that nation's vessels no matter the size or gear type. Thus far, within specific resolutions longline and purse seine vessels are defined for the tuna fisheries. The IATTC does maintain a record of each nation's fleet fishing for tropical tunas, such as bigeye. Table 1 summarizes information about national purse seine fleets.

**Table 1. Active purse seine vessels targeting tropical tuna in the EPO (IATTC, 2006).**

| <b>Nation</b> | <b># of vessels</b> | <b>Range of Length (m)</b> |
|---------------|---------------------|----------------------------|
| Bolivia       | 1                   | 32.9                       |
| Columbia      | 12                  | 32.9 - 74.7 m              |
| Ecuador       | 89                  | 16.2 – 78.0 m              |
| El Salvador   | 5                   | 50.3 – 91.9 m              |
| Guatemala     | 3                   | 66.1 – 77.3 m              |
| Honduras      | 4                   | 51.6 -62.7                 |
| Mexico        | 73                  | 25.0 – 79.9                |
| Nicaragua     | 6                   | 52.3 – 69.0                |
| Panama        | 26                  | 35.7 – 116.0               |
| Spain         | 3                   | 72.6 – 105.0               |
| United States | 3                   | 22.3 – 65.2                |
| Vanuatu       | 2                   | 56.5 – 69.2                |
| Venezuela     | 21                  | 59.1 – 107.5               |

Additionally the IATTC adopted Resolution C-03-07 which established in 2003 a requirement to maintain a list of longline fishing vessels larger than 24 meters overall length (i.e., large-scale tuna longline fishing vessels or “the LSTLFV List”). For the purposes of this resolution, LSTLFVs not included in the LSTLFV Record are deemed not to be authorized to fish for, retain on board, transship or land tuna and tuna-like species in the eastern Pacific Ocean (EPO). Also, the initial LSTLFV List consists of the LSTLFVs of IATTC Parties, cooperating non-Parties, entities, fishing entities or regional economic integration organizations (collectively "CPCs") on the IATTC Regional Vessel Register. The LSTLFV List shall include the following information for each vessel:

1. Name of vessel, registration number, previous names (if known), and port of registry;
2. A photograph of the vessel showing its registration number; and
3. Previous flag (if known and if any);

Table 2 is a summary of the LSTLFVs targeting tropical tunas in the EPO.

**Table 2. Active large longline vessels targeting tropical tuna in the EPO (IATTC, 2006).**

| <b>Nation</b>  | <b># of Vessels</b> | <b>Range in Length (m)</b> |
|----------------|---------------------|----------------------------|
| China          | 89                  | 35.1 – 50.8                |
| Chinese Taipei | 138                 | 27.3 – 59.2                |
| Costa Rica     | 11                  | 24.0 – 27.0                |
| Ecuador        | 21                  | 24.0 – 55.2                |
| France         | 14                  | 24.8 – 33.2                |
| Honduras       | 4                   | 32.8 – 44.2                |
| Japan          | 530                 | 30.0 – 57.0                |
| Korea          | 202                 | 39.0 – 49.9                |
| Mexico         | 9                   | 24.4 – 46.8                |
| Nicaragua      | 1                   | 24.0                       |
| Panama         | 77                  | 24.0 – 91.5                |
| Peru           | 1                   | 55.6                       |
| Spain          | 107                 | 25.7 – 49.0                |
| United States  | 25                  | 24.0 – 50.7                |
| Vanuatu        | 48                  | 37.5 – 53.5                |

## 2.3 Management Option 1 (No Action)

NMFS and the Council would not develop and implement controls necessary to end overfishing by Pacific-wide fishermen, nor submit comments or actively participate in the development of input and recommendations on the conservation and management of Pacific bigeye to the U.S. delegation to the IATTC.

**Comments and Considerations:** IATTC staff scientists determined that under the current exploitation patterns, and assuming recruitment at recent average levels, yields of bigeye tuna are expected to decline in the near future to levels below the average maximum sustainable yield, potentially leading to an overfished condition.

### *Impact Summary*

By implementing the no action management option (i.e. failure to implement measures that end overfishing) it is likely that a continued decline in Pacific bigeye stocks would result. If the Council chooses management option 1 as their strategy (no action), the stock could become overfished. Additionally, no action would be contrary to requirements in international agreements and to requirements of the MSA.

## 2.4 Management Option 2

The impact of purse seine and longline fisheries on Pacific bigeye is considered to be highly significant. An analysis by IATTC scientists suggests that the initial declines in stock biomass were caused by longline fishing, but accelerated declines since 2000 are mainly attributable to floating-object-based purse seine fishing. Under a current model, Spawning Biomass Ratio (SBR) levels are predicted to remain at very low levels for many years unless fishing mortality is significantly reduced or recruitment increases for several years.

IATTC scientists suggest large (50%) reductions in bigeye effort from the purse-seine fishery to allow the stock to rebuild towards the AMSY level in ten years. According to IATTC scientists, restrictions applied to a single fishery (e.g. longline or purse-seine), particularly restrictions on longline fisheries, are predicted to be insufficient to allow the stock to rebuild to levels that will support the AMSY. Therefore restrictions on both longline and purse-seine fisheries are necessary to rebuild the stock to the AMSY level in ten years. Simulations suggest that the restrictions imposed by the 2003 Resolution on the Conservation of Tuna in the EPO will not be sufficient to rebuild the stock.

IATTC scientists suggested a combination of the following management options as a means to rebuild the stock.

### 1) **Closure of the purse seine fishery in the EPO for six consecutive weeks.**

**Comments and Considerations:** The current resolution adopted by the IATTC allows member nations to choose between two different consecutive six week periods to close their purse seine fishery in the Convention Area. The closure dates begin either August 1, 2004, or November 20, 2004. The closure is intended to target fishing activity that results in high catches of juvenile tuna, and thus the closure should result in improved yields from the stock in subsequent years.

### 2) **Reduce the purse seine fishing effort on Pacific bigeye by 50 percent in 2007, and possibly beyond, with one or more of the following management options:**

- a) Close the purse seine fishery for six consecutive months in the area between 8°N and 10°S west of 95°W (this closure would not be intended to occur simultaneously with the two month EPO closure in (1)); and/or
- b) Close the purse seine fishery on floating objects for six consecutive months in the area west of 95°W (this closure is not intended to occur simultaneously with the two month EPO closure); and/or
- c) Limit the total annual catch of bigeye by each purse seine vessel that is required to carry an observer to 500 metric tons, estimated either by the observer or, at the request of the fishing vessels Captain, by scientific sampling of the vessel's catch conducted by IATTC staff at the time of unloading. If this latter option is chosen, the vessel would be responsible for the costs of the sampling.

**Comments and Considerations:** Management Option 2 contains recommendations by IATTC scientist who have indicated that large (50%) reductions in effort (on bigeye tuna) from the purse-seine fishery will allow the stock to rebuild towards the average maximum sustainable yield (AMSY) level, but restrictions on both longline and purse-seine fisheries will be necessary to rebuild the stock to the AMSY level in ten years. Simulations suggest that the restrictions imposed by the 2003 Resolution on the Conservation of Tuna in the EPO will not be sufficient to rebuild the stock. Projections indicate that, if fishing mortality rates continue at their recent (2002 and 2003) levels, longline catches and spawning biomass ratio will decrease to extremely low levels.

The particular closure contained in option (a) above is due to the high percentage of juvenile bigeye known to occur in that area and (b) is an area where a large amount of bigeye associated with floating objects are caught. Closing these areas will reduce bigeye tuna mortality.

As Table 3 illustrates, four major fleets are contributing to the majority of the longline catch in the EPO. Fishing mortality from the U.S. and other smaller fleets are an insignificant fraction of the total catch. Also, the U.S. longline fleet does not have freezers, such as those used in the lucrative Japanese sashimi market. Japanese vessels are equipped to fish at sea for many months and are not limited by having to return to port to offload fresh, iced bigeye. The fishing power of the large Asian fleets is thus enhanced by the use of vessels containing freezing capabilities.

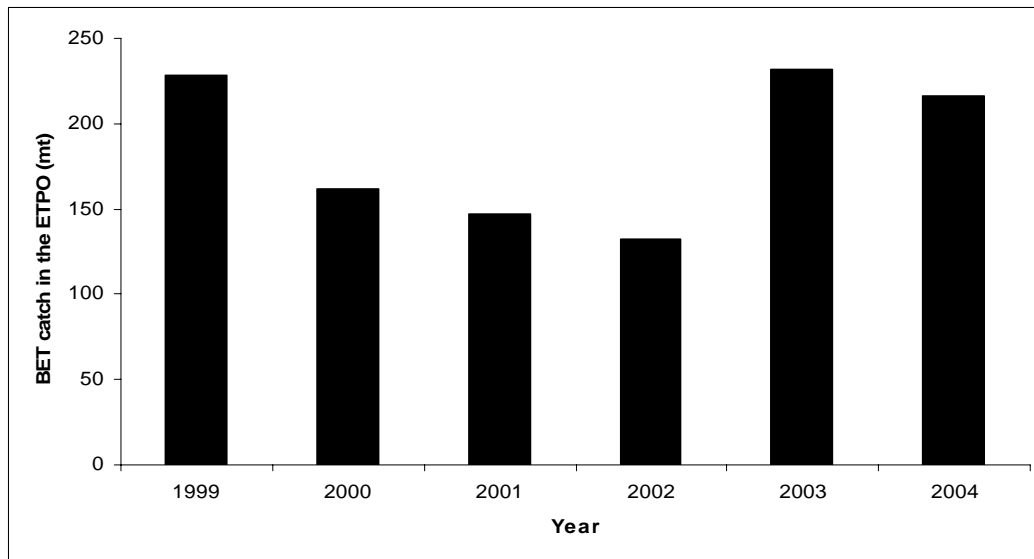
### 3) **Reduce longline catches in the EPO to 1999 levels.**

**Comments and Considerations:** Capping bigeye catches at the 1999 level would significantly reduce the volume of longline bigeye by 40-50% of present catches (see Figure 2). This would achieve significant conservation benefits to the stock. Additionally, the current bigeye quota set for U.S. vessels comes from the year 2001, which was a year when the U.S. catch level was at a lower than average, due to litigation and management measures regarding sea turtle conservation.

### *Impact Summary*

*Impacts on target and non-target stocks:* As discussed previously, West Coast fisheries for bigeye tuna are small compared to other fishing nations and often are not a main target species. If management option 2 were adopted as part of the U.S. position to reduce fishing mortality of bigeye tuna, domestic fishing mortality on bigeye could be reduced through regulatory controls, such as time/area closures. Additional controls on domestic fisheries for bigeye tuna would reduce future impacts to bigeye in the EPO; however, this action may overly burden U.S. fishermen that have a relatively minor role in bigeye tuna fishing mortality.

**Figure 2. Annual catch of bigeye tuna in the EPO by U.S. (Hawaii & California-based) vessels (Source: NMFS PIFSC)**



Because bigeye landings by West Coast fisheries are so small relative to Pacific-wide fishing nations, none of the regulatory controls considered here would be anticipated to have measurable impacts on bigeye stocks. Similarly, because landings of all non-target species are small relative to Pacific-wide landings, and options are not expected to adversely affect the catches of any of these fisheries, they are not anticipated to result in measurable impacts on non-target stocks.

### *Impact Summary*

*Impacts on marine habitat:* Purse seine and longline fisheries operations do not involve contact with the seabed, and because measures under management option 2 are not expected to alter these fishing operations, no adverse impacts on marine habitat are anticipated.

*Impacts on biodiversity and ecosystem functions:* The overall West Coast catch of bigeye tuna is less than 1 percent of the total Pacific-wide catch, thus adverse impacts to the tropical and subtropical pelagic ecosystems and biodiversity are not expected to occur.

*Impacts to public health and safety:* None of the measures contained in management option 2 are expected to require participants to fish in ways noticeably outside of historical patterns, and thus no impacts on public health and safety are anticipated.

*Impacts on fishery participants and fishing communities:* Anticipated impacts to affected participants would vary widely according to the severity of any new fishery management reduction in quota or fishing opportunities. However, because West Coast bigeye tuna fishery participants are not highly dependent on bigeye for a majority of their landings the effects of any fishing restrictions could potentially be offset over time with increased landings of other species.

If management option 2 were adopted it would provide for the sustained participation of fishing communities by helping to ensure the long-term availability of bigeye tuna, on the other hand there would likely be a short-term reduction in economic benefits from the fisheries until the stock recovers.

*Impacts on data collection and monitoring:* Under this management option no new data collection or monitoring requirements are required.

## 2.5 Management Option 3

Management Option 3 would include all management options contained in alternative 2, plus would exempt fleets<sup>1</sup> that catch 1 percent or less of the total Pacific bigeye tuna landings in the EPO and establish an annual international fishing quota (total allowable catch) of which the amount is to be divided among all nations in the EPO fishing on the stock. Each nation's quota would be based on historical effort. Additionally, this option would explore possible minimum size limitations on juvenile bigeye.

**Comments and Considerations:** Table 3 shows that the main contribution to EPO longline bigeye catches are made by fleets from China, Japan, Korea and Taiwan. Catches by these Asian fleets are two orders of magnitude larger than U.S. vessels landing bigeye. Catches by other South American longline fleets are comparable to the U.S. landings. Measures directed at the smaller fleets would have little conservation effect on bigeye stocks in the EPO, while at the same time incurring administrative costs that likely exceed the value of the small volume of bigeye landed.

**Table 3. EPO longline catches of bigeye tuna (mt) (IATTC, 2005).**

| Year                    | Japan   | South Korea | Taiwan | China  | Other fleets | USA   | Total   |
|-------------------------|---------|-------------|--------|--------|--------------|-------|---------|
| 1999                    | 22,224  | 9,431       | 910    | 660    | 961          | 228   | 34,414  |
| 2000                    | 27,929  | 13,280      | 5,214  | 1,320  | 3,719        | 162   | 51,624  |
| 2001                    | 37,493  | 12,576      | 7,953  | 2,639  | 4,169        | 147   | 64,977  |
| 2002                    | 33,794  | 10,358      | 16,692 | 7,351  | 3,597        | 132   | 71,924  |
| 2003                    | 20,517  | 10,272      | 12,501 | 10,065 | 1,292        | 232   | 54,879  |
| <b>Total</b>            | 141,957 | 55,917      | 43,270 | 22,035 | 13,738       | 901   | 277,818 |
| <b>Percent of total</b> | 51.1%   | 15.57%      | 20.13% | 7.93%  | 0.32%        | 4.94% | 100%    |

### *Impact Summary*

*Impacts on target and non-target stocks:* See Management Option 2 *Comments and Considerations*. Additionally, any measure that imposes minimum size limits on bigeye could potentially have a positive impact on the population by reducing fishing mortality on juvenile species. Management option 3 would also consider minimum size regulations on juvenile bigeye, which would prevent fishing nations from retaining and/or landing fish below a determined minimum size. Minimum size regulations are intended to conserve juvenile fish in three ways. First, prohibition on landing and/or sale prevents development of

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<sup>1</sup> The IATTC does not define a fleet, but rather leaves it up to individual nations to impose their own fleet restrictions on a domestic basis. The current IATTC resolution applicable in 2004, 2005 and 2006 simply applies to "purse-seine vessels" fishing for yellowfin, bigeye, and skipjack tunas, and to "longline vessels." Pole-and-line and sportfishing vessels are not subject to this resolution.



a commercial market for small fish, thereby discouraging fishermen from targeting them. Secondly, some of the small fish that are discarded will survive and mature to reproduce and contribute to the stock biomass. Third, a minimum size results in fewer fish being retained per mt than would be otherwise. However, to the extent that fishermen cannot control the size composition of the fish they catch, minimum sizes can result in significant discards of undersized fish. The objective to minimize bycatch and bycatch mortality, and the requirement to end overfishing should be considered when evaluating this management option.

Overall, greater restrictions on purse seine FAD fishing combined with minimum size limits would likely have a measurable beneficial impact on bigeye tuna conservation.

*Impacts on marine habitat: See Management Option 2 Comments and Considerations.*

*Impacts on biodiversity and ecosystem function: See Management Option 2 Comments and Considerations.*

*Impacts on public health and safety: See Management Option 2 Comments and Considerations.*

*Impacts of fishery participants and fishing communities: See Management Option 2 Comments and Considerations.* Additionally, if fleets that catch 1 percent or less of the total Pacific bigeye tuna in the EPO are exempted then the focus of management and conservation would be on the fisheries with the greatest impacts and on the regions of highest catches. An exemption recognizes the need to avoid overly burdening those fleets and countries which are peripheral in generating fishing mortality for bigeye tuna.

*Impacts on data collection and monitoring: See Management Option 2 Comments and Considerations.*

## **2.6 Management Option 4**

Same as Management option 3 plus either use the existing control date or re-establish a more current control date to notify present and potential participants that a limited entry and/or another management program may be considered by the Council for West Coast fisheries in the EPO so as to avoid excess capacity.

**Comments and Discussion:** See Management Option 2 Comments and Discussion.

This control date would not bind the Council to establishing limited access or other management programs for these fisheries, but it would notify current and prospective fishery participants that additional management measures may be taken by the Council for these fisheries. The implementation of a control date would be in recognition of the fact that unlimited expansion of purse seining and longline fishing is untenable with the conservation of bigeye tuna.

## **2.7 Management Option 5**

Close all fisheries under the Council's jurisdiction that target Pacific bigeye tuna in the EPO.

**Comments and Discussions:** Closure of all fisheries under the Council's jurisdiction that catch bigeye tuna in the EPO would appear to address the contribution to overfishing from U.S. vessels in the eastern Pacific. However, this unilateral action would place an unfair burden on U.S. fishermen by threatening their livelihoods without any significant impact on reducing bigeye fishing mortality. This would not be consistent with the Council objective of addressing overfishing in a cost-effective and equitable manner and for that reason this alternative was not analyzed in detail.

## **2.8 Management Option 6**

The Pacific Council adopts recommendations for international fisheries consistent with those described in Western Pacific Fishery Management Council's Pelagics FMP Amendment 14 as their Pacific-wide response to bigeye tuna overfishing. These recommendations could be adopted in addition to any adopted under options 2-4

**Comments and Discussions:** For additional details on Pelagics FMP Amendment 14 see Agenda Item G.1.a, Attachment 2, April 2006.

Amendment 14 creates a mechanism and a timetable for the Council to review the status of stocks, to consider and advise on impending RFMO actions, to deliberate on the Council's own proposals for conservation and management, to inform NMFS and the Department of State about the Council's positions and concerns, to participate in international meetings, and to apply their expertise in the subsequent implementation of any resultant agreements.

### **Specific recommendations for the Western and Central Pacific Ocean include:**

- a) Short term: cap and roll back fishing effort (e.g. number of vessels) to 1999 levels)
- b) Long term: reduce levels of fishing mortality to sustainable levels. If quotas are established they should transferable within countries.
- c) Require that fish aggregating devices used by purse seiners be registered and limited in number.
- d) Give consideration to allow for the development of emerging Pacific Island fisheries.

Recommendations a-c are concerned with reducing fishing effort and hence fishing mortality. Given the volume of overfishing on bigeye and yellowfin tunas, it is unlikely that wholesale reductions in the order described above can be achieved in the short term, hence the need, as outlined in a, to establish a reasonable short term target to ensure that overfishing on bigeye and yellowfin tuna does not increase by unconstrained expansion of fishing. This should be followed by sustained reduction in fishing for bigeye, likely through attrition of fleets, although mindful that some expansion of fishing is also likely by emergent fishing nations in the Pacific Islands. As noted earlier, the use of FADs by purse seiners targeting skipjack is known to be a significant contribution to bigeye fishing mortality, especially on juvenile bigeye and yellowfin. Restricting FAD use will therefore have significant reduction of fishing mortality on the bigeye and yellowfin stock as a whole. Allowing for expansion of emerging Pacific Islands fisheries appears to be at odds with the overall conservation objectives that need to be adopted for bigeye and yellowfin tuna. However, the text of the convention establishing the WCPFC explicitly recognizes the aspirations of the Pacific Islands to participate in tuna fisheries, rather than simply be resource owners. Balancing these aspirations and the expansion of Pacific Island fisheries (which is already happening) will be difficult challenge for the new Commission. However, it may be possible to match this expansion with controlling the additional deployment of FADs to minimize the volumes of juvenile bigeye and yellow tuna catch.

The Council recommendations regarding quotas include a provision that would allow quotas to be transferred within countries between fishing vessels or fleets, this allows countries to implement and allocate their quotas according to domestic objectives and conditions.

### **Specific recommendations for the Eastern Pacific Ocean include:**

- a) Set EPO bigeye tuna longline catch quotas at 1999 levels.
- b) Exempt fleets that take less than 1 percent of the total bigeye tuna catch in the EPO.
- c) Exempt fleets that catch less than 550 mt of bigeye tuna annually in the EPO.
- d) Provide the U.S. longline fleet with a quota of 250 mt of EPO bigeye tuna.
- e) All recommendations include a provision in whatever management measures are adopted to permit the landing of a small volume of bigeye (e.g. 20-25 fish) when quotas are exceeded to minimize bycatch and waste by longliners not targeting bigeye. They also include a provision that whatever management measures are adapted should incorporate flexibility for nations to administer the longline quota in accordance with national legislation and sovereignty. This will allow the Council to apply their expertise to the allocation and implementation of domestic quotas as they apply to vessels operating under or in the Council's management authority.

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## Appendix B: IATTC Resolution C-06-02

C-06-02 Conservation of tunas 2007

INTER-AMERICAN TROPICAL TUNA COMMISSION

### 74<sup>TH</sup> MEETING

BUSAN (KOREA)  
26-30 JUNE 2006

### RESOLUTION C-06-02

#### RESOLUTION FOR A PROGRAM ON THE CONSERVATION OF TUNA IN THE EASTERN PACIFIC OCEAN FOR 2007

*The Inter-American Tropical Tuna Commission (IATTC):*

*Recognizing* that, based on past experience in the fishery, the potential production from the resource can be reduced by excessive fishing effort;

*Recalling* the Resolution C-04-09 for a Multi-Annual Program on the Conservation of Tuna in the Eastern Pacific Ocean for 2004, 2005 and 2006;

*Taking into account* the best scientific information available, as reflected in the recommendation of the staff and the report of the meeting of the Working Group on Stock Assessments in May 2006;

*Considering* that the studies of yellowfin and bigeye tuna presented at this meeting show that bigeye stocks are below the level that would produce the average maximum sustainable yield (AMSY) and that yellowfin stocks will decline below the AMSY level unless additional management measures are applied; and

*Recognizing the importance of* urging the Western and Central Pacific Fisheries Commission to adopt appropriate measures to conserve the tuna stocks in that region;

*Resolves as follows:*

1. That this resolution is applicable in 2007 to purse-seine vessels fishing for yellowfin, bigeye, and skipjack tunas, and to longline vessels.
2. Pole-and-line and sportfishing vessels are not subject to this resolution.
3. That the fishery for tunas by purse seine vessels in the EPO, defined as the area bounded by the coastline of the Americas, the 40°N parallel, the 150°W meridian, and the 40°S parallel, shall for 2007 be closed from either (1) 0000 hours on 1 August to 2400 hours on 11 September; or (2) from 0000 hours on 20 November to 2400 hours on 31 December.
4. Each IATTC Party, cooperating non-party, fishing entity or regional economic integration organization (collectively "CPCs") shall for each year concerned, choose which of the two specified periods will be closed to purse-seine fishing by all of its vessels, and notify the Director by 15 July. All the vessels of a national fleet must stop purse-seine fishing during the period selected.
5. Every vessel that fishes in 2007, regardless of the flag under which it operates or whether it changes flag during the year, must observe the closure period to which it committed on 15 July of each year.
6. To prohibit landings, transshipments and commercial transactions in tuna or tuna products that have been positively identified as originating from fishing activities that contravene this resolution. The Director may provide relevant information to the Parties to assist them in this regard. The Commission shall develop transparent and non-discriminatory criteria and procedures to adopt trade restrictive measures consistent with international law and the provisions of the World Trade Organization to promote compliance in the EPO.
7. Each CPCs shall, for purse seine fisheries:

## C-06-02 Conservation of tunas 2007

- 7.1. No later than 45 days before the date of entry into force of a closure:
- 7.1.1. take the legal and administrative measures necessary to implement the closure;
  - 7.1.2. inform all interested parties in its national tuna industry of the closure;
  - 7.1.3. inform the Director that these steps have been taken.
- 7.2. Ensure that at the time the closures begins, and for the entire duration of the closures, all purse-seine vessels fishing for yellowfin, bigeye and skipjack tunas flying its flag in the EPO are in port, except that vessels carrying an observer from the AIDCP On-Board Observer Program may remain at sea provided they do not fish in the EPO. The only other exception to this provision shall be that vessels carrying an observer from the AIDCP On-Board Observer Program may leave port during the closure, provided they do not fish in the EPO.
8. China, Japan, Korea, and Chinese Taipei, shall take the measures necessary to ensure that their total annual longline catch of bigeye tuna in the EPO during 2007 will not exceed the following catch levels.

|                |                    |
|----------------|--------------------|
| China          | 2,639 metric tons  |
| Japan          | 34,076 metric tons |
| Korea          | 12,576 metric tons |
| Chinese Taipei | 7,953 metric tons  |

- Other CPCs shall take the measures necessary to ensure that their total annual longline catch of bigeye tuna in the EPO during 2007 will not exceed 500 metric tons or their respective 2001 catch levels, whichever is higher.<sup>1</sup> CPCs whose annual catches have exceeded 500 metric tons shall provide monthly catch reports to the Director.
9. The IATTC Scientific Working Group will analyze, in 2007, the effect of these measures on the stocks, and will propose, if necessary, appropriate measures to the Commission to be applied in 2008 and thereafter for its consideration.
10. Each CPC shall comply with this resolution.
11. This resolution replaces Resolution C-04-09.

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<sup>1</sup> The Parties acknowledge that France, as a coastal State, is developing a tuna longline fleet on behalf of its overseas territories situated in the EPO.

## Appendix C: IATTC Resolution C-04-09

INTER-AMERICAN TROPICAL TUNA COMMISSION  
COMISIÓN INTERAMERICANA DEL ATÚN TROPICAL

### 72<sup>ND</sup> MEETING

LIMA (PERU)  
14-18 JUNE 2004

### RESOLUTION C-04-09

#### RESOLUTION FOR A MULTI-ANNUAL PROGRAM ON THE CONSERVATION OF TUNA IN THE EASTERN PACIFIC OCEAN FOR 2004, 2005 AND 2006

*The Inter-American Tropical Tuna Commission (IATTC):*

*Recognizing* that, based on past experience in the fishery, the potential production from the resource can be reduced by excessive fishing effort;

*Recalling* that the *Resolution on the Conservation of Yellowfin and Bigeye Tuna in the Eastern Pacific Ocean* approved by the IATTC at its 69<sup>th</sup> meeting in Manzanillo, Mexico, encouraged states and fishing entities with large-scale tuna longline vessels (LSTLVs) to undertake initiatives similar to that of Japan, *i.e.* reduction by 20% of its fleet, in accordance with FAO International Plan of Action;

*Being aware* with grave concern that, despite the above Resolution, the catch of bigeye tuna by LSTLVs and their fishing capacity are still growing in the eastern Pacific Ocean (EPO);

*Taking into account* the best scientific information available, as reflected in the recommendation of the staff and the report of the meeting of the Working Group on Stock Assessments in May 2004; and

*Considering* that the studies of yellowfin and bigeye tuna presented at this meeting show that both stocks are at a level below that which would produce the average maximum sustainable yield (AMSY);

*Recognizing the importance of* urging the Western and Central Pacific Fisheries Commission to adopt appropriate measures to conserve the tuna stocks in that region;

*Resolves as follows:*

1. That this resolution is applicable in 2004, 2005 and 2006 to purse-seine vessels fishing for yellowfin, bigeye, and skipjack tunas, and to longline vessels.
2. Pole-and-line and sportfishing vessels are not subject to this resolution.
3. That the fishery for tunas by purse-seine vessels in the EPO, defined as the area bounded by the coastline of the Americas, the 40°N parallel, the 150°W meridian, and the 40°S parallel, shall for 2004, 2005 and 2006 be closed from either (1) 0000 hours on 1 August to 2400 hours on 11 September; or (2) from 0000 hours on 20 November to 2400 hours on 31 December.
4. Each IATTC Party, cooperating non-party, fishing entity or regional economic integration organization (collectively "CPCs") shall for each year concerned, choose which of the two specified periods will be closed to purse-seine fishing by all of its vessels, and notify the Director by 15 July. All the vessels of a national fleet must stop purse-seine fishing during the period selected.
5. Every vessel that fishes in 2004, 2005 and 2006, regardless of the flag under which it operates or whether it changes flag during the year, must observe the closure period to which it committed on 15 July of each year.
6. To prohibit landings, transshipments and commercial transactions in tuna or tuna products that have been positively identified as originating from fishing activities that contravene this resolution. The Director may provide relevant information to the Parties to assist them in this regard. The Commission shall develop transparent and non-discriminatory criteria and procedures to adopt trade

restrictive measures consistent with international law and the provisions of the World Trade Organization to promote compliance in the EPO.

7. Each CPCs shall, for purse-seine fisheries:

7.1. No later than 45 days before the date of entry into force of a closure:

- 7.1.1. take the legal and administrative measures necessary to implement the closure;
- 7.1.2. inform all interested parties in its national tuna industry of the closure;
- 7.1.3. inform the Director that these steps have been taken.

7.2. For the 2004, 2005 and 2006 closures, ensure that at the time the closures begins, and for the entire duration of the closures, all purse-seine vessels fishing for yellowfin, bigeye and skipjack tunas flying its flag in the EPO are in port, except that vessels carrying an observer from the AIDCP On-Board Observer Program may remain at sea provided they do not fish in the EPO. The only other exception to this provision shall be that vessels carrying an observer from the AIDCP On-Board Observer Program may leave port during the closure, provided they do not fish in the EPO.

8. China, Japan, Korea, and Chinese Taipei, shall take the measures necessary to ensure that their total annual longline catch of bigeye tuna in the EPO during 2004, 2005 and 2006 will not exceed the following catch levels<sup>1</sup>.

|                |                    |
|----------------|--------------------|
| China          | 2,639 metric tons  |
| Japan          | 34,076 metric tons |
| Korea          | 12,576 metric tons |
| Chinese Taipei | 7,953 metric tons  |

Other CPCs shall take the measures necessary to ensure that their total annual longline catch of bigeye tuna in the EPO during 2004, 2005 and 2006 will not exceed their respective 2001 catch levels. Each CPC with LSTLVs shall provide monthly catch reports to the Director.

9. The IATTC Scientific Working Group will analyze, in 2005 and 2006, the effect of these measures on the stocks, and will propose, if necessary, appropriate measures to the Commission in 2005 and 2006 for its consideration.

10. Each CPC shall comply with this resolution.

11. This resolution replaces Resolution C-03-12.

<sup>1</sup> The Parties acknowledge that France, as a coastal State, is developing a tuna longline fleet on behalf of its overseas territories situated in the EPO.

## **Appendix D: Highly Migratory Species Management Team Report on Bigeye Tuna Overfishing Response**

Originally presented as Agenda Item G.1.c, Supplemental HMSMT Report, April 2006

The Highly Migratory Species Management Team (HMSMT) reviewed the revised “Analysis of Management Options for Development of a Plan to End Overfishing of Pacific Bigeye Tuna in the Eastern Pacific Ocean” (Agenda Item G.1.a, Attachment 1), and has identified some issues, which will likely be discussed during the Inter-American Tropical Tuna Commission (IATTC) process, that could significantly affect portions or all of the U.S. fisheries that catch bigeye tuna. The HMSMT would like to highlight the following issues for the Council’s consideration:

### **Definition of “Fleet”**

One of the primary issues for consideration is the definition of a “fleet” in the IATTC’s resolution and whether this would include all vessels fishing for one nation regardless of gear type, or if a “fleet” refers to a geographical area or a gear type (e.g., purse seine separate from longline). While the separation of areas and/or gear types may be attractive to some, especially if Option 3 is selected (which exempts “fleets” that catch < 1% of total bigeye catch), there are potential problems that may result from this approach, including: 1) Allowing other nations to subdivide their fleets—as a result, an unknown, but potentially significant, number of fleets could be “exempt” and the problem of bigeye tuna overfishing may not be adequately addressed; and 2) Limiting or capping the catch of a narrowly defined fleet (e.g., West Coast-based purse seine) may be constraining, whereas a shared cap for U.S. vessels may provide some flexibility.

### **< 1% Exemption**

The HMSMT is unsure how the 1% exemption in Option 3 could affect the U.S. fisheries, and has identified these issues:

- 1) If the U.S. claims exemption for their fleet(s), then the argument might be made that an allocation of bigeye tuna for the U.S. is not needed. This could affect the U.S. fisheries in the future, should a new stock assessment produce a higher yield and/or if overfishing is adequately addressed through other means (e.g., limited entry programs);
- 2) The cumulative effects of the exemptions need to be addressed—e.g., as listed in Table 3. in the analysis, if the U.S. longline fleet is exempt, and the individual fleets in the “other fleets” category are exempt, then there is a cumulative total of over 5% of the catch being exempt. The cumulative effect of these exemptions should be examined to ensure that bigeye tuna overfishing would still be adequately addressed;
- 3) Because effort in these fisheries is not limited, the U.S. fleets that currently meet the exemption requirements now may not meet them in the future. How this is addressed (e.g., the duration of the exemption) needs to be further explored;
- 4) If an exemption is adopted, there needs to be a clear description of the specific vessels that would be exempt and/or a control date for which the exemption is based upon (e.g., all vessels that caught bigeye tuna prior to April 2006); and



- 5) If a nation's fleet met the 1% exemption criteria, but its national cap was higher than 1% of the total catch limit, then there would be a potential to increase bigeye tuna catches, while that nation's fleet was exempt from the fishing restrictions. This would appear to conflict with the overall purpose and objective; therefore, if a nation's fleet is exempt, then it would make sense to have its cap be 1% of the total catch limit (or less, which could be based on historical or recent catch levels).

### **Increased Effort and Limited Entry**

The HMSMT notes that, while there are only three large West Coast-based purse seine vessels that catch appreciable amounts of bigeye tuna in the Eastern Pacific Ocean (EPO), there is the potential for additional West Coast-based vessels to enter the fishery, as well as 12-15 active vessels from the Western Pacific to move into the EPO. Given this potential for increased effort, the HMSMT believes it would be prudent to discuss how this will be addressed (i.e., development of a longer-term plan) in cooperation with the Western Pacific Fishery Management Council and the NMFS Pacific Islands Region.

The HMSMT is concerned that a blanket EPO seasonal closure on purse seine vessels that fish for tropical tunas may disadvantage the southern California based small purse seine fishery. This fishery relies on seasonal availability of tropical tunas (e.g., yellowfin, bluefin, skipjack) in the southern California Bight for added income and the percentage of bigeye in these seasonal catches is near zero. As there is also the potential for the West Coast small vessel purse seine fishery to incidentally encounter bigeye while targeting tropical tuna, there should be a consideration for an incidental catch allowance by these vessels, to avoid an increase in bycatch.

Also, if there are catch limits imposed, then there could be a need for increased monitoring of the fisheries and real-time catch reporting to ensure that the catch limits are not exceeded. It is not clear whether there are mechanisms and funding in place to accommodate the increased monitoring and reporting levels.

### **Target vs. Catch**

Another issue is the use of the term "target"—Tables 1. and 2. in the analysis refer to vessels "targeting tropical tuna." As fleets are defined, the regulations need to address how to determine whether a vessel is "targeting" bigeye tuna. For example, a percentage of the landing, by weight, could be used and, again, vessels that occasionally catch incidental amounts could be provided an incidental catch allowance.

### **Options and Conclusions**

With regard to the different options in the analysis, the HMSMT notes that it is unclear whether the sub-options (a, b, and c) listed in Option 2 should be considered separately (they are listed as and/or) or if they all need to be in place to address bigeye tuna overfishing. Also, it is unclear whether the same six-month period would be chosen for the area closures listed in sub-option (a) and (b), and the effects of the different configurations on the purse seine fleets.

Based on the information presented in the analysis, the HMSMT drew the following conclusions about the options:

- Option 1 (No Action) should not be considered, as it does not meet the requirements of the Magnuson-Stevens Fishery Conservation and Management Act.
- Option 2 alone may not be enough to end bigeye tuna overfishing in the EPO.

- It is unclear whether Option 3 would end bigeye tuna overfishing in the EPO and/or whether Option 3 in combination with the WPFMC action for the Western Pacific would end bigeye tuna overfishing Pacific-wide.
- Option 4 (establishing a control date) is more of a longer-term measure that could be considered following the IATTC's action.
- Option 5 (close all Pacific Council fisheries that target bigeye in the EPO) should not be considered, as it would place an unfair burden on West Coast-based fleets that catch insignificant amounts of bigeye.
- Option 6 (which includes a portion of Option 2 plus the < 1% exemption in Option 3) may not be enough to end bigeye overfishing, since Option 2 in its entirety was insufficient; however, this is not explicitly stated.

#### **HMSMT Recommendations:**

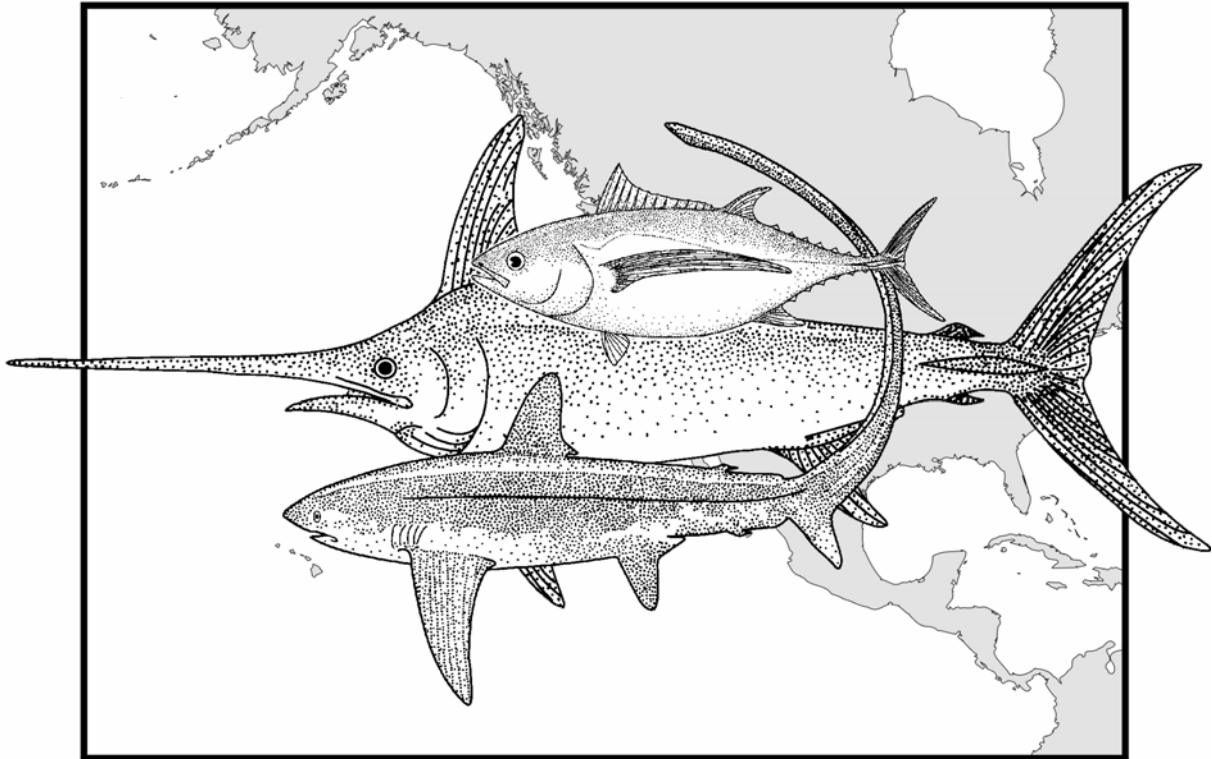
1. In all cases, support international action (as opposed to unilateral action) that would end bigeye tuna overfishing in the EPO.
2. Support a hybrid of Options 2 and 3 that would include everything in Option 2 plus the establishment of an annual international fishing quota (total allowable catch), but, at this point, would not include the exemption for fleets that caught 1% or less of the total Pacific bigeye tuna landings in the EPO. In general, the HMSMT supports the intent of exempting fleets that have had minimal impacts on an internationally managed stock; however, there is not enough information about how this would be implemented to evaluate the trade-offs associated with this exemption proposal. Because of the number of nations that target bigeye tuna and the lack of clarity about how a fleet would be defined, allowing this exemption could conflict with accomplishing the objective—that is, to end overfishing of bigeye tuna.
3. Support a definition of “fleet” that includes all of the vessels fishing under one nation, regardless of area or gear type.
4. Support an exemption for small purse seine vessels (e.g., by applying the purse seine area closures to vessels with a minimum length or size).
5. Support adoption of an incidental catch allowance for vessels that could encounter incidental amounts of bigeye tuna, such as small vessel purse seine, while targeting other tropical tunas.
6. Support Option 4 to establish a control date and develop a limited entry plan to address conservation of bigeye tuna over the longer-term. The HMSMT would then develop and analyze alternatives for limited entry for the Council's consideration.
7. Work with WPFMC and NMFS Regional Offices—Southwest Region and Pacific Island Region—to cooperatively address the overfishing of bigeye tuna Pacific-wide. Under Option 6, it is our understanding that there is the potential to add the IATTC's action to the WPFMC's Amendment 14 to address bigeye overfishing throughout the Pacific. If possible, the Pacific Council should take advantage of this opportunity so there is a comprehensive description and analysis of the actions taken in both the Western Pacific and EPO that, in combination, end overfishing of bigeye tuna.

## **Appendix E: Protocol for Making Recommendations to Regional Fishery Management Organizations (based on elements in WPFMC Pelagics FMP Amendment 14)**

- The Council participates on U.S. delegations to Regional Fishery Management Organizations (RFMOs e.g. IATTC and WCPFC) in the Pacific Ocean and is included in all pre-and-post meetings and negotiations.
- The Council and NMFS monitor RFMO meetings and actions and relevant fisheries, Council becomes aware of a need for management action or receives notice from NMFS or the RFMO directly of a need for such action, with supporting documentation.
- The Council reviews information from RFMO, NMFS, and other sources concerning stock assessment, area of consideration, fishery issues and data supporting determinations, and the role of U.S. fisheries in causing or contributing to overfishing.
- NMFS provides formal notice and time frame for Council action within MSA and RFMO frameworks.
- The Council refers information to its HMSMT, HMSAS, SSC and other advisors for review and advice with focus on:
  - Definition and condition of the stock or other fishery management unit, and the issue of concern (e.g., overfishing, bycatch, allocation, etc.),
  - Possible reasons for the situation including fishery and environmental conditions that may be relevant to the stock condition or other management concern,
  - Relative role of U.S. fisheries in overall stock harvests and management situation,
  - Existing conservation and management measures of the RFMO with jurisdiction over the stock or fishery involved,
  - Possible multi-lateral measures to avoid or end overfishing, rebuild the stock, or resolve other management concerns.
- The Council's HMSMT, HMSAS, SSC and other advisory bodies recommend possible domestic and international fishery conservation and management measures, including a comparison and evaluation of alternative measures including distinctions between Pacific-wide, regional, and local measure's effects and effectiveness.
- The Council makes initial decision on how to address problem (initial action).
- The Council distributes a draft background and action document for public review and advice.
- The Council makes formal recommendations to NMFS and the Department of State on: domestic regulations, and international actions.
- The Council drafts a position paper on how RFMOs should address the situation (the position paper should clearly and forcefully state the Council's recommendation on every substantial issue).
- The Council presents its position within the U.S. delegation to the RFMO.

- The RFMO meets and acts on fishery conservation and management needs in the international arena.
- The Council considers the RFMO's actions, U.S. government positions and requirements under applicable treaties and the MSA.
- The Council determines its appropriate regulatory response for domestic fisheries consistent with international agreements and the MSA.
- The Council takes final action (if any) to recommend regulations for NMFS' approval and implementation.
- NMFS implements approved recommendations.

# FISHERY MANAGEMENT PLAN FOR U.S. WEST COAST FISHERIES FOR HIGHLY MIGRATORY SPECIES



AS AMENDED BY AMENDMENT 1  
DRAFT

**SHOWING PROPOSED REORGANIZATION OF THE FMP**

**PACIFIC FISHERY MANAGEMENT COUNCIL**

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NOVEMBER 2006

# DRAFT

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## Preface

### Guide to Proposed Reorganization of the FMP under Amendment 1

*The Fishery Management Plan for U.S. West Coast Fisheries for Highly Migratory Species* (HMS FMP) was originally published as a combined document with the Final Environmental Impact Statement (FEIS), required by the National Environmental Policy Act in August 2003. That document contains detailed descriptions of the biological and socioeconomic environment affected by implementation of the Plan and an analysis of alternatives for implementing different components of the Plan, along with discussion of critical issues, such as stock status, protected species interactions, bycatch, and the management regime in place prior to FMP implementation.

This amendment document excerpts elements specific to the FMP, as adopted and approved, from the combined FMP/FEIS. In the process the material has been reorganized into new chapters and headings. But aside from substantive changes added to address bigeye tuna overfishing (discussed in Agenda Item C.4.a, Attachment 1, September 2006), the original FMP text has only been edited to be consistent with this reorganization. Descriptive material in the original FMP/FEIS has been moved to a series of appendices. Cross references to chapters, sections, tables and figures have been renumbered to reflect the reorganization proposed in this amendment without referencing such changes in the text. The table below allows cross reference between the original FMP/FEIS and the proposed reorganization under this amendment.

In order to aid in understanding changes to the FMP text included in the amendment, new text is indicated by underline and deleted text in otherwise included sections is indicated by ~~strikeout~~. However, for simplicity, the descriptions of non-preferred alternatives (principally found in Chapter 8 of the original FMP/FEIS) have been omitted without reference to the omission. References to a preferred alternative (such as “Alternative 2” or “this alternative”) have been replaced by “this FMP” where appropriate, also without reference to the change.

The original FMP/FEIS will remain a publicly available document. The information and analysis contained therein are a valuable resource to support future management actions and amendments to this FMP.

| Current FMP Contents                                  | Amendment 1    |
|-------------------------------------------------------|----------------|
| EXECUTIVE SUMMARY (required EIS section)              | omitted        |
| DEFINITIONS                                           | Included       |
| ACRONYMS                                              | included       |
| 1.0 INTRODUCTION                                      | 1.1            |
| 1.1 Format and Content of the EIS/FMP                 | revised as 1.2 |
| 1.2 Application of Federal Authority                  | 1.3            |
| 1.3 Complexity of HMS Management                      | 1.4            |
| 1.4 History of the Fishery Management Plan            | 1.5            |
| 1.5 Purpose and Need for FMP (required EIS section)   | 1.1            |
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| 1.6.8 Treaty Indian Fishing Rights                    | 1.6.8          |

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| 1.7 Scoping                                                                              | omitted            |
| 1.8 List of Preparers (required EIS section)                                             | omitted            |
| 1.9 Public Review Process and Schedule                                                   | omitted            |
| 1.10 Agencies and Organizations Consulted (required EIS section)                         | omitted            |
| 1.11 Literature Cited                                                                    | *                  |
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| 4.2.1.2 Identifying EFH of Tunas, Marlin, Swordfish and Dorado                           | omitted            |
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| 4.2.1.4 Identifying Habitat Areas of Particular Concern (HAPCs)                          | omitted            |
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\*Citations in revised FMP will be included in Literature Cited.

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## **Definition of Terms as used in the HMS FMP**

### Biomass

The estimated amount, by weight, of a HMS population. The term biomass means total biomass (age one and above) unless stated otherwise.

### Bycatch

Fish that are harvested in a fishery, but are not sold or kept for personal use and includes economic discards and regulatory discards. Such term does not include fish released alive under a recreational catch-and-release fishery management program.

### California Bight

The region of concave coastline off southern California between the headland at Point Conception and the U.S. Mexican border, and encompassing various islands, shallow banks, basins and troughs extending from the coast roughly 200 km offshore.

### Commercial fishing

Fishing in which the fish harvested, either in whole or in part, are intended to enter commerce through sale, barter, or trade.

### Council

The Pacific Fishery Management Council, including its HMSMT, HMSAS, SSC, and any other committee established by the Council.

### Epipelagic

The vertical habitat within the upper water column from the surface to depths generally not exceeding approximately 200 m (0-109 fm), i.e. above the mesopelagic zone.

### Essential fish habitat

Those waters and substrate necessary to fish for spawning, breeding, feeding, or growth to maturity.

### Exclusive economic zone

The zone established by Presidential Proclamation 5030, 3 CFR part 22, dated March 10, 1983, and is that area adjacent to the United States which, except where modified to accommodate international boundaries, encompasses all waters from the seaward boundary of each of the coastal states to a line on which each point is 200 nautical miles (370.40 km) from the baseline from which the territorial sea of the United States is measured. Off the West Coast states, the EEZ is the area between 3 and 200 miles offshore.

### Far offshore

All waters beyond the EEZ of the United States and beyond any foreign nation's EEZ, to the extent that such EEZ is recognized by the United States.

### Fishery Management Area

The EEZ off the coasts of Washington, Oregon, and California between three and 200 nautical miles offshore, bounded in the north by the Provisional International Boundary between the United States and Canada, and bounded in the south by the International Boundary between the United States and Mexico.

### Fishing:

- (1) the catching, taking, or harvesting of fish;
- (2) the attempted catching, taking, or harvesting of fish;
- (3) any other activity which can reasonably be expected to result in the catching, taking, or harvesting of fish; or
- (4) any operations at sea in support of, or in preparation for, any activity described above.

This term does not include any activity by a vessel conducting authorized scientific research.

Gear conflict

Any incident at sea involving one or more fishing vessels: (1) In which on fishing vessel or its gear comes into contact with another vessel or the gear of another vessel; and (2) That results in the loss of, or damage to a fishing vessel, fishing gear or catch.

Harvest guideline

A numerical harvest level or range of levels that is a general objective and is not a quota. Attainment of a harvest guideline does not require a management response, but it does prompt review of the fishery.

Harvesting vessel

A vessel involved in the attempt or actual catching, taking or harvesting of fish, or any activity that can reasonably be expected to result in the catching, taking or harvesting of fish.

Highly Migratory Species

Species managed under the HMS FMP, specifically:

Tunas:

North Pacific Albacore (*Thunnus alalunga*)

Yellowfin tuna (*Thunnus albacares*)

Bigeye tuna (*Thunnus obesus*)

Skipjack tuna (*Katsuwonus pelamis*)

Northern bluefin tuna (*Thunnus thynnus*)

Sharks:

Common thresher shark (*Alopias vulpinus*)

Pelagic thresher shark (*Alopias pelagicus*)

Bigeye thresher shark (*Alopias superciliosus*)

Shortfin mako shark (*Isurus oxyrinchus*)

Blue shark (*Prionace glauca*)

Billfish/Swordfish:

Striped marlin (*Tetrapturus audax*)

Swordfish (*Xiphias gladius*)

Other:

Dorado or Dolphinfish (*Coryphaena hippurus*)

Highly Migratory Species Advisory Subpanel (HMSAS)

The HMSAS is comprised of members of the fishing industry and public appointed by the Council to review proposed actions for managing the highly migratory species fisheries.

Highly Migratory Species Fishery Management Plan (HMS FMP)

The Fishery Management Plan for the Washington, Oregon, and California Highly Migratory Fisheries developed by the Pacific Fishery Management Council and approved by the Secretary of Commerce, and as it may be subsequently amended.

Highly Migratory Species Management Team (HMSMT)

The individuals appointed by the Council to review, analyze, and develop management measures for the HMS fishery.

High seas

All waters beyond the EEZ of the United States and beyond any foreign nation's EEZ, to the extent that such EEZ is recognized by the United States (Note, this differs from the definition in the Magnuson-Stevens Act which defines high seas as waters beyond the territorial sea).

Incidental catch or incidental species

Species caught and retained while fishing for the primary purpose of catching a different species (Note, this differs from bycatch which are discarded at sea).

Incidental take

The take of marine mammals, sea turtles, or sea birds during fishing operations.

Local depletion

Occurs when localized catches are in excess of replacement from local and external sources of production (via net immigration). Local depletion can occur independently of the status of the overall stock. The local depletion of abundance can be greater than stock-wide decreases.

Maximum sustainable yield

The largest long-term average catch or yield that can be taken from a stock or stock complex under prevailing ecological and environmental conditions.

Mesopelagic

The vertical habitat within the mid-depth ocean water column, from depths between 200 and 1000 m (109-547 fm) i.e., below the epipelagic zone.

Neritic

Inhabiting coastal waters primarily over the continental shelf; generally over bottom depths equal to or less than 183 m (100 fm) deep.

Oceanic

Inhabiting the open sea, ranging beyond continental and insular shelves, beyond the neritic zone.

Optimum yield (OY)

The amount of fish that will provide the greatest overall benefit to the Nation, particularly with respect to

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food production and recreational opportunities, and, taking into account the protection of marine ecosystems; that is prescribed on the basis of the MSY from the fishery, as reduced by any relevant economic, social, or ecological factor; and, in the case of an overfished fishery, provides for rebuilding to a level consistent with producing the MSY in such fishery.

### Overfished

Stock or stock complex whose size is sufficiently small that a change in management practices is required in order to achieve an appropriate level and rate of rebuilding.

### Overfishing

To fish at a rate or level that jeopardizes the capacity of a stock or stock complex to produce MSY on a continuing basis.

### Owner of a vessel or vessel owner

A person identified as the current owner in the Certificate of Documentation (CG-1270) issued by the U.S. Coast Guard for a documented vessel, or in a registration certificate issued by a state or the U.S. Coast Guard for an undocumented vessel.

### Pan-Pacific

Throughout the entire Pacific region.

### Pelagic

Inhabiting the water column as opposed to being associated with the sea floor; generally occurring anywhere from the surface to 1000 meters (547 fm). (See also epipelagic and mesopelagic)

### Person

Any individual, corporation, partnership, association or other entity (whether or not organized or existing under the laws of any state), and any federal, state, or local government, or any entity of any such government that is eligible to own a documented vessel under the terms of 46 U.S.C. 12102(a).

### Processing or to process

The preparation or packaging of HMS to render the fish suitable for human consumption, pet food, industrial uses or long-term storage, but does not mean heading and gutting unless there is additional preparation.

### Prohibited species

Those species and species groups whose retention is prohibited unless authorized by other applicable law (for example, to allow for examination by an authorized observer or to return tagged fish as specified by the tagging agency).

### Quota

A specified numerical harvest objective for a single species of HMS, the attainment (or expected attainment) of which causes the complete closure of the fishery for that species.

### Recreational fishing

Fishing with authorized recreational fishing gear for personal use only, and not for sale.

### Regional Administrator

The Administrator, Southwest Region, NMFS, or designee.

Sustainable Fisheries Division (SFD)

The Assistant Regional Administrator for Sustainable Fisheries, Southwest Region, NMFS, or a designee.

Take

The term is used with respect to protected species (marine mammals, sea turtles, and seabirds), is defined by the applicable statute (Marine Mammal Protection Act, Endangered Species Act, or the Migratory Bird Treaty Act ), and its implementing regulations.

## Acronyms

|         |                                                             |
|---------|-------------------------------------------------------------|
| ABC     | allowable biological catch                                  |
| AIDCP   | Agreement on the International Dolphin Conservation Program |
| ATCA    | Atlantic Tunas Convention Act                               |
| BO      | Biological Opinion                                          |
| CalCOFI | California Cooperative Oceanic Fisheries Investigations     |
| CDFG    | California Department of Fish and Game                      |
| CEQ     | Council on Environmental Quality                            |
| CFGC    | California Fish and Game Commission                         |
| CFR     | Code of Federal Regulations                                 |
| Council | Pacific Fishery Management Council                          |
| CPFD    | catch per fishing day                                       |
| CPFV    | commercial passenger fishing vessel                         |
| CPS     | coastal pelagic species                                     |
| CPUE    | catch per unit of effort                                    |
| CWP     | central-western Pacific                                     |
| CYRA    | Commission (IATTC) yellowfin regulatory area                |
| CZMA    | Coastal Zone Management Act                                 |
| DAH     | domestic annual harvest                                     |
| DAP     | domestic annual processing                                  |
| DEIS    | draft environmental impact statement                        |
| DGN     | drift gillnet                                               |
| DML     | dolphin mortality limit                                     |
| DOS     | U.S. Department of State                                    |
| EA      | environmental assessment                                    |
| EEZ     | exclusive economic zone                                     |
| EFH     | essential fish habitat                                      |
| EFL     | eye-to-fork length                                          |
| EIS     | environmental impact statement                              |
| EFP     | exempted fishing permit                                     |
| ESA     | Endangered Species Act                                      |
| ESU     | evolutionarily significant unit                             |

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|                      |                                                                                                                                    |
|----------------------|------------------------------------------------------------------------------------------------------------------------------------|
| EPOTFA               | Eastern Pacific Ocean Tuna Fishing Agreement                                                                                       |
| ETP                  | eastern tropical Pacific                                                                                                           |
| EPO                  | eastern Pacific Ocean                                                                                                              |
| FAO                  | Food and Agriculture Organization of the United Nations                                                                            |
| FAD                  | fish aggregating devices                                                                                                           |
| FEAM                 | Fishery Economic Assessment Model                                                                                                  |
| FFA                  | (South Pacific) Forum Fishery Agency                                                                                               |
| FL                   | fork length                                                                                                                        |
| FMP                  | fishery management plan                                                                                                            |
| FY                   | fiscal year                                                                                                                        |
| GIS                  | geographic information system                                                                                                      |
| HAPC                 | habitat area of particular concern                                                                                                 |
| HMS                  | highly migratory species                                                                                                           |
| HMSAS                | Highly Migratory Species Advisory Subpanel                                                                                         |
| HMS FMP              | Highly Migratory Species Fishery Management Plan                                                                                   |
| HMSMT                | Highly Migratory Species Management Team                                                                                           |
| HSFCA                | High Seas Fishing Compliance Act                                                                                                   |
| IATTC                | Inter-American Tropical Tuna Commission                                                                                            |
| ICCAT                | International Commission for the Conservation of Atlantic Tunas                                                                    |
| IDCPA                | International Dolphin Conservation Program Act                                                                                     |
| IPOA                 | International Plan of Action                                                                                                       |
| ISC                  | Interim Scientific Committee for Tuna and Tuna-like Species in the North Pacific                                                   |
| ITQ                  | individual transferable quota                                                                                                      |
| IUCN                 | World Conservation Union                                                                                                           |
| JFL                  | jaw-to-fork length                                                                                                                 |
| JVP                  | joint venture processing                                                                                                           |
| LOS                  | Law of the Sea                                                                                                                     |
| Magnuson-Stevens Act | Magnuson-Stevens Fishery Conservation and Management Act                                                                           |
| MBTA                 | Migratory Bird Treaty Act                                                                                                          |
| MFMT                 | maximum fishing mortality threshold                                                                                                |
| MHLC                 | Multi-Lateral High Level Conference for Conservation and Management of Highly Migratory Species of the Central and Western Pacific |
| MMC                  | Marine Mammal Commission                                                                                                           |

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|        |                                                          |
|--------|----------------------------------------------------------|
| MMPA   | Marine Mammal Protection Act                             |
| MRFSS  | marine recreational fisheries statistics survey          |
| MSFCMA | Magnuson-Stevens Fishery Conservation and Management Act |
| MSST   | maximum stock size threshold                             |
| MSY    | maximum sustainable yield                                |
| MUS    | management unit species                                  |
| NAICS  | North American Industry Classification System            |
| NEPA   | National Environmental Policy Act                        |
| NMFS   | National Marine Fisheries Service                        |
| NNB    | net national benefits                                    |
| NOAA   | National Oceanic and Atmospheric Administration          |
| NPDES  | national pollutant discharge elimination system          |
| NPFMC  | North Pacific Fishery Management Council                 |
| NPOA   | National Plan of Action                                  |
| NPTZ   | North Pacific transition zone                            |
| NS     | National Standards (of the Magnuson-Stevens Act)         |
| NWI    | National Wetlands Inventory                              |
| ODFW   | Oregon Department of Fish and Wildlife                   |
| OMB    | Office of Management and Budget                          |
| OY     | optimum yield                                            |
| PacFIN | Pacific Fisheries Information Network                    |
| PBR    | potential biological removal                             |
| PFMC   | Pacific Fishery Management Council                       |
| PGR    | population growth rate                                   |
| POCTRP | Pacific Offshore Cetacean Take Reduction Plan            |
| POCTRT | Pacific Offshore Cetacean Take Reduction Team            |
| POFI   | Pacific Oceanic Fishery Investigations                   |
| PRA    | Paperwork Reduction Act                                  |
| PRBO   | Point Reyes Bird Observatory                             |
| PSMFC  | Pacific States Marine Fisheries Commission               |
| RA     | Regional Administrator (of NMFS)                         |
| RecFIN | Recreational Fisheries Information Network               |



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|        |                                                                                                                                     |
|--------|-------------------------------------------------------------------------------------------------------------------------------------|
| RIR    | Regulatory Impact Review                                                                                                            |
| RFA    | Regulatory Flexibility Act                                                                                                          |
| RPA    | reasonable and prudent alternative                                                                                                  |
| SAC    | Sportfishing Association of California                                                                                              |
| SAFE   | stock assessment and fishery evaluation                                                                                             |
| SCB    | Southern California Bight                                                                                                           |
| SCTB   | Standing Committee on Tuna and Billfish                                                                                             |
| SDC    | status determination criteria                                                                                                       |
| SFA    | Sustainable Fisheries Act of 1996 (amendment to the Magnuson-Stevens Act)                                                           |
| SIC    | Standard Industrial Classification                                                                                                  |
| SPC    | Secretariat of the Pacific Community                                                                                                |
| SPTT   | South Pacific Tuna Treaty                                                                                                           |
| SSC    | Scientific and Statistical Committee                                                                                                |
| SST    | sea surface temperature                                                                                                             |
| SWFSC  | Southwest Fisheries Science Center (NMFS)                                                                                           |
| TALFF  | total allowable level of foreign fishing                                                                                            |
| TRP    | (Pacific Offshore Cetacean) Take Reduction Plan                                                                                     |
| TRT    | (Pacific Offshore Cetacean) Take Reduction Team                                                                                     |
| UNIA   | United Nations Implementing Agreement on the Conservation and Management of Straddling Fish Stocks and Highly Migratory Fish Stocks |
| USCG   | U.S. Coast Guard                                                                                                                    |
| USFWS  | U.S. Fish and Wildlife Service                                                                                                      |
| VMS    | vessel monitoring system                                                                                                            |
| WCBA   | Westport Charter Boat Association                                                                                                   |
| WDFW   | Washington Department of Fish and Wildlife                                                                                          |
| WPRFMC | Western Pacific Regional Fishery Management Council                                                                                 |
| YPR    | yield per recruit                                                                                                                   |
| ZMRG   | zero mortality rate goal                                                                                                            |

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## 1.0 INTRODUCTION

### 1.1 Purpose of This Document

[1.0 Introduction]

The FMP includes important species of tunas, billfish and sharks which are harvested by West Coast HMS fisheries. A complete list of species in the management unit is provided in Chapter 3.

The FMP is intended to ensure conservation and promote the achievement of optimum yield of HMS throughout their ranges, both within and beyond the U.S. Exclusive Economic Zone (EEZ), to the extent practicable. Effective conservation and management in most cases will require concerted U.S. and international action. The FMP may serve as a vehicle for fulfilling the West Coast portion of U.S. obligations under international conservation agreements, if domestic U.S. implementing legislation authorizes its use.

This ~~FMP document~~ is a “framework” plan, which includes some fixed elements and a process for implementing or changing regulations without amending the plan (flexible measures). Ongoing management of highly migratory species, and the need to address new issues that arise, make it impossible to foresee and address all regulatory issues in the initial plan. Some framework adjustments can be implemented more quickly than plan amendments, allowing for more timely management response. Changes to any of the fixed elements in the plan require a plan amendment. The framework procedures are described in Chapter 5.

This document also specifies ~~and analyzes~~ the initial management measures, which are that need to be implemented when the plan is implemented, pursuant to the framework procedures in the plan. ~~If adopted, these measures implemented through would become~~ federal regulations affecting one or more fisheries for highly migratory species. They may be modified in the future, or new regulations may be implemented, using the framework adjustment procedures in the plan.

[1.5 Purpose and Need for FMP]

~~West Coast-based fisheries for HMS currently are managed by the States of Washington, Oregon and California, except that federal regulations have been implemented in specific instances (PFMC 2003, section 7.2). So far, the states have been able to resolve local management problems without the need for regional management measures and may continue to do so with or without an FMP. But the momentum is building for international management of Pacific HMS under the auspices of the IATTC and the new Commission in the Western and Central Pacific. At a minimum, there will be a need to implement, in the U.S. EEZ and on the high seas, management measures that may be adopted by these international bodies. With an FMP, the Pacific Council is prepared to become involved in how these measures are applied to domestic fisheries. The councils are well equipped to work with the fishery constituents in their areas to develop domestic policy. In addition, an FMP provides a mechanism for the Pacific Council to obtain public comment and provide advice to NMFS and the Department of State for effective representation of West Coast interests in international negotiations and decision making affecting those interests.~~

~~The fisheries for HMS, with the exception of the swordfish drift gillnet fishery in California, are among the few remaining open access fisheries on the West Coast. However, some in the fishing industry are concerned that problems in other fisheries will result in increased participation in HMS fisheries with negative impacts. In response to this concern, the Pacific Council adopted a control date of March 9, 2000 for commercial and charter fisheries for HMS, in anticipation that a limited access program may be needed in the near future. This date was announced in the *Federal Register* as an advance notice to the public that a limited entry program may be adopted, and that any new entrants in the fishery after the control date may not qualify for a permit. Control dates are established to minimize the rush of new entrants in a fishery that often occurs~~

~~when limited entry is being considered. If the Council decides that it is necessary, the implementation of a limited access program will be facilitated by an FMP.~~

~~Once in place, an This FMP provides a mechanism to address any interstate management issues or conflicts that may arise, such as those addressed by the interjurisdictional plan for thresher sharks. An FMP is backed by federal regulation and enforcement, whereas interstate plans are not binding on the states. Currently, there are inconsistencies in the regulations promulgated by Washington, Oregon and California. For example, Washington and California prohibit the use of pelagic longlines, but Oregon allows longlining with a special permit. California allows drift gillnetting, but Washington does not, and Oregon allows drift gillnetting for swordfish, but not for thresher shark. These differences create the potential for management problems, which the FMP could resolve. These inconsistencies generally have not created management problems which require immediate federal action. This situation could change.~~

~~Currently, one of the most controversial HMS issues is the use of pelagic longlines inside 200 miles off California. This gear currently is not allowed inside 200 miles off California, but longliners may fish outside 200 miles and land in California ports. Some drift gillnetters have proposed a limited longline fishery in the zone to target tunas and swordfish, with effort and area restrictions. The intent is to evaluate longline gear as an alternative gear type to reduce bycatch, or bycatch mortality, and to reduce protected species interactions. Recreational fishing interests are opposed to such a fishery, and the environmental community has major concerns.~~

~~With respect to longlining on the high seas, the major concern is consistency with regulations affecting longliners based in Hawaii. Large areas of the north Pacific have been closed to longline fishing targeting swordfish by vessels with a Western Pacific longline permit in order to protect turtles. Vessels without a Western Pacific permit, including those landing in West Coast ports, are not constrained by these regulations. This inconsistency needs to be addressed. The initial federal regulations need to address such issues as where and to what extent longline fishing will be allowed.~~

~~An~~ This FMP provides the vehicle to address issues of regional, national and international concern. The conservation community has raised concerns about the status of HMS, essential fish habitat, and bycatch of fish and capture of protected species in HMS fisheries. International and U.S. policies reflect these concerns. The 1995 Agreement on Conservation and Management of Straddling Fish Stocks and Highly Migratory Fish Stocks provides that nations will cooperate in regional management bodies to establish and ensure compliance with conservation measures for HMS. The 1993 Agreement to Promote Compliance with International Conservation and Management Measures by Fishing Vessels on the High Seas, adopted by the Food and Agriculture Organization of the United Nations (FAO), requires nations to maintain a registry of authorized vessels fishing on the high seas and ensure that such vessels are marked for identification and that they report sufficient information on their fishing activities. The High Seas Fishing Compliance Act is the domestic legislation enacted in 1995 to implement the FAO Agreement. The FAO also was the forum for the negotiation of a non-binding "Code of Responsible Conduct of Fisheries" which establishes principles for national and international fishery management. The final text of this code was negotiated in September 1995 and the NMFS has completed an implementation plan for the U.S. In 1999, the FAO adopted an International Plan of Action for the Conservation and Management of Sharks, which encourages nations to assess the status of shark stocks within their EEZs and those fished on the high seas. The U.S. has developed a National Plan of Action for conservation and management, and an FMP can help by focusing research and data collection efforts to support the National Plan. Within the U.S., the Magnuson-Stevens Act requires councils to describe and identify essential fish habitat, minimize to the extent practicable adverse effects on habitat caused by fishing, and identify other actions to encourage conservation and enhancement of habitat. The Act requires that conservation and management measures, to the extent practicable, minimize bycatch and to the extent that bycatch cannot be avoided, minimize the mortality of such bycatch. Finally, the Marine Mammal Protection Act, Endangered Species Act and Migratory Bird Treaty Act provide protections for special resources. An

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FMP serves as a mechanism to address these critical issues in an open process and with the advice of all concerned.

~~An~~ This FMP provides a basis to increase federal investment in research, data collection and stock assessments for Pacific HMS. Knowledge of stock status is quite limited for many species. Increased funding is necessary to make sure that overfishing is prevented and that sustainable yields are provided for the long term. An FMP also can help to make sure that fishery data gaps and inconsistencies for HMS are addressed.

~~An~~ This FMP provides a mechanism for collaboration with the other Pacific area councils to achieve more consistent management of fisheries which harvest stocks in common. In particular, there is a need to ensure that some or all restrictions on Hawaii-based longliners to protect turtles and birds also apply to West Coast-based longliners. Also, the councils and the NMFS science centers in both regions should work together in the preparation of stock assessment and fishery evaluation (SAFE) reports on a regular basis. The councils should receive consistent scientific advice concerning the status of stocks which vessels from the different council areas harvest in common.

### 1.2 How This Document is Organized

#### [1.1 Format and Content of the EIS/FMP]

~~This document includes the required contents of an EIS and an FMP in a combined format, therefore it differs somewhat from the format recommended by the Council on Environmental Quality (CEQ) for an EIS. The following table is presented to help the reader find the required EIS components.~~

|                                                                                                     |                                       |
|-----------------------------------------------------------------------------------------------------|---------------------------------------|
| <del>CEQ Format</del>                                                                               | <del>HMS EIS/FMP</del>                |
| <del>Cover sheet</del>                                                                              | <del>Cover sheet</del>                |
| <del>Summary</del>                                                                                  | <del>Executive summary</del>          |
| <del>Table of contents</del>                                                                        | <del>Table of contents</del>          |
| <del>Purpose of and need for action</del>                                                           | <del>Chapter 1 (section 1.5)</del>    |
| <del>Alternatives including proposed action</del>                                                   | <del>Chapter 8</del>                  |
| <del>Affected environment</del>                                                                     | <del>Chapters 2, 3, 4, 5, and 6</del> |
| <del>Environmental consequences</del>                                                               | <del>Chapter 9</del>                  |
| <del>List of preparers</del>                                                                        | <del>Chapter 1 (section 1.8)</del>    |
| <del>List of agencies, organizations and persons<br/>to whom copies of the statement are sent</del> | <del>Chapter 1 (section 1.10)</del>   |
| <del>Index</del>                                                                                    | <del>Index</del>                      |
| <del>Appendices</del>                                                                               | <del>Appendices</del>                 |

~~This introductory chapter (Chapter 1) describes the complexity of HMS management, the history of the FMP, and explains why an FMP is needed. Chapter 2 describes the domestic fisheries for HMS and the economic~~

and social characteristics of the fisheries and the fishing communities. Chapter 3 includes the species to be managed by the FMP, the status of these species, and the definition of overfishing. Chapter 4 describes and identifies essential fish habitat (EFH) for HMS, describes threats to EFH, and recommends measures to protect EFH. Chapter 5 addresses bycatch of fish in HMS fisheries, and Chapter 6 deals with interactions of HMS fishing gears with protected species. Chapter 7 describes current management programs, including fishery monitoring programs. Chapter 8 presents the management alternatives including the preferred alternatives. The environmental consequences of the alternatives are presented in Chapter 9. Chapter 10 describes the relationship of the EIS/FMP to other applicable laws and executive orders. Appendices include the following:

~~Appendix A—Life History Accounts and Essential Fish Habitat Descriptions~~

~~Appendix B—Comparison of State Regulations~~

~~Appendix C—California Fish and Game Code 2000—Drift Gillnet Shark and Swordfish Fishery~~

~~Appendix D—Current State and Federal Logbook Formats~~

~~Appendix E—Threatened and Endangered Species in the Area of HMS Fisheries~~

~~Appendix F—Costs Involved in Managing Pacific Coast HMS~~

~~Appendix G—Comments on the DEIS and Responses~~

~~Appendix H—Regulatory Impact Review and Initial Regulatory Flexibility Analysis~~

~~Appendix I—Draft Regulations~~

This FMP is organized in 10 chapters and several appendices:

- Chapter 1 (this chapter) describes the rationale for HMS management and provides background information on the management context.
- Chapter 2 describes the management philosophy, recognizing the international nature of HMS management, and lists the goals and objectives of the FMP.
- Chapter 3 describes the species in the management unit, including monitored and prohibited species.
- Chapter 4 describes the framework for determining management thresholds, control rules for management, and measures to prevent overfishing and rebuild overfished stocks.
- Chapter 5 describes the process for periodically modifying applicable harvest specifications and management measures. This FMP is a framework plan, meaning that most management measures may be changed through regulatory action without a need to amend the FMP.
- Chapter 6 describes general and fishery specific management measures in place at the time of FMP adoption. Many of these measures can be changed through the management framework described in Chapter 5. This chapter also describes required specifications for any foreign fishing in the West Coast EEZ targeting HMS. Currently, HMS within the West Coast EEZ are considered fully utilized and no foreign fishing is permitted.

- Chapter 7 describes essential fish habitat (EFH) for HMS, fishing and non-fishing effects on this EFH and mitigation measures that may be applied.
- Chapter 8 lists research and data needs identified at the time of FMP adoption. This list may be periodically updated in the annual stock assessment and fishery evaluation (SAFE) reports.

There are eight appendices to the FMP containing descriptive material relating to fisheries, stock status, bycatch, protected species, EFH, critical habitat, and management costs. Descriptive information may be periodically updated in SAFE reports. Furthermore, because these appendices do not describe the management framework or Council HMS management policies and procedures and only supplement the required and discretionary provisions of the FMP described in §303 of the Magnuson-Stevens Act, they may be periodically updated without being subjected to the Secretarial review and approval process described in §304(a) of the Magnuson-Stevens Act. These appendices are published under separate cover.

### 1.3 Application of Federal Authority

[1.2 Application of Federal Authority]

The management unit in this FMP consists of highly migratory species and their associated fisheries which occur within the West Coast EEZ and on the high seas with the catch being landed on the West Coast. This is consistent with National Standard three of the MSFCMA, which requires that “To the extent practicable, an individual stock of fish shall be managed as a unit throughout its range, and interrelated stocks of fish shall be managed as a unit or in close coordination.” It also is consistent with Section 102 of the Act which states that, “The United States shall cooperate directly or through appropriate international organizations with those nations involved in fisheries for highly migratory species with a view to ensuring conservation and shall promote the achievement of optimum yield of such species throughout their range, both within and beyond the exclusive economic zone.”

This FMP applies to all U.S. vessels that fish for management unit species within the EEZ off California, Oregon or Washington. This FMP also applies to U.S. vessels that fish for management unit species on the high seas (seaward of the EEZ) and land their fish in California, Oregon or Washington. However, pelagic longline vessels that are registered for use under a Western Pacific longline limited entry permit and fish on the high seas and land their fish in California, Oregon and Washington will continue to be subject to the requirements for vessel monitoring system units, observer coverage, Western Pacific longline logbook forms, seabird avoidance gear, time and area closures, gear restrictions, and other measures at 50 CFR 660 Subpart C. U.S. vessels that fish with longline gear for management unit species on the high seas and land their catch solely in western Pacific ports (Hawaii, American Samoa, Guam, Northern Mariana Islands) likewise are subject to the western Pacific regulations at 50 CFR 660 Subpart C.

The FMP does not apply to U.S. vessels that fish for management unit species on the high seas and land into a non-U.S. port. However, those vessels are subject to the requirements of the High Seas Fishing Compliance Act (HSFCA, 16 U.S.C. 5501 et seq.), including permit and reporting requirements.

U.S. vessels that fish for tuna and associated species in the eastern tropical Pacific Ocean also may be subject to management measures under the Tuna Conventions Act (16 U.S.C. 951 et seq.) which implemented the agreement that established the Inter-American Tropical Tuna Commission. There also is the potential for regulations to be promulgated in the future pursuant to other international arrangements such as the U.S.-Canada Albacore Treaty. Section 1.6 provides more information about the relationship of fishery management under this FMP with fishery management under international arrangements.

The application of federal authority as described above promotes the achievement of many of the objectives

of the FMP (Section 2.2), including:

- ensure or contribute to international cooperation in the long-term conservation and sustainable use of highly migratory fish stocks that are caught by West Coast-based fishers.
- promote inter-regional collaboration in management of fisheries for species which occur in the Pacific Council's managed area and other Councils' areas.
- promote effective monitoring and enforcement.
- establish procedures to facilitate rapid implementation of future management actions, as necessary.
- ensure that fisheries are in compliance with laws and regulations to conserve and restore species listed pursuant to the ESA, MMPA and MBTA.

This application of authority is appropriate for the following reasons:

- To ensure consistent application of conservation and management measures applying to U.S. fishers on the high seas under other FMPs (e.g., Hawaii longline restrictions);
- To implement measures adopted by international management organizations in which the U.S. participates; if authorized by domestic U.S. implementing legislation;
- To promote consistent and coordinated data collection and management throughout the range of HMS; and
- To promote cooperative and reinforcing management of U.S. HMS fisheries throughout the Pacific such that vessels cannot avoid conservation requirements simply by relocating their operations.

#### 1.4 Complexity of HMS Management

[1.3 Complexity of HMS Management]

The management of highly migratory species presents formidable challenges, particularly in the Pacific area. There are numerous species of tuna, billfish, oceanic sharks and others which range throughout vast areas of the Pacific Ocean. Knowledge of stock distribution and status is limited. There is a moderate amount of information for the commercially important tunas, lesser amounts for swordfish and other billfishes, and scant information for sharks and other highly migratory fishes. Regular and comprehensive stock assessments are needed for certain species. These species are harvested by numerous coastal and distant-water fishing nations throughout the Pacific. The FEIS for this FMP (PFMC 2003, Chapter 2 Section 2.6) documents 36 nations harvesting HMS in the Pacific. United States fisheries harvest HMS in the EEZ of the U.S., in the zones of other nations and on the high seas.

Conservation of HMS is contingent on effective international management institutions and measures. There is no single, pan-Pacific institution that manages all HMS throughout their ranges. The Inter-American Tropical Tuna Commission (IATTC) adopts conservation measures for yellowfin and bigeye tunas in the eastern Pacific Ocean. Member nations, including the U.S., are obligated to implement these measures for their national fisheries. On September 5, 2000, the Convention on Conservation and Management of Highly Migratory Fish Stocks in the Western and Central Pacific Ocean was adopted. ~~The Convention, which is subject to ratification, establishes a Commission that would adopt management measures for HMS throughout their ranges. Both of these commissions affect West Coast-based HMS fisheries. Section 1.6 describes these~~



~~international institutions in more detail.~~ The international Convention on the Conservation and Management of Highly Migratory Fish Stocks in the Western and Central Pacific Ocean entered into force on April 19, 2004. The Convention establishes a Commission for the Conservation and Management of Highly Migratory Fish Stocks in the Western and Central Pacific Ocean, now more commonly referred to as the Western and Central Pacific Fishery Commission. Initial staffing for the Commission is in progress at its site in Pohnpei, Federated States of Micronesia. A noteworthy aspect of the Convention is the fact that it will exercise management control into the high seas zones outside national EEZs in contrast to some other regional fishery management organizations.

In 1981, the United States and Canada signed the Treaty on Pacific Coast Albacore Tuna Vessels and Port Privileges, which permits fishing vessels of each nation to fish for albacore tuna in waters of the other nation beyond 12 miles. Recently, U.S. albacore fishermen became concerned about the increased effort by Canadian vessels in U.S. waters and the lack of information on the amount of albacore taken by Canadian vessels. The U.S. and Canada have agreed to Treaty changes to resolve these issues. See section 1.6.2 for more information on this issue.

Within the U.S., HMS fishery management in the Pacific area is the responsibility of three regional fishery management councils, the Western Pacific Regional Fishery Management Council (WPRFMC), North Pacific Fishery Management Council (NPFMC) and PFMC, and the adjacent states. Some form of coordination among councils is required because fishers from the different council areas are harvesting the same stocks of HMS, and in some cases are fishing in the same areas, but landing in different locations. This is complicated by the fact that the council regions have different fishery traditions in addition to different management objectives, measures and concerns. The WPRFMC manages HMS fisheries pursuant to the FMP for the Pelagic Fisheries of the Western Pacific Region. The NPFMC does not manage HMS, except that sharks, including some migratory species, are included in the Gulf of Alaska Groundfish FMP and Bering Sea and Aleutian Islands Groundfish FMP. Currently, the NPFMC is not contemplating development of an FMP for HMS fisheries in their management area. However, the Pacific Council intends to keep the NPFMC informed of its proposed actions. Procedures for coordination with the WPRFMC and NPFMC are described in Section 5.1. This process ensures that WPRFMC and NPFMC are informed of and provided opportunity to comment on Pacific Council management actions affecting fisheries in their respective management areas, and it promotes consistent management of HMS fisheries.

Until now, there has been no FMP for West Coast-based fisheries for HMS. The fisheries have been managed by the States of Washington, Oregon and California, although some federal laws also apply. Federal statutes include the High Seas Fishing Compliance Act, Tuna Conventions Act, Marine Mammal Protection Act, Migratory Bird Treaty Act and Endangered Species Act. The lack of a single FMP covering all U.S. vessels in the Pacific creates a situation where U.S. vessels fishing on the high seas may be subject to different regulations, depending on where they start their trip or where they land. This ~~could~~ could created inequities and frustrated achievement of management goals. In addition, foreign vessels and U.S. vessels may be subject to different regulations.

Within the U.S. West Coast-based fisheries, HMS are harvested by five major commercial gear groups and various recreational fisheries. The commercial gears include surface hook and line, pelagic drift gillnet, pelagic longline, purse seine and harpoon, and are used in the EEZ, in state waters and on the high seas. Anglers pursue HMS from commercial passenger fishing vessels as well as private boats. There are sport fisheries targeting albacore, mixed tunas and dorado, billfish, and sharks. ~~Currently~~ At the time of FMP adoption, there ~~were~~ are no quotas or allocations among gear groups, however user conflicts have arisen, particularly in California, where state regulations prohibit longlining within 200 miles and control time and area for the drift gillnet fishery.

Representatives of the drift gillnet fishery have proposed a limited longline fishery in the EEZ to target tunas

and swordfish. Longliners currently may land HMS in California if the fish are harvested outside 200 miles. The proposers' intent is to evaluate longline gear as an alternative to drift gillnet gear to reduce bycatch or bycatch mortality, and determine if a longline fishery is an economically viable substitute for drift gillnet gear. The recreational community, particularly in southern California, is concerned about the status and availability of tunas, billfish and sharks and the impacts of the commercial fisheries on the recreational fisheries for these species. Anglers oppose a longline fishery in the EEZ off California targeting tunas and swordfish. They are concerned about increased fishing mortality and commercial effort in general and increased bycatch of striped marlin, sharks and other species.

In addition, a growing conservation community is concerned about the management of HMS, including sharks, which are particularly vulnerable to overexploitation. This community also is concerned about increasing bycatch and bycatch mortality of HMS and other fish, and protected species. Longline and drift gillnet gears targeting HMS also capture protected species such as marine mammals, seabirds and turtles. There is substantial information on the catch and bycatch of fish and the capture of protected species in the West Coast drift gillnet fishery, which has been observed since 1990 under the auspices of the Marine Mammal Protection Act. This fishery is subject to a Take Reduction Plan, and more restrictive gear measures have been in effect since 1997 to reduce the take of marine mammals.

## 1.5 History of the Fishery Management Plan

### [1.4 History of the Fishery Management Plan]

The Pacific Council was created in 1976 pursuant to the Magnuson-Stevens Act, and began to develop FMPs for all of the major fisheries in its area of authority, including a draft FMP for billfish (including swordfish) and oceanic sharks (PFMC 1981). At that time, tunas were not included in the Magnuson-Stevens Act and thus could not be managed by councils. The draft billfish FMP and several others were not adopted by the Council, because it became clear that federal management of all West Coast fisheries was not necessary nor cost-effective. With limited resources, the Council decided to concentrate its efforts on those which required federal management, such as salmon and groundfish. In the case of billfish and oceanic sharks, the Council concluded that effective stock conservation required international management efforts and that there was little the Council could accomplish. The fishery management problems were primarily in California, and the State was addressing these problems.

In 1990, the Pacific States Marine Fisheries Commission (PSMFC) adopted an interjurisdictional fishery management plan for thresher shark (PSMFC 1990) pursuant to the Interjurisdictional Fisheries Act, 16 U.S.C. 4101 et seq. The fishery for thresher shark began off California in 1977. Thresher sharks are harvested in drift gillnets in California along with swordfish and mako sharks. Incidental catches of thresher shark also occur in set gillnet fisheries. Drift gillnet fisheries for thresher shark began off the coasts of Oregon and Washington in 1983 under experimental fishing permits. This permit fishery in Oregon and Washington continued through 1988, when it was terminated due to bycatch of marine mammals and leatherback turtles, declining interest in the fishery and concerns about the abundance of thresher shark. The PSMFC plan established a management panel comprised of one member each from the states of Washington, Oregon and California, which makes management recommendations to the state agencies. The plan proposed an annual coastwide thresher shark harvest guideline of 750,000 pounds (340 mt dw) and discouraged catches of juvenile sharks. No quotas were established but states did agree to this harvest guideline, which since 1991 has never been approached. There have been no additional management actions since the plan was adopted.

In December 1994, the Western Pacific Council requested that the Secretary of Commerce designate it as the

single council responsible for management of domestic pelagic fisheries in the Pacific.<sup>1</sup> This request was based on a paper developed by the Western Pacific Council which evaluated several alternatives, including status quo, coordinated data collection, a joint FMP, Secretarial management, and single council designation (WPRFMC 1994). The Western Pacific Council argued that one FMP was necessary to “ensure the ability to monitor and manage the fisheries throughout their range, to the extent practicable, in a consistent and efficient manner.” The initial focus of the comprehensive FMP would be to address data gaps and inconsistencies. The Council concluded that the single designation alternative was most efficient and effective. The Council already had an FMP for tunas and other large pelagic fishes, which could be amended to include fisheries in the other two council areas. The Western Pacific Council did not favor a joint FMP because of the requirement that all councils must approve all measures and the need for joint meetings, and it felt that Secretarial management was undesirable because it removed regional control over management. Under the Western Pacific proposal, the North Pacific and Pacific Councils would make management recommendations for fisheries in their areas and submit them to the Western Pacific Council, which would take final action on all measures for approval by the Secretary of Commerce.

The Western Pacific Council consulted the Pacific and North Pacific Councils on the proposal for single council designation. The Pacific Council opposed this approach. At that time, the Pacific Council was not convinced of the need to alter management arrangements for HMS, and was concerned that the decision process might be neither convenient for, nor in the best interest of, fishery interests on the West Coast. Since the principal issue at the time was the need for coordinated and comprehensive data collection, the Pacific Council recommended that data collection gaps be documented and filled.

In July 1996, after receiving input from the affected councils and industry groups, the NMFS concluded that single council designation was not necessary at that time to achieve effective management under the Magnuson-Stevens Act or to support the Department of State in carrying out U.S. obligations. With regard to data needs, NMFS stated that recent international agreements and implementing domestic legislation (High Seas Fishing Compliance Act, 16 U.S.C. 5501 et seq.) provided authority for NMFS to require U.S. vessels fishing for HMS to report their fishing activities. The Western Pacific Council continued to maintain that a comprehensive FMP with single council designation was necessary, and the issue was raised again at the Council Chairs’ meeting in June 1997. As a result of this discussion, the Director of NMFS asked the Southwest Regional Administrator to work with the three Pacific area councils to develop a recommendation on how to proceed.

At the September 1997 Pacific Council meeting, the Southwest Region of NMFS presented a paper outlining options for Pacific Council involvement in HMS management. Options included no action, the Western Pacific proposal, Secretarial management, a joint FMP and a separate West Coast FMP. The paper summarized numerous activities at the national and international levels affecting HMS fisheries based on the West Coast. NMFS argued that the regional councils should play an active role in planning U.S. participation in future internationally managed HMS fisheries, and that the Pacific Council has unique capabilities for reaching the diverse fishing industry of the West Coast and involving them in the development of management policy. At that meeting, the Pacific Council established an HMS Policy Committee to address HMS issues and coordinate with the other councils. At the November 1997 meeting, the Council appointed a representative to attend meetings of the IATTC and MHLRC and recommended establishment of an inter-council coordinating committee. In June 1998, the Council appointed members to a West Coast HMS Advisory Subpanel comprised of representatives of constituent groups.

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<sup>1</sup> Under the Magnuson-Stevens Act, for fisheries under the authority of more than one council, the Secretary of Commerce may designate one council to prepare the plan or may require the plan be prepared jointly by the concerned councils. In the latter case, the plan must be approved by a majority of the voting members of each council.

In September 1998, representatives of the three Pacific area councils and NMFS met to discuss collaboration in HMS management. The NMFS Southwest Region presented a “straw man” approach for coordinated management. The objectives of this approach were:

- to achieve effective conservation and management of HMS fisheries throughout the EEZ and adjacent waters to the extent practicable consistent with the Magnuson-Stevens Act and other applicable law, including international agreements;
- to ensure comprehensive collection of comparable and compatible data throughout the range of U.S. HMS fisheries;
- to ensure the ability to take action on a timely basis as the need arises; and
- to ensure that those who would be affected by management have ample notice of prospective action and opportunity to advise the decision makers about their interests and needs.

Under this approach, the existing Western Pacific Council FMP would serve as the foundation for the comprehensive plan. It would be amended to include, among other things, framework management procedures for the Pacific Council. Each council would manage its respective fisheries independently, except when an action might affect the other council. In the latter case, both councils would vote. If there were disagreement, the councils would ask the Regional Administrator of NMFS to mediate the issue.

The Western Pacific Council did not support the collaborative approach proposed by NMFS, because it believed that joint actions would increase the work load, increase costs, delay implementation of regulations, and weaken the authority of the Western Pacific Council.

In June 1999, the Pacific Council voted to begin development of an FMP for HMS fisheries. The Council preferred that some form of comprehensive FMP be developed with all three councils involved and wrote the other two councils inviting their participation. While the Council recognized the difficulties associated with joint FMPs, it was optimistic that framework procedures and operational mechanisms could be developed to allow either independent or joint council actions as necessary and appropriate to achieve FMP objectives. While the North Pacific Council expressed support for a joint FMP, the Western Pacific Council stated that it was not inclined to participate at that time. The Pacific Council decided to begin development of a separate FMP for West Coast-based HMS fisheries, holding open the alternative of a comprehensive FMP in the future should the Western Pacific decide to participate.

In March 2001, NMFS wrote the Council to provide updated information on recent domestic HMS fishery management issues that had a bearing on the development of the FMP. NMFS Regional Administrator Rebecca Lent stated:

“When the decision was made to develop the FMP, there was no clear and pressing need for consideration of management measures that would immediately go into effect. It was envisioned that the FMP could include some reporting requirements and perhaps some changes in permit requirements, and it would almost certainly establish framework procedures for implementing regulations in the future if new information or conditions warranted it. The FMP also could conceivably incorporate under Magnuson-Stevens Act authority a variety of regulations currently in effect under other Federal law or State laws and regulations. However, the legal and programmatic environment for the FMP changed substantially as a result of the following factors:

“1. Drift Gillnet Fishery Management - This fishery has been managed under a mix of State laws (time/area closures, limited entry, mesh size, logbooks) and Federal regulations (net depth, pingers,

observers) under the Marine Mammal Protection Act. As a result of a new Section 7 consultation under the Endangered Species Act (ESA), NMFS is requiring that new restrictions be imposed on the fishery by August 2001. NMFS will promulgate these regulations by that time under the authority of the ESA. However, I would urge the Council to be sure that the draft FMP, when cleared for public review and comment, include an alternative under which the drift gillnet fishery would be managed through the FMP rather than under the anticipated mix of State laws and regulations and Federal regulations under the MMPA and ESA. Consolidating the management program under a single authority should greatly simplify the ability of fishers and managers to adjust to changing conditions in the future.

“In addition, the changes being required under the ESA will likely make it very difficult for some fishers to maintain profitable operations. This adds to the feeling on the fleet’s part that there should be some form of relief, and a proposal has been made to allow the vessels to fish with longline gear subject to a variety of restrictions, possibly including an experimental fishery process. This is a very contentious proposal, but the drift net fleet owners definitely want the Council to address it in the FMP process. I would strongly encourage that the plan include a full evaluation of the pros and cons of allowing longline fishing in the EEZ so that the final decision can be based on that evaluation.

“2. Hawaii Longline Fishery Restrictions - As a result of court actions, a number of restrictive regulations have been promulgated for the Hawaii-based longline fishery. In addition, NMFS prepared and distributed for public comment and hearings a Draft Environmental Impact Statement (DEIS) that reviewed the history and performance of that fishery and analyzed several alternatives for management of the fishery. I believe the Council has received a copy of that DEIS. While final action has not yet been taken, the preferred alternative would further constrain the fishery, including prohibiting a fishing strategy that targets swordfish and setting time/area closures for the fishery. NMFS also is completing a Section 7 consultation to determine if the fishery jeopardizes the continued existence of any species of sea turtle and if conditions should be set for the fishery to ensure that there will be no jeopardy and to mitigate or reduce the potential for interactions. NMFS recognizes that longline fishing in the EEZ, or on the high seas seaward of the EEZ, off the West Coast might not have the exact same impacts on fish and protected species as longlining out of Hawaii. However, NMFS also believes it would be inappropriate to allow fishing by vessels out of the West Coast in times and areas that would be closed to vessels out of Hawaii or using strategies that would not be available to Hawaii-based vessels until further information is available to indicate that the impacts would be different. At the least, the draft FMP should include an alternative that would establish the same measures for West Coast-based longliners as for Hawaii-based longliners. This also would include provisions to minimize interactions with seabirds and to authorize the Regional Administrator to require that observer accommodations be made and to require the use of automated vessel monitoring system units at vessel expense.

“3. U.S.-Canada Albacore Treaty - During the scoping process for the FMP, there was sufficient force of recommendations from the public that the Council established a control date for possible use in setting up a limited entry program in the future. Most of the interest came from the troll albacore fishery which is concerned that further restrictions in other fisheries (especially groundfish) might result in vessels shifting into the albacore fishery, possibly adversely affecting present participants and exacerbating marketing problems that have sometimes occurred when catches are too high and markets are flooded with landings. Also of concern was that additional effort could result in lower catch rates for historic participants. A more recent concern, however, is that there has been a dramatic increase in the participation of Canadian vessels in U.S. waters under the Treaty, so much so that the Western Fishboat Owners Association has promoted suspension of the Treaty unless the Canadians agree to some limit on their vessels’ fishing in U.S. waters. We have now scheduled a negotiating session with Canadian authorities April 10-11, 2001, in Seattle, to discuss changes in Annex A to the Treaty under which there would be a process for annually determining fleet or fishing limits and to discuss potential limits in 2001.

“In discussing the matter with NOAA General Counsel and industry, we have identified a broader issue. That is, there is no statute to implement the Albacore Treaty; thus there is no statute authorizing NMFS (or anyone else) to issue regulations to carry out the Treaty. Before we can propose legislation, however, we need to consider and agree on how the FMP and Treaty interrelate. We need to consider what kinds of measures would best be handled by different agencies and through different procedures. We will be discussing with industry and General Counsel the manner in which different possible future fishery management measures might be carried out under the FMP or under the Albacore Treaty, or even under laws implementing other future international management agreements (e.g., IATTC). For example, if there were a total allowable catch of north Pacific albacore with an allocation to the U.S., the internal allocation between sectors could be done through the Council as with Pacific halibut; or it could be done by the Secretary of Commerce in consultation with the Council and the member States.”

The consequence of these conditions or actions is that the Council needed to address immediate HMS fishery management regulation issues rather than to prepare only a framework plan. The Council agreed that it might not be sufficient to simply leave in place existing state or federal regulations (under other authorities) or simply defer to state regulations.

## 1.6 Management Context

[1.6 Management Context]

### 1.6.1 *Inter-American Tropical Tuna Commission (IATTC)*

[1.6.1 Inter-American Tropical Tuna Commission (IATTC)]

The U.S. is a member of the IATTC, which was established in 1950. Pursuant to the Tuna Conventions Act, NMFS promulgates regulations to carry out IATTC recommendations that have been approved by the Department of State. NMFS has implemented procedural regulations by which to announce IATTC quotas and associated management measures (e.g., incidental catch allowances when directed fishery quotas have been reached). Other IATTC recommendations take longer to implement through full rule-making procedures, including provision for a public hearing, under the Tuna Conventions Act. While the IATTC Convention does not specify the geographic boundaries of the eastern Pacific Ocean, under regulations at 50 CFR Part 300, Subpart C, NMFS has defined the “Convention Area” to consist of the waters bounded by the coast of the Americas, the 40° N and 40° S parallels, and the 150° W meridian.

Historically, the IATTC focused almost exclusively on tropical tuna species (and especially yellowfin tuna) taken in purse seine, baitboat and longline fisheries. Stock assessments are conducted regularly on tropical tunas and occasionally on albacore and northern bluefin tuna and striped marlin. The species under IATTC purview include all HMS in the Convention Area, and the scope of interest of the IATTC has expanded in recent years to include conservation measures to address additional species (e.g., bigeye tuna), fleet capacity (with focus on the purse seine sector), bycatch concerns in purse seine and longline sectors, the use of fish aggregating devices, and compliance.

In the past several years, NMFS has finalized regulations to carry out IATTC recommendations of special interest to this FMP. First, a regulation was implemented to collect vessel information for a regional register of all vessels that have harvested HMS in the IATTC Convention Area. The vessel register is intended to assist the IATTC in monitoring the international fisheries and supporting efforts to enhance compliance with IATTC conservation measures. The register will likely also prove very useful to the Council in its monitoring of West Coast-based HMS fisheries.

Second, a regulation was implemented to carry out a pilot bycatch reduction program. Under this program,

purse seine vessels are required to retain and land all tuna brought on board the vessel, while releasing safely to the extent practicable all non-tuna species brought on board and taking special measures to minimize harm to any sea turtles caught in the purse seine. This approach was undertaken to deal with bycatch concerns. It is hoped that the full retention requirement will encourage the development of gear or techniques that will reduce the amount of low-value tuna (especially small yellowfin and bigeye tuna) brought on board so that the vessels will not be economically disadvantaged by the full retention program. This pilot program is to run through 2004, at which point IATTC will evaluate the effects and effectiveness of the program.

The regulations currently implementing this convention also require that U.S. purse seine vessel operators maintain logbooks of catch and effort and to make them available to U.S. enforcement and fishery officials for inspection. If IATTC logbooks are maintained and submitted to IATTC, then the federal reporting requirement is met.

In addition, at its 2002 meeting, the IATTC went one step further and adopted a recommendation to use the vessel register as the authoritative source of identified purse seine vessels qualified to fish for tuna in the Convention Area in the future. NMFS will be required to promulgate regulations to implement this measure if the Department of State approves it.

The IATTC Convention is not entirely consistent with the Magnuson-Stevens Act. The Convention establishes a simple goal of achieving maximum sustainable yields from the tuna stocks and not optimum yield from the complex of HMS species in the Convention Area. It is only in the Convention Area that regulations to implement IATTC recommendations generally apply; NMFS has not attempted to apply IATTC recommendations beyond these waters. Further, the Tuna Conventions Act does not provide authority to manage U.S. fisheries for tuna in the Convention Area except as called for by IATTC recommendations approved by the Department of State. However, the IATTC and FMP management programs can support each other. In the future, the FMP could provide a mechanism to implement certain measures agreed to by the IATTC or to ensure that regulations adopted to apply in the Convention Area are complemented if necessary and appropriate by regulations to apply to U.S. vessels fishing the same stocks in waters beyond the Convention Area. The Council HMS management process also can serve to help in formulating or evaluating management recommendations that the U.S. delegation (headed by the Department of State) can take to the IATTC for consideration or possibly to comment formally on IATTC proposals and actions. Any permits and data reporting required by this FMP can aid the U.S. in being responsive to IATTC requests for information. Conversely, data collected or reported under the Tuna Conventions Act can be provided to support implementation of this FMP. It is noted that the Department of State is restructuring its general public advisory committee, and there may be some overlapping interests in both that committee and the Council's HMS advisory subpanel or Council membership.

The International Dolphin Conservation Program Act (IDCPA) was established in 1992 by the Agreement on the Conservation of Dolphins and was revised and extended in 1999 by the Agreement on the International Dolphin Conservation Program. The IATTC provides the secretariat for the Program. The objectives of the Program are: 1) to progressively reduce incidental dolphin mortalities in the purse-seine fisheries in the Agreement Area to levels approaching zero, by setting annual limits; 2) to seek ecologically sound means of harvesting large yellowfin tuna not in association with dolphins; and 3) to ensure the long term sustainability of tuna and other species and to avoid, reduce and minimize bycatch and discards of juvenile tunas and non-target species. The bycatch provisions referred to above are consistent with the IDCPA.

### *1.6.2 U.S.-Canada Albacore Treaty*

[1.6.2 U.S.-Canada Albacore Treaty]

In 1981, the United States and Canada entered into a treaty regarding fishing for albacore tuna in the eastern

Pacific. Under the treaty, U.S. albacore vessels are authorized to fish for albacore in waters under the jurisdiction of Canada and more than 12 miles from the baseline from which the territorial sea is measured and to use certain port facilities in Canada. Albacore may be landed in that port for sale, export, or transshipment back to the U.S. Similarly, Canadian vessels are authorized to fish in waters under U.S. jurisdiction more than 12 miles from the baseline from which the territorial sea is measured and to use certain U.S. ports to obtain supplies and other services. Albacore may be landed in those ports for sale, export, or transshipment back to Canada. The parties annually exchange lists of vessels that may fish in the other nation's zone, though these lists are not binding (that is, a vessel on a list is not obliged to fish in the other nation's waters). Logbooks of catch and effort are to be maintained, and the nations are to exchange data on the fisheries. There is no legislation to implement the Treaty.

The implementation of the treaty has been sporadic. Vessel lists have been exchanged, but there have not been regular exchanges of data, nor has there been an effective monitoring program to determine the level of fishing by each nation's vessels under the treaty. In recent years, there has been much more fishing by Canadian vessels in U.S. waters than fishing by U.S. vessels in Canadian waters. In fact, in 2000, the level of fishing by Canadian vessels and the consequent crowding on the grounds resulted in calls by some in the U.S. troll industry to convene a meeting to discuss the treaty with Canadian officials. Such a meeting was held in November 2000. There was agreement on a number of immediate steps, including a need for cooperative efforts to establish a better data collection and exchange program and action to establish "check-in, check-out" procedures so that the level of fishing in each zone by the vessels of the other nation can be monitored effectively. There also was general agreement that future meetings would be necessary to consider negotiation of amendments to the treaty to address the U.S. troll industry concerns as well as to ensure full exchange of information about management problems and possible solutions. Both nations are developing management programs for albacore fisheries and both parties recognize that effective albacore conservation will require international cooperation, whether through the IATTC, the MHLC, or some other mechanism.

There have since been three negotiating sessions (April and June 2001 and April 2002), and agreement was reached at the last session on changes in the Treaty. Under that agreement, limits on reciprocal fishing would be implemented and there would be a gradual decrease over three years in the allowable foreign fishing by vessels of one party in the waters of the other party. Specifically, beginning in 2003 (assuming that legislation is enacted and regulations are implemented), there would be a three-year regime for reciprocally limiting effort by U.S. and Canadian troll albacore fishing vessels' activities in each other's waters. Canadian effort would be limited in terms of numbers of vessels; U.S. effort would be limited in terms of vessel months.

This is intended to provide relatively equal fishing opportunity. The limits would gradually be reduced over the 3-year period, though the agreement provides some flexibility to carry over "unused" effort from one year to the next. The target for implementation is the 2003 season, pending (a) legislation by Congress to authorize U.S. regulations to limit the U.S. fishery and (b) NMFS rule-making for procedures to monitor entry and exit of vessels against the limits each year so that, if a limit is reached, the fishery would be "closed" in a timely manner.

The limits would be as follows:

| Year | Canadian boats in the U.S EEZ | U.S. effort in Canadian EEZ |
|------|-------------------------------|-----------------------------|
| 2003 | 170 vessels                   | 680 vessel-months           |
| 2004 | 140 vessels                   | 560 vessel-months           |
| 2005 | 125 vessels                   | 500 vessel-months           |

After the third year, the Parties can extend the agreement for one year or more, but if no agreement is reached,



then a default of 75% of the third year would be implemented. Further meetings of the Parties and industries will be necessary to develop and implement effective reporting and monitoring mechanisms to ensure that fishing remains within the limits.

### 1.6.3 *Central and Western Pacific ~~Convention~~ Fisheries Commission*

The FMP could provide a mechanism for implementation of U.S. responsibilities under an international agreement to conserve central and western Pacific HMS. The U.S. participated in negotiation of and signed the new international agreement developed through the Multi-Lateral High Level Conference for Conservation and Management of Tuna and Tuna-Like Species of the Central and Western Pacific (MHLHC). This effort was undertaken to develop an international arrangement to achieve long term conservation and management of HMS in the central and western Pacific. ~~The Convention is subject to ratification, acceptance or approval of the signatories before it goes into effect. Some major participating nations have not yet signed the agreement. While there are many specific points that the final agreement did not definitively resolve, it seems to be recognized that overall catch limits will be necessary to guard against overfishing. It also is likely that the initial focus will be on conservation of tropical tunas (skipjack, yellowfin, bigeye).~~ The international Convention on the Conservation and Management of Highly Migratory Fish Stocks in the Western and Central Pacific Ocean entered into force on April 19, 2004. The Convention establishes a Commission for the Conservation and Management of Highly Migratory Fish Stocks in the Western and Central Pacific Ocean, now more commonly referred to as the Western and Central Pacific Fishery Commission (WCPFC). A noteworthy aspect of the Convention is the fact that it will exercise management control into the high seas zones outside national EEZs in contrast to some other regional fishery management organizations. While West Coast interests may seem only peripherally involved, it should be noted that there is ~~will be~~ a “northern panel” that may make recommendations for management of such species as swordfish, albacore, and bluefin, all of which are of interest to West Coast fisheries. It will be important for the WCPFC ~~MHLHC arrangement~~ to coordinate with the Inter-American Tropical Tuna Commission on stocks that occur in waters of both entities’ purview. ~~It is already~~ expected that scientists from both areas will frequently meet and will develop protocols for exchanging information and collaborating on stock and fishery assessments for shared stocks.

### 1.6.4 *United Nations Agreements*

The FMP may provide a mechanism for implementing U.S. responsibilities under the United Nations Agreement on the Conservation and Management of Straddling Fish Stocks and Highly Migratory Fish Stocks (known as the UNIA) under the Law of the Sea Treaty. The UNIA interprets the duty of nations to cooperate in conservation and management of fishery resources. Measures adopted in the EEZ of a coastal state and by any international arrangement for HMS in the region should be compatible. A coastal state should not adopt measures that would undermine the effectiveness of regional measures to achieve conservation of the stocks. In the case of the Pacific Council, for example, while the UNIA does not dictate how management of HMS fisheries in the U.S. EEZ should be carried out, the UNIA requires that EEZ management be compatible with management under any international arrangement (such as the IATTC, for species that are under IATTC conservation measures). The UNIA is now in force as the requisite number of nations has ratified it.

The U.S. also has participated in deliberations and decisions of the Food and Agriculture Organization of the United Nations (FAO) that have implications for HMS management under the FMP. The Committee on Fisheries of FAO has agreed to international plans of action dealing with shark conservation, seabird interactions with longline gear, and fishing capacity. In turn, the United States has developed national plans of action (NPOAs) to carry out the objectives of the international plans of action. The FMP can provide a mechanism for considering and implementing specific actions that support these national plans of action. In fact, the seabird avoidance measures proposed in this FMP are consistent with the seabird NPOA.

### 1.6.5 *High Seas Fishing Compliance Act (HSFCA)*

The FMP also may provide an implementing mechanism for the U.N. Agreement to Promote Compliance with International Conservation and Management Measures by Fishing Vessels on the High Seas, which was adopted by the U.N. Food and Agriculture Organization (FAO) in November 1993. It establishes the responsibility of each nation for the actions of vessels fishing under that nation's flag on the high seas. The agreement requires that vessels have specific authorization from their flag nation to participate in high seas fishing. Further, nations must maintain a registry of authorized vessels, ensure that those vessels are marked for identification according to international standards, and ensure that they report sufficient information on their fishing activities. The High Seas Fishing Compliance Act (HSFCA) is the domestic legislation enacted in 1995 to provide authority to the Secretary of Commerce to implement this FAO Agreement.

NMFS has implemented regulations requiring U.S. vessel operators fishing on the high seas to maintain and submit records of catch and effort on their high seas fishing activities. The reporting requirement would be met if a vessel operator is reporting in compliance with regulations under another federal statute (e.g., MSFCMA requirements). Thus, longline vessel operators fishing outside the EEZ, but based on the West Coast, must maintain and file the new federal logbook, and West Coast albacore trollers must maintain and file a troll logbook. NMFS provides the required forms or logbooks. Fishermen are not required to report catch and effort within the EEZ under this requirement, although NMFS has asked that all activity be recorded. The FMP can supersede the HSFCA reporting requirements and thus provide a mechanism to harmonize eastern and western Pacific fishery reporting and monitoring mechanisms.

### 1.6.6 *Western Pacific Pelagics FMP*

#### ~~Initial FMP~~

The initial Western Pacific FMP was adopted in 1987 and included initial estimates of maximum sustainable yield (MSY) for the stocks and set optimum yield (OY) for these fisheries in the EEZ. The regulations applied to domestic and foreign fishing for billfishes, wahoo, mahimahi, and oceanic sharks. Among the original regulations were a prohibition on drift gillnet fishing within the region's EEZ and provisions for experimental fishing permits. The FMP prohibited foreign longline vessels from fishing within certain areas of the EEZ. Additional areas up to 150 nm from Guam and the main Hawaiian Islands and up to 100 nm from the Northwestern Hawaiian Islands may be closed to foreign longline vessels if their fishing activity is causing adverse impacts on domestic fishery performance, excessive waste of catch, excessive enforcement costs, or adverse effects on stocks. No legal foreign longline fishing has occurred under the FMP.

The initial FMP defined optimum yield as the amount of each species in the management unit that will be caught by domestic and foreign vessels fishing in the EEZ in accordance with the measures in the FMP. At that time, the principal concern was regulation of the foreign longline fishery in the EEZ to ensure that foreign catches of billfish, mahimahi, wahoo, and oceanic sharks would not adversely affect domestic commercial and recreational fisheries for these species.

The initial FMP specified domestic annual harvest and total allowable level of foreign fishing in non-numeric terms, i.e. the amount of fish that could be caught while fishing in accordance with the management measures in the FMP. The FMP also addressed joint venture processing for billfish and other non-tuna species by stating that practically all fish caught by vessels in the EEZ are landed in a whole or dressed state without processing, and processors handle whatever processing that is performed; thus, there is no allowance for joint venture processing.

The FMP has subsequently been amended numerous times to revise definitions, establish a limited entry program for the Hawaii domestic longline fishery, establish a variety of additional management measures,

address protected species interactions, and address overfishing. (These amendments may be accessed at <http://www.wpcouncil.org/pelagic.htm>.)

#### Amendment 1

~~The FMP was first amended on 29 June 1991. Amendment 1 included: (a) a measurable definition of recruitment overfishing for billfishes, mahimahi, wahoo, and ocean sharks; (b) a revised definition of OY; and (c) a revised set of objectives to bring the FMP objectives into accord with the definitions of overfishing and the revised definition of OY.~~

#### Amendment 2

~~The second amendment to the Western Pacific FMP, implemented on 31 May 1991, made permanent several regulations for domestic longline vessels first established by emergency interim rules. These regulations require longline vessels to have federal permits and maintain federal fishing logbooks. The regulations also authorized the placement of observers on longline vessels intending to fish within 50 nm "study areas" around certain areas in the Northwest Hawaiian Islands, to document the level of interaction with protected species. The existing observer requirement was nullified by Amendment 3.~~

#### Amendment 3

~~The third amendment to the Western Pacific FMP, implemented on 18 October 1991, made permanent previous emergency actions to establish a protected species zone in the Northwest Hawaiian Islands, in which pelagic longline fishing is prohibited. The zone was created to protect endangered Hawaiian monk seals. This action effectively abrogated the regulations for the placement of observers in the 50 nautical mile study areas created by Amendment 2. However, Amendment 3 includes framework provisions allowing the NMFS Regional Administrator, in consultation with the Western Pacific Regional Fishery Management Council, to modify conservation and management measures in response to changes in the fishery or new information on protected species. In September 1991, the Council requested the RA implement through this framework procedure a mandatory observer program for the longline fishery throughout its range to collect more information on longline turtle interactions.~~

#### Amendment 4

~~The fourth amendment to the Western Pacific FMP, implemented on 16 October 1991, extended previous emergency interim rules that were implemented to arrest the rapid growth of the Hawaii-based longline fishery. Amendment 4 established a moratorium on new participants from entering the Hawaii fishery for a total of three years, including the six months of the emergency actions, with limited exceptions for persons who had made certain financial commitments, and for participants in the lobster fishery. A longline vessel fishing in the Hawaii EEZ or using the EEZ with pelagic species on board, or landing pelagic fishing in Hawaii, must have a limited entry permit. A one-time transfer of this limited entry permit was allowed during the three-year moratorium. The Council halted the expansion of the fishery to provide a period of stability during which data could be collected and analyzed to assess the impacts of increased longline effort. The moratorium expired on 22 April 1994.~~

#### Amendment 5

~~The fifth amendment to the Western Pacific FMP, implemented on 4 March 1992, closed certain areas around the main Hawaiian Islands and Guam to pelagic longline fishing. This action was intended to prevent gear conflicts and vessel safety issues arising from interactions between longliners and smaller fishing boats. Amendment 5 also provided a framework mechanism to modify the area closures if new information indicates~~

that a change is necessary to meet the objectives of the FMP. A seasonal reduction in the size of the closure was implemented on 6 October 1992.

#### Amendment 6

The sixth amendment to the Western Pacific FMP, effective 27 October 1992, was adopted in response to an amendment to the MSFCMA to include all tuna species as fish under U.S. management authority. Amendment 6 included tuna and related species of the genera *Allothunnus* spp., *Auxis* spp., *Euthynnus* spp., *Gymnosarda* spp., *Katsuwonus* spp., *Scomber* spp., and *Thunnus* spp. These genera contain all tuna species caught in the EEZ or by vessels based in the region. Amendment 6 also incorporated a definition of overfishing for tuna and related species that is consistent with that developed for the other management unit species in Amendment 1. The regulations established by Amendment 6 extended all domestic longline restrictions (area closures, no new fishing in the Hawaii EEZ, etc.) to prospective foreign longline vessels. Areas closed to longline fishing were also closed to foreign purse seine and baitboats. Finally, Amendment 6 extended general foreign fishing permit and observer requirements to all foreign pelagic fishing vessels, regardless of their gear type and target species.

#### Amendment 7

Amendment 7 (January 1994) addressed the concerns regarding the impacts of longline fishing on fish resources, other pelagic fisheries in Hawaii, and protected species. Swordfish is the only stock that the U.S. longline fishery has the potential, if unregulated, to negatively impact on a stock wide basis. Managing the growth of the longline fleet that is permitted to land their catch in Hawaii was considered a prudent measure to address stock conservation concerns, even though much larger distant water fishing fleets from other nations participate in the same fishery. In addition, Amendment 7 added several pelagic species caught by the longline fishery, including moonfish or opah (*Lampris* sp.), pomfret (pelagic spp. of family Bramidae), and oilfish or walu (family Gempylidae). Overfishing definitions for these species are also added.

Amendment 7 modified the Pelagics FMP by establishing a new limited entry plan for the longline fishery based in Hawaii. The new program replaced a moratorium on new entry to the longline fishery. The limited entry program and longline area closures address the concerns of catch competition among longliners and commercial and recreational troll/handline fisheries. (The area closures required longline fishers to operate a minimum of 50-75 miles from shore.) The limited entry program also helps retard takes of protected species such as sea birds and turtles.

The specific provisions of the limited entry program are:

Persons eligible for permits were initially those who were longline limited entry permit holders at the end of the moratorium and (a) whose vessels were used to make at least one landing in Hawaii of longline caught fish during the moratorium; or (b) whose vessels were smaller than 40 feet in length, or those people who qualified for or would have qualified for a longline limited entry permit due to eligibility for a limited entry permit for the lobster fishery in the Northwestern Hawaiian Islands (the latter would be exempt from the landing requirement).

If an individual or corporation has more than one permit, new permits would be issued to replace each qualifying permit. The former requirement was eliminated for limited entry permit holders to have a separate general longline fishery permit in non-Hawaii areas managed under the Pelagics FMP.

Permits are transferable with or without a vessel, subject to the restriction on vessel upgrading. A vessel owner can upgrade a vessel up to the length of the longest vessel that was active under the moratorium. One intent of these provisions was to give permit holders the ability to obtain vessels large enough to fish beyond

~~the nearshore closed areas and safely reach international waters where swordfish and bluefin tuna are most frequently caught. Limiting the number of longline vessels and restricting upgrades were expected to prevent any adverse impacts on fish stocks, other fisheries, and protected species.~~

~~The amendment includes broad framework procedures for the adjustment of management regulations in the event new information on the fisheries and the status of the stocks demonstrates the need for such action. The framework process provides for adjustments in fleet size (upward or downward), catch, and/or effort. Adjustment mechanisms could include, but are not limited to, fractional licensing, consolidation of permits, different types of permits, or individual quotas. The framework procedures include all elements of the limited entry program, as well as area closures and exemption criteria previously covered under framework procedures established by earlier amendments, along with changes in permit conditions and modifications of the reporting and observer requirements for longline vessels. The framework procedures allow adjustments to be made through a single action in the Federal Register, following one or two Council meetings at which the opportunity for public input was provided. The intent is to allow for more rapid adjustment, when necessary, since an amendment to the FMP would not be required for most actions.~~

~~Longliners holding a Hawaii limited entry permit would be required to have only one federal permit to fish throughout the Western Pacific region.~~

~~The NMFS Southwest Regional Administrator is allowed to charge fees to cover the costs of administering limited entry permits.~~

~~Domestic longliners without Hawaii limited entry permits are allowed to transit the EEZ or enter Hawaii ports to re-provision, but are prohibited from offloading their catch. This port call privilege, formerly granted to foreign longliners, was unavailable to U.S. vessels during the moratorium.~~

~~The amendment is complemented by provisions that will be implemented under framework procedures already in the FMP, to authorize the NMFS Southwest Regional Administrator to place observers aboard permitted longline vessels, and to implement a requirement for longliners to carry an electronic vessel monitoring system. In September 1993, the Western Pacific Regional Fishery Management Council requested the RA to establish a mandatory observer program for the longline fishery and to implement a vessel monitoring system through the framework provisions of Amendments 3 and 4, respectively.~~

~~Amendment 7 also modified the definition of OY to clarify that OY encompasses fishing by all vessels to the extent regulated by the FMP.~~

## **Protected Marine Resources and Longline Fishery Interactions**

Twelve federally protected marine animals are known to have interactions with Hawaii-based longline vessels within or beyond the EEZ surrounding the Hawaiian archipelago. (1) Marine Mammals: Hawaiian monk seal (*Monachus schauinslandi*) - endangered; Humpback whale (*Megaptera novaeangliae*) - endangered; False killer whale (*Pseudorca crassidens*) - protected; Dolphin spp. - protected. (2) Sea Turtles: Green turtles (*Chelonia mydas*) - threatened; leatherback turtle (*Dermochelys coriacea*) - endangered; Olive ridley turtle (*Lepidochelys olivacea*) - endangered; Loggerhead turtle (*Caretta caretta*) - threatened; Hawksbill turtle (*Eretmochelys imbricata*) - endangered. (3) Sea Birds: Laysan albatross (*Phoebastria immutabilis*) - protected; Black-footed albatross (*P. nigripes*) - protected; Short-tailed albatross (*P. albatrus*) - endangered; Booby (*Sula sp.*) - protected.

## **Species in the Management Unit**

The Western Pacific FMP, as amended through Amendment 7, includes the following fish species:

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|                        |                          |
|------------------------|--------------------------|
| mahimahi (dolphinfish) | <i>Coryphaena spp.</i>   |
| marlin and spearfish   | <i>Makaira spp.</i>      |
| Tetrapturus spp.       |                          |
| oceanic sharks         | family Alopiidae         |
| family Carcharhinidae  |                          |
| family Lamnidae        |                          |
| family Sphyrnidae      |                          |
| sailfish               | <i>Istiophorus spp.</i>  |
| swordfish              | <i>Xiphias sp.</i>       |
| tuna and related spp.  | <i>Allothunnus sp.</i>   |
| <i>Auxis spp.</i>      |                          |
| <i>Euthynnus spp.</i>  |                          |
| <i>Gymnosarda sp.</i>  |                          |
| <i>Katsuwonus sp.</i>  |                          |
| <i>Scomber spp.</i>    |                          |
| <i>Thunnus spp.</i>    |                          |
| wahoo                  | <i>Acanthocybium sp.</i> |
| moonfish (opah)        | <i>Lampris sp.</i>       |
| pomfret                | family Bramidae          |
| oilfish (walu)         | family Gempylidae        |

### **Longline Fishery Restrictions to Protect Sea Turtles and Seabirds as of 2003**

On December 27, 1999 (64 FR 72290), NMFS issued, under the authority of the Magnuson-Stevens Act, an emergency interim rule, effective for 180 days, closing certain waters to fishing by the Hawaii based longline fishery. The intent was to reduce adverse impacts to sea turtles resulting from the fishery while NMFS prepared a comprehensive EIS for the FMP. The objective was to have appropriate time and area closures based upon the greatest benefit to sea turtles while considering the costs to the longline fishery. Subsequently, NMFS issued a proposed rule (65 FR 8107, February 17, 2000), requiring possession and use of line clippers and dip nets aboard vessels registered for use under a Hawaii longline limited access permit. Line clippers and dip nets were to be used to disengage sea turtles hooked or entangled by longline fishing gear. The rule required specific methods for handling, resuscitating, and releasing sea turtles. The final rule was published on March 28, 2000 (65 FR 16346). The December 27, 1999, emergency interim rule was extended on June 19, 2000 (65 FR 37917). The temporary area closure was maintained until December 23, 2000, or until new time and area closures, as imposed by the Court, were implemented by NMFS.

On July 5, 2000 (65 FR 41424), NMFS issued a proposed rule to require Hawaii-permitted operators to use two or more of six specific bird mitigation techniques when fishing with pelagic longline gear north of 25° N latitude; annually attend a protected species workshop conducted by NMFS; and release all hooked or entangled sea birds in a manner that maximizes their post-release survival. The rule was intended to reduce fishery impacts on black-footed and Laysan albatrosses that are accidentally hooked or entangled and killed by Hawaii pelagic longliners during the setting and hauling of longline gear. The rule was also expected to reduce the potential for interactions between pelagic longline fishing vessels and endangered short-tailed albatrosses, which are known to occasionally visit the Northwestern Hawaiian Islands.

On August 16, 2000 (65 FR 49968), NMFS published a notice of an August 4, 2000, order of the United States District Court for the District of Hawaii (65 FR 49968), which amended the Court's earlier Orders Of Injunction. The order would remain in effect until NMFS completed an EIS by April 1, 2001, analyzing the effect of fishing activities regulated under the Western Pacific Pelagics FMP. Under the order, certain areas were closed year-round to fishing by vessels engaged in the Hawaii-based pelagic longline fishery and other

areas are seasonally closed. In certain areas, limitations were placed on fishing effort and 100 percent observer coverage was required. In the remaining area, fishing for swordfish was prohibited, observer coverage had to be increased to 10 percent by September 21, 2000, and to 20 percent by November 2, 2000, and vessel operators were required to submit written reports to NMFS within 5 days of returning to port of any swordfish taken during that trip. NMFS had to make observer reports available to the court by the first of each month, continue to require Hawaii longline vessels to carry and use NMFS-approved line clippers and dip nets, and continue its research into the effects of several different gear modifications to reduce or eliminate the incidental catch of sea turtles. On August 25, 2000 (65 FR 51992), NMFS published an emergency interim rule replacing the previous emergency rule and implemented the court's August 4th order.

On November 3, 2000 (65 FR 66186), NMFS published changes to the emergency interim rule restricting fishing for swordfish in a specific area, established requirements for setting longline gear, and prohibited light sticks. On February 22, 2001 (66 FR 11120), NMFS published an extension to the emergency rule. On March 19, 2001 (66 FR 15358), NMFS published an emergency interim rule that closed the longline fishery during a specific period and clarified closure requirements. On April 19, 2001 (66 FR 20134), NMFS published a notice that announced the terms of the March 30, 2001, order of the court, which modified the previous order of August 4, 2000. The order restricted the Hawaii-based longline fishery based on the preferred alternative of the Final FEIS, which had been completed according to the court's order.

On June 12, 2001 (50 CFR Part 660, 66 FR 31561), NMFS issued an emergency interim rule, effective for 180 days, applicable to vessels registered for use under a Hawaii longline limited access permit. The rule: prohibits the targeting of swordfish north of the equator by Hawaii longline vessels; prohibits longline fishing by Hawaii longline vessels in waters south of the Hawaiian Islands (from 15° N latitude to the equator, and from 145° W longitude to 180° longitude) during the months of April and May; allows re-registration of vessels to Hawaii longline limited access permits only in October; imposes additional sea turtle handling and resuscitation measures; and requires all Hawaii longline vessel operators to attend an annual protected species workshop. This rule implements the order issued on March 30, 2001, by the court and supersedes the court's order of August 4, 2000, and the rule supersedes the emergency rules published on August 25, 2000; November 3, 2000; February 22, 2001; and March 19, 2001. Other parts of this emergency interim rule implement the terms and conditions contained in the November 28, 2000, Biological Opinion (BO) issued by the U.S. Fish and Wildlife Service on the effects of the Hawaii-based longline fishery on the endangered short-tailed albatross. To protect albatrosses, thawed, blue-dyed bait and practicing strategic discard of offal are required while fishing north of 23° N latitude. Observer coverage of 20% also is required. The rule is effective through December 10, 2001. On December 10, 2001 (66 FR 63631), the emergency rule was extended to June 8, 2002. This emergency rule also established basket-style longline gear as approved gear for the fishery.

On April 5, 2002 (67 FR 16323), NMFS published an emergency interim rule, also effective until June 8, 2002, which prohibits longline fishing north of 26° N latitude, and prohibits the retention or landing of more than 10 swordfish per trip by Hawaii longline vessels that fish north of the equator.

On April 29, 2002 (67 FR 20945), NMFS published a proposed rule establishing sea turtle take mitigation measures in the Hawaii-based longline fishery. The regulations would implement gear specifications for longline gear, prohibit targeting swordfish north of the equator, prohibit landing or possessing more than 10 swordfish per trip by longline vessels fishing north of the equator, establish a closed area during April and May south of Hawaii between the equator and 15° N latitude, and require all longline vessel operators to attend a protected species workshop annually. This rule would implement the reasonable and prudent measures of the March 29, 2001, biological opinion issued by NMFS under the Endangered Species Act. This proposed rule contains the 10 swordfish possession restriction that appears in the April 5, 2002, emergency interim rule mentioned above, but does not propose prohibiting longline fishing north of 26° N latitude.

On May 6, 2002 (67 FR 30346), NMFS published a proposed rule that would establish permit and reporting requirements for any U.S. fishing vessel that uses troll or handline fishing gear to harvest pelagic management unit species in waters around certain U.S. possessions in the western Pacific, referred to as Pacific Remote Island Areas.

On May 14, 2002 (67 FR 34408), NMFS published a final rule governing seabird mitigation measures in the Hawaii-based longline fishery. The regulations require fishermen to use line-setting machines and thawed blue-dyed bait and strategic offal discards during setting and hauling of longline gear. This rule codifies the terms and conditions of a biological opinion issued by the U.S. Fish and Wildlife Service on November 28, 2000, to protect the endangered short-tailed albatross. The rule also implements measures recommended by the Western Pacific Council in a proposed rule published on July 5, 2000 (mentioned above).

#### *1.6.7 Relationship to Existing Fishery Management*

As indicated in Section 1.6.6, the FMP will provide a basis for harmonizing management of fisheries by U.S. vessels that fish in both the western and eastern Pacific. However, in addition, the FMP can be a mechanism for consolidating federal marine resources management responsibilities under a single set of rules. For example, the drift gillnet fishery is currently subject to controls under California law and regulations and under Marine Mammal Protection Act (MMPA) and Endangered Species Act (ESA) regulations. To obtain the complete set of regulations, a fisher would have to go to three sources. Under the FMP, additional regulations would be implemented under Magnuson-Stevens Act authority. It would be reasonable to seek an approach under which at the least, all federal regulations could be found in one place and under a single statutory authority. If the MMPA and ESA regulations were essentially integrated into the FMP process, then this could be accomplished. This would be consistent with the provision of the Magnuson-Stevens Act that a FMP must be consistent with other applicable law. It also would be consistent with the ESA mandate to use all available authorities to further the purposes of that law. Further, by incorporating these regulations into the FMP process, the Council and NMFS would effectively provide an open and continuing process for considering the possible need for changes in those regulations as conditions change or new information becomes available. Under this approach, fishery participants might find it easier to understand what is required and why.

#### *1.6.8 Treaty Indian Fishing Rights*

### **Legal Considerations**

Treaties between the United States and numerous Pacific Northwest Indian tribes reserve to these tribes the right of taking fish at usual and accustomed grounds and stations ("u & a grounds") in common with all citizens of the United States. See *U.S. v. Washington*, 384 F. Supp. 312, 349-350 (W.D. Wash. 1974).

The National Marine Fisheries Service recognizes four tribes as having u & a grounds in the marine areas managed by this FMP: the Makah, Hoh, and Quileute tribes, and the Quinault Indian Nation. The Makah Tribe is a party to the Treaty of Neah Bay, Jan. 31, 1855, 12 Stat. 939. See 384 F. Supp. at 349, 363. The Hoh and Quileute tribes and the Quinault Indian Nation are successors in interest to tribes that signed the Treaty with the Quinault, et al. (Treaty of Olympia), July 1, 1855, 12 Stat. 971. See 384 F. Supp. at 349, 359 (Hoh), 371 (Quileute), 374 (Quinault). The tribes' u&a grounds do not vary by species of fish. *U.S. v. Washington*, 157 F. 3d 630, 645 (9th Cir. 1998).

The treaty fishing right is generally described as the opportunity to take a fair share of the fish, which is interpreted as up to 50 percent of the harvestable surplus of fish that pass through the tribes' u&a grounds. *Washington v. Washington State Commercial Passenger Fishing Vessel Association*, 443 U.S. 658, 685-687 (1979) (salmon); *U.S. v. Washington*, 459 F. Supp. 1020, 1065 (1978) (herring); *Makah v. Brown*, No. C85-



160R, and U.S. v. Washington, Civil No. 9213 - Phase I, Subproceeding No. 92-1 (W.D. Wash., Order on Five Motions Relating to Treaty Halibut Fishing, at 6, Dec. 29, 1993) (halibut); U.S. v. Washington, 873 F. Supp. 1422, 1445 and n. 30 (W.D. Wash. 1994), aff'd in part and rev'd in part, 157 F. 3d 630, 651-652 (9th Cir. 1998), cert. denied, 119 S.Ct. 1376 (1999) (shellfish); U.S. v. Washington, Subproceeding 96-2 (Order Granting Makah's Motion for Summary Judgment, etc. at 4, November 5, 1996) (Pacific whiting). The court applied the conservation necessity principle to federal determinations of harvestable surplus in Makah v. Brown, No. C85-160R/ United States v. Washington, Civil No. 9213 - Phase I, Subproceeding No. 92-1, Order on Five Motions Relating to Treaty Halibut Fishing, at 6-7, (W.D. Wash. Dec. 29, 1993); Midwater Trawlers Co-op. v. Department of Commerce, 282 F.3d 710, 718-719 (9th Cir. 2002).

The treaty right was originally adjudicated with respect to salmon and steelhead. However, it is now recognized as applying to all species of fish and shellfish within the tribes' u&a grounds. U.S. v. Washington, 873 F.Supp. 1422, 1430, aff'd 157 F. 3d 630, 644-645 (9th Cir. 1998), cert. denied, 119 S.Ct. 1376; Midwater Trawlers Co-op. v. Department of Commerce, 282 F.3d 710, 717 (9th Cir. 2002) ["The term 'fish' as used in the Stevens Treaties encompassed all species of fish, without exclusion and without requiring specific proof. (citations omitted)"]

The original 1974 District Court decision in U.S. v. Washington specifically references a Makah tuna (albacore) vessel:

There are presently eight [Makah] boats of commercial size fishing on the high seas. Three of these boats are gill netting in the Strait of Juan de Fuca, four are trolling, and one is tuna fishing. The commercial boats are thirty-six feet in length except that the tuna boat is fifty-four feet in length. (citation omitted) These boats were obtained by the tribe using its resources to acquire the boats and are managed by a tribal corporation. (citation omitted) These commercial boats go as far as fifty miles out to sea, east to Puget Sound and south to Westport and the Columbia River. (citation omitted)

**U.S. v. Washington, 384 F.Supp. 312, 364-365 (W.D. Wash. 1974).**

The National Marine Fisheries Service recognizes the areas set forth in the regulations cited below as marine u&a grounds of the four Washington coastal tribes. The Makah u&a grounds were adjudicated in U.S. v. Washington, 626 F.Supp. 1405, 1466 (W.D. Wash. 1985), aff'd 730 F.2d 1314 (9th Cir. 1984); see also Makah Indian Tribe v. Verity, 910 F.2d 555, 556 (9th Cir. 1990); Midwater Trawlers Co-op. v. Department of Commerce, 282 F.3d 710, 718 (9th Cir. 2002). The u&a grounds of the Quileute, Hoh, and Quinault tribes have been recognized administratively by NMFS. See, e.g., 67 Fed. Reg. 30616, 30624 (May 7, 2002) (u&a grounds for salmon); 50 C.F.R. 660.324(c) (u&a grounds for groundfish); 50 C.F.R. 300.64(i) (u&a grounds for halibut). The u&a grounds recognized by NMFS may be revised as ordered by a federal court.

The legal principles described above support the conclusion that treaty Indian fishing rights apply to highly migratory species that pass through the coastal tribes' ocean u&a grounds. The quantity of this right has not yet been determined or adjudicated.

**Prospective Tribal Fisheries for HMS at the Time of FMP Adoption**

Three Makah boats are presently reported to fish for albacore. They fish mostly beyond the EEZ, but sometimes within the EEZ. Landings are either in Ilwaco, Washington, or in Canada pursuant to the "Treaty Between the Government of the United States of America and the Government of Canada on Pacific Coast Albacore Tuna Vessels and Port Privileges (1981)." One Makah fisherman is currently planning to fish for thresher shark. In addition, two Quinault boats and one Quileute boat plan to fish for HMS. Currently there is no regulatory impediment to the tribes' pursuit of HMS fisheries. However, it is possible that specific treaty Indian allocations may be necessary in the future. To anticipate this eventuality, and to establish an orderly

process for implementing treaty fisheries, this FMP authorizes adoption of procedures to accommodate treaty fishing rights in the implementing regulations (see Chapter 8).

#### *1.6.9 Other International Entities*

##### **Standing Committee on Tuna and Billfish (SCTB)**

The SCTB evolved from a committee of international scientists charged with review of the work of the Offshore Fisheries Program of the Secretariat of the Pacific Community (SPC; formerly the South Pacific Commission) to a more general committee with the following terms of reference:

- Coordinate fisheries data collection, compilation and dissemination according to agreed principles and procedures;
- Review research on the biology, ecology, environment and fisheries for tuna and associated species in the western and central Pacific Ocean;
- Identify research needs and provide a means of coordination, including the fostering of collaborative research, to most efficiently and effectively meet those needs;
- Review information pertaining to the status of stocks of tunas and associated species in the western and central Pacific Ocean, and to produce statements on stock status where appropriate; and
- Provide opinion on various scientific issues related to data, research and stock assessment of western and central Pacific Ocean tuna fisheries.

Participation on the SCTB is open to scientists and others with an interest in the tuna fisheries of the western and central Pacific Ocean. The participation of scientists from coastal states and territories of the region, scientists from countries whose vessels fish in the region, and scientists from international tuna fishery management organizations is encouraged.

The 1999 annual meeting of the SCTB included 81 participants from American Samoa, Australia, Canada, Cook Islands, Federated States of Micronesia, Fiji, French Polynesia, Japan, Kiribati, Korea, Nauru, New Caledonia, New Zealand, Niue, Northern Mariana Islands, Palau, Papua New Guinea, Philippines, Samoa, Taiwan, Tonga, Tuvalu, USA, Vanuatu, Wallis & Fortuna, Forum Fisheries Agency, Inter-American Tropical Tuna Commission, and the SPC.

To perform its functions the SCTB formed a Statistics Working Group, and various species research groups which include skipjack, yellowfin, bigeye and albacore, and a research group for billfish and bycatch species.

Reports and information are available from the Secretariat of the Pacific Community, Noumea, New Caledonia.

##### **Interim Scientific Committee (ISC)**

The ISC evolved through a series of consultations between the U.S. and Japan with a twofold purpose:

- To enhance scientific research and cooperation for conservation and rational utilization of the species of tuna and tuna-like fishes which inhabit the north Pacific Ocean during a part or all of their life cycle; and

- To establish the scientific groundwork, if at some point in the future, it is decided to create a multilateral regime for the conservation and rational utilization of these species in this region.

The ISC membership can include coastal states/economies of the region and states/economies with vessels fishing for these species in the region. Observer participants include relevant intergovernmental fishery organizations, relevant intergovernmental marine science organizations and other entities with vessels fishing for these species in the region. Current membership includes Canada, Chinese-Taipei, Japan, Korea, Mexico, People's Republic of China, U.S., IATTC and SPC.

The functions of the ISC are to:

1. Regularly assess and analyze fishery and other relevant information concerning the species covered;
2. Prepare a report on its findings or conclusions on the status of such species such as trends in population abundance of such species, developments in fisheries, and conservation needs;
3. Strive to adopt reports and findings by consensus of all Members, however, it is not necessary that consensus is achieved on all matters, and reports and findings may reflect options and differing views when a consensus has not been achieved;
4. Formulate proposals for conduct of and, to the extent possible, coordinate international and national programs of research addressing such species; and
5. Consider any other matters, as appropriate, at the request of one of the members.

Species currently considered by the ISC include swordfish, bigeye tuna, northern bluefin tuna, yellowfin tuna, blue and striped marlins, and north Pacific albacore. Additional species such as sharks, wahoo, and sailfish may be considered at a later date.



## 2.0 MANAGEMENT PHILOSOPHY

### 2.1 Management Philosophy and Approach

[8.1 Management Philosophy and Approach]

Highly migratory species are wide-ranging, likely to be fished by multi-national fleets beyond U.S. waters, have productivity potentials ranging from very low to very high, and can seldom be directly surveyed for abundance. Their management usually requires international cooperation, for which there must be active U.S. participation at international forums. The management should be precautionary and multidimensional in approach.

*Precautionary management* should be the guiding theme in managing HMS species. It is called for by National Standard 1 of the Magnuson-Stevens Act, FAO's Code of Conduct for Responsible Fisheries, the United Nations' "UNIA" or "Highly Migratory Species and Straddling Stocks" Agreement, and regional agreements, such as MHLA. Precautionary management is proactive, i.e., it seeks to minimize the likelihood of attaining the overfished condition by accounting for uncertainties and by establishing preventive procedures. Other aspects of this concept are discussed in Sections 4.1–4.6. Precautionary management of HMS species should include:

1. Consideration of the biological limitations of species. Due to different and unique life histories, HMS species have differing vulnerabilities to exploitation that require differing management. For example, most tunas are wide-ranging and productive while many sharks, with delayed sexual maturity and low fecundity, are not. Precautionary quotas may be more appropriate for vulnerable species, as maintenance of healthy levels of their reproductive potential is more the concern than is maximization of yields.
2. Control of the growth rate of fisheries. Rapidly expanding fisheries are likely to overshoot management goals, both biological and economic. Uncontrolled growth can produce excess fishing capacity that is difficult to withdraw. The lower the productivity of a species, the greater the need for this control.

*Multidimensional management*, within the context of the above two precautionary concepts, refers to methods that are complementary and which are often applied in combination in actual management. There are at least four methods:

1. Management by Catch and Effort Limits. The limits for this traditional approach should be determined with express consideration of species' life histories and productivity potentials and applied within the context of control rules (Section 4.2). These limitations should also extend to controlling the rate of fishery expansions (#2 above).
2. Management by protecting reproductive potential. Season and/or area closures should be considered for times and places occupied by significant portions of populations that are reproducing females, especially for low-productivity species.
3. Management by Limiting Access. To prevent rapid increase in fishing effort, excess fishing capacity, and boom-bust exploitation, and to promote stable and long-term fishing investment and thereby incentives for resource conservation, limited entry systems should be considered.
4. Management by Limiting Bycatch. Under the Magnuson-Stevens Act, bycatch must be minimized and avoided to the extent practicable. Increased utilization to reduce bycatch discards can be promoted, but with the productivity potentials of the species involved considered. Incentives should be provided to promote gears with low bycatch.

Whatever the method or approach, specific management actions in this plan are to be in accordance with a control rule (Sections 4.2–4.4), which focuses on biomass relative to that for MSY (the  $B/B_{MSY}$  ratio) and on biomass relative to MSST (the  $B/B_{MSST}$  ratio - for the overfished condition). Thus in managing to maintain MSY, specific corrective action is not mandatory unless biomass giving  $B_{MSST}$ , or the overfished ratio, is reached. If MSY is exceeded, managers must bear in mind that MSY and other reference points refer to the equilibrium or long-term average stock condition, and that any year's catch can be above or below the target level depending on variations in stock availability or stock size as affected by recruitment. It is for this reason that the overfished state is specified as biomass reduced to  $B_{MSST}$  (not  $B_{MSY}$ ), and not simply catch being greater than MSY. Moreover, when MSY is a proxy estimate, managers need to recognize its interim nature. There will be uncertainty in all cases, so quotas or harvest guidelines must be developed with care.

## 2.2 Management Goals and Objectives

### [8.3.3 Management Goals and Objectives]

The preceding approaches for managing the management unit species of this plan are to be implemented by specific ~~proposed~~ management actions ~~and alternatives~~ that are described in Chapter 6. The general goals and objectives of this FMP are listed below to provide context for these ~~various~~ actions ~~and alternatives~~. They are not listed in order of priority:

1. Promote and actively contribute to international efforts for the long-term conservation and sustainable use of highly migratory species fisheries that are utilized by West Coast-based fishers, while recognizing these fishery resources contribute to the food supply, economy, and health of the nation.
2. Provide a long-term, stable supply of high-quality, locally caught fish to the public.
3. Minimize economic waste and adverse impacts on fishing communities to the extent practicable when adopting conservation and management measures.
4. Provide viable and diverse commercial fisheries and recreational fishing opportunity for highly migratory species based in ports in the area of the Pacific Council's jurisdiction, and give due consideration for traditional participants in the fisheries.
5. Implement harvest strategies which achieve optimum yield for long-term sustainable harvest levels.
6. Provide foundation to support the State Department in cooperative international management of highly migratory species fisheries.
7. Promote inter-regional collaboration in management of fisheries for species which occur in the Pacific Council's managed area and other Councils' areas.
8. Minimize inconsistencies among federal and state regulations for highly migratory species fisheries.
9. Minimize bycatch and avoid discard and implement measures to adequately account for total bycatch and discard mortalities.
10. Prevent overfishing and rebuild overfished stocks, working with international organizations as necessary.
11. Acquire biological information and develop a long-term research program.
12. Promote effective monitoring and enforcement.

13. Minimize gear conflicts.
14. Maintain, restore, or enhance the current quantity and productive capacity of habitats to increase fishery productivity for the benefit of the resource and commercial and recreational fisheries for highly migratory species.
15. Establish procedures to facilitate rapid implementation of future management actions, as necessary.
16. Promote outreach and education efforts to inform the general public about how West Coast HMS fisheries are managed and the importance of these fisheries to fishers, local fishing communities, and consumers.
17. Manage the fisheries to prevent adverse effects on any protected species covered by MMPA and MBTA and promote the recovery of any species listed under the ESA to the extent practicable.
18. Allocate harvest fairly and equitably among commercial, recreational and charter fisheries for HMS, if allocation becomes necessary.

## 2.3 Unilateral Management, Harvest Guidelines and Quotas, and Overfishing

[8.2 Unilateral Management, Harvest Guidelines and Quotas, and Overfishing]

### 2.3.1 *Unilateral Management*

For most management unit species in this FMP, U.S. harvest by West Coast-based vessels represents only a small fraction of total fishing mortality out of the overall range of the species, and any unilateral action, such as a reduction in the U.S. West Coast harvest or effort, would not likely have a significant biological effect on the stock. However, as discussed in the section on overfishing (see “overfishing” below), U.S. law requires unilateral action when a stock is determined to be overfished. Furthermore, unilateral management of U.S. vessels may also be appropriate under some circumstances apart from overfishing. This is particularly true for vulnerable stocks, defined, in part, as stocks that will require more than ten years to recover from depletion (see Section 4.1). Circumstances where unilateral management may be appropriate, not necessarily because a stock is overfished, include, but are not limited to, the following situations:

1. Where a stock is regionally distributed, and a significant portion of the regional distribution is subject to harvest by U.S. West Coast fisheries;
2. Where the ESA, the MMPA, or the MBTA mandate that a species be protected in both United States' and international waters; or
3. Where unilateral action is needed to address domestic issues such as local depletion, protection for essential fish habitat in United States' waters, bycatch reduction, catch allocations, or conflicts among user groups.

### 2.3.2 *Precautionary harvest guidelines and quotas*

A quota is a specified numerical harvest objective, the attainment (or expected attainment) of which causes closure of the fishery for that species or species group. A harvest guideline is a specified numerical harvest objective that is not a quota. Attainment of a harvest guideline does not require closure of a fishery.

~~None of the management unit species that are taken by U.S. West Coast harvesters are overfished, and n~~No U.S. harvest quotas ~~were~~ are recommended ~~at this the time of FMP adoption.~~ A U.S. harvest guideline (to replace the current PSMFC guideline) is initially recommended for the common thresher shark, since thresher shark is regionally distributed, its population occupies a significant portion of the EEZ every year, and it is harvested by West Coast-based U.S. fishing vessels. A harvest guideline is also recommended for the shortfin mako shark because of the stock's vulnerability, and the possible importance of the U.S. West Coast EEZ as nursery habitat. The recommended harvest guidelines for these sharks are given in Chapter 4 and Table 4–3.

### 2.2.3 Overfishing

Section 304(e) of the Magnuson-Stevens Act, 16 U.S.C. § 1854(e), governs the rebuilding of overfished stocks. At any time, if the Secretary of Commerce (Secretary) determines that a fishery is overfished, the Secretary must immediately notify the Council and request that actions be taken to end overfishing and rebuild the affected stock(s). For those fisheries managed under an FMP or an international agreement, the status is determined using the criteria for overfishing specified in the FMP or the agreement. Once an HMS stock is determined to be overfished, the Council must prepare, within one year, an FMP amendment or proposed regulations to end overfishing and rebuild the affected stock (see Section 4.5).

Because of the widespread distribution of HMS stocks outside the U.S. EEZ, it is recognized that unilateral action by the U.S. will likely provide little or no biological benefit to the stock(s), and that concerted international efforts will be required in order to achieve rebuilding. Therefore, if NMFS notifies the Council that a stock managed under an international agreement is overfished or is approaching a condition of being overfished, the Council may, in connection with preparing a rebuilding plan pursuant to the Magnuson-Stevens Act at 16 U.S.C. §1854(e) and 50 C.F.R. 600.310(e), provide analysis and documentation to NMFS and the Department of State supporting its recommendation for action under the international agreement to end or prevent overfishing. It is expected that the Department of State and U.S. delegation, in coordination with NMFS, will consider the Council's recommendation in developing U.S. positions for presentation to the international body, and will keep the Council informed of actions by the international body to end or prevent overfishing. These actions will be taken into account by the Council in completing its rebuilding plan, and in developing its recommendation to NMFS as to what additional U.S. regulations, if any, may be necessary to end or prevent overfishing. The Council's rebuilding plan will reflect traditional participation in the fishery, relative to other nations, by fishers of the United States, consistent with Section 304(e)(4)(C) of the Magnuson-Stevens Act, 16 U.S.C. §1854(e)(4)(C).

## 2.4 Fixed Elements of the Fishery Management Plan

[8.3 Fixed Elements of the Fishery Management Plan]

Fixed elements are the long-standing elements of a fishery management program that direct how it is applied and for what purpose. FMP amendments are required when fixed elements of the FMP are changed, as well as for major or controversial actions outside the scope of the original FMP.

Examples of fixed element actions that would require an FMP amendment include:

- changes to management objectives;
- changes to the species in the management unit (actively managed species);
- changes to the control rules (definition of overfishing);
- amendments to any procedures required by the FMP;



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- implementation of limited entry programs. This FMP does not propose a federal limited entry program for any HMS fishery at this time. The Council adopted a control date of March 9, 2000 for commercial and party/charter fisheries for HMS, in anticipation that a limited access program may be needed in the near future. Meanwhile, existing state limited entry programs for HMS fisheries will remain in effect when the FMP is implemented; and
- allowing a longline fishery in the EEZ (other than through approved activities under an EFP).



### 3.0 SPECIES IN THE MANAGEMENT UNIT

#### [8.3.1 Species in the Management Unit]

Numerous species are caught in HMS fisheries. Those to be actively managed are the Management Unit Species (MUS), for which the alternatives are as listed below (see Chapter 3, Section 3.1.1 for more detail on these alternatives). Other species, caught incidentally to targeted species, will be monitored.

#### [3.1 Species Addressed by the FMP]

HMS fishing gears catch an assortment of tunas, billfish, sharks and other fishes, and some protected species as well. Important species, which meet certain criteria described below, are designated as management unit species, that is, they are subject to active management by the FMP. The management unit species are addressed in Section 3.1.1 and the alternative options considered are listed in Table 3-1.

In addition to management unit species, over fifty other fish species are caught. It is recommended that data be collected for these and any others caught by HMS gears to assess the amount and type of bycatch as required by the Magnuson-Stevens Act. Table 3-2 identifies which species are 1) proposed for inclusion in the management unit, 2) recommended for monitoring, 3) covered by other Pacific FMPs, 4) considered for 'Prohibited' designation, 5) caught outside the EEZ on the high seas by West Coast-based HMS vessels, 6) classified as 'Incidental' (retained or recorded as being landed), and 7) known to be discarded dead or released alive at sea. The list was compiled after reviewing analyses of PacFIN landings (D. Dealy, pers. comm. 1/01, NMFS, SWFSC, La Jolla, CA), catch and bycatch data from the NMFS Driftnet Observer Program, and various literature sources such as Au (1991); Hanan et al. (1993); Holts et al. (1998); and Vojkovich and Barsky (1998).

Species included for monitoring purposes are discussed in Section 3.2. One or more of these species could be added to the management unit by action of the Council. This requires a plan amendment. Bycatch is addressed in Chapter 5 and in Chapters 8 and 9, sections 8.4.4 and 9.2.4.4, respectively.

A few species are designated by this FMP as prohibited because of their special status. These species, if intercepted, must be released immediately, unless there are other provisions for their disposition, or unless permits are held for their capture. Prohibited species are addressed in Section 3.3, Chapter 8 section 8.4.7, and Chapter 9 section 9.2.4.7.

Protected species caught incidentally to HMS fisheries include various species of birds, turtles and mammals. Protected species are addressed in Appendix D by fishery, and in Section 6.1.5.

#### 3.1 Management Unit Species (Actively Managed)

##### [3.1.1 Management Unit Species (Actively Managed)]

The Plan Development Team and the Council examined a number of different criteria and alternatives for species to be included in the management unit. Public testimony covered a wide range of alternatives, from a relatively short list of target species in West Coast HMS fisheries, to a long list of species harvested by HMS fisheries. The Council assumed that species placed in the management unit would be candidates for active management, i.e., the fisheries for these species may need to be regulated by the federal government. The Council also understood that maximum sustainable or optimum yield (bio-analytically-based or proxy) is the basis of management and would have to be specified for each species in the management unit, and that a

definition of overfishing is required. The Council considered various combinations of the following criteria for including species in the management unit, with the stipulation that any species that met the first three criteria would be strongly considered for inclusion:

1. the species occurs in the Pacific Council management area
2. the species occurs in west coast HMS fisheries
3. the species is defined as highly migratory in the Magnuson-Stevens Act or the Law of the Sea Convention
4. the species is important (moderate to high value) in the landings or to the fishery
5. the species is managed by the Western Pacific Region Council
6. sufficient data exists to calculate a bio-analytically based MSY, including a reasonable MSY proxy that is based, e.g., on catches and yields that are stable over time
7. the species occurs in fisheries which the Pacific Council wants to actively manage
8. the species possesses special biological characteristics (e.g., low productivity)

The Magnuson-Stevens Act defines highly migratory species as tuna species, marlin (*Tetrapturus* spp. and *Makaira* spp.), oceanic sharks, sailfishes (*Istiophorus* spp.) and swordfish (*Xiphias gladius*). The term “tuna species” includes albacore tuna (*Thunnus alalunga*), bigeye tuna (*T. obesus*), bluefin tuna (*T. thynnus* and *T. orientalis*), skipjack tuna (*Katsuwonus pelamis*), and yellowfin tuna (*T. albacares*). The inclusion of these definitions establishes the authority of the Secretary of Commerce to manage directly the above species in the Atlantic Ocean and Gulf of Mexico, without the need for a regional fishery management council FMP.

The United Nations Convention on the Law of the Sea, Annex I, defines “highly migratory species” to include: albacore tuna, bluefin tuna, bigeye tuna, skipjack tuna, yellowfin tuna, blackfin tuna (*Thunnus atlanticus*), little tuna (*Euthynnus alletteratus*; *E. affinis*), southern bluefin tuna (*T. maccoyii*), frigate mackerel (*Auxis thazard*; *A. rochei*), pomfrets (family Bramidae), marlins (*Tetrapturus angustirostris*; *T. belone*; *T. pfluegeri*; *T. albidus*; *T. audax*; *T. georgei*; *Makaira mazara*; *M. indica*; *M. nigricans*), sailfishes (*Istiophorus platypterus*; *I. albicans*), swordfish, sauries (*Scomberesox saurus*; *S. saurus scombroides*; *Cololabis saira*; *C. adocetus*), dorado (*Coryphaena hippurus*; *C. equiselis*), oceanic sharks (*Hexanchus griseus*; *Cetorhinus maximus*; *Rhincodon typus*; family Alopiidae; family Carcharhinidae; family Sphyrnidae; family Lamnidae), cetaceans (family Physeteridae; family Balaenopteridae; family Balaenidae; family Eschrichtiidae; family Monodontidae; family Ziphiidae; family Delphinidae).

Species in the management unit of the Pelagic Fisheries FMP adopted by the Western Pacific Region Fishery Management Council are listed in Section 1.7.6.

[**N.B.:** Management Unit Species (MUS) Alternatives subsection omitted.]

~~The preferred action is Alternative 2, which includes dorado (dolphinfish). The preferred management unit includes:~~

Tunas:

- North Pacific albacore (*Thunnus alalunga*)
- yellowfin tuna (*Thunnus albacares*)

bigeye tuna (*Thunnus obesus*)  
skipjack tuna (*Katsuwonus pelamis*)  
northern bluefin tuna (*Thunnus orientalis*)

Sharks:

common thresher shark (*Alopias vulpinus*)  
pelagic thresher shark (*Alopias pelagicus*)  
bigeye thresher shark (*Alopias superciliosus*)  
shortfin mako or bonito shark (*Isurus oxyrinchus*)  
blue shark (*Prionace glauca*)

Billfish/Swordfish:

striped marlin (*Tetrapturus audax*)  
swordfish (*Xiphias gladius*)

Other:

dorado or dolphinfish (*Coryphaena hippurus*)

~~The preferred alternative is intermediate in terms of the number of species subject to active management. It includes more species than Alternatives 1, 3, 4 and 6, but fewer than Alternative 5. The preferred alternative~~  
The management unit includes all five species of tuna which are important to commercial and recreational fisheries in the north Pacific (albacore, bluefin) and eastern tropical Pacific (yellowfin, bigeye, skipjack). Striped marlin is included because of its importance to the recreational fishery in California. Swordfish is a major target in commercial drift gillnet, harpoon and longline fisheries, and is pursued by anglers. Blue shark is an abundant bycatch species in drift gillnet and longline fisheries. It has been the target of some directed shark fisheries in the past, and currently is caught by anglers. Common thresher shark and shortfin mako shark are important species in the drift gillnet fishery and also are targeted by recreational fishers. Bigeye and pelagic thresher sharks are landed by the drift gillnet fishery but in small amounts compared to common thresher and mako sharks. They are included in the management unit ~~preferred alternative~~ largely because of concern that they have poor resilience to fishing. Dorado is an important component of the suite of species targeted by recreational fishers, especially in southern California.

The species are to be managed aiming for consistency in both regional and international management. Since the MUS tunas and billfishes are fished ocean-wide and are already assessed or reviewed regularly at international forums, the Council's main task would be to ensure that their local management is neither inconsistent with, nor is abrogated by, international management. The more regionally distributed sharks not currently under international management require more direct, regional or local assessments of stock status and possibly regional management (common thresher and shortfin mako sharks). Where production potentials cannot be estimated accurately (e.g., because only small fractions of the stocks are taken), the species, as MUS, will still be regularly reviewed under Council guidance (e.g., pelagic and bigeye thresher sharks; dorado).

### 3.2 Species Included in the FMP for Monitoring Purposes

#### [3.1.2 Species Included in the FMP for Monitoring Purposes]

The criteria for species included in the FMP for monitoring purposes are:

- species having a record of being caught in an HMS fishery
- not covered by another FMP or state management regime, or

- of special concern (e.g., elasmobranchs, which have relatively low productivity).

These species (see ~~Table 3-2~~), which often comprise a fishery's bycatch, should be monitored on a consistent and routine basis to the extent practicable. Sampling periodicity and coverage fraction will depend upon the take rates of the species that are of most concern. This monitoring is needed to evaluate the impact of HMS fisheries on incidental and bycatch species (as well as MUS), and to track the effectiveness of bycatch reduction methods (see Section 6.1.3). Monitored species other than the MUS and prohibited species (see below and Section 6.1.6) are:

### **Sharks and Rays**

Blue shark (*Prionace glauca*)  
 Whale shark (*Rincodon typus*)  
 Prickly shark (*Echinorhynchus cookie*)  
 Salmon shark (*Lamna ditropis*)  
 Leopard shark (*Triakis semifasciata*)  
 Hammerhead sharks (Sphyrnidae)  
 Soupfin shark (*Galeorhinus galeus*)  
 Silky shark (*Carcharhinus falciformis*)  
 Oceanic whitetip shark (*C. longimanus*)  
 Blacktip shark (*C. limbatus*)  
 Dusky shark (*C. obscurus*)  
 Sixgill shark (*Hexanchus griseus*)  
 Spiny dogfish (*Squalus acanthias*)  
 Pelagic stingray (*Dasyatis violacea*)  
 Manta/Mobula rays (Mobulidae)  
 Bat ray (*Myliobatis californica*)

### **Tunas and Mackerels**

Black skipjack (*Euthynnus lineatus*)  
 Pacific bonito (*Sarda chiliensis*)  
 Wahoo (*Acanthocybium solandri*)  
 Bullet mackerel (tuna) (*Auxis rochei*)  
 Frigate mackerel (tuna) (*A. thazard*)  
 Pacific mackerel (*Scomber japonicus*)

### **Billfishes and Swordfish**

Blue marlin (*Makaira nigricans*)  
 Black marlin (*M. indica*)  
 Pacific sailfish (*Istophorus platypterus*)  
 Shortbill spearfish (*T. angustirostris*)

### **Jacks, Barracudas, and Pomfrets**

Pacific moonfish (*Selene peruviana*)  
 Yellowtail (*Seriola lalandi*)  
 Jack mackerel (*Trachurus symmetricus*)  
 Rainbow runner (*Elegatis bipinnulata*)  
 Pacific pomfret (*Brama japonica*)  
 California barracuda (*Sphyraena argentea*)

### **Other Fishes**

Pacific whiting (*Merluccius productus*)  
*Sebastes* spp.  
Lingcod (*Ophiodon elongates*)  
Pacific saury (*Cololabis saira*)  
Common mola (*Mola mola*)  
Louvar (*Luvarus imperialis*)  
Oarfish (*Regalecus glesne*)  
Lancetfishes (*Alepisauridae*)  
Triggerfishes (*Balistidae*)  
Sablefish (*Anoplopoma fimbria*)  
Escolar (*Lepidocybium flavobrunneum*)  
Oilfish (*Ruvettus pretiosus*)  
Opah (*Lampris guttatus*)  
White seabass (*Atractoscion nobilis*)  
Northern anchovy (*Engraulis mordax*)  
Pacific sardine (*Sardinops sagax*)  
California sheephead (*Semicossyphus pulcher*)

As outlined in Section 4.3 of this draft FMP, each year, e.g., in March, the HMS Management Team will deliver one combined SAFE report for all species in this FMP to the Council. The SAFE report will follow the guidelines specified in National Standard 2 (of 10) and will be used by the Council and NMFS to develop and evaluate regulatory adjustments under the framework procedure or the FMP amendment process. ~~This information~~ It will document significant trends or changes in monitored species over time, and assess the relative success of existing state and federal fishery management programs. The SAFE report will also make recommendations to the Council concerning bycatch and incidental catch.

### 3.3 Prohibited Species

#### [3.1.3 Prohibited Species]

A few species are considered for inclusion under the category Prohibited Species in this Plan (~~Table 3-2~~). In general, prohibited species must be released immediately if caught, unless other provisions for their disposition are established, including for scientific study. Striped marlin, now allowed for sport-only and not commercial fishing by California, is prohibited by specific allocation and is discussed separately in Section 6.2.4. Pacific halibut and salmon are managed separately from this Plan, but are important in some HMS fisheries and so are provided for here with respect to how they can be caught. ~~Species recommended for~~ Prohibited species status in HMS fisheries are:

Great white shark (*Carcharodon carcharias*)  
 Basking shark (*Cetorhinus maximus*)  
 mega mouth shark (*Megachasma pelagio*)  
 Pacific halibut (*Hippoglossus stenolepis*)  
 Pink salmon (*Onchorhynchus gorbuscha*)  
 Chinook salmon (*O. tshawytscha*)  
 Chum salmon (*O. keta*)  
 Sockeye salmon (*O. nerka*)  
 Coho salmon (*O. kisutch*)

[*N.B.: Detailed descriptions of these species included in Section 3.1.3 of the FMP/FEIS are omitted.*]





## 4.0 PREVENTING OVERFISHING AND ACHIEVING OPTIMUM YIELD

[8.3.2 Control Rule]

The concepts of control rules and status determination criteria for management ~~are described in detail in Chapter 3, section 3.2.1, and the default and alternative management control rules proposed to be adopted for this FMP, are is discussed below in section 3.2.3.~~ Control rules for managing MUS are required under the Magnuson-Stevens Act.

### 4.1 Control Rules and Preventing Overfishing

[3.2 Overfishing Criteria]

These criteria are guideposts for managing exploited stocks and require being able to determine and monitor the effects of fishing. But such effects are not always clear, e.g., catch per unit of effort trends may not only reflect the abundance of HMS, but also how fishing success is affected by schooling or wide-ranging behaviors, fishing efficiency, and environmental effects on the availability of species. Estimated population status of management unit species is discussed in Section 4.8 and summarized in Tables 4–4 and 4–5. The SAFE Report (see Section 4.3), produced annually, provides periodic updates to the information found in this FMP.

Many of the more productive species support large and widespread international fisheries that are best managed cooperatively with other nations. In particular, rebuilding programs, required unilaterally by the Magnuson-Stevens Act for overfished stocks, would be ineffective without international cooperation, especially if domestic catches are only small fractions of the stock-wide harvest (see Table 4–5 for West Coast catch fractions). For such species, regional remedial actions must be concurrent with recommendations at international forums for cooperative action (see Section 4.5 on stock rebuilding).

Still other HMS species possess life histories characterized by low productivity, thus supporting smaller fisheries that tend to be more regional than international. They have more localized distributions and life stage needs, often within the EEZ. Not only are they more easily overfished, but recovery takes longer, i.e., the species are less resilient to overfishing. Their management should be more conservative, and may require strong regional leadership.

Managing conservatively means being precautionary, especially when there are large uncertainties in how a stock is being affected by fishing. Besides lowering the threshold for taking remedial action, it could mean preventing rapid growth of fisheries to prevent overshooting of management goals, or taking steps to protect the reproductive potential of stocks.

[3.2.1 Control Rules for Management]

The goal of the Magnuson-Stevens Act, as amended by the Sustainable Fisheries Act of 1996, is to ensure the long term sustainability of fisheries and fish stocks by halting or preventing overfishing and by rebuilding overfished stocks. The Act requires developing fishery management plans for exploited species of U.S. seas including shelf, anadromous, and highly migratory species whose ranges extend beyond the EEZ. By its National Standard 1, optimum yield is the ultimate goal for each fishery.

National Standard Guidelines, as required by the Magnuson-Stevens Act and published in the *Federal Register* (Code of Federal Regulations, 50 CFR §600, 305 et. seq.) were developed to assist implementing the Act and introduced the terms “**Control Rule**” and “**Status Determination Criteria**” (SDC) relative to the requirements of National Standard 1 (NS 1). The control rule specifies how a fishery is to be managed

depending upon stock status relative to the SDCs, which are biological benchmarks or thresholds. There are two SDCs: the **Maximum Fishing Mortality Threshold (MFMT)** and the **Minimum Stock Size Threshold (MSST)**. By control rule definition, **overfishing** occurs when fishing mortality  $F$  is greater than the MFMT mortality. Similarly, a stock is **overfished** when its size falls below the MSST stock biomass. The Magnuson-Stevens Act (§304,e) requires NMFS to notify Congress when the stock is approaching the overfished condition (i.e., if there is overfishing and the stock is expected to be overfished within two years) and when it is overfished. Fishery managers must then take appropriate remedial action: in the case of approach to being overfished, harvest rates must be reduced below MFMT; in the case of being overfished, a rebuilding plan must be prepared within one year to rebuild the stock. The rebuilding plan must bring the stock back to the level producing maximum (or optimal) sustainable yield within a specified time period. The Guidelines call for precautionary management, i.e., use of conservative control rules with remedial action to begin even if the overfishing/overfished status cannot be established with certainty.

#### 4.1.1 Default Control Rules

[3.2.2 Default Control Rules]

The general model for a control rule is the default **Maximum Sustainable Yield Control Rule** suggested in the Technical Guidance by Restrepo et al. (1998), and it is the model for this FMP. This control rule is a procedure for maintaining MSY, and is like that being considered by the Western Pacific Region Fishery Management Council. It is illustrated schematically in Figure 4–1, where the x and y axes are in relative measure, the biomass and fishing mortality ratios  $B/B_{MSY}$  and  $F/F_{MSY}$ , respectively. Here, the **MFMT mortality threshold** is the ratio  $F_{MFMT}/F_{MSY} = 1.0$ ; it is the mortality threshold for all stock levels above the MSST threshold (described below). With this MFMT ceiling emplaced, a stock would not be reduced to levels any lower than  $B_{MSY}$  that produces MSY (on average). It is to be noted, however, that the Technical Guidance for precautionary compliance with NS 1 (Restrepo et al. 1998) allows that MFMT can be occasionally and temporarily exceeded at some level of probability that depends upon the variability of fishing mortality. The **MSST biomass threshold**, the minimum biomass at which recovery measures are to begin, is the ratio  $B_{MSST}/B_{MSY}$ . It specifies a lower biomass level that allows remedial action not to be triggered each time  $B$  drops below  $B_{MSY}$ , simply from natural variation. In terms of  $B_{MSY}$ , the recommended level of  $B_{MSST}$  is:

$$B_{MSST} = (1-M)B_{MSY} \text{ when } M \text{ (natural mortality)} \leq 0.5, \text{ and}$$

$$B_{MSST} = 0.5B_{MSY} \quad \text{when } M > 0.5$$

(i.e., whichever is greater).  $B_{MSST}$  must not be less than  $B_{MIN} = 0.5B_{MSY}$  and should allow recovery back to  $B_{MSY}$  within 10 years when  $F$  is reduced to zero (to the extent possible).

An example of an **Optimum Yield (OY) Control Rule** is also shown in Figure 4–1, it being the Restrepo et al. (1998) recommended, precautionary default of 0.75MFMT of the MSY control rule (the lower dashed horizontal and slope line). This rule is for maintaining OY, which is defined as MSY reduced by relevant socioeconomic factors, ecological considerations, and fishery-biological constraints so as to provide the greatest long-term benefits to the Nation. Simulation studies have indicated that management according to the OY default rule will often allow biomasses ( $B_{OY}$ ) to be maintained at about  $1.25B_{MSY}$  (as shown), with yields of about 95% of MSY. Like for MSST of the MSY Control Rule, there is a **Minimum Biomass Flag ( $B_{FLAG}$ )** for the OY Control Rule equal to  $(1-M)B_{OY}$  or  $0.5B_{OY}$  (whichever is greater) (Boggs et al. 2000).  $B_{FLAG}$ , which would then be equivalent to  $1.25(B_{MSST}/B_{MSY})$ , serves as a warning call to halt biomass reduction that would jeopardize obtaining OY on average.

The OY control rule has a more conservative range of restraints that may be appropriate for more vulnerable

species. The more vulnerable a species is to being overfished, the more conservative should management be. And since the maximum value of OY is MSY, then the more should the catch ratio OY/MSY be reduced from unity (while  $B_{OY}/B_{MSY}$  is increased from unity).

These control rules involve the concept of target and limit reference points. It can be seen that  $B_{MSY}$  and  $B_{OY}$  are target reference points for the long term management goals of MSY or OY. But  $B_{MSST}$  and  $B_{FLAG}$  are limit thresholds for the respective control rules that should not be exceeded, or exceeded only at some level of probability. A stock that is reduced below those biomass limits would normally require remedial action, because the target goals would then be jeopardized. Similarly,  $F_{OY}$  is a target reference point. However,  $F_{MSY}$  could be a target reference point *or* a limit threshold; it could be the target point for the MSY control rule or it could be the limit threshold for the OY control rule. If  $B < B_{FLAG}$  is expected with the latter rule, remedial action may be recommended even though the stock could still be far above  $B_{MSST}$ .

#### 4.1.2 Alternative Management Control Rule

##### [3.2.3 Proposed Management Control Rule]

**Default Alternative Rule:** Since the management unit species vary from vulnerable to very productive, the following control rule, stated as a default alternative, is recommended: ~~Adopt the~~ default MSY control rule applies to for MUS, but additionally, use an alternative OY target control rule is used for “vulnerable” species. (See the specific alternative in Chapter 8 section 8.3.2.)

Vulnerability of species can stem from many reasons, and any species that has been depleted to 50% below  $B_{MSY}$  (for the logistic production model, to 25% of unfished level  $B_0$ ) that is incapable of recovering back to that  $B_{MSY}$  level within 10 years (with fishing removed) is to be considered vulnerable in this FMP. The productivities (potential per capita rates of population increase  $r$ ) of such species would have to be 5% or less per year, assuming recovery time is determined by a linear compensatory increase in  $r$  with population decline (logistic model). Only the sharks among the MUS, including common thresher, are likely to have such low rates and long recovery times (see Table 4–1), and they are therefore considered vulnerable by this criterion. Vulnerable OYs are also appropriate for other fish species for other reasons of stock health concern (see bluefin tuna, Section 4.8.1, and striped marlin, Section 4.8.3).

In this FMP, where OY is not determined analytically, an OY proxy is defined according to vulnerability, as follows:

$$OY(\text{proxy}) = MSY \text{ or } MSY(\text{proxy}) \quad \text{for species not considered vulnerable}$$

$$OY(\text{proxy}) = 0.75 * (MSY \text{ or } MSY(\text{proxy})) \quad \text{for species considered vulnerable}$$

The rationale for the vulnerable species OY follows from the recommended  $F_{OY} = 0.75F_{MSY}$  (see Figure 4–1). Then since  $MSY = F_{MSY}B_{MSY}$ ,  $OY = 0.75F_{MSY}B_{MSY} = 0.75MSY$  when estimated from the same  $B_{MSY}$  biomass.

Since the default alternative rule is defined with MFMT and MSST as ratios relative to MSY (as in Figure 4–1), its resulting generality allows management according to specific criteria even without estimates of the absolute biomass or exploitation status of a stock. This allows all the MUS, diverse with respect to productivity, scientific understanding, and stock status, to be managed by the same rule and in accordance with the requirements of the Magnuson-Stevens Act. This control rule is the most straight-forward of the possible rules discussed by Restrepo et al. (1998) and is the one they recommend. The reduction in fishing mortality it calls for to rebuild depleted populations is intermediate with respect to the degree of depletion that can be remedied at acceptable rates of recovery. It is the same rule being considered for the Western Pacific Region Fishery Management Council's FMP for pelagic fisheries (but with the additional stipulation for

vulnerable species).

#### 4.1.3 Adopted Control Rules

[8.3.2 Control Rule]

This FMP adopts the default MSY (or MSY proxy) control rule (Section 4.4.1), but additionally uses an OY (instead of MSY) target for vulnerable species, ~~as defined and discussed in (Section 4.1.2).~~ Rationale: The default MSY control rule was chosen because it is the standard recommended in technical guidance for implementing National Standard 1 of the Magnuson-Stevens Act, and it is consistent with the WPRFMC's rule for pelagic fisheries. The vulnerable species OY control rule is applied to sharks because of their low productivity, and to bluefin tuna and striped marlin because of uncertainties concerning total catches and stock structures.

To be precautionary, the OY for vulnerable species is set for now at 0.75MSY (from the relationship shown in Figure 4–1). Any harvest guideline for vulnerable species is set equal to that OY.

The status of the MUS in this FMP is discussed in terms of this default control rule in Section 3.3.

#### 4.1.4 Stock Rebuilding

[3.2.4 Stock Rebuilding]

When stock size  $B$  falls below its MSST level,  $F$  must be reduced below its fishing mortality threshold to allow stock rebuilding at least back to  $B_{MSY}$ . The amount of mortality reduction would depend upon the severity of stock depletion below MSST, the stock's capacity to rebound, and the desired recovery time of the stock. In rebuilding according to the default MSY control rule Figure 4–1),  $F$  is reduced linearly by the amount that  $B$  is determined to be below MSST. After the stock has been rebuilt back to MSST, maintaining  $F$  at the MFMT level will allow the stock to continue its increase until at equilibrium at  $B_{MSY}$ . With the OY Control Rule, the decrease from  $F_{OY}$  is shown beginning at  $B_{MSY}$ , rather than at  $B_{FLAG}$ , to enable faster rebuilding back to  $B_{OY}$ .

Under NMFS's National Standard Guidelines, a number of factors enter into the specification of the time period for rebuilding. The lower limit of the specified time period for rebuilding is determined by the status and biology of the stock or stock complex and its interactions with other components of the marine ecosystem, and is defined as the amount of time that would be required for rebuilding if fishing mortality were eliminated entirely. If the lower limit is less than 10 years, then the specified time period for rebuilding may be adjusted upward to the extent warranted by the needs of fishing communities and recommendations by international organizations in which the United States participates, except that no such upward adjustment can result in the specified time period exceeding 10 years, unless management measures under an international agreement in which the United States participates dictate otherwise. If the lower limit is 10 years or greater, then the specified time period for rebuilding may be adjusted upward to the extent warranted by the needs of fishing communities and recommendations by international organizations in which the United States participates, except that no such upward adjustment can exceed the rebuilding period calculated in the absence of fishing mortality plus one mean generation time or equivalent period based on the species' life-history characteristics. Overfishing restrictions and recovery benefits must also be fair and equitable among fishery sectors. Rebuilding of internationally managed fisheries must reflect traditional U.S. participation in those fisheries relative to that of other nations.

Fishery management councils actually have considerable latitude in how they rebuild depleted stocks. The rebuilding rules illustrated in Figure 4–1 and also Figures 4–2 and 4–3 (the  $F$  ramps) are examples of just

some of the possible approaches to F-reduction. Actual rebuilding could proceed through a combination of ways, e.g. a series of stepped increases in F or series of increasing catch quotas as the biomass rebuilds back toward  $B_{MSY}$  (such quotas can be shown only indirectly in terms of the F and B dimensions of Figure 4–1).

Rebuilding of overfished stocks is a unilateral requirement by the Magnuson-Stevens Act, but, as already noted, internationally fished stocks require cooperative catch reductions among the fishing nations for this rebuilding to be effective. U.S. responsibility in the rebuilding, however, will be greater the more localized the stock and the greater the domestic take of the stock's production (see unilateral/international management, Section 2.2).

In general, rebuilding is to remedy stock depletion, but there can also be rebuilding to remedy **local depletion**. The latter rebuilding could be domestic and unilateral. Local depletion occurs when localized catches are in excess of replacement from local and external (via net immigration) sources of production. As such, it can occur independently of the status of the overall stock. The local depletion of abundance can be stronger than the concurrent stock-wide decrease (Squire and Au 1990). In all cases, the degree and extent of this depletion must be assessed relative to the health of the overall stock and the resiliency of the species.

## 4.2 Assessment of Stock Status

### [3.2.5 Assessment of Stock Status]

National Standard 2 requires using the best scientific information in managing management unit species. This requires periodic updating of stock status for comparing against their control rules. Status updating will be through Stock Assessment and Fishery Evaluation (SAFE) reports (Section 4.3). In the case of species under international management, the control rule approach must be promoted so that status in terms of SDCs (e.g.,  $F/F_{MSY}$ ,  $B/B_{MSY}$ ) can be described (see also Section 2.1).

The control rule approach implies an ability to determine the level of biomass B relative to its initial level  $B_0$  and (at least conceptually) relative to  $B_{MSY}$ , and to determine the level of mortality F relative to some target level like  $F_{MSY}$ . Relative biomass level could be estimated by the decline in catch rate (CPUE) or, with sufficient information on stock and recruitment, by percent spawning potential ratio (SPR), or proxies based on SPR, e.g.,  $B_{50\%}$  or  $F_{50\%}$ . Non-empirical MSY levels of B or F can be estimated as fractions of  $B_0$  or multiples of M, respectively, e.g.,  $B_{MSY}=0.5B_0$  or  $F_{MSY}=1.0M$ .

In many cases estimates of MSY or OY themselves are the only information available for management, and the  $F/F_{MSY}$  and  $B/B_{MSY}$  ratios must be derived from those estimates. This does not abrogate the control rule, because MSY and OY *are* the management goals. Where MSYs have not been determined, average stock-wide catch levels over appropriate time periods can be proxies.

Both MSY and OY refer to a species' sustainable catch, stock-wide. For some species there is no stock-wide catch information, and some (e.g., pelagic thresher shark, mako shark, dorado) occur within the management area as the edges of wider distributions, so even their maximum, regional catch levels are unlikely to reflect stock production. While MSYs remain unknown for those species, the local catches can be used to estimate a local or regional level of MSY.

## 4.3 Stock Assessment and Fishery Evaluation Report

### [3.4 Stock Assessment and Fishery Evaluation Report]

National Standard 2 of the Magnuson-Stevens Act requires that the best scientific information available be used in developing FMPs and implementing regulations. For HMS, except dorado and sharks, NMFS and the

Pacific Council rely on analyses and assessments adopted by various international bodies (of which U.S. is an active participant), such as the Inter-American Tropical Tuna Commission (IATTC), Interim Scientific Committee for Tuna and Tuna-like Species in the North Pacific (ISC), Standing Committee on Tuna and Billfish (SCTB) and others. For other species such as dorado and sharks, the HMS Management Team and NMFS develops stock and fishery assessments, provides peer reviews and presents the results to the Council. The guidelines for implementation of NS 2 require preparation of an annual Stock Assessment and Fishery Evaluation (SAFE) report. The SAFE report will largely rely on international body assessments, NMFS directed assessments, and any new fishery information. The NS 2 guidelines for a SAFE report, adapted for this FMP, are below.

The SAFE report is a document or set of documents that provides the Council with a summary of information concerning the most recent biological condition of stocks and the marine ecosystems in the management unit and the social and economic condition of the recreational and commercial fishing interests, fishing communities, and the fish processing industries. It summarizes, on a periodic basis, the best available scientific information concerning the past, present, and possible future condition of the stocks, marine ecosystems, and fisheries being managed under federal regulation.

The Secretary of Commerce has the responsibility to assure that a SAFE report or similar document is prepared, reviewed annually, and changed as necessary. The Secretary or Council may utilize any combination of talent from Council, state, Federal, university, or other sources to acquire and analyze data and produce the SAFE report.

The SAFE report provides information to the Council and Southwest Region of NMFS for determining annual harvest levels from each stock, documenting significant trends or changes in the resource, marine ecosystems, and fishery over time, and assessing the relative success of existing state and Federal fishery management programs. Information on bycatch and safety for each fishery should also be summarized. In addition, the SAFE report may be used to update or expand previous environmental and regulatory impact documents, and ecosystem and habitat descriptions.

Each SAFE report must be scientifically based, and cite data sources and interpretations.

Each SAFE report should contain information on which to base harvest specifications.

Each SAFE report should contain a description of the maximum fishing mortality threshold and the minimum stock size threshold for each stock or stock complex, along with information by which the Council may determine:

- Whether overfishing is occurring with respect to any stock or stock complex; if any stock or stock complex is overfished; if the rate or level of fishing mortality applied to any stock or stock complex is approaching the maximum fishing mortality threshold, and if the size of any stock or stock complex is approaching the minimum stock size threshold.
- Any management measures necessary to provide for rebuilding an overfished stock or stock complex (if any) to a level consistent with producing the maximum sustainable yield in such fishery.

Each SAFE report may contain additional economic, social, community, essential fish habitat, and ecological information pertinent to the success of management or the achievement of objectives of each FMP.

Each year, in June and September, the HMS Management Team will deliver one combined SAFE report for all species in this FMP to the Council. The SAFE report will follow the guidelines specified in NS 2 and will be used by the Council and NMFS to develop and evaluate regulatory adjustments under the framework

procedure or the FMP amendment process. This information will provide the basis for determining annual harvest levels from each stock, documenting significant trends or changes in the resource, the bycatch, and the fishery over time, and assessing the relative success of existing state and federal fishery management programs. In addition, the SAFE report will be used to update or expand previous environmental and regulatory impact documents, and ecosystem and habitat descriptions, including EFH. The SAFE report will also make recommendations to the Council on matters concerning bycatch and incidental catch.

#### 4.4 Status of Management Unit Stocks at the Time of FMP Adoption

##### [3.3 Status of Management Unit Stocks]

The health status of management unit stocks is determined mainly by use of standard stock assessment techniques found in the scientific literature, but also from examination of their fisheries. The conclusions, summarized in Tables 4–2 and 4–3, should be reasonably accurate, but should also be taken with caution. Assessments of stock status always involve assumptions, use of uncertain parameters, and particular interpretations of fishery statistics. There are no universally-accepted standards by which to determine confidence for particular assessments, and “ground truthing” will probably never be possible for HMS species. Confidence arises mainly from long management experience with ample perspective from long time-series of the fishery trends.

Management will involve comparing a stock’s recent catch levels against its target reference levels, in most cases, MSY. These catch guideposts are listed in Table 4–2. For some stocks or populations, a **harvest guideline** is also listed. A harvest guideline if surpassed, calls for review of the stock/population and its fishery. The purpose is to alert the Council to the possibility that catches under its jurisdiction are at or near a particular target level.

Basic life history characteristics and other important stock indicators for HMS MUS are provided in (Table 4–1) for a comparative overview of the spectrum of productivities, exploitation limitations, and recovery capabilities of those species. The productivity estimate  $r$ , the potential, fractional rate of population growth, is central, and is calculated as the rate at which a population, initially at equilibrium with some total mortality, could rebound if the fishing mortality were removed (Smith et al. 1998). These productivities are comparable among species and approximately the productivity at MSY, because for each the total mortality used in the calculation is the same multiple of natural mortality ( $M$ ) that produces MSY (approximately). The procedure thus standardizes productivity estimates of all the species to that at  $B_{MSY}$ . Accuracy depends mainly upon the precision of the age-at-maturity estimate, which is the parameter that drives  $r$  (Smith et al. 1998). Uncertainty in  $r$  is greater for high productivity species (but they are more accurately aged as they are short-lived), and less for low productivity species (their productivities are less sensitive to age at maturity). The derived statistics of maximum rate of population growth and doubling time are standardized similarly, by assuming a same production function - for simplicity, the logistic model. In Table 4–1 age at maturity, fecundity,  $M$ , and maximum age are given for each species, from which are estimated productivity  $r$  (at  $B_{MSY}$ ), maximum annual fractional Population Growth Rate ( $PGR_{MAX}$ ) (which exploitation should not exceed to prevent population collapse), and the time needed ( $T_D$ ) for a population to double (recover) after being depleted to  $0.5B_{MSY}$  (see Table 4–1 footnotes for details). The productivity parameter  $r$  affects growth rate exponentially, so moderate changes in its value have large effects, as reflected in the  $PGR_{MAX}$  and  $T_D$  statistics. The statistics indicate that the billfishes and tunas (each as populations in their entirety), with  $r > 0.10$ , can withstand  $> 20\%$  exploitation rates ( $PGR_{MAX}$  rates) and can recover from depletion within 6 years, while the sharks (similarly considered), with  $r < 0.07$ , can withstand no more than  $12\%$  exploitation (on average), and their recovery time is 1-2 decades, or more.

The status of management unit species at the time of the adoption of the FMP (2003) is described in [Appendix B. Annual SAFE documents provide regular updates on the status of stocks.](#)

#### 4.5 Measures Adopted by the Council to End of Overfishing and Rebuild Overfished Stocks

No MUS are currently overfished. The Council strategy to end overfishing on bigeye tuna is described below.

##### 4.5.1 Bigeye Tuna

*[N.B.: Changes to the FMP as part of Amendment 1 under Alternatives 2 or 3 would be inserted here.]*



**Table 4–1. Demographic and productivity comparisons of highly migratory MUS and selected prohibited species.**

| Species<br>(yrs)  | Age at<br>Maturity<br>(yr <sup>-1</sup> ) | Fecundity<br>(yr <sup>-1</sup> ) | M <sup>1/</sup><br>(yrs) | Max. Age<br>(yr <sup>-1</sup> ) | Productivity ( <i>r</i> ) at<br>B <sub>MSY</sub> <sup>2/</sup><br>(yr <sup>-1</sup> ) | PGR <sub>MAX</sub> <sup>3/</sup><br>(yrs) | T <sub>D</sub> <sup>4/</sup> |
|-------------------|-------------------------------------------|----------------------------------|--------------------------|---------------------------------|---------------------------------------------------------------------------------------|-------------------------------------------|------------------------------|
| <b>TUNAS</b>      |                                           |                                  |                          |                                 |                                                                                       |                                           |                              |
| Skipjack          | 1                                         | Millions (eggs)                  | 1.50                     | 5                               | 0.16-0.34                                                                             | 0.68                                      | 2.1                          |
| Yellowfin         | 2.5                                       | "                                | 0.90                     | 8                               | 0.11-0.18                                                                             | 0.34                                      | 3.4                          |
| Bigeye            | 3                                         | "                                | 0.40                     | 10                              | 0.10-0.16                                                                             | 0.30                                      | 3.7                          |
| Albacore          | 4.5                                       | "                                | 0.30                     | 12                              | 0.07-0.11                                                                             | 0.20                                      | 5.2                          |
| Bluefin           | 5                                         | "                                | 0.25                     | 20                              | 0.07-0.10                                                                             | 0.19                                      | 5.6                          |
| <b>BILLFISHES</b> |                                           |                                  |                          |                                 |                                                                                       |                                           |                              |
| Str. Marlin       | 4                                         | "                                | 0.47                     | 9                               | 0.08-0.13                                                                             | 0.23                                      | 4.6                          |
| Swordfish         | 5                                         | "                                | 0.21                     | 20                              | 0.07-0.10                                                                             | 0.18                                      | 5.8                          |
| <b>SHARKS</b>     |                                           |                                  |                          |                                 |                                                                                       |                                           |                              |
| Com.Thresh.       | 5                                         | 4 (pups)                         | 0.234                    | 19                              | 0.04-0.07                                                                             | 0.12                                      | 9.2                          |
| S.F. Mako         | 7                                         | 6                                | 0.160                    | 14                              | 0.04-0.06                                                                             | 0.10                                      | 10.2                         |
| Blue              | 6                                         | 23                               | 0.223                    | 20                              | 0.04-0.06                                                                             | 0.10                                      | 10.4                         |
| Pel.Thresh.       | 9                                         | 2                                | 0.155                    | 29                              | 0.02-0.04                                                                             | 0.07                                      | 15.0                         |
| White             | 9                                         | 7                                | 0.126                    | 36                              | 0.02-0.04                                                                             | 0.07                                      | 15.8                         |
| B.E.Thresh.       | 13                                        | 2                                | 0.223                    | 20                              | 0.02-0.03                                                                             | 0.05                                      | 22.7                         |
| Basking           | 18                                        | 3                                | 0.136                    | 50                              | 0.01-0.02                                                                             | 0.04                                      | 27.4                         |
| <b>OTHER</b>      |                                           |                                  |                          |                                 |                                                                                       |                                           |                              |
| Dorado            | 0.6                                       | 240K+ (eggs)                     | 1.060                    | 4                               | >0.34                                                                                 | 0.97                                      | 1.4                          |

## Footnotes:

1. M is instantaneous natural mortality. All life history parameters are from Smith et al. (1998), Smith et al. (*In press* 2003), Au et al. (*In press*).
2. Productivity *r* is the potential per-capita rate of population growth per year, here at B<sub>MSY</sub>. Estimated for *Tunas and Billfishes* assuming that at B<sub>MSY</sub>, F<sub>MSY</sub> = 1.0M and initial fecundity increases by factor 1.00-1.25 [after Au et al. (*In press*)]; for *Sharks* assuming that at B<sub>MSY</sub>, F<sub>MSY</sub> = 0.5M-1.0M with fecundity not increased [after Smith et al. (*In press*)]. All figures are rounded.
3. PGR is the fractional Population Growth Rate per year. PGR<sub>MAX</sub> is the maximum rate calculated as (e<sup>2r</sup> - 1). Exploitation of the population (fraction of total population caught) greater than PGR<sub>MAX</sub> should bring population collapse, hence PGR<sub>MAX</sub> estimates maximum sustainable exploitation. The logistic model is assumed. Based on range of *r*.
4. T<sub>D</sub> is the doubling time for populations depleted to 50% of B<sub>MSY</sub> (hence the recovery time), calculated as (ln 2)/1.5*r* (the *r* is assumed to have increased linearly with the depletion, as per the logistic model). Based on range of *r*.

**Table 4–2. Summary of population status of management unit species at the time of FMP adoption (see text under species descriptions for details).**

| Species (Stock)   | $F/F_{MSY}$         | Over-fishing?<br>( $>1.0?$ ) | $B_{MSST}/B_{MSY}$<br>(1-M) | $B/B_{MSY}$           | Over-fished?<br>( $<1-M?$ ) | MinBiomass<br>Flag Ratio<br>( $1.25(B_{MSST}/B_{MSY})$ ) | NeedAction?<br>( $B/B_{MSY} < \text{FlagRatio?}$ ) |
|-------------------|---------------------|------------------------------|-----------------------------|-----------------------|-----------------------------|----------------------------------------------------------|----------------------------------------------------|
| TUNAS             |                     |                              |                             |                       |                             |                                                          |                                                    |
| Albacore (NP)     | 0.50                | N                            | 0.70                        | 1.10                  | N                           | 0.88                                                     | N <sup>1/</sup>                                    |
| Bluefin (NP)      | Unkn                | n                            | 0.75                        | Unkn                  | n                           | 0.94                                                     | n <sup>2/</sup>                                    |
| Bigeye (EPO)      | 1.11                | y                            | 0.60                        | 1.11                  | N                           | 0.75                                                     | N <sup>3/</sup>                                    |
| Skipjack (EPO)    | Unkn                | n                            | 0.50                        | 2.50 <sup>4/</sup>    | N                           | 0.63                                                     | N                                                  |
| Yellowfin (EPO)   | ~1.30 <sup>5/</sup> | Y                            | 0.50                        | ~0.86 <sup>5,6/</sup> | N                           | 0.63                                                     | N                                                  |
| BILLFISHES        |                     |                              |                             |                       |                             |                                                          |                                                    |
| Str. Marlin (EPO) | 0.70                | N                            | 0.50                        | 1.07                  | N                           | 0.63                                                     | N <sup>7/</sup>                                    |
| Swordfish (EPO)   | <1.00               | N                            | 0.70                        | >1.00                 | N                           | 0.88                                                     | N <sup>8/</sup>                                    |
| SHARKS            |                     |                              |                             |                       |                             |                                                          |                                                    |
| C.Thresher(EPO)   | <1.00 <sup>9/</sup> | N                            | 0.77                        | ~1.10 <sup>9/</sup>   | N                           | 0.96                                                     | N <sup>10/</sup>                                   |
| P.Thresher(EPO)   | Unkn                | ?                            | 0.85                        | Unkn                  | ?                           | 1.05                                                     | ? <sup>11/</sup>                                   |
| BE Thresh.(EPO)   | Unkn                | ?                            | 0.78                        | Unkn                  | ?                           | 0.97                                                     | ? <sup>12/</sup>                                   |
| Mako (EPO)        | <1.00               | N                            | 0.71                        | >1.00                 | N                           | 0.88                                                     | N <sup>13/</sup>                                   |
| Blue (EPO)        | <0.50               | N                            | 0.78                        | >1.00                 | N                           | 0.97                                                     | N <sup>14/</sup>                                   |
| OTHER             |                     |                              |                             |                       |                             |                                                          |                                                    |
| Dorado (EPO)      | Unkn                | Unlikely                     | 0.50                        | Unkn                  | Unlikely                    | 0.63                                                     | N <sup>15/</sup>                                   |

**Note:** Overfishing, Overfished, and Need Action columns ask if previous column value meets criterion; e.g., under Overfishing, is the previous fraction  $>1.0$ ? Less certain Y/N is y/n.

## Footnotes:

1. Note that stock is now in high productivity period (NPALW 2000).
2. No evidence of stock ill health, but abundance indexes are inconclusive (Bayliff 2001).
3. Assuming a stock-recruitment relationship (Maunder and Harley 2002). See text for caveats.
4. Boggs et al. 2000.
5. From production model (Tomlinson 2001, IATTC 2000).
6. Assuming a stock-recruitment relationship,  $B/B_{MSY}$  for 2001 could be 1.09 (Maunder 2002).
7. EPO stock has recovered (Hinton and Bayliff 2002a).
8. Per cpue patterns in EPO (Hinton and Bayliff 2002b).
9. Work in progress, D.W. Au and C. Show, SWFSC/NMFS, La Jolla, CA
10. Stock in recovery with positive population growth since 1992-94.
11. Status unknown, but catches incidental and on edge of species' broad range.
12. Status unknown, but catches incidental and possibly on edge of species' habitat.
13. Fishery takes mostly juveniles on edge of range; adults largely unavailable.
14. See text re Kleiber et al. stock assessment.
15. Highly productive and widely distributed throughout tropical/subtropical Pacific.

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**Table 4–3. Stockwide and regional (CA, OR, WA) catches in thousand (K) mt for management unit species at the time of FMP adoption, with respect to MSY, sustainability, and regional harvest guidelines.**

| Species (Stock)    | MSY<br>(or proxy)      | OY<br>(or proxy) | Catches (K mt round wgt, 1995-99 period) |                          |            | Status         |         |                     |
|--------------------|------------------------|------------------|------------------------------------------|--------------------------|------------|----------------|---------|---------------------|
|                    |                        |                  | Stock-wide                               | Regional                 |            | Regional Catch |         | Harvest Guideline   |
|                    |                        |                  |                                          | Comm'l                   | Rec'l      | Fract'n        | Sust'l? |                     |
| 1. TUNAS           |                        |                  |                                          |                          |            |                |         |                     |
| Albacore (NP)      | 120 <sup>1/</sup>      | (120)            | 67-128 <sup>2/</sup>                     | 10-18                    | <0.05-1.31 | 0.16           | Y       |                     |
| Bluefin (NP)       | (20) <sup>3/</sup>     | (15)             | 13-24 <sup>4/</sup>                      | <1-5                     | <0.05      | 0.10           | Y       |                     |
| Bigeye (EPO)       | 79 <sup>5/</sup>       | (79)             | 64-94 <sup>4/</sup>                      | ≤0.1                     |            | <0.01          | Y       |                     |
| Yellowfin (EPO)    | 270 <sup>6/</sup>      | (270)            | 244-306 <sup>4/</sup>                    | 1-6                      | 0.12-0.84  | 0.01           | Y       |                     |
| Skipjack (EPO)     | (190) <sup>3/</sup>    | (190)            | 137-295 <sup>4/</sup>                    | 4-7                      | <0.1       | 0.03           | Y       |                     |
| 2. BILLFISHES      |                        |                  |                                          |                          |            |                |         |                     |
| Str. Marlin (EPO)  | 4.5 <sup>7/</sup>      | (3.4)            | 2-4 <sup>2/</sup>                        | <0.02                    | 0.03       | 0.01           | Y       |                     |
| Swordfish (EPO)    | (12.5) <sup>8/</sup>   | (12.5)           | 8-15 <sup>4/</sup>                       | 1-2                      | <0.01      | 0.12           | Y       |                     |
| 3. SHARKS          |                        |                  |                                          |                          |            |                |         |                     |
| Cm Thresher(Reg'l) | (0.45) <sup>9/</sup>   | (0.34)           | Unkn                                     | 0.27-0.33                | 0.01-0.06  | ?              | Y       | 0.34 <sup>10/</sup> |
| PI Thresher(Reg'l) | (0.020) <sup>11/</sup> | (0.015)          | Unkn                                     | 0.004 <sup>12/</sup>     |            | ?              | y       |                     |
| BE Thresher(Reg'l) | (0.04) <sup>13/</sup>  | (0.03)           | Unkn                                     | 0.01-0.03                |            | ?              | y       |                     |
| Mako/Bonito(Reg'l) | (0.20) <sup>14/</sup>  | (0.15)           | Unkn                                     | 0.06-0.13                | 0.01-0.08  | ?              | Y       | 0.15 <sup>10/</sup> |
| Blue (NP)          | ~120 <sup>15/</sup>    | (90)             | >50 <sup>16/</sup>                       | 0.08-0.17 <sup>17/</sup> | <0.03      | <0.01          | Y       |                     |
| 4. OTHER           |                        |                  |                                          |                          |            |                |         |                     |
| Dorado (EPO)       | (0.45) <sup>3/</sup>   | (0.45)           | 0.22-0.56 <sup>18/</sup>                 | <0.01-0.04               | <0.01-0.08 | 0.04           | Y       |                     |

**MSY:** from catch-effort relationships, unless a proxy. **Proxy MSY:** average stock-wide catches over appropriate years or (minimal) local (West Coast) MSYs (LMSY) including local average levels of catch. **OY:** equal to MSY or to 0.75MSY (bluefin tuna, str. marlin, sharks). **Stock-wide Catch:** 1995-99 catches. **Regional Commercial Catches:** 1995-99 West Coast catches from PacFIN data base (Table 2-1); also drift gillnet catches (str. marlin, blue shark) extrapolated from SWFSC Observer Records, 1995-99. Except for albacore, these catches are mainly from within the EEZ. **Regional Recreational Catch:** CPFV (Table 2-57) and RECFIN (Table 2-58) data, and assuming 12.9kg/bluefin, 7.1kg/yellowfin, 2.4kg/skipjack, 7.3kg/albacore, 6.5kg/dorado, 113kg/swordfish, 16.7kg/mako, and 28.1kg/thresher; also, assuming 59kg/str. marlin, 300 sport-caught fish/yr. **Status:** Less certain Y/N is y/n re sustainability. **Harvest Guideline:** for shark species of regional/local concern; equal to the OY proxy.

Footnotes

1. Average MSY over low and high productivity periods (Bartoo and Shiohama 1985, NPALW 2000). See text.
2. NPALW 2000
3. Mean of 1995-99 stock-wide catches.
4. IATTC 2001
5. MSY between 66 and 92 K mt from production models (IATTC 2000).
6. From production model (Tomlinson 2001, IATTC 2000).
7. MSY and catches from Hinton and Bayliff (2002a).
8. Average of 1995-99 catches; an analytically derived MSY is pending.
9. LMSY proxy by Population Growth Rate (PGR) method; is a minimal estimate of MSY (see text).
10. The OY proxy = 0.75MSY.
11. LMSY proxy as average catch during strong El Niño years (here 1983, 1984, and 1997) when species presence became significant.
12. Average catch 1995-99 excluding 1997 (strong El Niño year).
13. Average catch 1982-99.
14. LMSY proxy as average 1981-1999 regional catch; is a minimal estimate of MSY (see text).
15. After Kleiber et al. (see text).
16. Estimated N. Pacific catches after Nakano and Seki (MS) (see text).
17. Catches from SWFSC DGN observer data base, plus other fisheries landings (Tables 2-1, 2-40, 2-42). No data on LL bycatches.

18. FAO Area 77 catches.

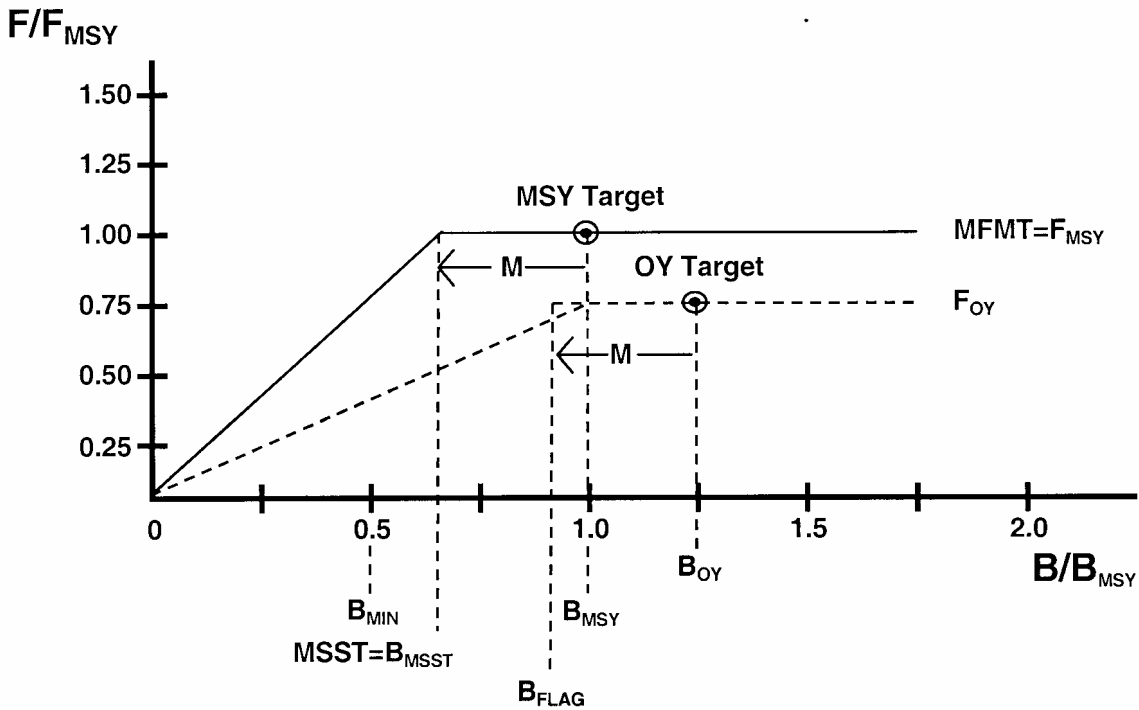


Figure 4-1. General model of maximum sustainable yield and optimum yield control rules, according to Restrepo et al. (1998).

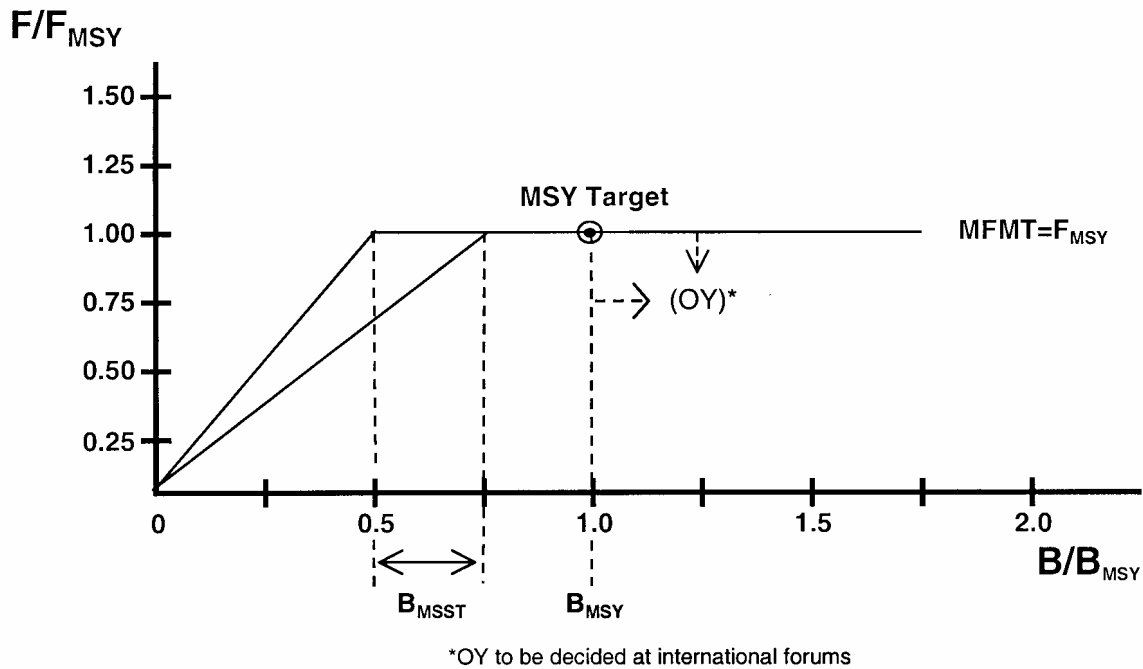


Figure 4-2. MSY control rules for tunas and billfishes.

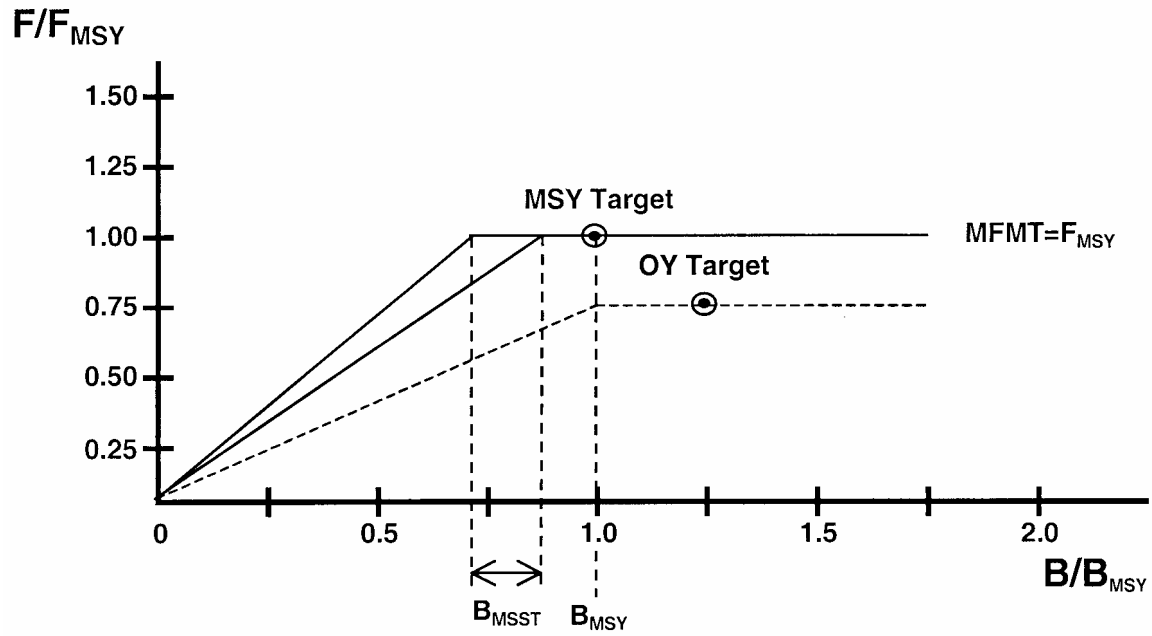


Figure 4-3. General MSY control rule for sharks, with an OY example.



## 5.0 PERIODIC SPECIFICATION OF MANAGEMENT MEASURES

### 5.1 Framework Procedures

[8.3.4 Framework Procedures]

Many fishery management plans under the Magnuson-Stevens Act use framework procedures by which flexible management, within the scope and criteria established by the FMP and implementing regulations, can be implemented without amending the FMP. Framework actions can usually be implemented more quickly than FMP amendments, allowing for more timely management response.

Such flexible management measures may be imposed, adjusted, or removed at any time during the year, or according to an established management cycle. Management measures may be imposed for resource conservation, or social or economic reasons consistent with FMP procedures, goals and objectives.

Analyses of biological, ecological, social, and economic impacts will be considered when a particular change is proposed. As a result, the time required to take action will vary depending on the type of action, its impacts on the fisheries, resources, and environment, and the review of these impacts by interested parties. Satisfaction of legal requirements under other applicable laws (e.g., Administrative Procedure Act, National Environmental Policy Act, Regulatory Flexibility Act, Executive Order 12866, etc.) for actions taken under framework procedures generally requires analysis and public comment before the measures may be implemented by the Secretary of Commerce.

#### *Types of Framework Actions.*

Under most framework procedures, management measures may be established, adjusted or removed using the following categories of actions:

- “Automatic” actions such as quota closures, which are nondiscretionary and must have already been analyzed in advance. Automatic actions may be made effective immediately in a single *Federal Register* notice, if there are adequate grounds for appropriate waivers of prior opportunity for public notice and comment, and the cooling-off period, as provided in the Administrative Procedure Act.
- “Notice” actions requiring at least one Council meeting and one *Federal Register* notice. These are management actions other than “automatic” actions that are either nondiscretionary or within the scope of a previous analysis. An example of a “notice” action might be a change in the incidental catch allowance per trip for non-HMS gears. Notice actions may be made effective immediately in a single *Federal Register* notice, if there are adequate grounds for appropriate waivers of prior opportunity for public notice and comment, and the cooling-off period, as provided in the Administrative Procedure Act.
- “Abbreviated Rulemaking” actions normally requiring at least two Council meetings and one *Federal Register* notice. Abbreviated rulemaking would be used only when time is insufficient to use the full rulemaking process. Abbreviated rulemaking actions may be made effective immediately in a single *Federal Register* notice, if there are adequate grounds for appropriate waivers of prior opportunity for public notice and comment, and the cooling-off period, as provided in the Administrative Procedure Act.
- “Full Rulemaking” (regulatory amendments or adjustments to change management rules) requiring at least two Council meetings and two *Federal Register* notices consisting of proposed and final rules. These include any proposed management measures not falling within the other categories, including measures that are highly controversial or that directly allocate a resource.

These procedures would not affect the authority of the Secretary of Commerce to take emergency regulatory action under Section 305(c) or (d) of the Magnuson-Stevens Act.

*Framework Process for Rulemaking Actions.*

New measures or changes to measures may be implemented for one or more fisheries for HMS in the Pacific Council area through the framework procedures. The objective is efficiency in management.

Reasons for adopting these framework measures may include, but are not limited to, the following:

- to implement U.S. obligations under an international agreement;
- to achieve optimum yield and prevent overfishing;
- to respond to a determination that overfishing is occurring;
- to minimize adverse impacts of fishing on EFH;
- to minimize bycatch and bycatch mortality;
- to reduce adverse effects of fisheries on protected resources and promote the recovery of any species listed under ESA.
- to promote vessel safety;
- to reduce conflict and provide for orderly fisheries;
- to allocate among domestic HMS fisheries;
- to address social or economic issues;
- to facilitate management of the fisheries;
- to meet goals and objectives of the FMP;
- to respond to changes in management of HMS in other areas of the Pacific.

The following types of measures are authorized to be established, adjusted, or removed using this framework process, without amending the FMP:

- time/area restrictions;
- reporting requirements;
- permits or licenses (for commercial harvesters or vessels, for recreational harvesters or vessels, and for processors) and endorsements for individual fisheries;
- quotas or harvest guidelines;
- fish length limits;
- recreational daily catch (bag) limits;
- trip limits;
- gear restrictions;
- changes to definition of legal gear;
- allocations among U.S. West Coast fisheries;
- at-sea observers;
- vessel monitoring systems (VMS);
- adjustments to descriptions of EFH and designation of habitat areas of particular concern;
- measures to minimize bycatch or minimize mortality of bycatch;



- measures to minimize interactions with protected species, including, but not limited to, implementation of federal biological opinions and court rulings.

General Procedure. Following an established management cycle which includes production of an annual Stock Assessment and Fishery Evaluation (SAFE) report, the HMS Management Team, HMS Advisory Subpanel, or other Council advisory body, or a member of the public, may identify a problem and request regulatory action. If the Council agrees that regulations may be necessary, it will direct the HMS Management Team and/or staff to prepare a draft document which includes a description of the problem, alternative management actions and analysis of the impacts of the alternatives. The document will be in the form of an environmental impact statement or environmental assessment/regulatory impact review/regulatory flexibility analysis which meets the analytical requirements of NEPA, Executive Order 12866, the Regulatory Flexibility Act, the Magnuson-Stevens Act and other applicable law.

Upon completion, the draft document will be made available to the interested public and will be addressed by the Council at a subsequent meeting. The issue will be placed on the subsequent meeting agenda, which will be distributed to the media and interested public and published in the *Federal Register*. The Council will seek to identify all interested persons and organizations and solicit their involvement in discussion and resolution of this problem through the Council process. If the action involves a fishery that extends beyond the EEZ, the Council shall invite comments from the Western Pacific and North Pacific Fishery Management Councils on the action that may affect those councils' fisheries. After receipt of comment from its advisory entities and the public, the Council will decide whether or not to adopt the draft document for public comment.

If the Council decides to proceed with the issue, it will revise the draft document as necessary and make it available for public comment. The issue will be placed on the agenda for a subsequent meeting, which will be distributed to the media and interested public and published in the *Federal Register*. At this meeting, after receipt of comment from its advisory entities and the public, the Council will adopt a measure or package of measures for submission to NMFS for approval. A final document including the Council action and rationale will be prepared and submitted to NMFS. The document will specifically indicate whether there will be any impacts on HMS fishery interests in areas of concern of other fishery management councils. If another council has commented on the proposed action, a copy of those comments will be included in the submission.

Point-of-Concern Framework Procedure. The point-of-concern procedure is an additional tool for the Council's use in exercising resource stewardship. The process is intended to foster continuous and vigilant review of Pacific HMS stocks and fisheries. Point-of-concern criteria are intended to assist the Council in determining when a focused review of a particular species is warranted and if management measures are required. The Council has the authority to act solely on a point-of-concern. The point-of-concern framework is intended to be complementary to the work by the HMS Management Team to monitor the fisheries throughout the year. A point-of-concern must be raised to the Chair of the Council in writing, including rationale, background and supporting data.

A point-of-concern occurs when one or more of the following is found or expected:

- Catch is projected to exceed, within two years, the current harvest guidelines or quotas based on current exploitation rates;
- Developments in a foreign fishery or actions required under an international management framework affect the likelihood of overfishing HMS domestically;
- Estimated bycatch of a species or species group increases significantly above previous estimates, or there is information that abundance of a bycatch species has declined significantly;
- New information is discovered on the biological characteristics of one or more species, or on the characteristics of a stock, indicating that current management measures are inadequate;

- An error in data or stock assessment is detected that significantly changes the estimates of impacts of current management;
- MSY control rule parameters or approach require modification;
- Projected catches for a non-management unit HMS species increase substantially such that applying the default control rule to that species would show catches exceeding the Allowable Biological Catch. This could require moving a species into the management unit;
- Changes in ecological relationships, such as significant shifts in predator-prey interactions or declines in forage species, indicate that an HMS population may be in decline.

If a point-of-concern is raised to Chair of the Council, the Council shall decide if the HMS Management Team (HMSMT) should proceed to address the concern, and/or if any additional actions are warranted by the Council at that time.

If so directed by the Council, the HMSMT will prepare a report including recommendations, rationale, and analysis for appropriate management measures to resolve the point-of-concern. After receiving the HMSMT report, the Council will hear public testimony and, if appropriate, recommend management measures to the NMFS Regional Administrator accompanied by supporting rationale and analysis of impacts. The Council analysis will include a description of (a) resource conservation or ecological issues consistent with FMP objectives; (b) likely impacts on other management measures, other fisheries, and bycatch; and c) socioeconomic impacts to commercial and recreational segments of the HMS fishery. The recommendation will also explain the urgency of the measure(s), if any.

The NMFS Regional Administrator will review the Council's recommendation and supporting information and will follow the appropriate implementation process. If the NMFS Regional Administrator does not concur with the Council's recommendation, the Council will be notified in writing of the reasons for the rejection.

The same framework procedures would be used during the management cycle for changing conservation and management measures, except there would be no point-of-concern criteria for raising conservation concerns to the Council.

## 5.2 Management Cycle

### [8.3.5 Management Cycle]

The management cycle is a pre-determined regular schedule for council management actions with respect to HMS fisheries. Cycle differences affect the time available for fishery assessments, the timeliness of available data and of management response, and the degree to which fishers can participate in the management process.

Future developments in the fisheries do not ordinarily bring need for change in the management cycle schedule, and the management cycle is thus a fixed element of the FMP. However, should there be need to change the management schedule, e.g., because of marked changes in fishery practices, the Council can do so by vote and without a plan amendment, provided the Council gives six-month notice.

The FMP establishes a *biennial* management cycle with regulatory/statistical year *April 1 to March 31*. The schedule would be as follows:

|        |      |                                                                                                                                                                                                                         |
|--------|------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Year 1 | June | Provide update to the Council on status of the HMS fisheries; preliminary SAFE report. If necessary, Council directs HMSMT to prepare draft regulatory analysis to implement harvest levels and/or management measures. |
|--------|------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

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September Annual SAFE document presented to Council. If necessary, Council directs HMSMT to prepare a draft regulatory analysis to implement new harvest levels and/or management measures. Council adopts for public review proposed actions addressing concerns from current and previous SAFE reports.

November Council adopts final action and submits to NMFS for approval.

Year 2 April Measures become effective, and stay in effect for at least two years.

~~Rationale:~~ This schedule allows at least minimally sufficient time for data analysis, provides for timely response to fishery problems, and allows most fishers adequate access to the management process, as scheduled.

The cycle is repeated biennially, with new actions considered in September and becoming effective in April every other year. The Council would schedule HMS for the June, September, and November Council meetings.

Under this biennial cycle (or any cycle), the HMS management team would still conduct ongoing reviews of the fisheries and status of stocks and prepare an annual SAFE document for the Council. The Council would still have to prepare a stock rebuilding plan within one year of notification by the Secretary of Commerce that a stock has been declared overfished, as called for under the Magnuson-Stevens Act (*SEC. 8.2*).

### 5.3 Procedure for Making Recommendations to Regional Fishery Management Organizations

*[N.B.: Text under Amendment 1, Alternative 3 would be inserted here.]*



## 6.0 MANAGEMENT MEASURES

### 6.1 General Conservation and Management Measures

[8.4 Initial General Provisions of the FMP]

This section describes the general elements of the FMP that affect the fisheries directly. Many of these elements address fundamental requirements of the Magnuson-Stevens Act and other applicable law. They can be modified through framework procedures if the Council so chooses.

#### 6.1.1 Legal Gear and Gear Restrictions

[8.4.1 Legal Gear and Gear Restrictions]

##### *Background*

Various state restrictions on gear exist in Washington, Oregon, and California. A listing of current state regulations in Washington, Oregon, and California at the time of plan adoption is in Appendix B to the HMS FMP FEIS (PFMC 2003).

For commercial fisheries, all three states allow the use of troll gear or hook-and-line gear.

In Washington, gillnet, harpoon, pelagic longline and purse seine gear are not listed as authorized gear. Sharks may be caught with otter trawl, beam trawl, set lines, bottomfish pots, commercial jig, and troll lines. (Note: sharks are classified by Washington as bottomfish and as such these are legal gears for sharks.) It is unlawful to use bottomfish trawl gear in state waters (0-3 miles).

In Oregon, most HMS are classified as ocean food fish. Legal gears for ocean food fish include handline, pole and line, longline, seines, spears, trawls, and pots. Drift gillnets may be used to harvest swordfish under a developmental fishery permit. It is unlawful to use gillnets to target thresher shark. Oregon has provisions for developmental longline fisheries for swordfish and blue shark outside 25 miles.

In California, legal gears are gillnets, drift gillnets, and trammel nets, purse seine and harpoon; set lines are legal in open ocean waters, but may not be used for shortfin mako, thresher, swordfish, or marlin. Pelagic longline gear is prohibited by California, but longliners may fish outside the EEZ and land in California.

HMS recreational gear is comparable coastwide, with troll and hook-and-line gears used in each state. "Mousetrap gear" is specifically prohibited in California. (Mousetrap gear means a free floating set of gear thrown from a vessel, composed of a length of line with a float on one end and one or more hooks or lures on the opposite end.)

The Federal List of Fisheries is a list of authorized fisheries under the authority of each regional fishery management council and all fishing gear used in each fishery in the EEZ. The following non-FMP fisheries (and gear) related to HMS are included in the List of Fisheries under the authority of the PFMC:

- Thresher shark and swordfish drift gillnet fishery (gillnet);
- Shark and Bonito longline and set line fishery (longline);
- Pacific albacore and other tuna hook-and-line fishery (hook and line);
- Pacific swordfish harpoon fishery (harpoon);

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- Pacific yellowfin, skipjack tuna, purse seine fishery (purse seine);
- Recreational fishery (spear, trap, handline, pot, hook and line, rod and reel, hand harvest).
- Commercial fishery (trawl, gillnet, hook and line, longline, handline, rod and reel, bandit gear, cast net, spear)

The List of Fisheries will need to be modified after implementation of this FMP to be consistent with the definition of legal HMS gear in the FMP.

This FMP authorizes commercial legal HMS gear as harpoon, surface hook and line, drift gillnet (14 inch stretched mesh or greater), purse seine, and pelagic longline. ~~Two options were initially presented for definition of drift gillnet mesh size (see below).~~ For recreational gear the FMP authorizes rod and reel, spear, and hook and line. The rationale for gear definitions is the FMP needs uniform definitions of gear so that management can be consistent and unambiguous, coast-wide.

Gear specifications are as follows:

Legal Gears and Definitions. The following gears would be authorized for the commercial and recreational harvest of HMS in the EEZ by all vessels, and beyond the EEZ by vessels landing in West Coast ports. Specific management measures regulating the use of legal gear types will be developed if necessary, using the framework procedures of this FMP. ~~The proposed initial specific measures for the respective fisheries are set forth in section 8.5.~~ Gear that is not defined as legal gear is prohibited.

### Commercial Gear

Harpoon: fishing gear consisting of a pointed dart or iron attached to the end of a line several hundred feet in length, the other end of which is attached to a flotation device. Harpoon gear is attached to a pole or stick that is propelled only by hand, and not by mechanical means.

Surface Hook and Line: one or more hooks attached to one or more lines (includes troll, rod and reel, handline, albacore jig, live bait, and bait boat; excludes pelagic longline and mousetrap gear [defined above]).

Drift Gillnet: a panel of netting, suspended vertically in the water by floats along the top and weights along the bottom, which is not stationary nor anchored to the bottom.

Drift gillnet mesh size: *This FMP specifies that HMS drift gillnets must be minimum stretched mesh size of 14 inches.* Rationale: This definition minimizes potential problems from additional bycatch, protected species interactions, and competition with other fishery sectors by disallowing a relatively new fishery (small-mesh gillnet) that targets HMS; precautionary in limiting additional new fishing on HMS.

This *measure* is consistent with the historic use of drift gillnet used to target swordfish and sharks. It would mean that small mesh drift gillnet gear cannot be used to target HMS.

Purse Seine: a floated and weighted encircling net that is closed by means of a purse line threaded through rings attached to the bottom of the net (includes encircling net, purse seine, ring net, drum purse seine, lampera net).

Pelagic Longline: a main line that is suspended horizontally in the water column, which is not stationary nor anchored, and from which dropper lines with hooks (gangions) are attached.

### Recreational Gear

Rod and Reel (pole and line): a hand-held (including rod holder) fishing rod with a manually or electrically operated reel attached.

Spear: a sharp, pointed, or barbed instrument on a shaft. Spears can be operated manually or shot from a gun or sling.

Hook and Line: one or more hooks attached to one or more lines (excludes mousetrap gear).

#### *Adjustments to Definition of Legal Gear and Gear Restrictions*

The FMP authorizes the modification of the definition of legal fishing gear. New commercial or recreational gears may be authorized or existing legal gears may be prohibited using the framework adjustment procedures. Implementation or modification of commercial or recreational gear restrictions is authorized. Gear restrictions may specify the amount, dimensions, configuration or deployment of commercial and recreational fishing gear, for example minimum mesh size or the number of hooks. Any changes in gear regulations should be scheduled to minimize costs to the fisheries, insofar as this is consistent with achieving the goals of the change.

#### *6.1.2 Incidental Catch Allowance*

[8.4.2 Incidental Catch Allowance]

Incidental catch refers to harvest of HMS which are unavoidably caught while fishing for other species or fishing with gear that is not legal for the harvest of HMS. This FMP authorizes the harvest and landing of incidental catches by gears not listed as legal HMS gears in the FMP up to a maximum number or percentage of the total weight, per landing. The incidental limit may be adjusted, or separate limits may be established for different non-HMS fisheries, in accordance with framework procedures described in this chapter. The objectives of allowing incidental catches are to:

- Minimize discards in fisheries using gear that is not legal for harvesting HMS, while increasing fishing income by allowing retention and sale of limited amounts of HMS.
- Discourage targeting on HMS by non-HMS fisheries; also reduces any associated take of marine mammals, sea turtles, and seabirds.

This FMP allows incidental commercial landings of HMS, within limits, for non-HMS gear such as bottom longline, trawl, pot gear, small mesh drift gillnet, set/trammel gillnets, and others. Small mesh gillnetters and set net gillnetters would not be permitted to land swordfish (as currently required under California law), but would be permitted to land other HMS, with the restriction of 10 fish per landing of each non-swordfish highly migratory species. For the bottom longline (set line) fishery, landings would be restricted to 3 HMS sharks in total or 20% of total landings by weight of HMS sharks, whichever is greater by weight. For trawl, pot gear, and other non-HMS gear, a maximum of 1% of total weight per landing for all HMS shark species combined would be allowed (i.e., blue shark; shortfin mako shark; and bigeye, pelagic, and common thresher sharks) or two (2) HMS sharks, whichever is greater. Rationale: This discourages targeting of HMS with non-HMS gears by limiting the allowed landings; reduces wastage of HMS by still allowing traditional levels of incidental catch by those gears.

These allowances are based on the frequency distribution of HMS in landings by non-HMS gears, and are intended to be practical with respect to the levels of HMS expected to be taken by non-HMS gears while not targeting HMS. A description of these rates in landings is given in the HMS FMP FEIS (PFMC 2006, section 9.2.4.2).

### 6.1.3 Bycatch (Including Catch-and-Release Programs)

#### 8.4.4 Bycatch (Including Catch-and-Release Programs)]

The Magnuson-Stevens Act requires that bycatch in fisheries be assessed, and that the bycatch and bycatch mortality be reduced to the extent practicable. Specifically National Standard 9 states that an FMP shall establish a standardized reporting methodology to assess the amount and type of bycatch occurring in the fishery, and include conservation and management measures that, to the extent practicable and in the following priority: 1) minimize bycatch; and 2) minimize the mortality of bycatch which cannot be avoided.

Bycatch has been identified as a concern in HMS drift gillnet and longline fisheries and large-vessel purse seine fisheries (see [Appendix C](#)). Anecdotal accounts indicate bycatch in the small-vessel HMS purse seine and albacore troll fishery is relatively low, but these fisheries have not had formal observer programs. The harpoon fishery is thought to have little if any bycatch due to the selective nature of the gear.

#### 6.1.3.1 Establishing a Standardized Bycatch Reporting Methodology

[Establishing a Standardized Bycatch Reporting Methodology]

The Council examined existing bycatch reporting methodology, and found that current logbook requirements for the various fisheries (states, NMFS and IATTC), together with periodic recreational fishing surveys and port sampling, have provided an important source of information on catch and bycatch for all HMS fisheries (*CHAPTER 5, SECTION 5.5*). Nonetheless, certain additional measures were considered to provide improved standardization of logbook reporting and better ground-truthing of the logbook data through pilot observer programs for some of the presently unobserved fisheries. The FMP proposes to mandate observer programs initially for the longline, surface hook-and-line, small purse seine, and CPFV fisheries, with NMFS to develop and review the observer sampling plans. This action and related actions are discussed separately in Section 6.1.4, Fishery Observers. Also, in Reporting Requirements Section 6.2.6, the FMP proposes that all commercial and recreational party or charter/CPFV fishing vessels maintain and submit to NMFS logbook records of catch and effort statistics, including bycatch. These measures, together with existing reporting requirements, should provide for a comprehensive standardized bycatch reporting system.

#### 6.1.3.2 Minimizing Bycatch and Bycatch Mortality

[Minimizing Bycatch and Bycatch Mortality]

~~In Additional to the alternatives listed below,~~ actions that will have the effect of reducing bycatch and bycatch mortality are discussed in Appendix C and under the various fishery-specific actions in Sections 6.2.1 (drift gillnet fishery), and 6.2.2 (pelagic longline fishery), ~~respectively.~~

The FMP provides for a fishery-by-fishery review of measures to reduce bycatch and bycatch mortality (see Appendix C); establishes a framework for implementing bycatch reduction; adopts measures to minimize bycatch in pelagic longline and drift gillnet fisheries (Section 6.2); and adopts a formal voluntary “catch-and-release” program for HMS recreational fisheries. ~~Rationale:~~ This meets the goals of the Magnuson-Stevens Act and of this FMP and the requirements for estimating bycatch and for establishing measures to reduce bycatch and bycatch mortality in HMS fisheries.

[Background for Proposed Action:]

*Background for Proposed Action*



The framework procedure is to allow efficient implementation of bycatch reporting and reduction measures as needed and as is practical. Potential measures/methods include but are not limited to:

- logbooks
- observers
- time/area closures
- gear restrictions or modifications, or use of alternative gear
- educational programs
- performance standards
- real-time data collection programs (e.g., VMS, electronic logbooks)

The voluntary “catch-and-release” program is to promote reduction of bycatch mortality and waste by encouraging the live release of unwanted fish. Its rationale and origination for recreational fisheries is explained in [Appendix B, section 5.7](#). The establishment of the catch-and-release program removes live releases in the recreational fisheries from the “bycatch” category as defined in the Magnuson-Stevens Act at 16 U.S.C. § 1802(2) and also promotes the handling and release of fish in a manner that minimizes the risk of incidental mortality, encourages the live release of small fish, and discourages waste.

#### 6.1.4 Fishery Observer Authority

[8.4.5 Fishery Observer Authority]

Observer programs are important for obtaining accurate information on total catch, catch disposition and protected species interactions, and also for detailed biological data and samples that managers cannot expect fishers to collect. Catch disposition information importantly includes data on bycatch, for which observers are indispensable in most cases (Section 6.1.3). Observers’ observations can also be very useful to better understand how different gears are actually deployed and how practical and effective regulations actually are.

Most FMPs provide observer placement authority for NMFS in the interest of obtaining more accurate and complete information about their fisheries. The Council and NMFS recognize, however, that observers may not be suitable for all vessels, that smaller vessels may not have accommodations for observers, and vessels that take extended trips are much more costly to observe. Therefore, it is incumbent on NMFS to develop an observer sampling plan that, in addition to the scientific objectives, also recognizes the different types of vessels and vessel capabilities in the various fisheries.

An observer program must include a sample design and cost analysis (including impacts on the vessels being sampled) for Council review and comment prior to implementing the program. The sampling design will include sampling rate, which is a function of the required sample size for determining take rates or amounts with a given precision. When a take amount is the result of infrequent events, as in certain protected species interactions, very large sampling of a fleet is needed for its precise estimation, and cost will be the determining factor for sample size.

*The FMP* authorizes NMFS to require that vessels carry observers when directed to do so by the NMFS Regional Administrator, and mandates observer programs initially for the longline, surface hook-and-line, small purse seine, and commercial passenger fishing vessel (CPFV) fisheries, with NMFS to complete initial observer sampling plans within six months of FMP implementation. NMFS is also to develop initial observer sampling programs for the private recreational fisheries at a later date. ~~Rationale: F~~The FMP focuses initially on the fisheries inadequately or not monitored under federal authority (MMPA, ESA) in meeting the FMP goal of documenting and reviewing bycatch mortality and protected species interactions in the HMS fisheries.

The large- and small-mesh DGN fisheries already have MMPA-mandated observer programs, and the longline fishery has recently come under ESA mandate for observers. These programs will be reviewed by the HMS management team for adequacy in meeting the goals of this FMP (important if the sampling rates in the protected species programs are reduced).

### 6.1.5 Protected Species

[8.4.6 Protected Species]

Various federal laws provide protection for special resources, including those for protected species under ESA, MMPA, and MBTA. Interactions of HMS fishing gears with protected species are described in **Appendix D**. This FMP authorizes the adoption of measures to minimize interactions of HMS gears with protected species and to implement recommendations contained in Biological Opinions (ESA), Take Reduction Plans (MMPA), Seabird Management Plans, or other relevant documents pertaining to HMS fisheries. The FMP also authorizes programs to collect information on interactions in any or all HMS fisheries.

Fishery-specific measures affecting protected species are included in the initial management measures implementing alternatives for drift gillnet and longline fisheries (Sections 6.2.1, 6.2.2). ~~The effects and effectiveness of the proposed measures are evaluated in CHAPTER 9, SECTION 9.2.5.1-3.~~ Protected species interactions with the other gear types are not major issues (Appendix D), and no alternatives were considered for those gears.

*The FMP* adopts a framework authorization for protected species conservation measures and implements initial conservation and management measures for drift gillnet and pelagic longline fisheries as described in section 6.2, Appendix D and the HMS FMP FEIS (PFMC 2006, sections 9.2.5.1-2). ~~Rationale:~~ The FMP requires general provision for its proposed protected species measures and also for future measures to reduce the takes of protected species and to minimize the risk of adverse impacts from those takes. The framework provisions of the FMP would be used to address new protected species concerns as they are identified.

Both through the SAFE Report and through special reports from interested parties (which could include the USFWS or environmental organizations), the Council will ~~would~~ be advised of new protected species concerns; would direct the plan team or others to investigate and recommend action; will ~~would~~ determine if action is needed and, if it is viewed as a matter of substantial concern, will ~~would~~ direct the completion of necessary documents to analyze the issues and evaluate alternatives; and will ~~would~~ submit recommendations for corrective action to NMFS for consideration. If such an action were recommended by the Council and approved by NMFS, the action will ~~would~~ be implemented by NMFS.

In fisheries where protected species takes are already being addressed, as by the Pacific Offshore Cetacean Take Reduction Team (POCTRT) for the drift gillnet fishery, any recommendations and supporting analyses, as by POCTRT, will ~~would~~ be provided by NMFS to the Council for consideration. The Council will ~~would~~ make recommendations as it deems appropriate to NMFS, which will make final decisions on whether to proceed with rulemaking under the MMPA or Magnuson-Stevens Act, as appropriate.

### 6.1.6 Prohibited Species

[8.4.7 Prohibited Species]

As indicated in Section 3.3, certain species are proposed to be designated as “prohibited species” under the FMP, meaning that they cannot be retained, or can be retained only under specified conditions, by persons fishing for management unit species. Three species of shark, as well as Pacific halibut and Pacific salmon, are

recommended for this designation. The designation of prohibited species could be changed using framework procedures.

This FMP prohibits retention of great white, basking and megamouth sharks (except for sale or donation of incidentally-caught specimens to recognized scientific and educational organizations). This FMP also prohibits retention of Pacific halibut and salmon (except when caught with authorized gears during authorized seasons) and adopts a framework authorization for changes in prohibited species designations. Rationale: Neither the populations of these rare or low productivity sharks nor the strict management of halibut and salmon should be compromised by HMS fisheries. The prohibited species status of halibut and salmon is also consistent with U.S. policy and other FMPs.

The great white shark's low productivity, its accessibility in certain localized areas, and its appeal to trophy hunters make it especially vulnerable to depletion. The species has been protected in the State of California since 1995; it may not be taken except for scientific and educational purposes under State permit. The sale (or donation) of incidentally-caught specimens, live or dead, to recognized scientific and educational organizations for research or display purposes would be allowed.

Megamouth sharks are extremely rare, though 4 have been taken in the drift gillnet fishery in recent years. Protection is recommended because of extreme rarity and uniqueness. Sale (donation) of incidentally caught specimens to recognized scientific and educational organizations for research or display purposes would be allowed.

Basking sharks occur in greatest numbers in the eastern Pacific in autumn and winter months. The fins are valuable in east Asian markets. This species is recommended for protection because it is thought to be among the least productive of shark species and thus highly vulnerable to depletion. The north Pacific stock is listed as endangered by the World Conservation Union (IUCN Red List of Threatened Species). The sale (donation) of incidentally-caught specimens, live or dead, to recognized scientific and educational organizations for research or display purposes would be allowed.

Pacific halibut and Pacific salmon, while not HMS, are important as incidental catch in some HMS fisheries and so are recommended to be prohibited to ensure they are not targeted by HMS fishers, unless with authorized gear during authorized seasons. The fisheries that target halibut and salmon are already overcapitalized. Further, some runs of salmon are listed as threatened or endangered.

### 6.1.7 Quotas or Harvest Guidelines

[8.4.8 Quotas or Harvest Guidelines]

#### *Background*

A *quota* is a specified numerical harvest objective for a stock, the attainment (or expected attainment) of which causes the complete closure of the fishery or fisheries for that species. A *harvest guideline* is a numerical harvest level that is a general objective and is not a quota. Attainment of a harvest guideline does not require a management response, but it does prompt review of the fishery. This will include a Management Team meeting to evaluate the status of the stock and to make recommendations.

Factors involved in choosing between a quota or harvest guideline include:

- the status of the stock and the need to prevent overfishing or rebuild overfished stocks;
- effects on bycatch;
- impacts on fisheries;

- achievement of the FMP goals and objectives
- ability to monitor catches during the season;
- U.S. obligations under an international agreement.

Harvest guidelines can help prevent overfishing or localized depletion of vulnerable species, or can be used in implementing management decisions by international HMS management bodies. Allocation of guideline amounts among fisheries may be necessary (see following section).

As explained in Chapter 4, the ~~proposed~~ harvest guidelines for common thresher and shortfin mako sharks are based on a “local MSY” concept. The thresher shark harvest guideline is lower than the recommended harvest limit set in the tri-state fishery management plan for thresher shark. These two sharks are the only species with harvest guidelines thus far proposed.

This FMP establishes harvest guidelines for selected shark species and authorizes establishment or modification of quotas or harvest guidelines under the framework provisions. Initial harvest guidelines ~~are proposed~~ for common thresher and shortfin mako sharks, are set equal to an OY estimate specified as 0.75MSY. The MSY used is the local MSY (LMSY), as the stock-wide maximum sustainable harvests are not known.

The initial harvest guidelines are  $OY=0.75 \times LMSY$ , as follows:

|                 |                        |
|-----------------|------------------------|
| common thresher | 340 mt (round weight)  |
| shortfin mako   | 150 mt (round weight). |

The rationale for these harvest guidelines is that, as vulnerable species in this FMP and with total catches and extent of stocks poorly known, management of these sharks under precautionary harvest guidelines is appropriate.

These harvest guidelines pertain only to the portion of the stocks that are vulnerable to capture by West Coast vessels as they now fish. They are particularly conservative as LMSY necessarily underestimates stock-wide MSY. The guidelines are catch benchmarks that warn of possible approach to the local sustainable maximum.

The HMS Management Team, at its annual meeting in May or June, will review the catches from the previous statistical year (April 1-March 31) and compare those catches with the established harvest guidelines; evaluate the status of the stocks; and develop recommendations for management measures, as appropriate. These management measures will be presented to the Council as part of the SAFE document at its June and/or September meetings to be reviewed and approved for public review. Final action on management measures would be scheduled for the Council’s November meeting.

#### 6.1.8 Allocation

[8.4.9 Allocation]

This FMP authorizes allocation of HMS quotas or harvest guidelines among U.S. West Coast-based HMS fisheries if necessary using the full rulemaking framework process. In addition to other requirements of the FMP, the Council will consider the following factors when adopting allocations of HMS among domestic fisheries:

- present participation in and dependence on the fishery, including alternative fisheries;
- historical fishing practices in, and historical dependence on, the fishery;

- economics of the fishery;
- agreements or negotiated settlements involving the affected participants;
- potential biological impacts on any species affected by the allocation;
- consistency with the Magnuson-Stevens Act National Standards;
- consistency with the goals and objectives of the FMP.

The FMP ~~does~~ ~~would~~ not establish initial quota allocations to different fisheries or fishery sectors, with the exception of a 'No Sale' of Striped Marlin Proposed Action described in section 6.2. This action allocates striped marlin for sport use only. Future allocations could be made using framework procedures. Rationale: There is no pressing need to establish allocations since no quotas are presently proposed. No compelling argument was raised for repealing the long-standing (California; since 1937) no-sale status of striped marlin and for establishing it as a commercial species on the West Coast.

#### 6.1.9 Treaty Indian Fishing

[8.4.10 Treaty Indian Fishing]

This FMP authorizes adoption of measures and procedures to accommodate treaty fishing rights in the initial implementing regulations for the FMP. Also authorize revisions to the initial regulations through regulatory amendments, without the need to amend the FMP. The initial implementing regulations would contain the measures and procedures specified below. Rationale: This action is a practical procedure for accommodating treaty fishing rights, without need of plan amendments for revisions.

##### *Initial Measures and Procedures*

Under the FMP, the initial measures and procedures for accommodating treaty fishing rights ~~are~~ ~~would be~~ as follows:

- Pacific Coast treaty Indian tribes have treaty rights to harvest HMS in their usual and accustomed (u&a) fishing areas in U.S. waters.
- Pacific Coast treaty Indian tribes means the Hoh, Makah, and Quileute Indian Tribes and the Quinault Indian Nation.
- The NMFS recognizes the areas set forth below as marine u&a fishing grounds of the four Washington coastal tribes. The Makah u&a grounds were adjudicated in U.S. v. Washington, 626 F.Supp. 1405, 1466 (W.D. Wash. 1985), affirmed 730 F.2d 1314 (9<sup>th</sup> Cir. 1984). The u&a grounds of the Quileute, Hoh, and Quinault tribes have been recognized administratively by NMFS. See, e.g., 64 Fed. Reg. 24087-24088 (May 5, 1999) (u&a grounds for groundfish); 50 C.F.R. 300.64(i) (u&a grounds for halibut). The u&a grounds recognized by NMFS may be revised as ordered by a federal court.
- Procedures. The rights referred to in paragraph (a) will be implemented by the Secretary of Commerce, after consideration of the tribal request, the recommendation of the Council, and the comments of the public. The rights will be implemented either through an allocation of fish that will be managed by the tribes, or through regulations that will apply specifically to the tribal fisheries. An allocation or a regulation specific to the tribes shall be initiated by a written request from a Pacific Coast treaty Indian tribe to the NMFS Northwest Regional Administrator, at least 120 days prior to the time the allocation is desired to be effective, and will be subject to public review through the Council process. The Secretary recognizes the sovereign status and co-manager role of Indian tribes

over shared Federal and tribal fishery resources. Accordingly, the Secretary will develop tribal allocations and regulations in consultation with the affected tribe(s) and, insofar as possible, with tribal consensus.

- (e) Identification. A valid treaty Indian identification card issued pursuant to 25 CFR Part 249, Subpart A, is prima facie evidence that the holder is a member of the Pacific Coast treaty Indian tribe named on the card.
- (f) Fishing (on a tribal allocation or under a federal regulation applicable to tribal fisheries) by a member of a Pacific Coast treaty Indian tribe within that tribe's usual and accustomed fishing area is not subject to provisions of the HMS regulations applicable to non-treaty fisheries.
- (g) Any member of a Pacific Coast treaty Indian tribe must comply with any applicable federal and tribal laws and regulations, when participating in a tribal HMS fishery implemented under paragraph (d) above.
- (h) Fishing by a member of a Pacific Coast treaty Indian tribe outside that tribe's usual and accustomed fishing area, or for a species of HMS not covered by a treaty allocation or applicable federal regulation, is subject to the HMS regulations applicable to non-treaty fisheries.

#### *6.1.10 Procedures for Reviewing State Regulations*

##### [8.4.11 Procedures for Reviewing State Regulations]

Any state may propose that the Council review a particular state regulation for the purpose of determining its consistency with the FMP and the need for complementary federal regulations. Although this procedure is directed at the review of new regulations, existing regulations affecting the harvest of highly migratory species managed by the FMP may also be reviewed under this process. The state making the proposal will include a summary of the regulation in question and concise arguments in support of consistency.

Upon receipt of a state's proposal, the Council may make an initial determination whether or not to proceed with the review. If the Council determines that the proposal has insufficient merit or little likelihood of being found consistent, it may terminate the process immediately and inform the petitioning state in writing of the reasons for its rejection.

If the Council determines sufficient merit exists to proceed with a determination, it will review the state's documentation or prepare an analysis considering, if relevant, the following factors:

- How the proposal furthers, or is not otherwise consistent with, the objectives of the FMP, the Magnuson-Stevens Act, and other applicable law
- Likely effect on or interaction with any other regulations in force for the fisheries in the area concerned
- Expected impacts on the species or species group taken in the fishery sector being affected by the regulation
- Economic impacts of the regulation, including changes in catch, effort, revenue, fishing costs, participation, and income to different sectors being regulated as well as to sectors that might be indirectly affected.
- Any impacts in terms of achievement of harvest guidelines or harvest quotas, maintaining year-round fisheries, maintaining stability in fisheries, prices to consumers, improved product quality, discards, joint venture operations, gear conflicts, enforcement, data collection, or other factors.

The Council will inform the public of the proposal and supporting analysis and invite public comments before and at the next scheduled Council meeting. At its next scheduled meeting, the Council will consider public testimony, public comment, advisory reports, and any further state comments or reports, and determine whether or not the state regulation is consistent with the FMP and whether or not to recommend implementation of complementary federal regulations or to endorse state regulations as consistent with the FMP without additional federal regulations.

If the Council recommends the implementation of complementary federal regulations, it will forward its recommendation with the proposed rule and rationale to the NMFS Regional Administrator for review and approval. The NMFS Regional Administrator will publish the proposed regulation in the *Federal Register* for public comment, after which, if approved, he/she will publish final regulations as soon as practicable. If the Regional Administrator disapproves the proposed regulations, he/she will inform the Council in writing of the reasons for disapproval.

#### 6.1.11 Exempted Fishing Permits

[8.4.12 Exempted Fishing]

##### *Background*

Existing Federal Procedures. Exempted fishing is defined to be fishing practices that are new to a fishery and not otherwise allowed under an FMP. The NMFS Regional Administrator, using Federal EFP (Exempted Fishing Permit) procedures, may authorize the targeted or incidental harvest of HMS for experimental or exploratory fishing that would otherwise be prohibited. Applicants must submit their application package at least 60 days before the desired effective date of the EFP, provide a statement of purpose and goals of the EFP activity, the species (target and incidental) expected to be harvested, arrangements for disposition of all regulated species and any anticipated impacts on marine mammals or endangered species, and provide the times and places fishing will take place and the type, size and amount of gear to be used. There are no specific requirements. The Administrator may restrict the number of experimental permits by total catch, time, area, bycatch, incidental catch or protected species takes. The NMFS Regional Administrator may require any level of industry-funded observer coverage for these experimental permits.

Exempted fisheries are expected to be of limited size and duration and must be authorized by an EFP issued for the participating vessel in accordance with the criteria and procedures specified in 50 CFR §600.745. The duration of EFPs will ordinarily not exceed one year. Permits will not be renewed automatically. An application must be submitted to the Regional Administrator for each year. A fee sufficient to cover administrative expenses may be charged for EFPs. An applicant for an EFP need not be the owner or operator of the vessel(s) for which the EFP is requested as long as the proposed activity is compatible with limited entry and other management measures in the FMP.

The Regional Administrator or Director may attach terms and conditions to the EFP consistent with the purpose of the exempted fishing, including, but not limited to:

- (a) The maximum amount of each regulated species that can be harvested and landed during the term of the EFP, including trip limitations, where appropriate.
- (b) The number, size(s), name(s), and identification number(s) of the vessel(s) authorized to conduct fishing activities under the EFP.
- (c) The time(s) and place(s) where exempted fishing may be conducted.
- (d) The type, size, and amount of gear that may be used by each vessel operated under the EFP.

- (e) The condition that observers, a vessel monitoring system, or other electronic equipment be carried on board vessels operated under an EFP, and any necessary conditions, such as pre-deployment notification requirements.
- (f) Reasonable data reporting requirements.
- (g) Other conditions as may be necessary to assure compliance with the purposes of the EFP, consistent with the objectives of the FMP and other applicable law.
- (h) Provisions for public release of data obtained under the EFP that are consistent with NOAA confidentiality of statistics procedures at set out in subpart E. An applicant may be required to waive the right to confidentiality of information gathered while conducting exempted fishing as a condition of an EFP.

~~Proposed~~ Additional FMP Requirements for an Exempted Fishing Permit. This FMP places additional requirements for authorizing an EFP for targeting HMS species. An EFP proposal will be required to follow a specific Council protocol and be reviewed by the Council prior to application to NMFS. The intent of the protocol is to ensure the Council has adequate information on all aspects of the proposed fishery and has adequate time to consider, review and formulate recommendations. This protocol will be available from the Council. It will require additional detailed information and analysis beyond those specifically required for an NMFS EFP. The protocol will specify timing for submissions and timing for Council review.

This FMP authorizes mandatory data reporting and mandatory on-board observers for vessels with exempted fishing permits (PFMC 2003, section 9.2.4.6). Installation of vessel monitoring units (VMS) aboard vessels with exempted fishing permits may be also required.

The FMP ~~would~~ requires that applicants submit for Council review and approval an initial EFP plan prior to formal application to NMFS, following a specific Council supplied EFP protocol, which is to be developed by the HMS Management Team. The specific protocol will be available from the Council as a Council Operating Procedure. The protocol will include, but not be limited to, the following elements:

- schedule and procedure for submitting EFP applications;
- format for applications;
- qualification criteria for applicants;
- Council internal review procedures;
- relevant laws and regulations that must be followed.

~~Rationale:~~ To serve its constituents, the Council needs a formal process through which it can review and make recommendations on the EFP applications to NMFS.

The Council will review, comment, and make recommendations on the plan and may require changes or request additional information. The final EFP plan and Council recommendations will then be provided by the applicant to NMFS for action. An example of a fishery-specific proposal is shown in the HMS FMP FEIS (PFMC 2003, section 9.2.5.2.1, Example of Exempted Longline Fishery Permit with Experimental Design). NMFS review and any subsequent issuance of an EFP will ~~would~~ then proceed according to regulations specified in Code of Federal Regulations (50 CFR §600.745) pursuant to the procedures and criteria in that section.



### 6.1.12 *Temporary Adjustments due to Weather*

[8.4.13 Temporary Adjustments due to Weather]

The Council will consider and may provide, after consultation with the U.S. Coast Guard and persons utilizing the fishery, temporary adjustments for access to the fishery by vessels otherwise prevented from harvesting because of weather or other ocean conditions affecting the safety of the vessels, except that the adjustment shall not adversely affect conservation efforts in other fisheries or discriminate among participants in the affected fishery. No adjustments due to weather are proposed at this time as the Council has no information from fishery participants or others to indicate that particular accommodations are needed to provide reasonable opportunity to harvest HMS. There are no quotas or allocations that could not be harvested due to poor weather.

### 6.1.13 *Safety of Life at Sea*

[8.4.14 Safety of Life at Sea]

National Standard 10 (NS-10) requires that conservation and management measures shall, to the extent practicable, promote the safety of human life at sea. The substantive requirements of NS-10 are fulfilled by Council, NMFS, USCG, and fishing industry consultation on the nature and extent of any adverse effects that proposed management measures may have on safety of human life at sea. The purpose of consultation is to identify and mitigate, to the extent practicable, any adverse effects. 50 CFR 600.355, which implements NS-10, provides lists of safety considerations and mitigation measures that could be considered. To fulfill NS-10, the Council will utilize existing Council and Council subgroup meeting procedures, and the framework provisions of the FMP. Except for automatic actions such as quota closures, the framework provisions require public comment and Council action before management actions are implemented. Safety and weather issues can be considered during the Council process. The USCG has a Council representative who regularly comments on proposed management measures. In addition, the USCG participates on the Council's Enforcement Consultants Committee, which is another forum for considering safety and weather issues. The HMS Management Team and Advisory Subpanel also hold public meetings where safety and weather concerns can be raised and addressed. Mitigation measures may be incorporated into pre-season and in-season actions under the framework procedures.

A NMFS regulation at 50 CFR 600.745 applies to any fishing vessel required to carry an observer as part of a mandatory observer program or carrying an observer as part of a voluntary observer program under the Magnuson-Stevens Act, MMPA (16 U.S.C. 1361 et seq.), the South Pacific Tuna Act of 1988 (16 U.S.C. 973 et seq.), or any other U.S. law. Observers may not depart on a fishing trip aboard a vessel that does not comply with United States Coast Guard safety requirements or that does not display a current commercial fishing vessel safety examination decal. All vessels required to carry an observer must meet Coast Guard safety requirements and display a current safety decal (issued within the previous two years). Vessels not meeting these requirements are deemed unsafe for purposes of carrying an observer and must correct deficiencies before departing port. The vessel owner or operator must also allow an observer to visually inspect any safety or accommodation requirement if requested. Observers are required to complete a pre-trip safety check of the emergency equipment and are encouraged to review emergency instructions with the operator before the vessel departs port.

## 6.2 Specific Conservation and Management Measures

[8.5 Initial Conservation and Management Measures of the FMP]

This section describes the initial specific management measures ~~proposed by the Council to be implemented~~ when the plan ~~is~~ was adopted. The adopted measures may be modified in the future, or new regulations may

be implemented, using framework adjustment procedures in the FMP. These measures would stay in effect until revised or removed by specific action.

The proposed measures ~~or alternatives~~ are described below specifically for the drift gillnet, longline, and purse seine fisheries only, because of the measures that would affect how those particular fisheries are conducted. On the other hand, the measures proposed for hook-and-line, harpoon, and recreational fisheries are largely administrative in nature, having to do with permits and logbooks that do not directly affect fishing operations. Management of recreational fishing, moreover, is essentially deferred to the states in this FMP, reflecting the mainly localized nature of sportfishing issues and values that are best addressed at that level. Although this FMP does have a proposed catch-and-release measure for the recreational fishery that could affect fishing practices, that program would be voluntary.

### 6.2.1 Drift Gillnet Fishery Management Measures

#### [8.5.1 Drift Gillnet Fishery Management Measures]

##### *Background*

The drift gillnet fishery for swordfish and shark (14" minimum mesh size) is managed under numerous complex and detailed federal and state regulations to protect the populations fished as well as the protected species incidentally taken. These regulations are described in Appendixes B and C to the original FMP FEIS (PFMC 2003), the latter being the California code for fishing swordfish and shark with minimum stretched mesh of 14 inches required. Briefly, the regulations (for  $\geq 14$ " stretched mesh only) drift gillnets are as follows:

##### Federal Regulations

Take Reduction Team (POCTRT) measures to protect marine mammals:

- Acoustic deterrent devices (pingers) are required on drift gillnets to deter entanglement of marine mammals.
- All drift gillnets must be fished at minimum depth below the surface of 6 fm (10.9 m).
- Skipper workshops may be required.
- Vessels must provide accommodations for observers when assigned.

Federal Turtle Conservation Closed Areas:

- Drift gillnet fishing may not be conducted:
  - In the portion of the EEZ bounded by the coordinates 36° 18.5' N latitude (Point Sur), to 34° 27' N latitude, 123° 35' W longitude (off CA); then to 129° W longitude; then north to 45° N latitude (off OR); then east to the point where 45° N latitude meets land (OR), through year 2003 from August 15 to November 15 (see map, *CHAPTER 9 FIGURE 9-1*);
  - In the portion of the EEZ south of Point Conception, California (34° 27' N latitude) and west to 120° W longitude from August 15 to August 31 and again from January 1 through January 31 during a forecasted or occurring El Niño, as announced by NMFS<sup>2</sup>.

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<sup>2</sup> ~~As of June 2003, a rule to modify the El Niño closure is being finalized. It proposes instead to~~ A final rule was published December 16, 2003, at 68 FR 69967, changing 50 CFR § 223.206(d) to prohibit fishing during the months of June, July, and August, which NMFS has concluded offers more protection for loggerheads while having less

State Restrictions (applicable to vessels operating from the state's ports)

Participation restrictions:

- The California and Oregon limited entry programs for the swordfish/shark drift gillnet fisheries.

Gear restrictions (California):

- The maximum cumulative length of a shark or swordfish gill net(s) on the net reel of a vessel, on the dock of the vessel, and/or in the water at any time shall not exceed 6,000 ft in float line length, except that up to 250 fm of spare net (in separate panels not to exceed 100 fm) may be on board the vessel stowed in lockers, wells, or other storage.
- The use of quick disconnect devices to attach net panels is prohibited.
- Drift gillnets must be at least 14 inch stretch mesh.
- The unattached portion of a net must be marked by a pole with a radar reflector.

Mainland area restrictions/closures:

- Drift gillnets cannot be used:
  - In the EEZ off California from February 1 to April 30.
  - In the portion of the EEZ off California within 75 nm of the coastline from May 1 to August 14.
  - In the portion of the EEZ off California within 25 nm of the coastline from Dec. 15 through Jan. 31.
  - In the portion of the EEZ bounded by a direct line connecting Dana Point; Church Rock on Catalina Island; and Point La Jolla, San Diego County; and the inner boundary of the EEZ from August 15 through September 30 each year.
  - In the portion of the EEZ within 12 nm from the nearest point on the mainland shore north to the Oregon border from a line extending due west from Point Arguello.
  - East of a line running from Point Reyes to Noonday Rock to the westernmost point of southeast Farallon Island to Pillar Point.
  - In the portion of the EEZ within 75 nm of the Oregon shoreline from May 1 through August 14, and within 1000 fm the remainder of the year.
  - Off Washington (Washington does not authorize this HMS gear).

Channel Islands (California) closures:

- Drift gillnets cannot be used:
  - In the portion of the EEZ within six nm westerly, northerly, and easterly of the shoreline of San Miguel Island between a line extending six nm west magnetically from Point Bennett and a line extending six nm east magnetically from Cardwell Point and within six nm westerly, northerly, and easterly of the shoreline of Santa Rosa Island between a line extending six nm west magnetically from Sandy Point and a line extending six nm east magnetically from Skunk Point, from May 1 through July 31 each year.
  - In the portion of the EEZ within 10 nm westerly, southerly, and easterly of the shoreline of San Miguel Island between a line extending 10 nm west magnetically from Point Bennett and a line

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impact on the fishery than a closure in January and August.

extending 10 nm east magnetically from Cardwell Point and within 10 nm westerly, southerly, and easterly of the shoreline of Santa Rosa Island between a line extending 10 nm west magnetically from Sandy Point and a line extending 10 nm east magnetically from Skunk Point from May 1 through July 31 each year.

- In the portion of the EEZ within a radius of 10 nm of the west end of San Nicolas Island from May 1 through July 31 each year.
- In the portion of the EEZ within six of the coastline on the northerly and easterly side of San Clemente Island, lying between a line extending six nm west magnetically from the extreme northerly end of San Clemente Island to a line extending six nm east magnetically from Pyramid Head from August 15 through September 30 each year.

The federal Turtle Conservation Closed Areas are based on recommendation from the Pacific Offshore Cetacean Take Reduction Team (POCTRT or TRT), which was modified by NMFS after considering fishery observer data and recent satellite telemetry tracking data obtained from two leatherback sea turtles that were tagged in Monterey Bay in September 2000; and on existing state restrictions that regulate drift gillnet gear and regulate drift gillnet use in certain times or places. In an effort to minimize the economic impact of the time and area closures, the above "modified" TRT recommendation was developed to provide access to the productive fishing grounds north of Point Conception, which is consistent with the intent of the TRT proposal, while still providing at least an equal, if not greater, level of protection for leatherback and loggerhead sea turtles. In addition, the modified TRT recommendation does not include the lowering of the net to at least 60 feet as recommended by the TRT because observer data (1990-2000) do not suggest that the lengthening of extenders to 60 ft would result in a definite decrease in leatherback interactions. The original *trigger* language identified by the TRT to extend the area closure in a southerly direction to Point Conception if a leatherback was observed was also removed because NMFS did not consider this extra precaution to be necessary based on the distribution of the turtles. Although the TRT recommended 36° 15' N latitude as the southern boundary of the closed area, Point Sur was set as the southern boundary because it is a more recognizable landmark and only three miles north of 36° 15' N latitude. The diagonal line from Point Sur to 34° 27' N latitude, 123° 35' W longitude was developed by plotting the satellite tracking data of two leatherback turtles, keeping the southernmost turtle trajectory north of the diagonal line. The reason for this precaution is to protect a potential migratory corridor of leatherbacks departing Monterey Bay for western Pacific nesting beaches. NMFS hopes to learn more about this migratory corridor through additional satellite tag attachments on turtles leaving Monterey Bay, in order to minimize the impact of commercial fisheries on leatherbacks.

This FMP endorses or adopts in the FMP all federal conservation and management measures in place under the MMPA and ESA; adopts all state regulations for swordfish/shark drift gillnet fishing under Magnuson-Stevens authority except limited entry programs (which will remain under states' authority); modifies an OR closure inside 1000 fm (or way point equivalent) to be in effect year round; closes EEZ waters off WA to all drift gillnet fishers; and continues the current turtle protection closure north of Point Sur, CA to 45° N latitude (August 15 to November 15); and d During a forecasted or occurring El Niño event (August and January) a specified area south of Pt. Conception to 120° W longitude. ~~Note: NMFS had issued a proposed and interim final rule to implement this January and August 15-31 El Niño closure stemming from the October 2000 Biological Opinion, but a modified rule is now being finalized, which would change the closure months to be is closed during June, July and August. NMFS has concluded that this modified closure offers more protection for loggerheads during El Niño periods, while having less impact on the fishery than the former closure in January and August. An analysis for this alternate closure will be included in the final rule. This final rule will likely be published by the time NMFS issues the proposed regulations to implement this FMP and therefore the FMP regulations should reflect this modified closure. It would prohibit fishing with drift gillnets in the CA/OR thresher shark/swordfish drift gillnet fishery in U.S. waters off southern California east of 120° W longitude, for the months of June, July, and August, when El Niño conditions are forecasted~~

~~or present off southern California. Rationale: The reason for this closure is~~ existing federal and state regulations, including current states' drift gillnet time-area closures and gear restrictions (except for an Oregon spring-summer closure) were deemed appropriate for adopting intact. However, the Council concluded it was premature to federalize the states' limited entry programs, with its increase in federal costs and administrative burdens. Closures off Washington and Oregon are intended to protect the common thresher shark, sea turtles and marine mammals.

The FMP modifies the current state regulations to prohibit, year round, drift gillnet fishing for swordfish and sharks in EEZ waters off OR east of a line approximating the 1,000 fm curve (deleting the May-August prohibition within 75 nm) and prohibits HMS DGN fishing in all EEZ waters off WA. The state of Washington currently does not allow the use of drift gillnet gear and Oregon does not allow drift gillnets to target thresher shark, although DGN vessels have fished off both states and landed their catch in California.

## 6.2.2 Pelagic Longline Fishery Management Measures

[8.5.2 Pelagic Longline Fishery Management Measures]

The pelagic longline *measures* differ according to their application inside or outside the EEZ.

### Inside the EEZ:

This FMP establishes a general prohibition on the use of pelagic longline gear in the EEZ (see also Legal Gear Restrictions ~~Alternative 3~~ Section 6.1.1 and Chapter 9 section 9.2.4.1, with reference to prohibition of longline gear inside the EEZ). Rationale: This avoids/prevents potential bycatch, protected species, and fishery competition problems by continuing the de facto longline prohibition throughout the EEZ.

Proposals for research or exempted fishing permit (EFP) use of longline gear under this prohibition will ~~would~~ be evaluated when the proposals are submitted, the latter according to EFP guidelines developed by the HMS management team (see Section 6.1.11, Exempted Fishing, ~~Alternative 2~~).

### Outside the EEZ:

*N.B.: The Council's preferred alternative (Alternative 2) for these measures was disapproved by NMFS. The following measures are pursuant to a December 2003 supplement to the August 2003 FMP FEIS.*

~~This is the proposed action for purposes of this FEIS. That is, the Measures proposed by the Council for longline fishing in waters west of 150° W longitude would be implemented, and they would be~~ supplemented by NMFS rules under the ESA to impose the same restrictions on longline vessels fishing outside the EEZ but ~~east~~ ~~west~~ of 150° W longitude. (N.B.: *The text of the December 2003 supplement appears to be in error and is shown corrected*). ~~This is in anticipation that the reasonable and prudent alternative in a Biological Opinion being prepared pursuant to a Section 7 consultation under the ESA will require this action.~~ This will result in implementation of all the elements listed below for all fishing on the high seas by West Coast longline fishing vessels.

~~Under this alternative,~~ Longline vessels operating on the high seas outside the EEZ would be subject to the same controls that applied to Hawaii-based longline fishing vessels holding longline permits in 2003. These are as follows:

1. Line clippers, dip nets, and bolt cutters meeting NMFS' specifications must be carried aboard each vessel for releasing turtles (specifications vary by vessel size);

2. A vessel may not use longline gear to fish for or target swordfish (*Xiphias gladius*) north of the equator (0° latitude); landing or possession of more than 10 swordfish per trip is prohibited.
3. The length of each float line possessed and used to suspend the main longline beneath a float must be longer than 20 m (65.6 ft or 10.9 fm).
4. From April 1 through May 31, a vessel may not use longline gear in waters bounded by 0° latitude and 15° N latitude, and 145° W longitude and 180° W longitude;
5. No light stick (any light emitting device for attaching underwater to the longline gear) may be possessed on board a vessel;
6. When a longline is deployed, no fewer than 15 branch lines may be set between any two floats (10 branch lines if using basket gear);
7. Longline gear must be deployed such that the deepest point of the main longline between any two floats, i.e., the deepest point in each sag of the main line, is at a depth greater than 100 m (328.1 ft or 54.6 fm) below the sea surface;
8. While fishing for management unit species north of 23° N latitude, a vessel must:
  - Maintain a minimum of two cans (each sold as 0.45 kg or 1 lb size) containing blue dye on board the vessel during a fishing trip;
  - Use completely thawed bait to fish for Pacific pelagic management unit species;
  - Use only bait that is dyed blue of an intensity level specified by a color quality control card issued by NMFS;
  - Retain sufficient quantities of offal for the purpose of discharging the offal strategically in an appropriate manner;
  - Remove all hooks from offal prior to discharging the offal;
  - Discharge fish, fish parts (i.e., offal), or spent bait while setting or hauling longline gear on the opposite side of the vessel from where the longline is being set or hauled;
  - Use a line-setting machine or line-shooter to set the main longline (unless using basket gear);
  - Attach a weight of at least 45 g to each branch line within 1 m of the hook; and
  - Remove the bill and liver of any swordfish that is incidentally caught, sever its head from the trunk and cut it in half vertically, and periodically discharge the butchered heads and livers overboard on the opposite side of the vessel from which the longline is being set or hauled.
9. Other measures<sup>3</sup> for the proper release and handling of turtles and seabirds, the requirement for vessel operators to attend a protected species workshop each year, and the requirement for Vessel Monitoring Systems (VMS). VMS is required because the proposed action involves area-specific regulations.

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<sup>3</sup> Full description of all applicable measures are in 50 CFR Part 660, see 66 FR 63630 (turtles) and 67 FR 34408 (seabirds).

### 6.2.3 Purse Seine Fishery Management Measures

[8.5.3 Purse Seine Fishery Management Measures]

These measures pertain to the small purse seine vessels (< 364 mt carrying capacity) fishing HMS.

This FMP opens the entire EEZ to purse seine fishing. Rationale: With few data to suggest any potential harmful bycatch or gear conflicts, this action ~~would~~ provides additional opportunity for purse seiners to fish for bluefin tuna in those years when they travel in fishable schools off Oregon and Washington, and could raise a potential for purse seining for albacore in the northwest portion of the EEZ.

Purse seine fishers targeting HMS from any state ~~can~~ could fish anywhere in the EEZ, although there has been little interest in such fishing off Oregon and Washington.

### 6.2.4 Prohibit Sale of Certain Species (No-sale Marlin Provision)

[8.5.4 Prohibit Sale of Certain Species (No-sale Marlin Provision)]

This FMP prohibits the sale of striped marlin by vessels under PFMC jurisdiction.

Rationale: Greater regional and national net benefits are obtained from continuing coast-wide under federal authority the long standing, traditional policy (California) of reserving this species for sport use only.

Striped marlin is considered to have far greater value as a recreational rather than commercial target species, and is only available seasonally. Prohibiting its sale removes the incentive for its taking by commercial fishers.

### 6.2.5 Permits

[8.5.5 Permits]

Permits are a standard tool used in virtually all fishery management plans to support management by:

- enhancing or facilitating collection of biological, economic or social data.
- facilitating enforcement of laws and regulations.
- identifying those who would be affected by actions to prevent or reduce excess capacity in the fishery.
- providing information to meet international obligations.

A special kind of permit is for limited entry into a fishery. However, no limited entry systems are proposed at this time. Implementation of a limited entry program would require a plan amendment. The Council adopted a control date of March 9, 2000 for commercial and charter fisheries for HMS, in anticipation that a limited access program may be needed in the future.

#### Commercial Permits

This FMP requires a federal permit for HMS vessels with a specific endorsement for each gear type (harpoon, drift gillnet, surface hook and line, purse seine, and pelagic longline). The permit is to be issued to a vessel owner for each specific fishing vessel used in commercial HMS fishing. Rationale: This action is a practical procedure for tracking and controlling, by permits, commercial HMS fishing activities and the effects of regulations on those activities.

Regulations implementing the FMP ~~would~~ establish the permitting system and set the terms and conditions for issuing a permit. Initially, there will be no qualification criteria, such as minimum amount of landings, to obtain specific gear endorsements. Any commercial fisher may obtain the required gear endorsements. The permits and endorsements are subject to sanctions, including revocation, as provided by Section 308 (g) of the Magnuson-Stevens Act. Permit requirements could be changed in the future under the framework procedures (Section 5.1). This permit program alternative would not eliminate existing state permit or licensing requirements, ~~or nor would~~ federal permits under the High Seas Fishing Compliance Act ~~be eliminated~~.

### Recreational Permits

This FMP requires a federal permit for all commercial passenger recreational fishing vessels (CPFV) that fish for HMS, but an existing state permit or license for recreational vessels could meet this requirement. The Council will ~~would~~, however, request states to incorporate in their existing CPFV permit systems an allowance for an HMS species endorsement on the permits so that statistics could be gathered on that segment of the HMS fishery. ~~Rationale:~~ This action is a practical procedure for tracking and controlling, by permits, recreational HMS fishing activities and the effects of regulations on those activities.

### 6.2.6 Reporting Requirements

[8.5.6 Reporting Requirements]

#### *Background*

The Magnuson-Stevens Act requires that FMPs specify the pertinent data which shall be submitted to the Secretary with respect to commercial, recreational, and charter fishing in the fishery, including, but not limited to, information regarding the type and quantity of fishing gear used, catch by species in numbers of fish or weight thereof, areas in which fishing was engaged in, time of fishing, number of hauls, and the estimated processing capacity of, and the actual processing capacity utilized by, United States fish processors (Sec. 303(a)(5)).

Catch, effort, and catch disposition data are critical for monitoring the fisheries, assessing the status of the stocks and fisheries, and evaluating the effectiveness of management. Data necessary for management of HMS have not been regularly or fully collected by state, federal and international agencies under existing provisions. HMS reporting requirements for basic catch-effort and bycatch are inconsistent among the states and the federal government and do not cover all HMS fisheries operations or do not collect all data needed for stock and fishery monitoring. The NMFS requires logbooks under the High Seas Fishing Compliance Act for all vessels fishing outside the U.S. EEZ (purse seine, surface hook-and-line, longline) and the formats of the logs are tailored to the fishery-specific needs. But the logbook requirements do not extend to fisheries in the EEZ. Logbooks are required for specific fisheries by non-federal authorities: the IATTC (purse seine, baitboat), California (drift gillnet, harpoon, charter/party), Oregon (developmental gillnet, developmental longline). No other HMS reporting requirements exist in Washington or Oregon (although voluntary logbooks for various HMS fisheries are accepted).

Current estimates indicate catch, effort and bycatch data are not captured for approximately 72% of the surface hook-and-line vessels fishing in the U.S. EEZ and an unknown percentage of the charter/party vessels operating from Oregon and Washington ports. In 2000, 28% of the estimated 710 surface hook-and-line vessels fishing in the EEZ submitted logbooks. Currently 77% of the charter/party vessels coast-wide submit logbooks. The remainder of the HMS fisheries report catch and effort and bycatch data in one format or another to some collecting authority with approximately 100% reporting rate. Not all currently collected data are available to PFMC on a timely basis or in a detailed format making contemporary monitoring of some HMS stocks and fisheries difficult or problematic. Bycatch/incidental catch reporting is not consistent among



fisheries and will need revision upon adoption of this FMP. PacFIN does not capture catch and effort data (allowing CPUE to be estimated), which is fundamental for stock assessment and monitoring and needed for preparation of SAFE documents.

All three states have far offshore fishery regulations that require fishers to declare when they plan to fish on the high seas. These fishers are then allowed to fish outside the EEZ, but cannot fish inside the EEZ during the same trip. All three states have exceptions for albacore troll vessels. The FMP does not propose federal regulations addressing declarations, because the state requirements are adequate.

This FMP requires all commercial and recreational party or charter/CPFV fishing vessels to maintain and submit logbooks to NMFS. State or existing federal logbooks could meet this requirement as long as essential data elements are present, and data are available to NMFS subject to a data exchange agreement. Authorizes adjustment of reporting requirements under a framework process. ~~Rationale:~~—This action is a practical procedure for obtaining commercial (including CPFV) catch and effort data for a standardized NMFS data base on West Coast fisheries.

The operator of any commercial fishing vessel and any charter vessel fishing for HMS ~~is would be~~ required to maintain on board an accurate and complete record of catch, effort and other data on logbook forms provided by NMFS or a state agency. The original logbook form for each day of the fishing trip must be submitted to either the Southwest Regional Administrator of NMFS or the appropriate state management agency. Existing state or federal logbook forms may be used. These include logbooks required by: 1) the Tuna Conventions Act, the FMP for Pelagic Fisheries of the Western Pacific Region, the High Seas Fishing Compliance Act, and any logbook required by California, Oregon or Washington. These logbook forms can be found in the HMS FMP FEIS (PFMC 2003), Appendix D. Information required to be submitted on logbooks may be revised in the future. Existing state reporting requirements, including those for landing receipts, would remain in effect.

### 6.3 Domestic Annual Harvest (DAH), Total Allowable Level of Foreign Fishing (TALFF), and Domestic Annual Processing (DAP)

[8.7 Domestic Annual Harvest (DAH), Total Allowable Level of Foreign Fishing (TALFF), and Domestic Annual Processing (DAP)]

The Magnuson-Stevens Act at 16 U.S.C. § 1853(a)(4) requires that each fishery management plan assess and specify 1) the capacity and extent to which U.S. fishing vessels, on an annual basis, will harvest the OY from the fishery (DAH); 2) the portion of the OY which, on an annual basis, will not be harvested by U.S. fishing vessels and can be made available for foreign fishing (TALFF); and 3) the capacity and extent to which U.S. fish processors, on an annual basis, will process that portion of the OY that will be harvested by U.S. fishing vessels (DAP). Regulations implementing the Magnuson-Stevens Act at 50 C.F.R. § 600.516 further define the total allowable level of foreign fishing, as—with respect to any fishery subject to exclusive U.S. fishery management authority (i.e., the portion of the fishery that occurs within the U.S. EEZ)—that portion of the OY of such fishery that will not be caught by U.S. vessels.

All species in the management unit of this FMP are highly migratory and range far beyond the EEZ. As presently defined, the OY for each species is based on MSY for the entire stock, both within and beyond the U.S. EEZ. However, the U.S. domestic fleet harvests only a small portion of the OY, and only a small portion of the U.S. harvest is taken in the EEZ. The rest of the U.S. harvest is taken beyond the EEZ.

Presently, no highly migratory species in excess of U.S. harvest capacity are available for foreign fishing (TALFF) in the EEZ. The DAH of HMS from 1995 through 1999 has averaged 24,349 mt (Chapter 2, Table 2-1). During this period, an average of 1,074 vessels landed HMS on the West Coast (Chapter 2, Table 2-64). The amount of fishing gear actually deployed on an annual basis to take management unit species depends on

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availability of the resource. In all instances, the harvesting capacity of the U.S. fleet along the West Coast exceeds the amount of the resource available in the EEZ.

Similarly, no HMS are available for foreign processing. In *CHAPTER 2 SECTION 2.4*, the FMP documents the characteristics of 20 HMS communities, including the number of processors/buyers in each area. U.S. processors process fish caught within and outside the EEZ by U.S. vessels, and import additional HMS to meet market demand. Therefore, the capacity and extent of domestic annual processing (DAP) exceeds the amount of HMS harvested by U.S. vessels in the EEZ.

A review of the capacity and extent of domestic annual harvest and processing will be included in the annual SAFE document.

## 7.0 ESSENTIAL FISH HABITAT (EFH)

### 7.1 Background

[4.1 Introduction and Need for Action]

Section 303(a)(7) of the Magnuson-Stevens Act, 16 U.S.C. §§ 1801 et seq., as amended by the Sustainable Fisheries Act in 1996, requires that fishery management plans (FMPs):

Describe and identify essential fish habitat, minimize to the extent practicable adverse effects on such habitat caused by fishing and identify other actions to encourage the conservation and enhancement of such habitat.

The Magnuson-Stevens Act provides the following definition:

The term ‘essential fish habitat’ means those waters and substrate necessary to fish for spawning, breeding, feeding or growth to maturity.” (16 U.S.C. § 1802 (10)).

The essential fish habitat (EFH) regulations (at 50 C.F.R. 600 Subpart J) provide additional interpretation of the definition of essential fish habitat:

‘Waters’ include aquatic areas and their associated physical, chemical, and biological properties that are used by fish, and may include aquatic areas historically used by fish where appropriate; ‘substrate’ includes sediment, hard bottom, structures underlying the waters, and associated biological communities; ‘necessary’ means the habitat required to support a sustainable fishery and the managed species’ contribution to a healthy ecosystem; and ‘spawning, breeding, feeding, or growth to maturity’ covers a species’ full life cycle.

The NMFS guidelines intended to assist councils in implementing the EFH provision of the Magnuson-Stevens Act set forth the following four broad tasks:

- Identify and describe EFH for all species managed under an FMP;
- Describe adverse impacts to EFH from fishing activities;
- Describe adverse impacts to EFH from non-fishing activities; and
- Recommend conservation and enhancement measures to minimize and mitigate the adverse impacts to EFH resulting from fishing and non-fishing related activities

The EFH regulations require that EFH be described and identified within the U.S. Exclusive Economic Zone (EEZ) for all life stages of each species in a fishery management unit if they occur within that zone. FMPs must describe EFH in text and/or tables and figures which provide information on the biological requirements for each life history stage of the species. According to the EFH regulations, an initial inventory of available environmental and fisheries data sources should be taken to compile information necessary to describe and identify EFH and to identify major species-specific habitat data gaps. The EFH regulations also suggest that where possible, FMPs should identify Habitat Areas of Particular Concern (HAPCs) within EFH for habitats which satisfy the criteria of being 1) sensitive or vulnerable to environmental stress, 2) are rare, or are 3) particularly important ecologically.

Conservation and enhancement measures may be recommended by the National Marine Fisheries Service

(NMFS) during consultation with federal agencies, as required by section 305(b) of the Magnuson-Stevens Act, on projects which may potentially impact HMS EFH. Specific conservation measures, however, will be developed on a case-by-case basis. NMFS' authority includes the direct management of activities associated with fishing for marine, estuarine, and anadromous resources; NMFS' role in federal interagency consultations with regard to non-fishing threats is, more often than not, advisory. This document does not assume any new authority or regulatory role for NMFS in the control of non-fishing activities beyond the statutory requirements to recommend measures to conserve living marine resources, including their habitats.

#### [8.4.3 Essential Fish Habitat (EFH)]

This chapter identifies and describes EFH for management unit species. Improved descriptions of EFH may be possible with more basic research on life history, habitat use, behavior and distribution of life stages. Research also is needed to identify Habitat Areas of Particular Concern (HAPC). This FMP authorizes changes to the identification and description of EFH, and of HAPCs, as new information is collected.

The FMP also authorizes the adoption of management measures to minimize adverse effects on EFH from fishing when there is evidence for such effects. Presently, however, there is no clear evidence of adverse impacts from any fisheries' practices or gear on HMS EFH. Management measures to prevent, mitigate, or minimize adverse effects from fishing activities include, but are not limited to:

Fishing gear restrictions: Seasonal and areal restrictions on the use of specified gear; gear modifications to allow escapement of particular species or particular life stages (e.g., juveniles); prohibitions on the use of explosives and chemicals; prohibitions on anchoring or setting gear in sensitive localities; and prohibitions on fishing activities that cause significant physical damage in EFH.

Time/area closures: Closing areas to all fishing or specific gear types during spawning, migration, foraging, and nursery activities; and designating zones for use as marine protected areas to limit adverse effects of fishing practices on certain vulnerable or rare areas/species/life history stages.

Harvest limits: Limits on the take of species that provide structural habitat for other species assemblages or communities, and limits on the take of prey species.

This FMP adopts species and stage-specific Essential Fish Habitat designations for individual Management Unit Species as described in Section 7.2 and **Appendix F**. ~~Rationale:~~ Designating EFH according to the best understanding of species' requirements enables informed assessments of the impacts of habitat alterations or disturbances.

## 7.2 Description of Designated EFH by Species

#### [4.6 Description Of Designated EFH by Species]

In general, the management unit species are found in temperate waters within the Pacific Council's region. Variations in the distribution and abundance of the management unit species are affected by ever-changing oceanic environmental conditions including water temperature, current patterns and the availability of food. Sea surface temperatures and habitat boundaries vary seasonally and from year to year, with some HMS much more abundant from northern California to Washington waters during the summer and warm waters years than during winter and cold water years, due to increased habitat availability within the EEZ. There are large gaps in the scientific knowledge about basic life histories and habitat requirements of a few management unit species. The migration patterns of the stocks in the Pacific Ocean are poorly understood and difficult to categorize despite extensive tagging studies for many species. Little is known about the distribution and habitat requirements of the juvenile life stages of tuna and billfish after they leave the plankton until they

recruit to fisheries. Very little is known about the habitat of different life stages of most highly migratory species which are not targeted by fisheries (e.g., certain species of sharks). For these reasons, the Council recommends a precautionary approach in designating EFH for the management unit species

### 7.2.1 *Common Thresher Shark*

#### [4.6.1 Essential Fish Habitat for Common Thresher Shark:]

Based on California drift gill net logbook (1981-1991); drift net observer data (1990-1999); Oregon driftnet logbook data 1991-2001. Food habit information from Stick and Hreha (1989), Bedford (1992) Preti et al. (2001).

- Neonate/early juveniles (< 102 cm FL): Epipelagic, neritic and oceanic waters off beaches, in shallow bays, in near surface waters from the U.S.-Mexico EEZ border north to off Santa Cruz (37° N latitude) over bottom depths of 6 to 400 fm, particularly in water less than 100 fm deep and to a lesser extent further offshore between 200-300 fm. Little known of the food of early juveniles; presumably feeds on small northern anchovy and other small, schooling fishes and invertebrates.
- Late juveniles/subadults (> 101 cm FL and < 167 cm FL): Epipelagic, neritic and oceanic waters off beaches and open coast bays and offshore, in near-surface waters from the U.S.-Mexico EEZ border north to off Pigeon Point, California (37° 10' N latitude) from the 6 fm to 1400 fm isobaths. Known to feed primarily on northern anchovy, Pacific hake, Pacific mackerel and sardine; secondarily on a variety of other fishes, squid and pelagic red crab (warm water years). Northern anchovy especially important for juvenile fish < 160 cm FL.
- Adults (> 166 cm FL): Epipelagic, neritic and oceanic waters off beaches and open coast bays, in near surface waters from the U.S.-Mexico EEZ border north seasonally to Cape Flattery, WA from the 40 fm isobath westward to about 127° 30' W longitude. north of the Mendocino Escarpment and from the 40 to 1900 fm isobath south of the Mendocino Escarpment. Known to feed primarily on northern anchovy, Pacific hake, Pacific mackerel and sardine; secondarily on a variety of other fishes, squid and pelagic red crab (warm water years).

### 7.2.2 *Pelagic Thresher Shark*

#### [4.6.2 Essential Fish Habitat for Pelagic Thresher Shark]

Based on California drift gill net logbook (1981-1991) and drift net observer data (1990-1999).

- Neonate/early juveniles (< 137 cm FL): There is no evidence of successful nursery habitat within the EEZ, presumably pupping takes place to the south off Mexico closer to the center of this species' distribution. Nothing known of diet; presumably feeds on small schooling fishes and squids
- Late juveniles/subadults (> 136 cm FL and < 162 cm FL): Epipelagic and predominantly oceanic waters along coastal California from the U.S.-Mexico border as far north as 34° N latitude, from the 100 fm isobath about out to the Santa Rosa-Cortes Ridge, particularly between San Diego and Long Beach, California. (Line extends south from Ridge to a point on the EEZ boundary at 31° 36' N latitude and 118° 45' W longitude). Associates with sea surface temperatures of 21 °C or warmer; nothing known of diet; presumably feeds on small schooling fishes and squids
- Adults (≥ 161 cm FL, predominantly adult females): Epipelagic and predominantly oceanic waters along coastal California from the U.S. Mexico border as far north as 34° N latitude, from the 100 fm

isobath about out to the Santa Rosa-Cortes Ridge, particularly between San Diego and Long Beach, California. (Line extends south from Ridge to a point on the EEZ boundary at 31° 36' N latitude and 118° 45' W longitude). Associates with sea surface temperatures of 21°C or warmer. Nothing known of diet; presumably feeds on small pelagic schooling fishes and squids e, in near surface waters from the U.S.-Mexico EEZ border north to off Pigeon Point, California.

### 7.2.3 *Bigeye Thresher Shark*

#### [4.6.3 Essential Fish Habitat for Bigeye Thresher Shark]

Based on California drift gill net logbook (1981-1991); drift net observer data (1990-1999); Nakano and Matsunaga, 1997, unpub. ibid.). Diet information from Fitch and Craig (1964) and Ramon and Preti (SWFSC, NMFS, pers. commun., unpub. data, 9/2000).

- Neonate/early juveniles (~ 90 to 115 cm FL, 0 to 2 and 3 yr olds): These size classes are not known to occur in U.S. West Coast EEZ.
- Late juveniles/subadults (> 115 cm FL and < 155 cm FL males and < 189 cm females): Coastal and oceanic waters in epi- and mesopelagic zones from the U.S.-Mexico border north to 37° N latitude off Davenport, California. South of 34° N latitude from the 100 fm isobath to the 2000 fm and north of 34° N latitude the 800 fm isobath out to the 2200 fm isobath. Nothing known of diet in our region; presumably feeds on pelagic fishes and squids.
- Adults (> 154 cm FL males and > 188 cm FL females): Coastal and oceanic waters epi-and mesopelagic zones from the U.S.-Mexico border north to 45° N latitude off Cascade Head, Oregon. In southern California south of 34° N latitude from the 100 fm isobath out to the 2000 fm isobath. North of 34° N latitude from the 800 fm isobath out to the outer EEZ boundary. Little known of the diet in our region; presumably feeds on pelagic fishes and squids, including Pacific hake and king-of-the-salmon.

### 7.2.4 *Shortfin Mako Shark*

#### [4.6.4 Essential Fish Habitat for Shortfin Mako Shark:]

Based on California drift gill net logbook (1981-1991); drift net observer data (1990-1999); Oregon driftnet logbook data 1991-2001; longline and gillnet catch data from Nakano (1994); California Department of Fish and Game tagging data; Holts and Bedford (1993); and Casey and Kohler (1992)) Food habits information from Hannan et al. (1993); Eschmeyer et al. (1983); D. Holts (NMFS, SWFSC La Jolla, pers. comm. 10/16/2000).

- Neonate/early juveniles (< 101 cm FL): Oceanic and epipelagic waters of the U.S. West Coast from the 100 fm isobath out to the 2000 fm isobath (and possibly beyond) from the Mexico border to Point Pinos, CA, especially the Southern Calif. Bight, from the 1000 fm isobath out to 2000 fm isobath from Monterey Bay north to Cape Mendocino; and from the 1000 fm isobath out to the EEZ boundary north of Cape Mendocino to latitude 46° 30' N latitude. Occupies northerly habitat during warm water years. Nothing documented on food of neonates; presumably feeds on small pelagic fishes.
- Late juveniles/subadults (> 100 cm FL and < 180 cm FL males and < 249 cm FL females): Oceanic and epipelagic waters from the U.S.-Mexico EEZ border north to 46° 30' N latitude from the 100 fm isobath out to the EEZ boundary north to San Francisco (38° N latitude), and from 1000 fm out to the

EEZ boundary north to San Francisco (38° N latitude) and from 1000 fm out to the EEZ boundary north of San Francisco. Shortfin mako off the West Coast reportedly feed on mackerel, sardine, bonito, anchovy, tuna, other sharks, swordfish and squid. Since the large majority of makos within the EEZ are juveniles, presumably this diet refers to primarily to juveniles and subadults.

- Adults (> 179 cm FL males and > 248 cm FL females--Most adults within the U.S. West Coast EEZ are males.): Epipelagic oceanic waters from the U.S.-Mexico EEZ border north to 46° 30' N latitude extending from the 400 fm isobath out to the EEZ boundary south of Point Conception, from 1000 fm isobath out to the EEZ boundary and beyond north of Point Conception, and from the 1000 fm isobath out to the EEZ boundary and beyond, North of Point Conception, CA. Little is known of diet of large adults. Two adult shortfin mako over 250 cm TL were found to contain remains of a harbor seal, common dolphin, small sharks, and marlin (D. Holts, NMFS, SWFSC La Jolla, pers. comm. 10/16/2000). As with juveniles, presumably mackerel, sardine, bonito, anchovy, tunas, squid and swordfish may also be taken by adults, but existing published information on diet in our region is not broken down by mako size.

### 7.2.5 Blue Shark

#### [4.6.5 Essential Fish Habitat for Blue Shark]

Based on California drift gill net logbook (1981-1991); drift net observer data (1990-1999); Nakano and Nagasawa (1996); and Nakano (1994)). Diet information based on Tricas 1979; Harvey 1989; and Brodeur et al. 1987.

- Neonate/early juveniles (< 83 cm FL): Epipelagic, oceanic waters from the U.S.-Mexico border north to the U.S.-Canada border from the 1000 fm isobath seaward to the outer boundary of the EEZ and beyond; extending inshore to the 100 fm isobath south of 34° N latitude. Size-specific information on diet of neonates is not available for our region.
- Late juveniles/subadults (> 82 cm FL and < 167 cm FL males and < 153 cm FL females): Epipelagic, oceanic waters from the U.S.-Mexico border north to 37° N latitude (off Santa Cruz, CA) from the 100 fm isobath seaward to the outer boundary of the EEZ and beyond; and north to the U.S.-Canada border from the 1000 fm isobath seaward to the EEZ outer boundary. Within the U.S. West Coast EEZ known to feed on northern anchovy, Pacific hake, squid, spiny dogfish, Pacific herring, flatfishes, and opportunistically on surface-swarms of the euphausiid, *Thysanoessa spinifera*, and inshore spawning aggregations of market squid, *Loligo opalescens*.
- Adults (> 166 cm FL males and > 152 cm FL females): Epipelagic, oceanic waters from the U.S.-Mexico border north to the U.S.-Canada border from the 1000 fm isobath seaward to the outer boundary of the EEZ and beyond; extending inshore to the 200 fm isobath south of 37° N latitude off Santa Cruz, CA. Although diet information is lacking for fish of this specific size group, blue sharks in coastal waters off the U.S. West Coast reportedly feed on northern anchovy, Pacific hake, squid, spiny dogfish, herring, flatfishes, and opportunistically on surface-swarms of the euphausiid, *Thysanoessa spinifera*, and inshore spawning aggregations of market squid, *Loligo opalescens*.

### 7.2.6 Albacore Tuna

#### [4.6.6 Essential Fish Habitat for Albacore Tuna]

Based on drift net observer data (1990-1999); California Commercial Passenger Fishing Vessel data; and Saito (1973); Laurs et al. (1974); Laurs and Lynn (1991); Bartoo and Forman (1994); and Hanan et al. (1993).

Diet information from Iverson (1962) and Pinkas et al. (1971).

- Eggs and Larvae - No habitat within the U.S. West Coast EEZ.
- Juvenile < 85 cm FL. Oceanic, epipelagic waters generally beyond the 100 fm isobath from the U.S.-Mexico EEZ border north to U.S.-Canada border, and westward to the outer edge of the EEZ boundary. Habitat concentrations off southern and central California and the area of the Columbia River Plume area. Reported to feed opportunistically, predominantly on fishes (e.g., Pacific saury) and squids. Associated with SSTs between 10°C and 20°C in waters of the North Pacific Transition Zone in dissolved oxygen saturation levels greater than 60%. Smaller (younger) fish are known to have a higher proportion of squid in their diet. In our region, may aggregate in the vicinity of upwelling fronts to feed on small fishes (northern anchovy, saury, rockfish spp., Myctophids, barracudina), squids (e.g., *Loligo*, *Gonatus* and *Onychoteuthis* sp.) and crustaceans (Sergestid shrimp, pelagic red crab, *Phronima* amphipods, euphausiids).
- Adult > 84 cm FL. Oceanic, epipelagic waters generally beyond the 100 fm isobath from the U.S.-Mexico EEZ border north to U.S.-Canada border, and westward to the outer edge of the EEZ boundary. Associated with SSTs between 14°C and 25°C in waters of the North Pacific Transition Zone in dissolved oxygen saturation levels greater than 60%. Reported to feed opportunistically, predominantly on fish (e.g., Pacific saury) and squid. Large fish tend to prey increasing more on fish and less on squid.

### 7.2.7 Bigeye Tuna

[4.6.7 Essential Fish Habitat for Bigeye Tuna]

Based on California drift gill net observer data (1990-1999); California Commercial Passenger Fishing Vessel data; Kikawa (1957, 1961); and Alverson and Peterson (1963).

- Eggs and Larvae - No habitat within the U.S. West Coast EEZ.
- Juvenile - < 100 cm FL. Oceanic, epipelagic and mesopelagic waters beyond the 200 fm isobath out to the EEZ boundary from the U.S.-Mexico EEZ border north to Point Conception, CA, some years extending northward to Monterey Bay (37° N latitude). Associated with SSTs between 13°C and 29°C with optimum between 17°C and 22°C. Habitat concentrated in the Southern California Bight primarily south of 34° N latitude from the 100 fm isobath out to the 1000 fm isobath. Nothing is known of the diet of juvenile bigeye in the U.S. West Coast EEZ.
- Adult - > 100 cm FL. Oceanic, epipelagic and mesopelagic waters beyond the 200 fm isobath out to the EEZ boundary from the U.S.-Mexico EEZ border north to Point Conception, CA, some years extending northward to Monterey Bay (37° N latitude). Associated with SSTs between 13°C and 29°C with optimum between 17°C and 22°C. Habitat concentrated in the Southern California Bight primarily south of 34° N latitude from the 100 fm isobath out to the 1000 fm isobath. Nothing is known of diet of adult bigeye in the U.S. West Coast EEZ.

### 7.2.8 Northern Bluefin Tuna

[4.6.8 Essential Fish Habitat for Northern Bluefin Tuna]

Based on California drift gill net observer data (1990-1999); Oregon driftnet logbook data, 1992-2001; Uosaki and Bayliff (1999); Bayliff (1994); Harada (1980). Food habits based on Pinkas et al. (1971) and



Bayliff (1994).

- Eggs and Larvae - No habitat within the U.S. West Coast EEZ.
- Juvenile - < 150 cm FL and 60 kg, Bayliff 1994; Harada 1980). Oceanic, epipelagic waters beyond the 100 fm isobath from the U.S.-Mexico EEZ border north to U.S.-Canada border, and westward to the outer edge of the EEZ boundary. Associated with SST between 14°C and 23°C. Northerly migratory extension appears dependent on position of the North Pacific Subarctic Boundary. A major prey item of juvenile bluefin in our region is the northern anchovy; other food items reported from off southern California include saury, market squid, (up to 80% of stomach contents by volume), saury, squid, and hake. May feed on pelagic red crab when this species occurs in the EEZ, since it is a significant component of the diet off Mexico.
- Adult - ( $\geq$  150 cm FL and 60 kg, Bayliff 1994; Harada 1980). No regular habitat within the U.S. West Coast EEZ, although large fish are occasionally caught in the vicinity of the Channel Islands off Southern California and rarely off the central California coast. Adult prey items are squids and a variety of fishes including anchovies, herring, pompanos, mackerel, and other tunas.

### 7.2.9 Skipjack Tuna

[4.6.9 Essential Fish Habitat for Skipjack Tuna]

Based on California drift gill net observer data (1990-1999); California Commercial Passenger Fishing Vessel data; Matsumoto et al. 1984 and IATTC 2001). Diet information based largely on Alverson (1963).

- Eggs and Larvae - No habitat within the U.S. West Coast EEZ.
- Juvenile - No habitat within the U.S. West Coast EEZ.
- Adult - Oceanic, epipelagic waters beyond the 400 fm isobath out to the EEZ boundary from the U.S.-Mexico EEZ border northward to Point Conception, CA, and northward beyond the 1000 fm isobath north to about 40° N latitude. Associated with SSTs between 18°C and 20°C and dissolved oxygen level  $\geq$  3.5 ppm. Habitat concentrated, esp. in warm years, in the Southern California Bight primarily south of 33° N latitude. Off Baja California, Mexico and southern California, pelagic red crab and northern anchovy are important constituents of the diet. Euphausiids, Pacific saury and squid are also taken.

### 7.2.10 Yellowfin Tuna

[4.6.10 Essential Fish Habitat for Yellowfin Tuna]

Based on California Commercial Passenger Fishing Vessel data; drift gill net observer data (1990-1999); Uosaki and Bayliff (1999); Block et al. (1997); IATTC (1990; 2000e); Schaefer (1998); N. Bartoo, SWFSC, NMFS, La Jolla, CA pers. comm.). Diet information based largely on Alverson (1963).

- Eggs and Larvae - No habitat within the U.S. West Coast EEZ.
- Juvenile - females: < 92 cm FL; males: < 69 cm FL. Oceanic, epipelagic waters from the U.S.-Mexico EEZ border north to Point Conception, CA, some years extending northward to Monterey Bay (37° N latitude). South of Pt Conception from the 100 fm isobath out to the EEZ boundary; north of Point Conception from 300 fm isobath out to the EEZ boundary. Associated with SSTs

between 18° to 31°C. Pelagic red crab is an important constituent of the diet off the west coast of Baja California, Mexico, and southern California (warm water years), and, secondarily, northern anchovy. Cephalopods also occur in the diet less frequently.

- Adult - females:  $\geq 92$  cm FL; males:  $\geq 69$  cm FL. Adult yellowfin tuna do not regularly occupy habitat within the U.S. West Coast EEZ.

### 7.2.11 Striped Marlin

[Essential Fish Habitat for Striped Marlin]

Based on Uosaki and Bayliff (1999); California drift net observer data (1990-1999 and angler tag-release data (D. Holts and D. Prescott, pers. comm. NMFS, SWFSC, La Jolla, CA, and diet information from Hubbs and Wisner (1953), Nakamura (1985), Ueyanagi and Wares (1975), and Holts *in press* (2001).

- Eggs and Larvae - No habitat within the U.S. West Coast EEZ.
- Juvenile - No regular habitat within the U.S. West Coast EEZ.
- Adult -  $> 150$  cm EFL or 171 JFL. Oceanic, epipelagic waters of the Southern California Bight, above the thermocline, from the 200 fm isobath from the U.S.-Mexico EEZ border to about 34° 09' N latitude (Pt. Hueneme, CA), east of the Santa Rosa-Cortes Ridge (a line from South Point, Santa Rosa Island, southeast to the EEZ boundary at approx. 31° 36' N latitude and 118° 45' W longitude). Preferred water temperature bounded by 68° to 78°F (20-25°C). Food species off California include Pacific saury, northern anchovy, Pacific sardine, jack mackerel, squid and pelagic red crab.

### 7.2.12 Swordfish

[4.6.12 Essential Fish Habitat for Swordfish]

Based on California drift gill net observer data (1990-1999); Oregon driftnet logbook data, 1991-2001; and DeMartini et al. (2000); diet information from Fitch and Lavenberg (1971) Mearns et al. (1981) and Markaida and Sosa-Nishizaki (1998).

- Eggs and Larvae - No habitat within the U.S. West Coast EEZ.
- Juvenile - (Males  $< 102$  EFL or 118 cm JFL; females  $< 144$  cm EFL or  $< 163$  JFL). Oceanic, epipelagic and mesopelagic waters from the U.S.-Mexico EEZ border north to 41° N latitude. In the Southern California Bight primarily south of the Santa Barbara Channel Islands from the 400 fm isobath out to the EEZ boundary. North of Point Conception from the 1000 fathom isobath westward to the EEZ outer boundary and northward to 41° N latitude. Food species within the U.S. West Coast EEZ have not been documented for this size category. Diet is thought to be largely opportunistic on suitable-sized prey. Off southern California, swordfish of unspecified size are reported to feed on Pacific hake, northern anchovy, squid, Pacific hake, jack mackerel, and shortbelly rockfish; squids are also important prey off western Baja California, Mexico
- (Males  $> 102$  cm EFL or 117 JFL; females  $> 144$  cm EFL or 162 JFL): Oceanic, epipelagic and mesopelagic waters out to the EEZ boundary inshore to the 400 fm isobath in southern and central California from the U.S.-Mexico EEZ border north to 37° N latitude; beyond the 1000 fm isobath northward to 46° 40' N latitude. Food species within the U.S. West Coast EEZ have not been documented for this size category. Off southern California, swordfish of unspecified size are

reported to feed on Pacific hake, northern anchovy, squid, Pacific hake, jack mackerel, and shortbelly rockfish; squids are also important prey off western Baja California, Mexico. Large swordfish are capable of foraging in deep water and may also feed on mesopelagic fishes.

### 7.2.13 Dorado or Dolphinfish

#### [4.6.13 Essential Fish Habitat for Dorado or Dolphinfish]

Based on California Commercial Passenger Fishing Vessel catches; Norton (1999); and Ambrose (1996). Diet information based on Eschmeyer et al. (1983) and Palko et al. (1982).

- Spawning, eggs and larvae - (< 13.7 cm FL): Primarily outside of the U.S. West Coast EEZ. Spawning restricted to water  $\geq 24^{\circ}\text{C}$ ; off southern Baja California, Mexico, with peak larval production in August and September (Ambrose 1996).
- Juveniles and subadults - (> 13.6 cm FL and < 35 cm FL): Epipelagic ( $\leq 30$  m deep) and predominantly oceanic waters offshore the 6 fm isobath along coastal California from the U.S.-Mexico border generally as far north as Point Conception, CA ( $34^{\circ} 34'$  N latitude) and within the U.S. West Coast EEZ primarily east of the Santa Rosa-Cortes Ridge. (Line extends from Point Conception south-southeast to a point on the EEZ boundary at  $31^{\circ} 36'$  N latitude and  $118^{\circ} 45'$  W longitude). Prefers sea surface temperatures  $20^{\circ}\text{C}$  and higher during warm water incursions. Nothing documented on the diet of juvenile dolphin within the EEZ; presumably feeds on other epipelagic fishes (e.g. small flying fish), crustaceans and squids.
- Adults - (> 34 cm FL): Epipelagic ( $\leq 30$  m deep) and predominantly oceanic waters offshore the 6 fm isobath along coastal California from the U.S.-Mexico border generally as far north as Point Conception, CA ( $34^{\circ} 34'$  N latitude) and within the U.S. West Coast EEZ primarily east of the Santa Rosa-Cortes Ridge. (Line extends from Point Conception south-southeast to a point on the EEZ boundary at  $31^{\circ} 36'$  N latitude and  $118^{\circ} 45'$  W longitude). Prefers sea surface temperatures  $20^{\circ}\text{C}$  and higher during warm water incursions. Nothing is known of the diet of adult dolphin within the U.S. EEZ, but in the Pacific, adult common dolphin are reportedly mainly piscivorous, with flying fish being the most important in volume and occurrence.

## 7.3 Habitat Areas Of Particular Concern (HAPCs)

#### [4.4 Habitat Areas Of Particular Concern (HAPCs)]

There are no HAPCs designated at this time, but through this FMP, a framework is authorized to ensure review and updating of EFH based on new scientific evidence or other information as well as incorporation of new information on HMS HAPCs as it becomes available in the future.

Reviewing and identifying HAPCs would entail additional management costs and an increase in data needs to survey and determine HAPC (such as shark pupping grounds), and for periodically reviewing and updating EFH designations. But incorporating a framework should save costs in the long run by avoiding the necessity of having to go through the amendment process every time new data necessitated revision. There may be some inconsistency with the Western Pacific FMP, which has a different type of framework relating to EFH, but the WPFMC management area also has regional differences in habitat utilization and a different plan development design and history.

Research is needed to identify HAPCs, such as shark pupping grounds, key migratory routes, feeding areas, and areas of concentration of large adult females. The Council recommends adoption of EFH designations as presented without identification of HAPCs at this time, because of lack of information on specific habitat dependencies for species that may occupy critical habitat in the EEZ, such as the more coastal-occupying sharks. Some of the more transitory MUS that invade the region only at the far fringes of their distributions (e.g., the tropical tunas and dorado), probably do not occupy habitat within the EEZ essential to the health and survival of their populations. If HAPCs of these species, and those of others that have more regional distributions, become identified in the future (such as pupping areas of thresher and mako sharks), it is recommended that the Council make every effort to protect them, especially if found to be concentrated in localized definable areas.

## 7.4 Effects of Fishing Activities on Fish Habitat

### [4.5.6 Effects of Fishing Activities on Fish Habitat]

Section 600.815(a)(2) of the final rule lists the mandatory contents of FMPs regarding fishing activities that may adversely affect EFH. The adverse effects from fishing activities may include physical, chemical, or biological alterations of the substrate, and loss of, or injury to, benthic organisms, prey species and their habitat, and other components of the ecosystem. FMPs must include management measures which minimize adverse effects on EFH from fishing, to the extent practicable, and identify conservation and enhancement measures. FMPs must also contain an assessment of the potential adverse effects of all fishing activities in waters described as EFH. In completing this assessment, councils should use the best scientific information available, as well as other appropriate information sources, as available. This assessment should consider the relative impacts of all fishing gears and practices used in EFH on different types of habitat found within EFH. The assessment should also consider the establishment of research closure areas and other measures to evaluate the impact of any fishing activity that alters EFH.

Councils must act to minimize, prevent, or mitigate any adverse effects from fishing activities, to the extent practicable, if there is evidence that a fishing activity is having an identifiable adverse effect on EFH. In determining whether it is practicable to minimize an adverse effect from fishing, councils should consider whether, and to what extent, the fishing activity is adversely impacting EFH, including the fishery; the nature and extent of the adverse effect on EFH; and whether the management measures are practicable, taking into consideration the long- and short-term costs and benefits to the fishery and EFH, along with other appropriate factors, consistent with national standard 7 (conservation and management measures shall, where practicable, minimize costs and avoid unnecessary duplication).

In general, fishing gear is not known to directly alter HMS water column habitat, but habitat can be affected by inadvertent loss of gear that is left to “ghost fish,” or to create marine debris that can cause harm to other species in the pelagic environment (e.g., light sticks from swordfish longlining are known to be mistaken for food by albatrosses). Also, fishing activities also affect the water column through discharge of offal from fish processed at sea. These discards may redistribute prey food or attract bycatch and protected species, which then become susceptible to capture or entanglement by the gear.

Fishing activity can also cause harm when it takes place in areas where HMS congregate and are thus highly susceptible to capture during a critical life history period, e.g., when they form spawning/pupping aggregations, when adults are concentrated inshore during seasonal migration, or when young are concentrated in core nursery areas.

#### 7.4.1 Physical Impacts of Fishing Gears on HMS EFH

##### [4.5.6.1 Physical Impacts of Fishing Gears on HMS EFH]

HMS fisheries are associated with hydrographic structures of the water column (e.g., the marine pelagic and mesopelagic zone and convergence boundary areas between currents and major features such as the thermocline). Thus the approved gears that are used in the HMS fisheries do not contact the bottom substrate; therefore, the only opportunity for damage to benthos or EFH for any species in fishing for HMS is from lost gear. If gear is lost, diligent efforts should be made to recover the lost gear to avoid further disturbance of the underwater habitat through “ghost fishing.” Under federal law, it is illegal for any vessel to discharge plastics or garbage containing plastics into any waters, but plastic buoys, light sticks, monofilament line and netting, and other plastic items have been known to enter the system from fishing operations, mostly as a result of damage to gear. The full extent of this problem in our HMS fisheries is not known, but is not thought to have a significant impact on HMS EFH because of the agility of these large pelagic species in avoiding debris in the open ocean, and the tendency of at least some of this material to sink to the bottom, and the relatively inert nature of plastic. These materials may have a far greater impact on benthic and intertidal environments, or on seabirds and turtles which may ingest floating plastics mistaking them for food. Intact sections of gillnets have the potential to continue fishing in the pelagic environment for some time. When high seas squid nets were operating in the Pacific, NMFS estimated in 1991 that .06% of driftnets were lost each time they were set (Davis L.A., cited in Paul 1994). It has been reported that lost and discarded sections of driftnet ball up fairly quickly and cease to ghostfish in a short period of time (Mio et al. 1990), but these loose balls may trail streaming sections of net that may continue to fish for extended periods (Ignell et al. 1986; von Brandt 1984). It is most likely, however, that HMS, particularly tunas and billfish are less vulnerable to the ghost fishing effects of streaming sections of netting than are less mobile or scavenging species which may blunder into the net (e.g. *Mola mola*) or become entangled in attempts to feed on remains of the catch (e.g. seabirds and pinnipeds). Nonetheless, sharks may be more vulnerable, and blue shark and pelagic hammerhead shark have been reported as caught in four sections of derelict squid driftnet retrieved by U.S. observers in 1985 (Ignell et al. 1986).

There are other fishery operations off the Pacific coast which may alter species complexity in the water column. There is a large mid-water trawl fishery for Pacific whiting, primarily occurring north of 39° N latitude. Discharge of offal and processing slurry may affect EFH for HMS. Prolonged offal discards from some large-scale fisheries have redistributed prey food away from mid-water and bottom-feeding organisms to surface-feeding organisms, such as tuna, usually resulting in scavenger and seabird population increases. Offal discards in low-current environments can collect and decompose on the ocean floor, creating anoxic bottom conditions which may affect HMS. Pacific coast marine habitat is generally characterized by strong current and tide conditions, but there may be either undersea canyons affected by at-sea discard, or bays and estuaries affected by discard from shoreside processing plants. As with bottom trawling off the Pacific coast, little is known about the environmental effects of mid-water trawling and processing discards on habitat conditions.

#### 7.4.2 Mitigation Considerations for Fishing Effects

##### [4.5.6.2 Mitigation Considerations for Fishing Effects]

Fishery management options to prevent, mitigate, or minimize adverse effects from fishing activities may include, but are not limited to:

Fishing gear restrictions: Seasonal and areal restrictions on the use of specified gear; gear modifications to allow escapement of particular species or particular life stages (e.g., juveniles); prohibitions on the use of explosives and chemicals; prohibitions on anchoring or setting gear in sensitive areas; and prohibitions on

fishing activities that cause significant physical damage in EFH.

Time/area closures: Closing areas to all fishing or specific gear types during spawning, migration, foraging, and nursery activities; and designating zones for use as marine protected areas to limit adverse effects of fishing practices on certain vulnerable or rare areas/species/life history stages.

Harvest limits: Limits on the take of species that provide structural habitat for other species assemblages or communities, and limits on the take of prey species.

Compliance and Enforcement of Marine Pollution Laws: Fishers are required to save light sticks for disposal on land as required by the International Convention of the Prevention of Pollution from Ships, or MARPOL established in 1973. Annex V of the Protocol deals with plastics and garbage disposal from ships and prohibits dumping of all ship-generated plastics. The Coast Guard is in charge of enforcing MARPOL Annex V within the U.S. EEZ. All vessels, regardless of nationality, are bound by these MARPOL restrictions within the territorial waters of the treaty nations.

Compliance and Enforcement of Seabird Mitigation Measures Related to Strategic Offal Discards. This includes, but is not limited to, strategic release of offal from vessels to distract seabirds and other protected species away from longline hooks during setting and retrieval.

There is an increasing amount of research to measure the effects of fishing activities on marine habitat, and some general conclusions about the effects of some gear types on marine habitat may be drawn from this research. However, as noted above, there has been little research on Pacific coast fisheries EFH and into the fishing effects on such habitat, especially HMS EFH, which is generally less associated with the sea bottom topography and inshore waters, as the habitats of most other species managed by the Council. Implementing measures to mitigate gear impacts on habitat may require research that specifically describes the effects of the fishing gear used in Pacific coast fisheries on marine habitat utilized by HMS. The Council may weigh the magnitude of this potential impact and develop appropriate recommendations for addressing them.

In addition to suggesting measures to restrict fishing gears and/or methods, NMFS' regulatory guidance on EFH also suggests time/area closures as possible habitat protection measures. These measures might include, but would not be limited to: closing areas to all fishing or specific gear types during spawning, migration, foraging, and nursery activities; and designating zones for use as marine protected areas to limit adverse effects of fishing practices on certain vulnerable or rare areas/species/life history stages (e.g., to protect early life stages of sharks). Some of these closures may already exist, such as the exclusion of trawling within three miles of the California coastline and areas closed to commercial fishing (e.g., Santa Monica Bay). The Council may examine whether such opportunities exist for HMS and make appropriate recommendations for addressing them. The proposed action to require West Coast -based high seas longliners to abide by the same regulations restricting the targeting of swordfish north of the equator west of 150° W longitude will undoubtedly reduce significantly the number of lightsticks that may be inadvertently lost during fishing operations, since this gear is primarily used in swordfish longlining.

Beyond protecting natural reserves and areal closures for particular species, the Council may consider creating marine reserves closed to all fishing, should certain critical habitat areas be identified in the future, although it is recognized that most HMS move widely throughout and beyond the EEZ and reserves tend to be more practical for more sedentary species. Several no-fishing zones have been created in the North Pacific Fishery Management Council for the waters off Alaska, generally for the purposes of protecting either crab or marine mammal rookeries.

Additional research is recommended to identify adverse impacts and to quantify impacts currently occurring. Any inshore areas that are closed to fishing in order to conserve pupping and juvenile habitats would be ideal

locations to study the effects of fishing gear impacts on EFH. Research in these areas is strongly advocated, and further evaluations of fishing impacts on HMS habitat will be undertaken as more research is conducted and information becomes available. Information will be reviewed annually to assess the state of knowledge in this field; the annual Stock Assessment and Fishery Evaluation (SAFE) report (see section 3.4) will include any new information on the impacts of fishing activities on HMS EFH.

### 7.4.3 Findings

[4.5.6.3 Findings]

*As of this writing (January 16, 2003), there is no evidence that HMS fishing practices or gear are causing identifiable adverse impacts on HMS EFH, or that other FMP fishing practices are causing identifiable adverse effects on HMS EFH. Therefore, the West Coast HMS FMP meets the Magnuson-Stevens Act requirement to minimize to the extent practicable, the adverse effects of fishing on EFH, and no further action is recommended at this time.*

## 7.5 Effects of Non-fishing Activities on Fish Habitat

[4.5.7 Effects of Non-Fishing Activities on Fish Habitat]

Section 600.815(a)(4) of the EFH regulations pertains to identifying non-fishing related activities that may adversely affect EFH. The section states that FMPs must identify activities that have the potential to adversely affect, directly or cumulatively, EFH quantity or quality, or both. Broad categories of activities which can adversely affect EFH include, but are not limited to: dredging, filling, excavation, mining, impoundment, discharge, water diversions, thermal additions, actions that contribute to non-point source pollution and sedimentation, introduction of potentially hazardous materials, introduction of exotic species, and the conversion of aquatic habitat that may eliminate, diminish, or disrupt the functions of EFH. For example, Sheehan and Tasto (2001) provide a good summary of various sources of impairment of water quality and habitats in California waters. FMPs should describe known and potential adverse impacts to EFH.

These descriptions should explain the mechanisms or processes that may cause adverse effects and how these may affect habitat function. A GIS or mapping system should be used to support analyses of data and to present these data in an FMP in order to geographically depict impacts identified in this paragraph.

The Magnuson-Stevens Act requires federal agencies undertaking, permitting, or funding activities that may adversely affect EFH to consult with NMFS. Under section 305(b)(4) of the Magnuson-Stevens Act, NMFS is required to provide EFH conservation and enhancement recommendations to federal and state agencies for actions that adversely affect EFH; however, state agencies and private parties are not required to consult with NMFS. EFH consultations will be combined with existing interagency consultations and environmental review procedures that may be required under other statutes, such as the Endangered Species Act, Clean Water Act, the National Environmental Policy Act, the Fish and Wildlife Coordination Act, the Federal Power Act, or the Rivers and Harbors Act.

EFH consultation may be at either a broad programmatic level or project-specific level. Programmatic is defined as "broad" in terms of process, geography, or policy (e.g., "national level" policy, a "batch" of similar activities at a "landscape level", etc.). Where appropriate, NMFS will use a programmatic approach designed to reduce redundant paperwork and to focus on the appropriate level of analysis whenever possible. The approach would permit project activities to proceed at broad levels of resolution so long as they conform to the programmatic consultation. The wide variety of development activities over the extensive range of EFH, and the Magnuson-Stevens Act requirement for a cumulative effects analysis warrants this programmatic approach.

The following are general descriptions of non-fishing activities which may directly or cumulatively, temporarily or permanently, threaten the physical, chemical, and biological properties of the habitat utilized by HMS and/or their prey. The direct result of these threats is that EFH may be eliminated, diminished, or disrupted. The list includes common activities with known or potential impacts to EFH; it is not prioritized nor is it to be considered all-inclusive. The potential adverse effects described below, however, do not necessarily apply to the described activities in all cases, as the specific circumstances of the proposed activity or project must be carefully considered on a case-by-case basis. Furthermore, some of the activities described below may also have beneficial effects on habitat, which need to be considered in any analysis.

Non-fishing related effects on EFH for HMS may not be as adverse relative to other EFH types, because adults and juveniles are highly mobile, and all life stages are pelagic (in the water column near the surface and not associated with substrate) and dispersed in a wide band along the West Coast. Table 4-1 summarizes the potential adverse impacts of these non-fishing activities and conservation/enhancement measures to minimize those effects.

### *7.5.1 Description of Non-fishing Activities*

#### **Dredging**

Dredging navigable waters has a periodic impact on benthic and adjacent habitats during construction and operation of marinas, harbors and ports. Periodic or constant dredging is required to maintain or create ship (e.g., ports) and boat (e.g., marinas) access to docking facilities. Dredging is also used to create navigable channels or to maintain existing channels which periodically fill with sediments from rivers, or transported by wind, wave, and tidal processes. In the process of dredging, large quantities of the seafloor are removed, disturbed, and resuspended and the biological characteristics of the seafloor are changed, and turbidity plumes may arise.

Dredging events using certain types of dredging equipment can result in increased levels of fine-grained mineral particles, usually smaller than silt, and organic particles in the water column habitat utilized by HMS. These turbidity plumes of suspended particles may reduce light penetration and decrease the rate of photosynthesis, and lower the primary productivity of an aquatic area if suspended for variable periods of time. HMS may suffer reduced feeding ability if suspended particles persist. The contents of the suspended material may react with the dissolved oxygen in the water and result in short-term oxygen depletion to aquatic resources. Toxic metals and organics, pathogens, and viruses absorbed or adsorbed to fine-grained particles in the material may become biologically available to organisms either in the water column or through food chain processes.

Dredging, as well as the equipment used in the process (e.g., pipelines), may damage or destroy spawning, nursery habitat and other sensitive areas important to HMS, particularly sharks, or the habitat of coastal pelagic forage fish and invertebrates that are important prey of HMS. Within bays and harbors, dredging may also modify current patterns and water circulation of the habitat by changing the direction or velocity of water flow, or otherwise changing the dimensions of the water body potentially utilized by HMS.

#### **Dredged Material Disposal/Fills**

The disposal of dredged materials resulting from dredging operations or the use of fill material in the development of harbors results in sediments (e.g., dirt, sand, mud) covering or smothering existing substrates. Usually these covered sediments are of a soft-bottom nature as opposed to rock or hard-bottom substrates.

The disposal of dredged or fill material can result in varying degrees of change in the physical, chemical, and biological characteristics of the substrate. Subsequent erosion or lateral displacement of such deposits can



also adversely affect the substrate outside the perimeter of the disposal site by changing or destroying benthic habitat. The amount and composition of the discharged material and the location, method, and timing of discharges may all influence the degree of impact on potential HMS EFH or that of HMS prey species. The discharged material can also alter the chemistry of the receiving water at the disposal site by introducing chemical constituents in suspended or dissolved form.

The discharge of dredged or fill material can result in greatly elevated levels of fine-grained mineral particles, usually smaller than silt, and organic particles in the water column thereby affecting HMS. These suspended particles may reduce light penetration and decrease the rate of photosynthesis and lower the primary productivity of an aquatic area if suspended for lengthy intervals. HMS or their prey may suffer reduced feeding ability leading to limited growth and reduced resistance to disease if high levels of suspended particles persist. The contents of the suspended material may react with the dissolved oxygen in the water and result in oxygen depletion. Toxic metals and organics, pathogens, and viruses absorbed or adsorbed to fine-grained particles in the material may become biologically available to organisms either in the water column or through food chain processes.

### **Fossil Fuel Production and Exploration**

Oil exploration/production occurs at a wide range of water depths and usually over soft-bottom substrates, although hard-bottom habitats may also be present in the general area. Oil exploration/production areas are vulnerable to an assortment of physical, chemical, and biological disturbances as oil and gas deposits are located using high energy seismic surveys. EFH may be disrupted by the use and/or installation of anchors,

chains, drilling templates, dredging, pipes, and platform legs. During actual operations, chemical contaminants may also be released into the aquatic environment.

The impacts of oil exploration-related seismic energy release may interrupt and cause HMS to disperse which may disrupt feeding. Exploratory activities may also result in resuspension of fine-grained mineral particles, usually smaller than silt, in the water column. These suspended particles may reduce light penetration and decrease the rate of photosynthesis and lower the primary productivity of the aquatic area especially if suspended for lengthy intervals. The contents of the suspended material may react with the dissolved oxygen in the water and result in oxygen depletion.

The discharge of oil drilling muds can change the chemistry and physical characteristics of the receiving water at the disposal site by introducing toxic chemical constituents thereby potentially affecting HMS EFH. Changes in the clarity and the addition of contaminants can reduce or eliminate the suitability of water bodies for habitation by fish species and their prey.

### **Water Intake Structures**

Withdrawing ocean water through the use of offshore water intake structures is a common occurrence coastwide. Water may be withdrawn to provide cooling water for coastal power generating stations or as a source of potential drinking water as in the case of desalinization plants. If not properly designed, these structures may create unnatural and vulnerable conditions to various fish life stages and their prey. Various life stages of HMS can be affected by water intake operations by entrapment through water withdrawal, impingement on intake screens, and entrainment through the heat-exchange systems or discharge plumes of both heated and cooled effluent.

### **Aquaculture**

The culture of marine and freshwater species in coastal areas can reduce or degrade the habitats used by

native stocks. The location and operation of these facilities will determine the level of impact on the marine environment.

A major concern of aquaculture operations is the discharge of organic waste from the farms. Wastes are composed primarily of feces and excess feed, and the buildup of waste products into the receiving waters depends on water depths and circulation patterns. The release of these wastes may introduce nutrients or organic materials into the surrounding water body and lead to a high biochemical oxygen demand which may reduce dissolved oxygen, thereby potentially affecting the survival of many aquatic organisms in the area. Net effects to HMS may be either positive or negative.

Aquaculture operations also have the potential to release high levels of antibiotics and disease, as well as allowing cultured organisms to escape into the environment. These events have unknown but potential adverse impacts on fish habitat.

### **Wastewater Discharge**

The discharge of point and non-point source wastewater from activities including municipal wastewater treatment plants, power generating stations, industrial plants (e.g., pulp mills, desalination plants) and storm drains into open ocean waters, bays or estuaries can introduce pollutants detrimental to estuarine and marine habitats. These pollutants include pathogens, nutrients, sediments, heavy metals, oxygen-demanding substances, hydrocarbons and other toxins. Historically, wastewater discharges have been one of the largest sources of contaminants into coastal waters. However, wastewater discharges have been regulated under increasingly more stringent requirements over the last 25 years, while non-point source/stormwater runoff has not, and continues to be a significant remaining source of pollution to the coastal areas and ocean. Outfall-related changes in community structure and function, health and abundance may result; many of these changes can be long-lasting.

Wastewater effluent and non-point source/stormwater discharges may affect the growth and condition of fish associated with wastewater outfalls when high contaminant levels (e.g., chlorinated hydrocarbons; pesticides; herbicides) are discharged. In addition, the high nutrient levels downcurrent of these outfalls may also be a concern. If contaminants are present, they may be absorbed across the gills or accumulate as a result of consuming contaminated prey. This is especially true for benthic-feeding fish frequenting wastewater discharge outfalls. Due to turbation, diffusion, and other upward transport mechanisms, buried contaminants may migrate to surface layers and become available.

Localized sources of pollution which may affect HMS in bays and harbors along the coast may not affect HMS stocks as a whole because HMS are distributed over large areas of the open coast and respond quickly to adverse changes in their environment by moving away.

The use of biocides (e.g., chlorine; heat treatments) or the discharge of brine as a byproduct of desalination may reduce the suitability of water bodies for populations of fish species and their prey within the general vicinity of the discharge pipe. The impacts of chlorination and heat treatments, if any, are minimized as a result of their intermittent use and regulation pursuant to state and/or federal national pollutant discharge elimination system (NPDES) permit requirements. These compounds may change the chemistry and the physical characteristics of the receiving water at the disposal site by introducing chemical constituents in suspended or dissolved form. In addition to chemical and thermal effects, discharge sites may adversely impact sensitive areas such as emergent marshes, seagrasses, and kelp beds if located improperly.

High discharge velocities may cause scouring at the discharge point as well as entrainment of particles with resulting turbidity plumes. Turbidity plumes may reduce light penetration and decrease the rate of photosynthesis and lower the primary production in an area if suspension persists. Fish may suffer reduced

feeding ability, especially if suspended particles persist. The contents of the suspended material may react with the dissolved oxygen in the water and result in oxygen depletion.

A significant portion of impacts to coastal waters may also be caused by non-point source pollution from agriculture and urban runoff. Other significant sources include faulty septic systems, forestry, marinas and recreational boating, physical changes to stream channels, and habitat degradation, especially the destruction of wetlands and vegetated areas near streams. Runoff can include heavy metals, pesticides, fertilizers, synthetic and petroleum hydrocarbons, and pet droppings. Unless proper management measures are incorporated, these contaminants can find their way into the food web through benthic infaunal communities and subsequently accumulate in numerous fish species.

### **Discharge of Oil or Release of Other Hazardous Substances**

The discharge of oil or release of hazardous substances into estuarine and marine habitats, or exposure to a product of reactions resulting from such discharge can have both acute and chronic effects on fish resources and their prey.

Exposure to petroleum products and hazardous substances from spills or other unauthorized releases can also potentially reduce the marketability of target species. Direct contact with discharged oil or released hazardous substances (e.g., toxins; oil dispersants; mercury) or indirect exposure through food chain processes can produce a number of biological responses in fish resources and their prey; these responses can occur in a variety of habitats including the water column, seafloor, bays, and estuaries. Chronic and large oil spills have a significant impact on fishery populations.

Mercury contamination of EFH is a potential concern because higher level predators such as HMS contaminated with this neurotoxin tend to accumulate mercury in their tissues either directly or through the food chain. Mercury is a natural occurring element, but an estimated two-thirds of environmental mercury is the result of human activities. It is a by-product of gold and zinc mining and the fossil fuel, solid waste management, and smelting industries. Other sources include cement plants and gasoline combustion. Primary sources of mercury in the U.S. are the combustion of fossil fuels (notably coal) and municipal waste incinerators. Like water, mercury can evaporate and become airborne, and because it is an element, does not break down into other substances. Once mercury escapes from the environment, it circulates in and out of the atmosphere into lakes and oceans. Harbor dredging can mix mercury contaminated sediments into the water column. Bacteria and chemical reactions in wetlands change mercury into a much more toxic form known as methylmercury. In this form it undergoes biomagnification toward the upper ends of the aquatic food chain, with HMS species such as swordfish and tunas at times known to exceed the 1 ppm action level of acceptability state and federal agencies now regulate industrial discharges of mercury, and mercury use in agriculture, to provide an increased margin of safety (R.J. Price. 1995. Mercury in Seafood. California Sea Grant College Program U.C.). Preventative measures include compliance with emission-related legislation to lower or eliminate incineration of mercury-bearing materials and industrial processes that promote removal of mercury from the waste stream. Little work has been done on the direct effect of mercury contamination on HMS except there is recent evidence that this toxin can effect the nervous system of fish by circumventing the blood-brain barrier that usually prevents toxins from entering the brain. Fish depend on their nervous systems to find food, communicate, migrate, orient themselves and to recognize predators. In addition to uptake through the food chain, dissolved mercury is taken in by fish through their gills and dispersed by blood as it circulates through the body. (Environmental News Service 9/8/99 citing C. Rouleau, Environment Canada).

Other related issues include efforts to cleanup spills or releases that in themselves can create serious harm to the habitat. For example, the use of potentially toxic dispersants to break up an oil spill may adversely affect various life stages of HMS.

## Coastal Development Impacts

Coastal development involves changes in land use by the construction of urban, suburban, commercial, and industrial centers and the corresponding infrastructure. Vegetated and open forested areas are removed to enhance the development potential of the land. Portions of the natural landscape are converted to impervious surfaces resulting in increased runoff volumes. Runoff from these developments include heavy metals, sediments, nutrients and organics, including synthetic and petroleum hydrocarbons, yard trimmings, litter, debris, and pet droppings. As residential, commercial, and industrial growth continues, the demand for water escalates. As ground water resources become depleted or contaminated, greater demands are placed on surface water through dam and reservoir construction or other methods of freshwater diversion. The consumptive use or redistribution of significant volumes of surface freshwater causes reduced river flows that can affect salinity regimes as saline waters intrude further upstream.

Development activities within watersheds and in coastal marine areas may impact fish habitat on both long-term and short-term scales. Runoff of toxins reduces the quality and quantity of water column and benthic EFH for HMS by the introduction of pesticides, fertilizers, petrochemicals, and construction chemicals (e.g., concrete byproducts, seals, and paints).

### 7.5.2 Mitigation Considerations for Non-Fishing Effects

Section 600.815(a)(6) of the EFH regulations states that FMPs must describe options to avoid, minimize, or compensate for the adverse effects and promote the conservation and enhancement of EFH. Generally, non-water-dependent actions should not be located in EFH if such actions may have adverse impacts on EFH. Activities which may result in significant adverse effects on EFH should be avoided where less environmentally harmful alternatives are available. If there are no alternatives, the impacts of these actions should be minimized. Environmentally sound engineering and management practices should be employed for all actions which may adversely affect EFH. Disposal or spillage of any material (dredge material, sludge, industrial waste, or other potentially harmful materials) which may destroy or degrade EFH should be avoided. If avoidance or minimization is not possible, or will not adequately protect EFH, compensatory mitigation to conserve and enhance EFH should be recommended. FMPs may recommend proactive measures to conserve or enhance EFH. When developing proactive measures, the Council may develop a priority ranking of the recommendations to assist federal and state agencies undertaking such measures.

Established policies and procedures of the Council and NMFS provide the framework for conserving and enhancing essential fish habitat. This framework includes components to avoid and minimize adverse impacts; provide compensatory mitigation whenever the impact is significant and unavoidable; and incorporate enhancement. New and expanded responsibilities contained in the Magnuson-Stevens Act will be met through appropriate application of these policies and principles. In assessing the potential impacts of proposed projects, the Council and NMFS are guided by the following general considerations:

- The extent to which the activity would directly and indirectly affect the occurrence, abundance, health, and continued existence of fishery resources.
- The extent to which the potential for cumulative impacts exists.
- The extent to which adverse impacts can be avoided through project modification, alternative site selection or other safeguards.
- The extent to which the activity is water dependent if loss or degradation of EFH is involved.
- The extent to which mitigation may be used to offset unavoidable loss of habitat functions and

values.

The following activities have been identified as potentially, directly or indirectly, affecting the habitat utilized by all or some HMS: dredging, fills/dredge material disposal, oil/gas exploration/production, water intake structures, aquaculture, wastewater discharge, discharge of oil or release of hazardous substances, and coastal development. While we recognize that HMS, because of their more pelagic, oceanic and migratory habits, may be less vulnerable to coastal development and degradation than more coastal and benthic fishes, they are not immune. They may be indirectly affected by the disruption or tainting of key organisms within the food web upon which they depend; and being upper level predators, are also especially efficient at accumulating various toxins within their tissues. The following measures are suggested in an advisory, not mandatory, capacity as proactive conservation measures which would aid in minimization or avoidance of the adverse effects of these non-fishing activities on essential fish habitat.

### **Dredging**

1. To the maximum extent practicable, new, as opposed to maintenance dredging, should be avoided. Activities which require dredging (such as placement of piers, docks, marinas, etc.) should be sited in deep water areas or designed in such a way as to alleviate the need for maintenance dredging. Projects should be permitted only for water dependent purposes, when no feasible alternatives are available. Open coast dredging and beach replenishment should be conducted in a manner that minimizes disruption of existing surf grass beds, which provide habitat for certain HMS prey species.
2. Where the dredge equipment employed could cause significant long-term impacts due to entrainment of prey species, dredging in estuarine waters shallower than 20 feet in depth should be performed during the time frame when prey species are least likely to be entrained.
3. All dredging permits should reference latitude-longitude coordinates of the site so information can be incorporated into GIS for tracking cumulative impacts. Inclusion of aerial photos may also be required to help geo-reference the site and evaluate impacts over time.
4. Sediments should be tested for contaminants as per the Environmental Protection Agency and U.S. Army Corps of Engineers requirements to determine proper removal and disposal procedures.
5. The cumulative impacts of past and current dredging operations on EFH should be considered and described by federal, state, and local resource management and permitting agencies and considered in the permitting process.
6. Where a dredging equipment type is used that is expected to create significant turbidity (e.g., clamshell), dredging should be conducted using adequate control measures to minimize turbidity.

### **Fills/Dredge Material Disposal**

1. Upland dredge disposal sites should be considered as an alternative to offshore disposal sites. Fills should not be allowed in areas with subaquatic vegetation or other areas of high productivity. Surveys should be undertaken to identify least productive areas prior to disposal. Use of clean dredge material meeting Army Corps of Engineers and state water quality requirements for beach replenishment and other beneficial uses (e.g., creation of eelgrass beds/surf grass beds) is encouraged, but dredging itself must be carried out along the coast so as to have minimum impact on open coast surf grass beds, which provide habitat for certain prey species.
2. The cumulative impacts of past and current fill operations on EFH should be addressed by federal,

state, and local resource management and permitting agencies and considered in the permitting process.

3. Any disposal of dredge material in EFH should meet applicable state and/or federal quality standards for such disposal.
4. When reviewing open water disposal permits for dredged material, state and federal agencies should identify the direct and indirect impacts such projects may have on EFH. Benthic productivity should be determined by sampling prior to any discharge of fill material. Sampling design should be developed with input from state and federal resource agencies.
5. The areal extent of the disposal site should be minimized. However, in some cases, thin layer disposal may be less deleterious. All non-avoidable, adverse impacts (other an insignificant impacts) should be fully mitigated.
6. All spoil disposal permits should reference latitude-longitude coordinates of the site so information can be incorporated into GIS systems. Inclusion of aerial photos may also be required to help geo-reference the site and evaluate impacts over time.

#### **Oil/Gas Exploration/Production**

1. Benthic productivity should be determined by sampling prior to any exploratory operations. Areas of high productivity should be avoided to the maximum extent possible. Sampling design should be developed with input from state and federal resource agencies.
2. Mitigation should be fully addressed for impacts.
3. Containment equipment and sufficient supplies to combat spills should be on site at all facilities that handle oil or hazardous substances.
4. Each facility should have a "Spill Contingency Plan" and all employees should be trained in how to respond to a spill.
5. To the maximum extent practicable, storage of oil and hazardous substances should be located in an area that would prevent spills from reaching the aquatic environment.

#### **Water Intake Structures**

1. New facilities which rely on surface waters for cooling should be located in areas of low productivity or areas not prone to congregating HMS and their prey. New discharge points should be located in areas which have low concentrations of living marine resources, or they should incorporate cooling towers that employ sufficient safeguards to ensure against release of blow-down pollutants into the aquatic environment in concentrations that exceed state and/or federal limits established pursuant to state and/or federal NPDES regulations.
2. All intake structures should be designed to minimize entrainment or impingement of prey species. Power plant intake structures should be designed to meet the "best technology available" requirements as developed pursuant to section 316b of the Clean Water Act.
3. Discharge temperatures (both heated and cooled effluent) should comply with applicable temperature limits established pursuant to state and/or federal NPDES regulations.

### **Aquaculture Facilities**

1. Facilities should be located in upland areas as often as possible. Tidally influenced wetlands should not be enclosed or impounded for mariculture purposes. This includes hatchery and grow-out operations. Siting of facilities should also take into account the size of the facility, the presence or absence of submerged aquatic vegetation, proximity of wild fish stocks, migratory patterns, and competing uses. Areas of high productivity should be avoided to the maximum extent possible.
2. Water intakes should be designed to avoid entrainment and impingement of fish species.
3. Water discharge should be treated to avoid contamination of the receiving water, and should be located only in areas having good mixing characteristics.
4. Where cage mariculture operations are undertaken, water depths and circulation patterns should be investigated and should be adequate to preclude the buildup of waste products, excess feed, and chemical agents.
5. Any net pen structure should have small enough webbing to prevent entanglement by prey species.
6. Measures should be taken to avoid escapement of farmed animals.
7. Mitigation should fully address all impacts.

### **Wastewater Discharge**

1. New outfall structures should be placed offshore sufficiently far enough to prevent discharge water from impacting productive areas. Discharges should be managed to comply with applicable state and/or federal NPDES permit requirements, including compliance with applicable technology-based and water quality-based effluent limits.
2. The establishment of management programs to address non-point source/stormwater pollution water quality issues on a watershed basis is supported and encouraged.

### **Discharge of Oil or Release of Hazardous Substances**

1. Containment equipment and sufficient supplies to combat spills should be on-site at all facilities that handle oil or hazardous substances.
2. Facilities should have a "Spill Contingency Plan" where required by applicable local, state, federal requirements, and employees identified in the plan as having responsibility for responding to a spill should receive appropriate training.
3. To the maximum extent practicable, storage of oil and hazardous substances should be located in an area which would prevent spills from reaching the aquatic environment.

### **Coastal Development Impacts**

1. Prior to installation of any piers or docks, benthic productivity should be determined and areas with high productivity avoided. Sampling design should be developed with input from state and federal resource agencies.

2. Fueling facilities should be equipped with all necessary safeguards to prevent spills. A spill response plan should be developed and gear necessary for combating spills should be located on site.
3. Filling of any aquatic areas should be curtailed as much as reasonably possible.

**Table 7–1. Adverse non-fishing activities, impacts and conservation/enhancement measures for HMS EFH.**

| <b>ACTIVITY</b>                   | <b>IMPACTS (Potential)</b>                                                                                                                                                                                                                                                                | <b>CONSERVATION MEASURES (Advisory)</b>                                                                                                                                                                                                                                                                                                                                                                 |
|-----------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1. Dredging                       | <ul style="list-style-type: none"> <li>• Bottom-dwelling organisms</li> <li>• Turbidity plumes</li> <li>• Toxins becoming biologically available</li> <li>• Damage to sensitive habitats</li> </ul>                                                                                       | <ul style="list-style-type: none"> <li>• Curtail/minimize new dredging activities as practicable</li> <li>• Take actions to prevent impacts to flora/fauna</li> <li>• Geo-reference all dredge sites</li> <li>• Containment assays</li> <li>• Address cumulative impacts</li> <li>• Minimize turbidity</li> </ul>                                                                                       |
| 2. Dredge Material Disposal/Fills | <ul style="list-style-type: none"> <li>• Bottom-dwelling organisms</li> <li>• Turbidity plumes</li> <li>• Toxins becoming biologically available</li> <li>• Damage to sensitive habitats</li> <li>• Loss of habitat function</li> </ul>                                                   | <ul style="list-style-type: none"> <li>• Place dredge spoils upland if possible; avoid fills in productive areas</li> <li>• Address cumulative impacts</li> <li>• Meet applicable quality requirements for disposal of dredge material in EFH</li> <li>• Identify direct and indirect impacts on EFH</li> <li>• Minimize areal extent of the disposal site</li> <li>• Geo-reference the site</li> </ul> |
| 3. Oil/Gas Exploration Production | <ul style="list-style-type: none"> <li>• Seismic energy release</li> <li>• Discharge of exploratory drill muds and cuttings</li> <li>• Resuspension of fine-grained mineral particles</li> <li>• Composition of the substrate altered</li> </ul>                                          | <ul style="list-style-type: none"> <li>• Avoid areas of high productivity</li> <li>• Provide mitigation</li> <li>• On-site containment equipment</li> <li>• Maintain “spill contingency plan”</li> <li>• Keep oil and hazardous substances from reaching the aquatic environment</li> </ul>                                                                                                             |
| 4. Water Intake Structures        | <ul style="list-style-type: none"> <li>• Entrapment, impingement, and entrainment</li> <li>• Loss of prey species</li> </ul>                                                                                                                                                              | <ul style="list-style-type: none"> <li>• Locate new facilities away from productive areas</li> <li>• Minimize entrainment or impingement of prey species per CWA 316(b)</li> <li>• Discharge temperature to meet applicable discharge limits</li> </ul>                                                                                                                                                 |
| 5. Aquaculture                    | <ul style="list-style-type: none"> <li>• Discharge of pollutants from the facility</li> <li>• Escapement</li> </ul>                                                                                                                                                                       | <ul style="list-style-type: none"> <li>• Minimize water/habitat quality impacts</li> <li>• Avoid entrainment and impingement losses</li> <li>• Treat and mix water discharges</li> <li>• Preclude waste product buildup</li> <li>• Prevent entanglement of prey species</li> <li>• Prevent escapement</li> <li>• Mitigate impacts</li> </ul>                                                            |
| 6. Wastewater Discharge           | <ul style="list-style-type: none"> <li>• Wastewater effluent with high contaminant values</li> <li>• High nutrient levels downcurrent of outfall</li> <li>• Biocides to prevent biofouling</li> <li>• Thermal effects</li> <li>• Turbidity plumes</li> <li>• Stormwater runoff</li> </ul> | <ul style="list-style-type: none"> <li>• Avoid areas of high productivity with new discharge points</li> <li>• Watershed management programs</li> </ul>                                                                                                                                                                                                                                                 |



| ACTIVITY                                                | IMPACTS (Potential)                                                                                                                                                    | CONSERVATION MEASURES (Advisory)                                                                                                                                                                                                                                                      |
|---------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 7. Oil Discharge/<br>Hazardous<br>Substances<br>Release | <ul style="list-style-type: none"> <li>• Direct physical contact</li> <li>• Indirect exposure resulting</li> <li>• Cleanup</li> <li>• Mercury Contamination</li> </ul> | <ul style="list-style-type: none"> <li>• Maintain on-site containment equipment and supplies</li> <li>• On-site "spill contingency plan"</li> <li>• Prevent spills from reaching the aquatic environment</li> <li>• Compliance with industrial mercury discharge standards</li> </ul> |
| 8. Coastal<br>Development<br>Impacts                    | <ul style="list-style-type: none"> <li>• Contaminant runoff</li> <li>• Sediment runoff</li> <li>• Filling of aquatic areas</li> </ul>                                  | <ul style="list-style-type: none"> <li>• Shoreline construction should avoid productive areas</li> <li>• Prevent fuel spillage</li> <li>• Curtail fills in estuaries, wetlands, and bays</li> </ul>                                                                                   |

### 7.5.3 Findings

[4.5.7.2 Findings]

*Federal action agencies must consult with NOAA Fisheries regarding any of their actions authorized, funded or undertaken, or proposed to be authorized, funded or undertaken, that may adversely affect EFH. For actions that were completed prior to the approval of these EFH designations for HMS, consultation is not required.*

### 7.6 Summary

[4.7 Summary]

- The proposed action is to adopt species- and stage-specific EFH designations for the thirteen individual management unit species as described in above and **Appendix F**. This FMP identifies and describes EFH for all MUS managed under this FMP based on available Level 1 and Level 2 data from the fisheries and from the literature on distribution and habitat preference. Some of these important habitat areas are already protected to some extent by regulatory season and area closures now in effect.
- No specific EFH problem areas were identified at this time that could be addressed by management actions to protect and enhance EFH. After conducting a review and analysis of new and existing data on MUS' habitat and possible sources of disturbance in these habitats, the Council found no clear evidence of significant adverse impacts on HMS EFH. Thus no new EFH management measures, and therefore no regulations, are proposed.
- At this time, there is no evidence that HMS fishing practices or non-fishing activities are causing adverse impacts on HMS EFH, although EFH Conservation Recommendations are included to mitigate the possible effects of these practices.
- Current management measures to protect fishery habitat appear to be adequate, but should future research demonstrate a need, the Council will act accordingly to protect habitat necessary to maintain a sustainable and productive fishery in the eastern Pacific region.
- No HAPCs have been designated at this time, but the FMP provides a framework which will ensure review and updating of EFH based on new scientific evidence or other information as well as incorporation of new information on HMS HAPCs as it becomes available in the future. The Council is authorized to proceed with establishing such a framework procedure for reviewing EFH and

identifying HAPCs, particularly critical areas such as shark pupping and core nursery areas.

## 7.7 Recommendations for EFH Research

### [4.8 Recommendations for EFH Research]

Very little specific information is known about the migratory corridors and habitat dependency of these large mobile fishes, how they are distributed by season and age throughout the Pacific and within the West Coast EEZ, and how oceanographic changes in habitat affect production, recruitment and migration. More research is needed in these areas to better define EFH and HAPCs. Also, research is needed to identify specific shark habitat areas of particular concern, such as pupping grounds, key migratory routes, feeding areas, and areas of concentration of large adult female sharks. Pupping grounds and core nursery areas have not yet been identified and need further study. These areas may not only concentrate pups, but also the highly valuable pregnant females at certain times of the year. Reproductive female sharks, having run and survived the gauntlet of many years of natural and fishing mortality, are extremely valuable to the continued growth of their populations, and if concentrated in certain areas at pupping times, would be highly vulnerable to habitat perturbations. Of special relevance are thresher and mako shark pupping areas, the locations of which are currently unknown but must occur somewhere within the southern portion of the U.S. West Coast EEZ, judging from the presence of post-partum pups in the area (NMFS Driftnet Observer data; Bedford 1992).

## 8.0 RESEARCH AND DATA NEEDED FOR MANAGEMENT

### [8.6 Research and Data Needed for Management]

There is substantial uncertainty on the status of stocks and estimates of MSY for many HMS species. Basic biological and life history data are unknown for some species, and understanding of distribution, abundance, and reproductive behaviors of most is poor. There is insufficient understanding of stock structures relative to the extent of fisheries, on the interchange between stocks, and on survival and fecundity schedules for investigating exploitation effects and species' resiliency to exploitation. Total catch data may be inaccurate for some species, because of unreported catch by international fisheries, or unreported bycatch. There is lack of fishery independent indexes of abundance.

More complete catch information and data on interactions with protected and prohibited species are needed for most fisheries. Data collection and reporting requirements are inconsistent between state and federal regulations. There is inadequate understanding of the fisheries on some HMS stocks that are shared with Mexico (e.g., species composition of shark catches in Mexican fisheries), and inadequate data exchange with Mexico.

Little is known of the long-term survivorship of hooked fishes after release, to assess the effectiveness of recreational tag-and-release methods on big game fishes (pelagic sharks, tunas and billfishes) and of methods to reduce bycatch mortality in longline fishing. Controlled studies of the survivability of hooked and released pelagic sharks and billfishes are needed to determine the physiological responses to different fishing gears, and the effects of time on the line, handling, methods of release, and other factors. More work is also needed to investigate the hooking survivorship of protected species, such as turtles and seabirds, that are caught incidentally in HMS fisheries.

There is very little specific information on the migratory corridors and habitat dependencies of these large mobile fishes, how they are distributed by season and age throughout the Pacific and within the West Coast EEZ, and how oceanographic changes in habitat affect production, recruitment and migration. Research is needed to better define EFHs and to identify specific habitat areas of particular concern (HAPC), such as pupping grounds, key migratory routes, feeding areas, and where adults aggregate for reproduction. A special need is to determine the pupping areas of thresher and mako sharks, which are presumed to be within the southern portion of the U.S. West Coast EEZ, judging from the occurrence of post-partum and young pups in the area (e.g., NMFS Driftnet Observer data).

For sharks, the size/age groups contributing most to population growth and maintenance need to be determined by demographic studies to better determine how best to apply management measures, such as season and area closures, and 'slot' size limits. Additionally, the U.S. Congress identified the following data needs for sharks in the Shark Finning Prohibition Act (PL 106-557) (see also the U.S. National Plan of Action for Sharks):

- The collection of data to support stock assessment of shark populations subject to incidental or directed harvesting by commercial vessels, giving priority to species according to vulnerability of the species to fishing gear and fishing mortality, and its population status.
- Research to identify fishing gear and practices that prevent or minimize incidental catch of sharks in commercial and recreational fishing.
- Research on fishing methods that will ensure maximum likelihood of survival of captured sharks after release.
- Research on methods for releasing sharks from fishing gear that minimize risk of injury to fishing vessel operators and crews.

- Research on methods to maximize the utilization of, and funding to develop the market for, sharks not taken in violation of a fishing management plan approved under the Magnuson-Stevens Act.
- Research on the nature and extent of the harvest of sharks and shark fins by foreign fleets and the international trade in shark fins and other shark products.

## 8.1 Information Needs by Species

### [8.6.1 Information Needs by Species]

The following information needs have been identified. They are to obtain better fundamental information, like on reproductive and feeding habits, and distribution and abundance. There is a need to determine:

#### Albacore Tuna

- a. Whether there are multiple sub-stocks with differently-migrating juveniles or juveniles from different spawning localities with different migration routes and timetables.
- b. How deep-dwelling adults migrate and are distributed in the north Pacific by season and age, including in the West Coast EEZ.
- c. How ENSO and decadal oceanographic changes affect stock production and the east-west migrations of juveniles.

Whether certain prey species are key for survival and reproductive success.

#### Bigeye Tuna

- a. How deep-dwelling adults migrate and are distributed by season and age in the Pacific.
- b. Significance of floating object and other-species associations in bigeye life history.
- c. How ENSO/decadal oceanographic changes affect stock production and recruitment success.
- d. Whether certain prey species are key for survival and reproductive success.

#### Skipjack Tuna

- a. The significance of floating object and other-species associations in skipjack life history.
- b. How ENSO/decadal oceanographic changes affect production and recruitment.
- c. How the very large skipjack catch in the western Pacific is affecting the pelagic community.
- d. Whether certain prey species are key for survival and reproductive success.

#### Bluefin Tuna

- a. How adult bluefin migrate and are distributed by season and age in the North Pacific, including in the West Coast EEZ.
- b. How stock abundance can most reliably be measured.
- c. How ENSO/decadal oceanographic changes affect production, recruitment, and east-west migrations.

- d. Whether certain prey species are key for survival and reproductive success.

#### Yellowfin Tuna

- a. How yellowfin migrate and are distributed by season and age in the Pacific.
- b. How ENSO/decadal oceanographic changes affect yellowfin production and recruitment.
- c. The significance of floating object and other-species associations in yellowfin life history.
- d. Whether certain prey species are key for survival and reproductive success.

#### Common Thresher Shark

- a. The stock structure and boundaries of this species; the relationship to populations to the south and west.
- b. The extent of pupping and nursery grounds off northern Mexico, and their relationship to those of southern California.
- c. The pattern of seasonal migrations for feeding and reproduction, and where and when life stages may be vulnerable.
- d. Aging and growth rate, including validation.

#### Pelagic Thresher Shark

- a. How this species is distributed by season and age in the eastern Pacific, especially off Mexico.
- b. Reproductive biology and cycle off Mexico and California.
- c. How growth rates in the eastern Pacific compare with rates estimated in the western Pacific.
- d. How this species' ecology compares with that of the other thresher species.

#### Bigeye Thresher Shark

- a. Ways to reduce the take of this species, especially by longline fishing in deep water.
- b. Importance of EEZ habitat to adult males and juvenile females and proportion of the stock utilizing this habitat (using archival tags).
- c. Maturity and reproductive schedule in the eastern Pacific, including validation of extremely slow growth.
- d. The ecology of this species compared with the other, more surface-dwelling, threshers.

#### Shortfin Mako Shark

- a. Distribution, abundance, size, and catch distribution of shortfin mako to the south and west of the U.S. EEZ; relative importance of the nursery areas off southern California.
- b. Pupping areas off southern California and northern Mexico, and whether any are critical for stock health.

- c. Importance of the high-seas habitat and the dispersal and migratory patterns of adults.
- d. Age and growth of this species (current growth estimates differ widely).

#### Blue Shark

- a. Survival rate of discarded longline-caught blue sharks.
- b. Total regional catches by sex and size (unknown because of high discard rate).
- c. Movements of maturing fish from the EEZ to the high seas, comparing size composition of catches inside the EEZ and beyond.

#### Swordfish

- a. How swordfish can be caught with greatly reduced take of protected species.
- b. How swordfish are distributed by season and age in the outer EEZ and beyond, and whether there could be better fishing strategies.
- c. Age and growth of west-coast-caught swordfish.

#### Striped Marlin

- a. Nature and degree of exchange or isolation of the U.S./Mexico population with populations to the south and west (stock structure).
- b. How the seasonal migration into southern California waters differs by size, age, and sex (archival tagging).
- c. Age and growth of fish sampled from the eastern Pacific.

#### Dorado

- a. Stock structure of eastern Pacific population.
- b. The catches in the eastern Pacific, including from artisanal fisheries.
- c. The importance of floating objects to this species according to age, sex, and reproductive state, comparing associated and non-associated fish (archival tagging).

### 8.2 Information Needs by Fishery

[8.6.2 Information Needs by Fishery]

There is a need to determine, in priority order of need (not of fisheries):

#### Drift Gillnet

- a. Size composition of bycatch species.
- b. Adequacy of catch sampling by observers—are enough samples being collected given variability?
- c. Dressed weights of individually landed fish (weight of entire catch is presently entered on fish

tickets)

Surface Hook and Line (troll)

- a. Total catch information (including incidental and bycatch) by vessel.
- b. The extent of protected species interactions in this fishery (thought to be low).
- c. Mortality of fish released in this fishery.

Pelagic Longline

- a. The size and species composition of the primary catch.
- b. Extent and composition of bycatch and of protected species interactions and resulting impacts on populations; distribution, abundance and movements of protected species.
- c. How protected species takes can be reduced and survivability increased with new techniques and gear modifications. Effectiveness of the conservation measures adopted from the Hawaii-based longline fishery in the area fished by the West Coast longline fleet.
- d. Economic factors (for RIR and RFA analysis).

Harpoon

- a. Accurate catch composition taken exclusively by harpoon (California landings data, drift gillnet catches, are sometimes mixed with the Harpoon/Spear category when fishers hold multiple gear permits).
- b. Length and weight data for individual swordfish (including estimates for fish struck but escaped).
- c. Economic factors (for RIR and RFA analysis).

Coastal Purse Seine

- a. Extent and composition of bycatch and protected species interactions, and the mortality rates.
- b. Size, sex, and maturity composition of bluefin in catch.
- c. Economic factors (for RIR and RFA analysis).

Recreational - Party/Charter Vessels

- a. Complete catch composition and logbook information on a coast-wide basis (CA/OR/WA).
- b. Protected species interactions, including depredation by sea lions and survival of hooked birds, and evaluation of the adequacy/accuracy of logbook entries.
- c. Bycatch on a coast-wide basis and evaluation of adequacy/accuracy of information from logbooks and the MRFSS.
- d. Economic factors (for RIR and RFA analysis).

Recreational - Shore and Private Vessels

- a. Ways to adequately sample private vessels utilizing marinas.
- b. Ways to determine the bycatch and protected species interactions by such private vessels.
- c. Ways to sample the recreational catch for length and weight of fish caught to be able to convert catches reported in numbers to catches by weight.
- d. Economic factors (for RIR and RFA analysis).

### 8.3 General Information Needs

[8.6.3 General Information Needs]

#### EFH

- a. Very little is known about the habitat of different life stages of most highly migratory species that are not targeted.
- b. Little is known about the environmental effects of mid-water trawling and of the processing of discards.
- c. Need to identify pupping grounds of common thresher sharks and shortfin mako sharks. Areas where pregnant females congregate may be sensitive to perturbation, and the aggregated females and pups there may be vulnerable to fishing.

#### PacFIN Data Issues

There are significant errors in gear codes of existing PacFIN data, and there is a need for finer resolution of California, Oregon, and Washington gear codes associated with HMS landings. Specific recommendations are:

Problem: Landings reported under incorrect gear codes.

Solution: Minimize inaccurate reporting on HMS fish tickets by eliminating defunct gear codes and by discouraging the use of dealers' knowledge of vessels to designate gear type. These concerns should be addressed through the states' fish ticket systems, and may require newly designed, or redesigned, fish tickets that more precisely identify HMS gears. California tickets to which this might apply include: (1) northern, central and southern hook and line; (2) central and southern gillnet and harpoon; and, (3) pelagic species.

Problem: Drift gillnet landings reported under both specific and lumped gear categories.

Solution: Recommend CDFG provide "corrected" drift gillnet fishery landings (using a filtering process) to PacFIN that include drift gillnet catches previously lumped under the general "entangling net" (60) and "other gear" (0) categories. Currently, PacFIN data for the drift gillnet fishery reflect only those landings that were assigned to gear code 65 (drift gillnet), and do not consider drift gillnet landings that were assigned to gear code 0 (unknown gear) or, more importantly, to gear code 60 (the general gillnet category, "entangling net").

Problem: Historical drift gillnet landings data contain errors stemming from inconsistent reporting of data processing practices.

Solution: To the extent possible, generate a "correct" record of historical drift gillnet landings.



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Problem: Longline landings are lumped so impossible to separate out pelagic longline data.

Solution: Request that California delineate a drift/pelagic longline gear on HMS fish tickets, using a PacFIN gear code (GRID) created for drift/pelagic longline gear. Lately there has been increased interest in West Coast HMS species by pelagic longline vessels. A distinct pelagic longline gear code would accommodate landings by these vessels.

To the extent possible, generate a “correct” record of historical, pelagic longline landings.

Problem: Inability to differentiate CA coastal purse seine landings from distant water purse seine landings.

Solution: Request that the states and PacFIN distinguish between HMS purse seine landings by distant water tuna vessels (U.S. tropical tuna purse seine fleet) and HMS purse seine landings by California coastal vessels. The distinction is important for socioeconomic impact analyses, Regulatory Flexibility Analysis and potential quota allocations between fleets. To the extent possible, generate a “correct” record of historical purse seine landings of tropical tunas, bluefin and albacore, by purse seine gear type.

Problem: Inability to separate salmon from albacore effort/landings for OR and WA.

Solution: Develop distinct salmon and albacore troll gear codes for Oregon and Washington fish tickets.

To the extent possible, generate a “correct” record of historical albacore and salmon landings, by species troll type.



## LITERATURE CITED

*NB: Citations remaining in the reorganized FMP will be compiled during editing pursuant to Council final action. This section is unnumbered and will remain at the end of the document throughout any future changes.*

## Attachment 1: List of Figures and Tables from the August 2003 HMS FMP/FEIS

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HIGHLY MIGRATORY SPECIES MANAGEMENT TEAM AND  
HIGHLY MIGRATORY SPECIES ADVISORY SUBPANEL JOINT REPORT ON  
FISHERY MANAGEMENT PLAN AMENDMENT 1: OVERFISHING RESPONSE FOR  
BIGEYE TUNA

The Highly Migratory Species Management Team (HMSMT) and the Highly Migratory Species Advisory Subpanel (HMSAS) reviewed and discussed the Bigeye Tuna Overfishing Response (updated on October 17, 2006). Some alternatives under consideration include implementing part or all of the Western Pacific Fishery Management Council's Pelagics fishery management plan (FMP) Amendment 14. The HMSMT and HMSAS have an overarching concern that the Council is scheduled to take final action on alternatives to end bigeye tuna overfishing before we have been able to obtain a copy of Amendment 14 for review.

In addition, we have the following recommendations:

Range of Alternatives

There are four alternatives presented in the document:

Alt 1 – No Action (status quo) – Under this alternative, the Council would not develop an amendment to the HMS FMP to address bigeye tuna overfishing; however, as noted in the document, “If [the Western Pacific Fishery Management Council's] Pelagics FMP Amendment 14 were determined to be sufficient to end overfishing, and is approved by National Marine Fisheries Service (NMFS), that plan could serve as the sole plan to end overfishing.”

Alt 2 – Adopt the guidance provided by the Council in April 2006 to include the actions identified in Management Option 3, in Attachment 1, with the exclusion of the exemption for fleets that catch one percent or less of the total Pacific bigeye tuna landings, and the inclusion of a definition of national fleet in the HMS FMP. According to the Inter-American Tropical Tuna Commission (IATTC), this alternative by itself, which only pertains to the Eastern Pacific Ocean, would likely not end bigeye tuna overfishing Pacific-wide. However, this alternative, in conjunction with the Western Pacific's Pelagics FMP Amendment 14, would meet the requirement to end bigeye tuna overfishing.

Alt 3 – Adopt “elements” of the Western Pacific's Pelagics FMP Amendment 14, which are specific to management in the Eastern Pacific Ocean (EPO), into the Pacific Council's HMS FMP – Elements include a specific reduction in purse seine fishery effort on floating objects (including fish aggregating devices) in the EPO, and a specific reduction in longline fishery effort in the EPO from current levels. This alternative may include some exemption for fleets that catch relatively small amounts of bigeye tuna (which would not be specifically included in Alternative 2). It is anticipated that this alternative would meet the requirement to end bigeye tuna overfishing.

Alt 4 – Concurrence with Pelagics FMP Amendment 14 – The Pacific Council would notify the NMFS that it recognizes that the Pelagics FMP Amendment 14 as the sole Pacific-wide response to bigeye tuna overfishing. Under this alternative, the Council's strategy would not be incorporated into the FMP (as a plan amendment), but would be captured in writing, and NMFS

would describe how this action sufficiently addresses the requirement to end bigeye tuna overfishing.

While there are four alternatives listed, it appears that, in reality, there are only two management alternatives available—either adopt the measures the Council specified in April 2006, or adopt the measures in the Pelagics FMP Amendment 14 specific to the EPO—but there are two processes described to achieve the latter. With regard to the management provisions, the HMSMT and HMSAS support adopting specific management measures for the EPO with the inclusion of a definition of national fleet in the HMS FMP (as specified in Alternative 2).

As mentioned in the HMSMT’s April 2006 report, one of the primary issues for consideration is, if a national quota were developed, whether this would include all vessels fishing for one nation, or if a “fleet” refers to a narrower combination of geographical area and gear type. Limiting or capping the catch of a narrowly defined fleet (e.g., West Coast-based purse seine) may be constraining, whereas a shared cap for U.S. vessels may provide some flexibility. The proposed FMP amendment language provided for Alternative 2 (p. 5, second paragraph from the bottom) addresses this and we recommend its inclusion in the FMP amendment.

With regard to the process, the Magnuson-Stevens Conservation and Management Act specifies that fishery management plans prepared by the Council “shall contain the conservation and management measures...which are necessary and appropriate for the conservation and management of the fishery to prevent overfishing and rebuild overfished stocks, and to protect, restore, and promote the long-term stability of the fishery...and, consistent with the national standards, the other provisions of this Act, regulations implementing recommendations by international organizations in which the United States participates (including but not limited to closed areas, quotas, and size limits), and any other applicable law....” Given that, the HMSMT and HMSAS recommend that the EPO management provisions for bigeye tuna be incorporated as an amendment to the Pacific Council’s HMS FMP, as described in Alternative 3.

#### Specific Comments on Alternative 3

With regard to Alternative 3, we note that the narrative under Section 3.3, second paragraph, second sentence, references both Councils coordinating “on future recommendations for reductions in bigeye tuna and/or other tropical tuna fishing mortality to NMFS,” whereas, the suggested FMP Amendment text focuses on specific percentage reductions in fishing effort from current levels. It is unclear whether the prescribed provisions in Amendment 14 pertain to fishing mortality vs. fishing effort. Further, it is unclear how reductions in fishing effort in both the purse seine and longline fisheries would be achieved, given that participation in these fisheries is currently not limited. Therefore, while the HMSMT and HMSAS recommend moving forward with Alternative 3, we also recommend that clear, concise sub-options for implementation of the reductions in fishing effort be specified and analyzed. If through the IATTC process, the IATTC agrees that a different specific percentage reduction for either purse seine or longline effort is required to end bigeye tuna overfishing in the EPO, we recommend that a framework be included to allow for an adjustment to be made to the FMP amendment.

#### Analysis Needed

For Alternative 3, it is suggested in the document that NMFS could approve Amendment 14 on the basis of the Environmental Assessment (EA) submitted by the Western Pacific Council and, as such, the Pacific Council and NMFS would not have to prepare an additional EA for this

action. The HMSMT and the HMSAS have not had the opportunity to review the EA for Amendment 14 and, therefore, do not know whether it adequately assesses the potential impacts to West Coast-based fishers and West Coast communities resulting from the proposed actions. We note that the Magnuson-Stevens Act also requires that Councils “include a fishery impact statement for the plan or amendment...which shall assess, specify, and describe the likely effects, if any, of the conservation and management measures on participants in the fisheries and fishing communities affected by the plan or amendment; and participants in the fisheries conducted in adjacent areas under the authority of another Council, after consultation with such Council and representatives of those participants.” Therefore, we recommend that NMFS prepare a separate EA that includes an analysis of the impacts of the proposed actions on West Coast fisheries and communities.

**HMSMT and HMSAS Recommendations:**

1. Indicate a preference for Alternative 3 with the addition of a definition of national fleet in the HMS FMP, with the understanding that provisions would be consistent with IATTC action;
2. Modify the draft FMP amendment language to be consistent with the Council’s action;
3. Request that NMFS, working with the HMSMT and HMSAS, develop sub-options for Alternative 3 that specify how reductions in fishing effort for the purse seine and longline fleets may be achieved; and
4. Request that NMFS, working with the HMSMT and HMSAS, prepare a separate EA focusing on Alternative 3 and its sub-options that includes an analysis of the impacts of the proposed actions on West Coast fisheries and communities.

PFMC  
11/13/06

## YELLOWFIN TUNA STATUS

At the September 2006 Council meeting, the Scientific and Statistical Committee (SSC) was briefed on the most recent stock assessment for the Eastern Pacific (EPO) yellowfin tuna (*Thunnus albacares*) by the assessment's author, Dr. Mark Maunder of the Inter-American Tropical Tuna Commission (IATTC). The attached SSC Report summarizes their review and conclusions. Based on their review, the SSC endorses the assessment, and its use for status determination purposes. They note that under the base case model, the stock is estimated to be close to  $B_{MSY}$  with a fishing intensity slightly above  $F_{MSY}$ ; i.e., under the base case overfishing is occurring but the stock is not overfished.

Attachment 1 is a letter from the National Marine Fisheries Service (NMFS) Southwest Regional Administrator to Council Chairman Hansen discussing their determination, as required by the Magnuson-Stevens Act (MSA), that overfishing is occurring on the EPO yellowfin tuna stock. Section 304(e) of the MSA (16 U.S.C. 1854(e)) states that within one year of such a notification "the appropriate Council ... shall prepare a fishery management plan, plan amendment, or proposed regulations for the fishery to which the identification or notice applies..." In this case the Council would need to consider whether to begin the process of amending the Fishery Management Plan for U.S. West Coast Fisheries for Highly Migratory Species (HMS FMP) and/or propose regulations to address overfishing of EPO yellowfin tuna.

As noted in the letter, U.S. catch of yellowfin tuna in the EPO is a small proportion of the total and any action would need to be part of an international strategy by the United States to end overfishing through action by the IATTC. As with the Council's action on bigeye overfishing, such a strategy, although described in the FMP, would principally entail formulating recommendations to the IATTC for measures to end overfishing.

### **Council Action:**

**Consider Stock Assessment and Possible Overfishing Implications and Determine Action Needed Under the Requirements of the Magnuson-Stevens Act.**

### **Reference Materials:**

1. Agenda Item C.5.a, Attachment 1: Letter from Rodney R. McInnis to Donald Hansen communicating yellowfin tuna overfishing determination.
2. Agenda Item C.5.b, SSC Report.

### **Agenda Order:**

- a. Agenda Item Overview
  - b. Reports and Comments of Advisory Bodies
  - c. Public Comment
  - d. **Council Action:** Consider Stock Assessment and Possible Overfishing Implications
- Kit Dahl

PFGC

10/25/06



**UNITED STATES DEPARTMENT OF COMMERCE**  
**National Oceanic and Atmospheric Administration**  
NATIONAL MARINE FISHERIES SERVICE

Southwest Region  
501 West Ocean Boulevard, Suite 4200  
Long Beach, California 90802-4213

OCT 25 2006

150414SWR2006SF00616:MH

Mr. Donald K. Hansen, Chairman  
Pacific Fishery Management Council  
7700 NE Ambassador Place, Suite 101  
Portland, Oregon 97220

Dear Chairman Hansen:

On behalf of the Secretary of Commerce (Secretary), NOAA's National Marine Fisheries Service (NMFS) hereby notifies the Pacific Fishery Management Council (Council) that overfishing is occurring on the yellowfin tuna (*Thunnus albacares*) stock in the eastern Pacific Ocean (EPO). NMFS requests that the Council take appropriate action as required by the Magnuson-Stevens Fishery Conservation and Management Act (MSA) (16 U. S. C. 1854(e)(3)) and the implementing regulations at 50 CFR 600.310(e)(3). Specifically, the statute and regulations require that the Council develop, and submit to NMFS, a plan to end overfishing within one year from the date of this notification. Action must include the preparation of a fishery management plan (FMP), an FMP amendment, or proposed regulations any of which must provide an approach to end overfishing of yellowfin tuna in the EPO.

Based on the Council's most recent Stock Assessment and Fishery Evaluation report<sup>1</sup>, the U. S. West Coast catch for both the commercial and recreational sectors has amounted to less than one-half percent of the stockwide EPO catch between 2000-2004. Consequently, the capacity for the United States to prevent or end overfishing through unilateral action is limited. Multilateral management is essential to ensure that overfishing on yellowfin tuna in the EPO ends and this view necessitates that the United States pursue an international strategy to end overfishing specifically through the IATTC. To that end, the FMP for U. S. West Coast Fisheries for Highly Migratory Species (HMS FMP) can serve as one of the sources for the development of a U.S. position with respect to the international management of yellowfin tuna.

According to NMFS' guidelines interpreting National Standard 1, of the MSA (50 CFR 600.313), fishery stock status is assessed with respect to two status determination criteria: one is used to determine whether a stock is "overfished," and the second is used to determine whether the stock is subject to "overfishing." A stock is experiencing

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<sup>1</sup>Pacific Fishery Management Council. 2006. Status of the U. S. West Coast Fisheries for Highly Migratory Species through 2005: Stock Assessment and Fishery Evaluation. Portland, OR. 128 pp.




overfishing when the fishing mortality rate exceeds the maximum fishing mortality threshold (MFMT) for one year.

The HMS FMP, effective May 7, 2004 (69 FR 18444, April 7, 2004), explains that MFMT is exceeded when the fishing mortality rate exceeds the rate associated with maximum sustainable yield (MSY). The most recent stock assessment for EPO yellowfin tuna by the Inter-American Tropical Tuna Commission<sup>2</sup> (IATTC) indicates that the fishing mortality rate has, for at least one year, been greater than the rate associated with average MSY. That is, the recent rate of fishing mortality ( $F_{\text{recent}}$ ) is likely to be in excess of the rate associated with average MSY ( $F_{\text{aMSY}}$ ). Specifically, the assessment results indicate a  $F_{\text{recent}}/F_{\text{aMSY}}$  ratio of 1.2.

I am aware that the Council is in the process of developing reference points to recommend to NMFS that will allow future overfishing/overfished determinations of tunas. However, because the IATTC has shown proficiency in assessing the tropical tunas of the EPO, NMFS believes that the EPO yellowfin tuna assessment prepared by the IATTC is the best available for judging the status of this tuna resource. Therefore, based on the IATTC assessment, taking into account previous years assessments, and relying on the expertise and advice of the Southwest Fisheries Science Center Director, NMFS has determined that overfishing of the EPO yellowfin tuna stock is occurring.

NMFS welcomes the Council's participation in seeking ways to end EFO yellowfin tuna overfishing including working with the General Advisory Committee to the U.S. delegation to the IATTC, with the U. S. Commissioners to the IATTC, and with NMFS to develop and implement any domestic conservation measures necessary to implement IATTC resolutions pertaining to this species.

Sincerely,



Rodney R. McInnis  
Regional Administrator

cc: F - W. Hogarth, S. Rauch  
F/IA - R. Lent  
F/SF - A. Risenhoover  
SWFSC - W. Fox  
GCSW - J. Feder  
PIRO - W. Robinson  
DOS - D. Hogan  
IATTC - R. Allen

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<sup>2</sup> Hoyle, S. D. and M. M. Maunder. 2005. Status of yellowfin tuna in the eastern Pacific Ocean in 2005 and outlook for 2006. Inter-Amer. Tropical Tuna Comm., Working Group to Review Stock Assessments, 7<sup>th</sup> Meeting, May 15-19, 2006. 94 pp.

## HIGHLY MIGRATORY SPECIES MANAGEMENT TEAM REPORT ON YELLOWFIN TUNA STATUS

The Highly Migratory Species Management Team (HMSMT) reviewed the most recent stock assessment for yellowfin tuna<sup>1</sup>, the report from the Council's Scientific and Statistical Committee (SSC), and the letter from National Marine Fisheries Service (NMFS) notifying the Council that overfishing of Eastern Pacific Ocean (EPO) yellowfin tuna is occurring, and would like to offer the following comments and recommendations.

### **Yellowfin Tuna Stock Status**

The recent yellowfin tuna stock assessment is based on data through 2005 for fisheries operating in the EPO. The results of the base-case assessment indicate that recent fishing mortality is slightly higher than  $F_{MSY}$  ( $F_{Recent}/F_{MSY} = 1.02$ ) and that the biomass is slightly below  $B_{MSY}$  ( $B_{Recent}/B_{MSY} = 0.99$ ). Given the review and endorsement of the Council's SSC, the HMSMT recognizes that overfishing is occurring, yet the stock is not overfished. The HMSMT also noted that these results show a modest improvement over the results of the 2005 assessment. The Inter-American Tropical Tuna Commission's (IATTC) resolution C-04-09 established conservation measures for yellowfin and bigeye tuna, which were updated through resolution C-06-02. Given that U.S. West Coast vessels account for less than 1% of the total EPO yellowfin tuna landings, management of the stock will need to continue to be handled on an international level.

### **Process and Timeline**

Similar to addressing bigeye tuna overfishing, the HMSMT recommends that measures to address yellowfin tuna overfishing be developed through the IATTC process. It is anticipated that yellowfin tuna management for those vessels operating out of the U.S. West Coast will be incorporated into the HMS fishery management plan through a plan amendment, and that an environmental assessment for the amendment will be developed to analyze the potential impacts to West Coast fisheries and communities. To that end, the HMSMT would appreciate guidance from the Council and/or NMFS as to the timeline for this process in conjunction with scheduled IATTC discussions on this issue.

### **HMSMT Recommendations:**

1. Work with the IATTC in developing a plan to end yellowfin tuna overfishing in the EPO; and
2. Provide guidance to the HMSMT on the process and timing for developing alternatives to address yellowfin tuna overfishing in the EPO.

PFMC  
11/13/06

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<sup>1</sup> Hoyle, S.D and Maunder, M.N. 2006. Status of yellowfin tuna in the eastern Pacific Ocean in 2005 and outlook for 2006. IATTC Working Group to Review Stock Assessments 7<sup>th</sup> Meeting May 15-19, 2006. 94 pp.

HIGHLY MIGRATORY SPECIES ADVISORY SUBPANEL REPORT ON YELLOWFIN  
TUNA STATUS

The Highly Migratory Species Advisory Subpanel (HMSAS) recommends that the Council send a letter to National Marine Fisheries Service (NMFS) and the Department of State (DOS) indicating that it will defer action (such as an fishery management plan (FMP) amendment) addressing yellowfin overfishing until after the June 2007 Inter-American Tropical Tuna Commission (IATTC) meeting. The Council should emphasize to NMFS/DOS that the U.S. Section vigorously seek a solution to the overfishing problem through action at the June 2007 IATTC meeting. This will allow the Council to include in any FMP amendment to address yellowfin overfishing measures based on action taken by the IATTC that are sufficient to end overfishing. In the interim, the Council may wish to develop recommendations to the U.S. Section of the IATTC for their position at the 2007 IATTC meeting.

PPMC  
11/08/06



## SCIENTIFIC AND STATISTICAL COMMITTEE REPORT ON YELLOWFIN TUNA STATUS

Dr. Mark Maunder (Inter-American Tropical Tuna Commission) briefed the Scientific and Statistical Committee (SSC) on the stock assessment conducted for yellowfin tuna in the Eastern Tropical Pacific. The results in document E.2.a, Attachment 6 are slightly different from those presented to the SSC. The SSC reviewed the assessment, noting that there is currently no Terms of Reference document for Highly Migratory Species stock assessments. The report on the yellowfin tuna stock assessment, however, includes most of the information typically included in a stock assessment report used for Council decision-making and hence could be reviewed by the SSC. Based on its review of the assessment, the SSC endorses the assessment, and its use for status-determination purposes.

The SSC notes that the stock assessment is not spatially-structured although the length-frequency of yellowfin catches differ spatially, and by gear-type. The SSC is unclear whether the impact of not having a spatially-explicit model is substantial, but recommends that this issue be examined as part of future assessments.

The assessment indicates that the stock has been relatively stable since 1984. For the base-case assessment, the stock is estimated to be close to  $B_{MSY}$  with a fishing intensity slightly above  $F_{MSY}$ , i.e. under the base-case assessment overfishing is occurring, but the stock is not in an overfished state. The base-case assessment assumes that recruitment is independent of spawning biomass (i.e. steepness equals one). The extent to which fishing intensity exceeds  $F_{MSY}$  depends on the relationship between spawning biomass and recruitment; the lower the value of steepness, the greater the implied extent of overfishing. Dr. Maunder noted that steepness for yellowfin tuna was unlikely to be one, but that it was also unlikely to be much lower than one.

The recruitment used in the calculation of  $B_{MSY}$  is the average over the entire period considered in the assessment. However, Dr. Maunder noted that the results of the assessment are consistent with a change in average recruitment in about 1984. The value of  $B_{MSY}$  would have been higher had it been based on recent (post-1983) recruitment. The SSC was not able to determine whether the stock would be estimated to be currently below  $B_{MSY}$  had  $B_{MSY}$  been defined this way.

Finally, the SSC notes that, at present, very few US-flagged vessels operate in the commercial fishery for yellowfin tuna and hence that multi-national management arrangements are needed to stop overfishing.