Title of Environmental Review: A Limited Entry Program for the Non-Tribal Sectors of the Pacific Whiting Fishery

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Legal Mandate: Magnuson-Stevens Fishery Conservation and Management Act, 50 CFR Part 660

Location of Proposed Activities: The Exclusive Economic Zone (3-200 nautical miles offshore) of the states of Washington, Oregon, and California

Abstract: This environmental assessment (EA) analyzes the effects of implementing a limited entry program for the three non-tribal sectors of the Pacific whiting fishery (shore-based, catcher/processor, mothership) off the coast of Washington, Oregon, and California. Under current regulations, catcher vessels participating in the shore-based and mothership sectors, or vessels participating in the catcher/processor sectors, must be registered to a groundfish limited entry permit. The limited entry permit program has been in place since 1994 and allows appropriately registered vessels to participate in groundfish fisheries targeting any of the 90+ species in the Pacific Coast Groundfish Fishery Management Plan (FMP). The proposed action, which would be finalized as Amendment 15 to the FMP, would require vessels that wish to participate in the non-tribal whiting fishery to qualify for an additional whiting entry limitation program within the overall groundfish limited entry program. Amendment 15 is intended to be an interim measure until the implementation of a trawl individual quota or cooperative management program. The alternatives considered in this EA share the intent to limit future participation in the Pacific whiting fishery, but vary in the qualifications required to secure that privilege. This EA analyzes the effects that a limited entry program for the Pacific whiting fishery, with qualifications for the three non-tribal sectors, has on the socioeconomic, biological, and physical environments. This document also includes economic analyses that address the regulatory impact review (RIR) requirements of Presidential Executive Order 12866 and an Initial Regulatory Flexibility Act analysis (IRFA) to address the requirements of the Regulatory Flexibility Act.

List of acronyms

ABC Allowable Biological Catch
AFA American Fisheries Act
BSAI Bering Sea Aleutian Islands
CFR Code of Federal Regulations
CZMA Coastal Zone Management Act
E.O. Executive Orders
EA Environmental Assessment
EEZ Exclusive Economic Zone
EFH Essential Fish Habitat
EFP Exempted Fishing Permit
EIS Environmental Impact Statement
EMS Electronic monitoring system
ESA Endangered Species Act
ESU Evolutionarily significant unit
FMP Pacific Coast Groundfish Fishery Management Plan
FR Federal Regulations
H&G Head and gut
MMPA Marine Mammal Protection Act
mt Metric ton
NEPA National Environmental Policy Act
Nm Nautical miles
NMFS National Marine Fisheries Service
NOAA National Oceanic and Atmospheric Administration
NWR North West Regional
OY Optimum Yield
PacFIN Pacific Fisheries Information Network
POP Pacific Ocean Perch
PRA Paperwork Reduction Act
PWCC Pacific Whiting Conservation Cooperative
RCA Rockfish Conservation Area
RFA Regulatory Flexibility Act
SBA Small Business Administration
SHOP Shorebased Hake Observation Program
USD United State Dollar
WOC Washington, Oregon, and California

TABLE OF CONTENTS

1.0 PURPOSE OF AND NEED FOR THE ACTION

1.1 Introduction

The groundfish fishery in the Exclusive Economic Zone (EEZ), offshore waters between 3 and 200 nautical miles (nm), off the coasts of Washington, Oregon, and California (WOC) is managed under the Pacific Coast Groundfish Fishery Management Plan (FMP). The Pacific Coast Groundfish FMP was prepared by the Pacific Fishery Management Council (Council) under the authority of the Magnuson Fishery Conservation and Management Act (subsequently amended and renamed the Magnuson-Stevens Fishery Conservation and Management Act). The FMP has been in effect since 1982.

Actions taken to amend FMPs or to implement regulations to govern the groundfish fishery must meet the requirements of several Federal laws, regulations, and executive orders. In addition to the Magnuson-Stevens Fishery Conservation and Management Act (Magnuson-Stevens Act), these Federal laws, regulations, and executive orders include: National Environmental Policy Act (NEPA); Regulatory Flexibility Act (RFA); Endangered Species Act (ESA); Marine Mammal Protection Act (MMPA); Coastal Zone Management Act (CZMA;, Paperwork Reduction Act (PRA); Executive Orders (E.O.) 12866, 12898, 13132, and 13175; and the Migratory Bird Treaty Act.

In addition to addressing MSA mandates, this document is an environmental assessment (EA), pursuant to NEPA. The purpose of an EA is to disclose and evaluate the effects of the proposed action on the human environment, considered by means of a range of alternatives, and "Briefly provide sufficient evidence and analysis for determining whether to prepare an environmental impact statement or a finding of no significant impact" (40 CFR 1508.9). This document contains the analyses required under NEPA, the RFA, E.O. 12866, and other applicable laws. NEPA, E.O. 12866, and the RFA require a description of the purpose and need for the proposed action as well as a description of alternative actions that may address the problem. This document is organized as follows:

- Chapter 1 describes the purpose and need of the proposed action.
- Chapter 2 describes a reasonable range of alternative management actions that may be taken to meet the proposed need.
- Chapter 3 contains a description of the physical, biological, and socioeconomic characteristics of the affected environment.
- Chapter 4 examines the physical, biological, and socioeconomic impacts of the alternative management actions.
- Chapter 5 outlines the consistency with the fishery management plan and other applicable laws.
- Chapter 6 details the regulatory impact review and regulatory flexibility analysis.
- Chapter 7 contains a list of references for this document.

1.2 Background

Amendment 15 to the FMP has been under Council consideration through two separate iterations. During the Council's first-round discussions on Amendment 15 (1999 – 2001), Amendment 15's focus was responding to the 1998 American Fisheries Act (AFA) for West Coast fisheries, including the Pacific whiting fishery. The Council tabled its first-round discussions in 2001 and did not re-examine Amendment 15 until 2006. In its second-round discussions, the Council moved from just looking at the effects of the AFA on West Coast fisheries to a more broad examination of participation, overcapitalization, and the resulting conservation impacts, in the Pacific whiting fishery by both AFA- and non-AFA-vessels. This background section describes Council discussions on Amendment 15.

The 1998 AFA was designed to strengthen United States ownership standards that had been exploited under the Anti-reflagging Act, and to rationalize the Bering Sea and Aleutian Islands (BSAI) walleye pollock fishery (pollock) while protecting non-AFA participants in other fisheries. Management measures required by the AFA include 1) regulations that limit access into the fishing and processing sectors of the BSAI pollock fishery and that allocate pollock to such sectors, 2) regulations governing the formation and operation of fishery cooperatives in the BSAI pollock fishery, 3) regulations to protect other fisheries from spillover effects from the AFA, and 4) regulations governing catch measurement and monitoring in the BSAI pollock fishery. The AFA requires the Council to develop conservation and management measures to protect fisheries under its jurisdiction and the participants in those fisheries from adverse impacts caused by the AFA, or by any fishery cooperatives in the directed pollock fishery. Protection measures can be divided into two basic categories 1) the protection of persons/companies that harvest fish and are not part of the BSAI pollock fleet as defined by the AFA, and 2) the protection of non-AFA fish processors.

To address the concern of AFA impacts on the Pacific coast groundfish fishery the Council voted to establish a control date of September 16, 1999, and to initiate the development of recommendations to restrict AFA-qualified vessels from participating in the Pacific Coast groundfish fishery if, during a qualifying period between January 1, 1994, and September 16, 1999, the vessel: 1) did not harvest at least 50 metric tons (mt) of Pacific whiting in the mothership sector, 2) did not land at least 50 mt of Pacific whiting in the shorebased sector, or 3) did not land groundfish shore-based in the Pacific Coast groundfish fishery (not including fish landed in the Pacific whiting fishery) (64 FR 66158). This control date provided notice to AFA-permitted vessels that might seek to participate in the Pacific Coast groundfish fisheries that current requirements for accessing the fisheries may change.

At its June 2000 meeting, the Council also set a control date of June 29, 2000 for any limited entry permit on that date owned by an owner of a vessel eligible for benefits under the AFA and registered for use with an AFA-qualified vessel that does not meet minimum participation requirements. The control date was intended to indicate that new requirements may be established in the future, and permit holders may be subject to restrictions similar to restrictions imposed on the vessel (65 FR 55214). The intended effect of this action was to discourage speculative entry or increased effort in the Pacific coast groundfish fisheries by entities eligible

for AFA benefits and to provide notice of potential permit restrictions or revocation to purchasers or lessees of limited entry permits owned by AFA-qualified vessel owners and registered for use with AFA-qualified vessels.

In September 2001, the Council reviewed a range of alternatives limiting participation in the West Coast groundfish fisheries and the Pacific whiting fishery under Amendment 15. Analysis in the draft EA identified key issues: qualifying criteria for AFA catcher vessels; whether AFA catcher vessel restrictions would be on vessels, permits held by vessels, or both; qualifying criteria for AFA catcher/processors; qualifying criteria for AFA motherships; and duration of the restrictions (PFMC 2001). The Council adopted a preferred alternative and directed Council staff to complete public review drafts of the analysis and proposed management measures. However, because of competing workload and no threatened imminent harm, the Council tabled action on Amendment 15 in 2001.

By 2006, changes in the Pacific whiting fishery had occurred that led to Council concern about increased participation by both AFA-permitted and non-AFA permitted vessels in the Pacific whiting fishery. A significant increase in the whiting ex-vessel price had attracted several new vessels to the fishery, including some AFA-permitted vessels. Since the Alaska pollock fishery was rationalized, some vessels found they could engage in fishing for Pacific whiting off the West Coast in the spring and early summer and then travel to Alaska to take their shares of pollock later in the summer when Alaskan fishing conditions were more favorable. Increased participation in the Pacific whiting fishery contributed to the achievement of the shore-based whiting harvest limits earlier in the year in 2006 than in 2005, which adversely affected West Coast processors and fishers.

At the March 2006 Council meeting, the Legislative Committee discussed a request by staff of the United States Senate Committee on Commerce, Science, and Transportation for Council input on draft AFA amendatory language. In turn the Council directed Council staff to send a letter to the United States Senate Commerce Committee recommending that “all AFA qualified vessels (original or replacement) - not just catcher/processor vessels - without West Coast landing history prior to June 29, 2000 [one of two Council approved control dates] be prohibited from participating in the Pacific whiting fishery.” At the June 2006 meeting, the Legislative Committee and the Council heard testimony regarding participation by AFA qualified vessels in the shore-based sector of the Pacific whiting fishery. Additional public comments stated that Council recommended restrictions on AFA qualified vessels would not go far enough to protect all sectors of the West Coast Pacific whiting fishery and that sector specific “sideboards” (landing requirements) should be requested and that current efforts to address the issue through federal legislation were unlikely to address all of the Council’s concerns. In response, the Council and the Legislative Committee recommended revisiting Amendment 15 in the groundfish FMP as a potential mechanism for protecting West Coast fisheries from adverse impacts caused by the AFA.

In September 2006, the Council recommended that NMFS take emergency action to prevent new entry into the Pacific whiting fishery in 2007. The basis for the Council’s recommendation was

conservation concerns that could arise from an accelerated race for fish[1] due to new entry of AFA-permitted vessels to the fishery. Members of the Council expressed concern that a race for fish could result in excessive harvest of whiting early in the season, greater bycatch of overfished rockfish and higher levels of incidental catch of endangered and threatened salmon in the early season. The Council also noted its concern that new entry of AFA-permitted vessels could result in early achievement of the United States directed harvest whiting quotas, leaving West Coast-based vessels facing no fishing or very limited fishing while the AFA-permitted vessels could return to the rationalized Alaska pollock fisheries, in which they also had an interest. The Council's proposal would only have prohibited AFA-permitted vessels from entry into the Pacific whiting fishery in 2007, and only if they did not have a history of involvement in the fishery prior to 2006. Other non-AFA vessels could still have entered the fishery.

In a letter of January 11, 2007, the NMFS Northwest Regional Administrator denied the Council's request for an emergency rule. The letter noted that the Council action was intended to address actual or potential harm to West Coast fisheries from the AFA; however the earlier closure of the whiting shore-based fishery in 2006 (compared to 2005) was due to new participation by both AFA-permitted vessels and non-AFA vessels. While acknowledging that new market conditions were likely to attract additional vessels, the Regional Administrator pointed out that the proposed action would have denied new entry to a selected category of vessels (i.e., AFA-permitted vessels) but not all vessels. The Regional Administrator noted that the guidelines for the use of emergency rules call for use of notice-and-comment procedures when there are controversial actions with serious economic effects, except under extraordinary circumstances. Therefore, the proposal, as with other allocation decisions, would more appropriately be handled through the Council's full rulemaking process.

The NMFS Regional Administrator subsequently advised the Council on February 13, 2007, that if it were to submit a proposal that dealt more broadly with the issue of conservation risks and management problems due to potential new entry of any new vessels into the directed whiting fishery, NMFS would review that proposal on its own merits. NMFS would continue to be concerned if the request based the proposed action on the AFA rather than on the Magnuson-Stevens Act.

At its March 2007 meeting, the Council discussed a schedule for final Council action for Amendment 15 to take place at either its June or September 2007 meeting. As an interim protective mechanism, the Council voted to request that NMFS enact an emergency rule for the 2007 non-tribal season to prohibit participation in the 2007 non-tribal Pacific whiting fishery by all vessels without sector-specific history in the fishery prior to January 1, 2007 (72 CFR 27760). In addition to the factors that were presented in the 2006 Council emergency rule request, there were four new pieces of information presented at the March 2007 Council meeting that exacerbated concern for an accelerated race for fish. First, the price for whiting continued to

[1] The Pacific whiting fishery is managed under a "primary" season structure where vessels harvest Pacific whiting until the sector allocation is reached and the fishery is closed. This is different from most West Coast groundfish fisheries, which are managed under a "trip limit" structure, where catch limits are specified by gear type and species (or species group) and vessels can land catch up to the specified limits. Incidental catch of other groundfish species in the Pacific whiting fishery, however, is managed under the trip limit structure.

increase to unprecedented levels, ex-vessel prices increased from $77.00 per ton in 2004 to $137.00 per ton in 2006 - nearly doubling since 2004, and increasing by over 22 percent compared to 2005. Industry projections for the 2007 season were that prices would continue to increase to over $176.00 per ton. Second, the United States OY of whiting was reduced by 10 percent for the 2007 season compared to 2006. Third, because of higher than projected canary rockfish bycatch rates in the non-whiting fishery, the Council took action in March 2007 that placed more severe constraints on the limited entry non-whiting trawl fishery. Vessels that had reduced opportunities due to the expanded rockfish conservations areas may have had an incentive to join the whiting fishery. Fourth, the quota for Alaskan pollock was reduced in 2007[2]. All of these recent changes increased the likelihood that there could be accelerated race for fish: the first by making entry more lucrative for additional vessels, the second by constraining supply of whiting and leading to more pressure among vessels to quickly capture the more limited supply of whiting, and the third and fourth by increasing the relative attractiveness of entering the whiting fishery this year.

Faced with this information, the Council adopted and submitted a proposal to NMFS to address the anticipated issues in 2007. The Council's proposal was to: 1) prohibit via NMFS emergency action participation in either the shore-based, catcher/processor, and mothership sectors of the fishery by any vessel that had no sector-specific history of participation prior to January 1, 2007; and 2) commit the Council to complete Amendment 15 to the FMP to address concern regarding increased participation by AFA vessels for the long term, consistent with the Magnuson-Stevens Act, the AFA, and other applicable law.

NMFS, as stated in the *Federal Register*, agreed that " if [the emergency rule] is not implemented, an accelerated 'race for the fish' is likely to cause serious conservation and management problems, including bycatch of overfished rockfish, excessive catch of endangered and threatened salmon, and severe disruption of other sectors. This rule will help maintain stability in the whiting fishery and other groundfish fishing sectors in 2007 while the Council completes its FMP top resolve groundfish and whiting fishing fleet capacity issues for the long term." (72 FR 27759, May 17, 2007).

The NMFS implemented the Council's request for emergency action on May 14, 2007. The regulation prohibited participation in the 2007 whiting fishery by any vessel that had no history of participation within a specific sector of the whiting fishery during the period between December 31, 1996 and January 1, 2007. The original action remained in effect until November 13, 2007, and was subsequently extended until May 13, 2008 (72 FR 64952, November 19, 2007). Emergency actions may initially be effective for as long as 180 days, and may be extended for an additional 186 calendar days, but not longer.

The Council continued to address Amendment 15 during the April 2007 meeting. At this meeting, the Council adopted a purpose and need statement to limit sector-specific participation by AFA-permitted vessels without historical participation, and adopted a range of alternatives.

[2] Because the midwater trawl fishing gear used in the shore-based whiting fishery is similar to gear used in the Bering Sea/Aleutian Islands pollock fishery, the added equipment cost for participation is minimal for Alaskan pollock vessels. Individuals entering the whiting fishery would need to acquire the necessary West Coast trawl limited entry permit(s); the number of permits needed is directly related to the size of the vessel.

Following the April Council meeting, an inter-agency workgroup led by the Oregon Department of Fish and Wildlife was established composed of staff from that agency, as well as Washington Department of Fish and Wildlife, NMFS, and the Pacific Fishery Management Council. This workgroup was assigned with conducting analysis of the selected alternatives and completing the EA for Amendment 15.

During the initial planning and analysis, the workgroup identified a need for Council clarification on the purpose and need statement in order to develop and analyze a range of alternatives for Council consideration. During the June 11-15, 2007 Council meeting, the Council refined the previously adopted purpose and need statement, expanding it to prohibit participation by all vessels, regardless of qualification under the AFA. The revised statement and subsequent proposed alternatives, which are presented in this document, were designed to more fully address conservation risks and management problems as a result of new entrants to the Pacific whiting fishery.

At the September 2007 Council meeting, the Council reviewed a draft EA and adopted a Final Proposed Action for limiting participation in the Pacific whiting fishery. The draft EA was commented on by the Science and Statistical Committee, Groundfish Advisory Panel and the public. This final EA addresses those comments where appropriate throughout the document.

1.3 Description of the Proposed Action

The proposed action is to develop a limited entry program for the three non-tribal sectors of the Pacific whiting fishery (shore-based, catcher/processor, mothership) off the coast of Washington, Oregon, and California to protect the West Coast non-tribal Pacific whiting fishery and the participants in the fishery from adverse impacts caused by vessels with no sector-specific significant historical participation in the Pacific whiting fishery. The proposed limitations on entry are intended to restrict new vessels from entering the fisheries, which could accelerate the race for fish. However, the entry limitations proposed under Amendment 15 may be insufficient to reduce overcapitalization and incentives for vessels to engage in "the race for fish" that currently exist in the Pacific whiting fishery. The proposed action is intended to serve as an interim measure to limit potential participation in the Pacific whiting fishery within the U.S. West Coast Exclusive Economic Zone sunsetting such time until with implementation of a trawl rationalization program under Amendment 20 to the Groundfish FMP including the non-tribal whiting sectors.

1.4 Purpose of and Need for the Action

In 2006, vessels with no previous participation in the Pacific whiting fishery entered the fishery. Additionally, participation shifts between the whiting sectors occurred in 2006. The increased participation resulted in concern by fishers and managers that more vessels may want to enter the fishery or shift between sectors of the fishery. New entry into the Pacific whiting fishery is likely given the increased whiting ex-vessel prices, increased prices for headed and gutted whiting as well as for fillet products, declining West Coast trawl opportunities due to overfished species rebuilding measures, and declining pollock quotas off of Alaska. Action is needed to restrict new vessels from entering into the fully capitalized Pacific whiting fishery. If fishing

capacity increases (becomes further overcapitalized) the intensity of fishing may increase such that fishers strive to catch as much Pacific whiting as possible as quickly as possible (also referred to as a derby fishery or the race for fish). This race constrains the available time for vessels to search for whiting, which can cause fishers to neglect safety and bycatch concerns to which they would otherwise be more attentive. This accelerated race for fish would likely increase the incidental catch of non-whiting species, increase management costs, and decrease the economic returns to historical participants and communities.

1.5 Relationship to Other Plans and Policies

To encourage consistency among plans the relationship of the alternative actions to existing plans must be examined. Plans and policies that may affect or be affected by the alternative actions are discussed below.

Magnuson-Stevens Act and the Groundfish Fishery Management Plan
The alternative actions are consistent with the national standards and guidelines specified in the Magnuson-Stevens Act and the goals and objectives of the FMP. The alternative actions in the context of the Magnuson-Stevens Act and the Fishery Management Plan are thoroughly discussed in subsections 5.1 and 5.2.

The proposed actions also relate to other FMP Amendments.

Amendment 10
In 1996, Amendment 10 to the groundfish FMP was combined with Amendment 12 to the Pacific Coast Salmon FMP to, in part, allow the retention of incidentally trawl-caught salmon as prohibited species under a Council-approved monitoring program. The monitoring program for the whiting fishery has been in an ongoing experimental mode since that time. In 2006, however, the Council finalized recommendations for long-term revisions to Federal groundfish regulations to create a maximized retention and monitoring program for the Pacific whiting shore-based fishery. The alternative actions proposed under Amendment 15 may restrict vessel eligibility for participating in the whiting fishery in future years, reducing the universe of vessels to which the maximized retention and monitoring program would apply.

Amendment 20
Amendment 20 to the FMP examines the creation and implementation of a capacity rationalization plan that increases net economic benefits, creates individual economic stability, provides for full utilization of the trawl sector allocation, considers environmental impacts, and achieves individual accountability of catch and bycatch. If the trawl fishery is rationalized under Amendment 20, then the proposed action under Amendment 15 would be an interim measure.

Groundfish Fishing Capacity Reduction Program
In 2003, NMFS implemented a $46 million groundfish fishing capacity reduction program, also known as the limited entry trawl permit and vessel buyback program (68 FR 62435, November

4, 2003.) Most of this program was underwritten by a 30 year $36 million loan to the fishing industry which is currently being repaid by ex-vessel landings taxes. The groundfish reduction program's objective was to reduce the number of vessels and permits endorsed for the operation of groundfish trawl gear. The program also involved corollary fishing capacity reduction in the California, Oregon, and Washington fisheries for Dungeness crab and pink shrimp fisheries. This program retired 91 limited entry trawl vessels and their associated federal and state fishing permits. Because the buyback program explicitly prohibits the beneficiaries from the program from using their vessels in any fishing endeavor; none of these vessels are eligible to fish in the whiting fishery.

Pacific Fishery Management Council Strategic Plan

The Amendment 15 alternatives support the Council's Strategic plan, which addressed the prevention of future overcapacity in the whiting fishery. The plan recommended implementing whiting endorsements with qualification for the endorsement based on landing history since 1994, the start of West Coast limited entry. While the alternatives do not promote an endorsement, a list of vessels eligible to participate in the Pacific whiting fishery would be maintained by the NMFS. Alternatives 1 and 2 contain the 1994 start date for historical participation, which is consistent with the Strategic Plan recommendations. The Strategic Plan recommends bringing harvest capacity to a level that is in balance with the economic value of the resource. The plan also recommended limiting capacity while the permanent rationalization program is being developed. As previously mentioned, Amendment 15 would prohibit new entrants and additional harvest capacity until such a time that the Council can create a permanent capacity reduction program through Amendment 20 or other initiative. If the trawl fishery is rationalized under Amendment 20, then the proposed action under Amendment 15 would be an interim measure. The Strategic Plan also encourages the use of incentives to encourage fishermen to fish in areas or times when bycatch is lower. Reducing competition and slowing the race for fish, under Amendment 15, may provide the opportunity to fish during times and in areas with lower rockfish bycatch.

1.6 Applicable Federal Permits, Licenses, or Authorizations Needed in Conjunction with Implementing the Proposed Action

In June 2007, the Council took final action to adopt a maximized retention and monitoring program for the Pacific whiting shore-based fishery. When that program is implemented, in addition to a limited entry permit with a trawl endorsement, vessels participating in future shore-based whiting fisheries will be required to apply for and obtain an annual whiting certification, which will serve as a declaration of intent to participate for a particular fishing year. The alternative actions considered under Amendment 15 are expected to result in a license limitation program for all-three sectors of the non-tribal whiting fishery. The alternatives considered base eligibility for this program on vessel landings, rather than on landings associated with particular limited entry permits. Therefore, NMFS anticipates issuing vessel licenses that are separate from limited entry permits, but which would be required in addition to limited entry permits for participation in any of the three non-tribal whiting sectors. Annual certifications for vessels in the shore-based whiting fleet would be separate from the vessel licenses that may result from Amendment 15. Implementing regulations under Amendment 15 would specify the necessary application procedures for the Pacific whiting fishery.

2.0 ALTERNATIVES

This chapter describes the alternative management actions that could be implemented to prevent increased participation in the non-tribal Pacific whiting fishery by vessels with no sector-specific participation during the qualifying periods. The proposed limitations on entry are intended to restrict introduction of additional vessels in the Pacific whiting fishery, which could result in an accelerated race for fish. This action is anticipated to be in effect until the Council recommends and NMFS implements a trawl rationalization program, such as that being considered under Amendment 20 to the groundfish FMP.

For the shore-based and mothership catcher vessel sector, the alternatives proposed by the Council do not seek to restrict or exclude participation of vessels who have participated in the Pacific whiting fishery during the qualifying period. For the catcher/processor and mothership sector and depending on the alternative, vessels with limited participation (i.e., less than 1,000 mt catching or processing in a single year) in that sector during the qualifying period could be restricted. Preventing further capacity in the Pacific whiting fishery could be accomplished by excluding vessels that do not meet qualifying criteria for sector specific significant participation in the Pacific whiting fishery during the qualifying period.

The primary factors taken into consideration when developing the alternatives were: 1) defining sector-specific significant historical participation by vessels, and 2) determining qualifying dates by sector. The Council recommended that any participation during the qualifying period was a sufficient qualifier for all sectors. Specifically: The following sector-specific license qualification criteria apply:

Catcher/processor vessels,-- the qualifying criteria for a Pacific whiting vessel license is evidence of having caught and processed any amount of whiting during a primary catcher/processor season during the period January 1, 1997 through January 1, 2007.

Mothership at-sea processing vessels, the qualifying criteria for a Pacific whiting vessel license is documentation of having received and processed any amount of whiting during a primary mothership season during the period January 1, 1997 through January 1, 2007.

Catcher vessels delivering whiting to at-sea mothership processing vessels, the qualifying criteria for a Pacific whiting vessel license is documentation of having delivered any amount of whiting to a mothership processor during a primary mothership season during the period January 1, 1997 through January 1, 2007.

Catcher vessels delivering whiting to shoreside, the qualifying criteria for a Pacific whiting vessel license is documentation of having made at least one landing of whiting taken with mid-water trawl gear during a primary shore-based season during the period January 1, 1994 through January 1, 2007 and where the weight of whiting exceeded 50 percent of the total weight of the landing.

The earliest date for defining the start of participation under the proposed actions is January 1, 1994, the year in which the West Coast limited entry trawl permit system began. No catcher/processors initially qualified for a permit, but catcher/processor vessel owners later

purchased the permits necessary to operate in the fishery. An alternative date for the start of the qualifying period is January 1, 1997 for catcher/processors and motherships, which represents the year in which the at-sea allocation was specifically divided into catcher/processor and mothership allocations. Prior to 1997, 60 percent of the OY was available in open competition between the shore-based and at-sea sectors. The remaining 40 percent was reserved for the shore-based fishery.

The Council designed alternatives that had different end dates for the qualifying periods. Some alternatives had a January 1. 2006 end date while others had a January 1. 2007 end date (see Table 1). The qualifying period end date of January 1, 2006 reflects the Pacific whiting fishery through the 2005 season, prior to the 22 percent increase in the ex-vessel value of Pacific whiting and the subsequent increased participation in the shore-based sector by 7 vessels that had not previously participated in that sector of the whiting fishery, and one mothership processor that had not previously participated in the fishery. The qualifying period end date of January 1, 2007 reflects the Pacific whiting fishery through the 2006 season, after improved market conditions and increased participation in the shore-based and mothership sectors by the new entrants.

The proposed actions for limiting participation in the Pacific whiting fishery are found in Table 1 and further detailed below.

Table 1 Alternatives for Limiting Vessel Participation in the Pacific Whiting Fishery

Status quo (No Action)	**Alternative 1** **(includes participation through the 2005 season)**	**Alternative 2** **(includes participation through the 2006 season)**	**Alternative 3** **(2007 E-Rule 72 CFR 27759)**	**Alternative 4** **(Proposed Action)**
Harvest capacity limited only by the number and availability of limited entry permits with trawl endorsements: Catcher vessels in the shore-based and mothership sectors and catcher/processors must be registered to a Pacific coast groundfish limited entry permit with a trawl endorsement Processing capacity in the mothership and shore-based sectors are not limited.	**Alternative 1A** All vessels required to have sector specific participation between January 1 1994 and January 1, 2006 Catcher/processor and motherships required to have significant participation	**Alternative 2A** All vessels required to have sector specific participation between January 1, 1994 and January 1, 2007 Catcher/processor and motherships required to have significant participation	All vessels required to have sector specific participation between January 1, 1997 and January 1, 2007	**Alternative 4A** Shore-based vessels required to have sector specific participation between January 1, 1994 and January 1, 2007
	Alternative 1B Shore-based and mothership catcher vessels required to have sector specific participation between January 1 1994 and January 1, 2006 Catcher/processor and mothership Vessels required to have significant sector specific history of participation between January 1, 1997 and January 1, 2006	**Alternative 2B** Shore-based and mothership catcher vessels required to have sector specific participation between January 1, 1994 and January 1, 2007 Catcher/processor and mothership Vessels required to have significant sector history of participation between January 1, 1997 and January 1, 2007		**Alternative 4B** – Catcher/processor, mothership catcher and mothership vessels required to have sector specific participation between January 1, 1997 and January 1, 2007

For Alternatives 1 and 2, significant historical participation is defined as having caught and processed at least 1,000 metric tons in any one qualifying year for catcher/processors; and having received at least 1,000 metric tons of whiting in any one qualifying year for motherships.

All of the action alternatives, those alternatives other than status quo, would limit participation in the whiting fishery on a sector-specific basis. This means that a vessel that qualifies to participate in one of the three non-tribal sectors would not necessarily qualify to participate in another sector, unless that vessel meets the qualification requirements for both sectors. All of the

alternatives restrict participation in the fishery only by vessels, which means that participation in the shore-based sector by shore-based processing plants would remain an open competition under all of the action alternatives.

All of the action alternatives are intended to be interim programs that would constrain participation in the non-tribal whiting fishery until the Council is able to develop a more detailed and long-term rationalization program for the limited entry trawl fishery. A vessel's qualification for participation in the whiting fishery under Amendment 15 is not a guarantee of future participation in any West Coast groundfish fishery under a future trawl rationalization program. Conversely, a vessel's exclusion from participation in the whiting fishery under Amendment 15 is not guaranteed to continue under a future trawl rationalization program.

Specific provisions of each of the alternatives are provided below. A comparison of the number of vessels that would be eligible to participate in the future whiting fishery is provided in Table 2. Although Table 2 notes all of the vessels that have historic whiting catch compatible with the landings qualifications, no whiting catch made by a vessel purchased through the groundfish fishing capacity reduction program may be used to qualify for a whiting license limitation program implemented under Amendment 15 (see subsection 1.4).

2.1 Status Quo (No Action): Limit Participation in the Pacific Whiting Fishery by Using Only the Current Limited Entry System

Under the No Action Alternative, any vessel registered to a West Coast limited entry groundfish permit with a trawl endorsement (176 existing permits) could harvest fish in the shore-based, catcher/processor, and mothership sectors of the Pacific whiting fishery. For new, unpermitted vessels to be registered to a limited entry groundfish permit, they would need to purchase trawl endorsement permit(s) adequate to the size of the vessel.[3] Under this alternative, increased or decreased participation in the whiting fishery is expected to be driven by whiting allocations, market conditions for whiting products, processor capacity, cost of gear, opportunity in other West Coast groundfish fisheries, and other West Coast and Alaskan fishing opportunities such as the BSAI pollock fishery. If fishing capacity increases (becomes further overcapitalized) the intensity of fishing may increase such that fishers strive to catch as much Pacific whiting as possible as quickly as possible (also referred to as a derby fishery or the race for fish). In the at-sea catcher processor sector, the current cooperative (Pacific Whiting Conservation Cooperative) is likely to dissolve if additional vessels enter, resulting in less cooperation in reducing bycatch, and perhaps, resulting into derby fishery.

The PWCC is a private business arrangement with approval from the Department of Justice, comprised of four companies, which own all of the catcher/processor vessels that have fished in this sector prior to 2007. These companies divide between themselves the Pacific whiting allocation received by this sector (34 percent) of the allowed non-tribal Pacific whiting harvest). The public comment section of the May 14, 2007 Emergency Rule to temporarily limit any vessel from participating in the fishery unless it had a past history in the fishery summarized

[3]Each limited entry permit is endorsed with the length overall or the size of the vessel that initially qualified for the permit. Vessels must combine enough limited entry permits in order to cover the length overall. Only 176 limited entry permits with trawl endorsements are currently available for use in all groundfish fisheries.

PWCC's concerns. The Pacific Whiting Conservation Cooperative wrote reiterating its support for emergency action. It noted that the voluntary industry arrangement that results in the slow pace of fishing early in the season and that includes collaboration and communication to avoid bycatch would likely end if there were new entry to the fishery. The PWCC indicated that there would be a race for fish leading to all the problems discussed by the Council when it agreed to request emergency action (Federal Register, Volume 72, May 17, 2007, Number 95, page 27762). Therefore, the entry of another company into the fishery would likely void the PWCC agreement, creating a race for fish in the catcher/processor sector of the Pacific whiting fishery.

This race constrains the available time for vessels to search for whiting, which can cause fishers to neglect safety and bycatch concerns to which they would otherwise be more attentive. This accelerated race for fish would likely increase the incidental catch of non-whiting species, increase management costs, and decrease the economic returns to historical participants and communities.

2.2 Alternative 1: Limit Participation Through the 2005 Season

Alternative 1 would allow only vessels with a history of participation in the Pacific whiting fishery during the qualifying years, as defined below, to operate in those sectors where they meet the historical participation requirements. This alternative is based on participation in the fishery since license limitation was implemented through the 2005 season. For the at-sea processing sector, a sub option exists with a start date that represents the year in which the at-sea allocation was specifically divided into catcher/processor and mothership allocations. Adverse harm to the fishery from vessels that joined the fishery in 2006 and any new vessels that may chose to join in the future would be prevented under this alternative.

Alternative 1A
Limit participation to only those vessels with a history of participation as catcher vessels in the shore-based and mothership sectors during the January 1, 1994 – January 1, 2006 qualification period.

For the catcher/processor and mothership sectors only, limit participation to those vessels with significant historical participation during the January 1, 1994 – January 1, 2006 qualification period. Significant historical participation is defined as having caught and processed at least 1,000 metric tons in any one qualifying year for catcher/processors; and having received at least 1,000 metric tons of whiting in any one qualifying year for motherships.

Alternative 1B
Limit participation to only those vessels with a history of participation as catcher vessels in the shore-based and mothership sectors during the January 1, 1994 – January 1, 2006 qualification period.

For catcher/processors and motherships only, limit participation to only those vessels with significant participation records during the January 1, 1997 – January 1, 2006 qualifying period. Significant historical participation is defined as having caught and

processed at least 1,000 metric tons in any one qualifying year for catcher/processors; and having received at least 1,000 metric tons of whiting in any one qualifying year for motherships.

This alternative excludes vessels that entered the fishery for the first time in 2006. Vessels that have purchased limited entry permits since 2005 with the intent to join the whiting fishery or vessels that purchased equipment necessary to fish for Pacific whiting, but had not previously done so, would be prohibited from future participation under Alternative 1.

2.3 Alternative 2: Limit Participation Through the 2006 Season

Alternative 2 would allow only vessels with a history of participation in the Pacific whiting fishery during the qualifying years, as defined below, to operate in those sectors where they meet the historical participation requirements. This alternative is based on participation in the fishery since license limitation was implemented through the 2006 season. For the at-sea processing sector, a sub option exists with a start date that represents the year in which the at-sea allocation was specifically divided into catcher/processor and mothership allocations. Adverse harm to the fishery from vessels that may chose to join in the future would be prevented under this alternative.

Alternative 2A
Limit participation to only those vessels with a history of participation as catcher vessels in the shore-based and at-sea catcher vessel sector during the January 1, 1994 – January 1, 2007 qualification period.

For catcher/processors and motherships only, limit participation to those vessels with significant historical participation during the January 1, 1994 – January 1, 2007 qualification period. Significant historical participation is defined as having caught and processed at least 1,000 metric tons in any one qualifying year for catcher/processors; and having received at least 1,000 metric tons of whiting in any one qualifying year for motherships.

Alternative 2B
Limit participation to only those vessels with participation records as catcher vessels in the shore-based and at-sea catcher vessel sector during the January 1, 1994 – January 1, 2007 qualification period.

For catcher/processors and motherships only, limit participation to those vessels with significant historical participation during the January 1, 1997 – January 1, 2007 qualification period. Significant historical participation is defined as having caught and processed at least 1,000 metric tons in any one qualifying year for catcher/processors; and having received at least 1,000 metric tons of whiting in any one qualifying year for motherships.

This alternative includes vessels that entered the fishery during the 2006 season. More vessels are eligible to participate in the Pacific whiting fishery under Alternative 2, compared to

Alternative 1. Vessels that purchased limited entry permits since 2006 with the intent to join the whiting fishery or vessels that purchased equipment necessary to fish for Pacific whiting, but had not previously done so, would be prohibited from future participation under Alternative 2.

2.4 Alternative 3: Conditions Under the 2007 Emergency Rule (72 CFR 27759)

Alternative 3 reflects the spirit of the 2007 emergency rule, with participation dates reflecting the first year of the whiting sector allocation scheme that is currently in use (1997) through the 2006 season. Adverse harm to the fishery from any new vessels that may chose to join in the future would be prevented under this alternative.

Vessels that participated prior to 1997 and after January 1, 2007, would be excluded under this alternative. Alternative 3 provides the greatest participation restriction of any of the other action alternatives, primarily because it removes catch from some of the earliest years (1994-1996) from consideration. Similar to Alternatives 1 and 2, vessels that purchased limited entry permits with the intent to join the whiting fishery or vessels that purchased equipment necessary to fish for Pacific whiting, but had not previously done so, would be prohibited from future participation under Alternative 3.

2.5 Alternative 4: Proposed Action (Council Preferred)

The proposed action is a combination of Alternative 2A for the shore-based sector and Alternative 3 for all other sectors.

Alternative 4A.
Limit participation to only those vessels with participation records as catcher vessels in the shore-based sector during the January 1, 1994 – January 1, 2007 qualification period.

Alternative 4B
For catcher/processors, mothership catcher vessels, and mothership processors, limit participation to those vessels between January 1, 1997 and January 1, 2007.

The Council's preferred alternative would restrict participation in the non-tribal sectors as follows: catcher vessels in the Pacific whiting shoreside fishery would be required to have made sector-specific Pacific whiting landings in any one calendar year during the period of January 1, 1994 through January 1, 2007; vessels participating in either the catcher/processor or mothership sector would be required to have either caught and processed Pacific whiting (catcher/processor sector,) caught and delivered Pacific whiting (catcher vessels in mothership sector,) or processed Pacific whiting (motherships) in any one calendar year during the period of January 1, 1997 through January 1, 2007. This would be the first participation requirement for motherships, which, unlike catcher vessels, have not needed a groundfish limited entry permit registered to them. The Council preferred the 1994 qualifying period start date for the shore-based sector because that was the first year the groundfish limited entry program was in effect. For the at-sea sectors, however, 1997 was the preferred qualifying period start date because that was the first

year that Pacific whiting was specifically allocated between the three sectors. Prior to 1997, Pacific whiting catch was allocated between vessels that landed on shore and those that caught Pacific whiting for processing at sea.

This alternative includes vessels that entered the fishery during the 2006 season. Vessels that have purchased limited entry permits since 2006 with the intent to join the whiting fishery or vessels that purchased equipment necessary to fish for Pacific whiting, but had not previously done so, would be prohibited from future participation under Alternative 4.

Table 2 summarizes the number of eligible vessels by sector and alternative. For these alternatives, buyback vessels[4] that qualified under each alternative were easily identified and removed from the set of effective vessels. However, qualifying vessels that no longer hold limited entry permits with a trawl endorsement, vessels that have sunk, or that have been rendered inoperable were not identified.

Table 2. Numbers of Eligible Vessels by Sector and Alternative.

Vessel Category	Alternative 1A 1/1/94-1/1/06	Alternative 2A 1/1/94-1/1/07	Alternative 3 1/1/97-1/1/07	**Alternative 4A 1/1/94-1/1/07 Proposed Action**
Shore-based catcher vessels	57 [68][1]	64 [75] [1]	56 [65] [1]	**64 [75] [1]**
Mothership catcher vessels	62 [64][1]	62 [64][1]	39	
Catcher/processors	11	11	10	
Motherships	7[2]	8[2]	7	
	Alternative 1B 1/1/97-1/1/06	Alternative 2B 1/1/97-1/1/07		**Alternative 4B 1/1/97-1/1/07 Proposed Action**
Catcher/processors	10	10		**10**
Mothership catcher vessels				**39**
Motherships	6	7		**7**

[1] Numbers in brackets indicate the total number of vessels that would have qualified had the buyback program not occurred. [2] Three catcher/processors acted as mothership processors between 1994 and 1996; however, these vessels did not have significant historical participation (i.e., process greater than 1,000 mt) and therefore did not qualify as motherships.

2.6 Alternatives Considered but not Analyzed in Detail

Only restrict participation by AFA-permitted vessels in the whiting fishery

In September 2006, the Council requested that NMFS take emergency action to prevent new entry into the Pacific whiting fishery in 2007 by AFA-permitted vessels. The Council stated its concern that recent new entrants into the whiting fishery had accelerated the race for fish in the fishery, and requested that NMFS use its emergency rule authority to prohibited AFA-permitted

[4] In 2003, NMFS implemented a groundfish fishing capacity reduction program (68 FR 62435, November 4, 2003.) This program bought 91 limited entry trawl vessels and permits permanently out of all fisheries.

vessels from entry into the Pacific whiting fishery in 2007, and only if they did not have a history of involvement in the fishery prior to 2006. The Council did not request that NMFS prohibit non-AFA vessels from becoming new entrants to the fishery in 2007.

In a letter of January 11, 2007, the Northwest Regional Administrator denied the Council's request for an emergency rule. The letter noted that NMFS's decision on whether to grant the emergency rule request depended on whether the perceived harm to the Pacific whiting fishery was caused by the AFA itself, and if there were harm from the AFA, whether the potential harm to the fishery during the 2007 season outweighs the benefits of Council's full rulemaking process. The Regional Administrator's letter pointed out that new entry into the 2005 and 2006 whiting fisheries by both vessels and processors had been spurred by increasing whiting prices, and that the pool of new entrants included both AFA-permitted and non-AFA vessels. This letter stated the Regional Administrator's belief that participation in the 2007 whiting fishery would be dependent on whiting price per pound, not on whether AFA-permitted vessels were prohibited from participation, and that harm to the whiting fishery from increased fishery participation could not be linked to the AFA itself. Because of the lack of a link to harm from the AFA and because NMFS believes that allocation decisions need to be made through full Council deliberation and a full rulemaking process, rather than via an emergency rule, NMFS denied the Council's September 2006 request. Based in part of this denial, the Council decided to frame its alternatives for Amendment 15 so that they would deal more broadly with the issue of conservation risks and management problems due to potential new entry of any new vessels into the directed whiting fishery.

Implement Rules under Secretary of Commerce Authority under the AFA
The Secretary of Commerce has the authority under the AFA to establish regulations and control entry into the Pacific whiting fishery by AFA-permitted vessels. Developing an alternative under the AFA was considered and rejected by the Council at its June 2007 meeting. By rejecting action under the AFA, the Council also rejected participation dates relative to the AFA control dates previously specified by the Council (64 FR 66158 and 65 FR 55214) or the passage of the AFA (1999). The NMFS previously indicated to the Council that the potential problems that would arise with new entry to the Pacific whiting fishery were not limited to the prospect of AFA-permitted vessels entering the fishery. Conservation and management problems were likely to arise with any new entry to the fishery. Further, use of Secretarial authority under the AFA would be more complex and take longer than under the Magnuson-Stevens Act and the rule could likely not be implemented under the AFA in a time frame to be useful in 2008. Therefore, this alternative was rejected without further analysis.

Restrict participation by AFA-permitted vessels in the non-whiting groundfish fisheries
The Council also considered increased participation by AFA-permitted vessels in the non-whiting fishery at the June 2007 Council meeting. The Council stated its desire to implement measures to protect the whiting fishery, from vessels with no previous participation, in time for the 2008 whiting fishery. The Council rejected an expanded action which would restrict AFA-permitted vessel participation in the non-whiting groundfish fishery since it would considerably lengthen the amount of time for the analysis, preventing implementation in time for the 2008 Pacific whiting season.

3.0 AFFECTED ENVIRONMENT

This action addresses the number of vessels eligible to participate in the whiting fishery and does not directly alter allowable harvest levels of any groundfish species. Some alternatives could affect fishing effort levels in the fishery, which may have an indirect effect on the amount of non-target groundfish taken as bycatch in the whiting fishery. The whiting fisheries are relatively pure, meaning that very little bycatch is taken relative to the amount of target species taken. However, since whiting is a high-volume fishery it is important to consider the absolute amounts of bycatch for certain species in addition to the relative amounts. Yellowtail rockfish, a species of healthy abundance, is the groundfish species most commonly incidentally taken in the whiting fishery, at a rate of 0.0011 mt per metric ton of whiting in 2006 (NMFS 2006a.) Because of the whiting fishery's low bycatch rates for all non-target species, the principal non-target groundfish species of concern in this EA are overfished groundfish species. Therefore, the assessment of the impacts of the alternatives on groundfish focuses on the effects of the action on Pacific whiting and overfished groundfish species, rather than on all groundfish species more broadly.

The principal non-target protected species of concern in the whiting fishery is Chinook salmon, the bycatch of which is managed and has been evaluated under the ESA. As with non-target groundfish species, some of the alternatives could constrain fishing effort levels in the fishery, which could have the potential indirect effect of reducing the already low levels of annual bycatch of listed salmon. Marine mammal and seabird interactions with this fishery have been low or do not occur on an annual basis and are expected to either remain unchanged because this action would not affect the geographic extent of the fishery, or interactions are expected to decline because the action would provide fishery participants with a greater opportunity to fish more slowly and with more care than under status quo. Sea turtle interactions with this fishery have not occurred because the geographic extent of the fishery does not overlap with marine turtle habitat; this action would not affect the geographic extent of the fishery.

Based on the above fishery characteristics, NMFS has identified three environmental components for further evaluation and discussion in these chapters: target and nontarget overfished groundfish species; protected species, with particular attention given salmonid species; and the socioeconomic environment. The first two of these items are discussed and evaluated below as biological characteristics of the environment, while the latter is discussed and evaluated below within the sections on socioeconomic characteristics of the environment.

Chapter 3 serves as the baseline description of the affected environment and provides a summary of current conditions, which results from the interaction between past and present actions and underlying natural phenomena. Chapter 4 is then used to comparatively describe how the alternatives could be expected to alter future baseline conditions by evaluating the impacts of the alternatives. This includes a description of how the alternatives are expected to affect the baseline environment, and a summation of these effects in combination with past, present, and reasonably foreseeable future actions – the cumulative impact assessment.

No mitigation measures are proposed separately from any mitigative effect of the alternatives. Therefore, the effect of mitigation measures is not considered further in this EA when evaluating impacts.

This chapter describes the Pacific Coast groundfish fishery and the resources that would be affected by the alternative actions. Physical resources are discussed in subsection 3.1, biological resources are described in subsection 3.2, and socioeconomic resources are described in subsection 3.3. Other recent NEPA documents prepared for the Pacific Coast groundfish fishery provide detailed information pertaining to the physical, biological and socioeconomic environment. These NEPA documents include: the Environmental Impact Statement (EIS) for the FMP, EFH Designation and Minimization of Adverse Impacts; the EIS prepared for the Proposed Acceptable Biological Catch and Optimum Yield Specifications and Management Measures for the 2007-2008 Pacific Coast Groundfish Fishery (NMFS 2005;) the EA entitled "A Maximized Retention and Monitoring Program for the Pacific Shore-based Fishery" (NMFS 2007b); the EA titled "Catch Accounting Requirements for Pacific Whiting Shore-based Processors/First Receivers Participating in the Shore-based fishery" (NMFS 2007c); and the "Emergency Rule to Implement Measures to Prohibit Entry of New Vessels to the Directed Fishery for Pacific Whiting in the Exclusive Economic Zone Off the West Coast in 2007" (NMFS 2007a). Rather than repeat information detailed in the other NEPA documents, the information has been summarized in this document, and the reader is referred to the appropriate sections in the other NEPA documents for further detail.

3.1 Physical Characteristics of the Affected Environment

The MSA, as amended by the 1996 Sustainable Fisheries Act (SFA), requires NMFS and the Council to describe Essential Fish Habitat (EFH) and enumerate potential threats to EFH from both fishing and nonfishing activities for the managed species. EFH for Pacific Coast groundfish is defined as the aquatic habitat necessary to allow groundfish production to support long-term sustainable fisheries for groundfish and for groundfish contributions to a healthy ecosystem. The physical environment and its relation to Pacific whiting are more fully described in subsection 3.2 of the Pacific Coast Groundfish Fishery Management Plan, EFH Designation and Minimization of Adverse Impacts (NMFS 2005).

Federal regulations require that participants in the Pacific whiting fishery use midwater trawl gear. Midwater gear is deployed in open water between the sea surface and the bottom of the ocean and has little contact with the benthic environment. Midwater trawl gear makes little contact with the ocean floor, therefore there are few habitat protection measures restricting the use of the gear.

3.2 Biological Characteristics of the Affected Environment -- Target and Non-Target Overfished Groundfish Species, Pacific Salmon

There are over 90 species of groundfish managed under the groundfish FMP. These species include over 60 species of rockfish in the family Scorpaenidae, 7 roundfish species, 12 flatfish species, assorted sharks, skates, and a few miscellaneous bottom-dwelling marine fish species. The groundfish species occur throughout the EEZ and occupy diverse habitats at all stages in

their life history. For more in-depth descriptions of species in the affected environment, the reader is referred to the Environmental Assessment for Catch Accounting Requirements for Pacific Whiting Shoreside Processors Participating in the Shore-based Fishery (NMFS 2007c).

Initial scoping for this action determined that the primary species of concern in this action are Pacific whiting and non-target overfished groundfish species. Species that are incidentally taken in the Pacific whiting fishery may be commingled with Pacific whiting or merely in the vicinity of Pacific whiting schools, depending on the relationships between the various species. Major factors affecting bycatch are: area, depth, season, time of day, and environmental conditions. Overall abundance of a particular species is also relevant.

The FMP characterizes groundfish stocks according to their current assessed abundance relative to their assumed unfished abundance as follows: stocks above B_{40}, the FMP's B_{MSY} proxy, are classified as *healthy*; stocks between B_{25} and B_{40} are classified as within the *precautionary zone* and are required to be managed with a precautionary formula that reduces the OY from ABC, with greater precaution applied at lower stock size levels, and; stocks that are below B_{25} are determined to be *overfished* and must be managed via an overfished species rebuilding plan until their abundance is rebuilt to B_{40}.

The most common groundfish species taken incidentally in the shore-based sector under whiting fishery exempted fishing permits (EFP) between 2002 and 2006 include: yellowtail rockfish (*Sebastes flavidus*), sablefish (*Anoplopoma fimbria*), spiny dogfish (*Squalus acanthias*), chilipepper rockfish (*Sebastes goodie*), and lingcod (*Ophiodon elongatus*). The most common groundfish species taken incidentally in the at-sea fishery between 2002 and 2005 include sablefish, thornyhead rockfish (*Sebastolobus altivelis* and *Sebastolobus alascanus*), widow rockfish, and yellowtail rockfish. Yellowtail, chilipepper, thornyheads and lingcod are all considered to be healthy stocks. Sablefish is a precautionary zone species. Spiny dogfish has not been quantitatively assessed.

Suites of groundfish species are assessed or re-assessed every other year in support of the Council's biennial specifications and management measures process. Updated descriptions of all of the species listed above as commonly taken incidentally in the non-tribal whiting fishery, their life histories, and most recent stock assessment information, are provided in Chapter 4 of the EIS for the 2007-2008 groundfish specifications and management measures (PFMC and NMFS 2006) and are not repeated here. Because of the relative abundance of these stocks, the small amounts taken in the whiting fishery, and the anticipated minimal-to-no effects of the action on the biological environment, the remainder of this section focuses on Pacific whiting itself and the less abundant overfished species that co-occur with whiting.

3.2.1 *Pacific Whiting*

Pacific whiting range from Sanak Island in the western Gulf of Alaska to Magdalena Bay, Baja California Sur. They are most abundant in the California Current System (Bailey 1982; Hart 1973; Love et al. 1991; NOAA 1990). In general, Pacific whiting is a very productive species with highly variable recruitment patterns (recruitment-the biomass of fish that mature and enter the fishery each year) and a relatively short life span when compared to most other groundfish

species. The variable recruitment pattern for whiting means that population size can increase or decrease depending upon the amount of recruitment over time.

In 1987, the Pacific whiting biomass was at a historically high level due to an exceptionally large number of fish that spawned in 1980 and 1984 (fished spawned during a particular year are referred to as year classes). As these large year classes passed through the population and were replaced by moderate sized year classes, the overall size of the Pacific whiting stock declined. The Pacific whiting stock stabilized between 1995 and 1997, but then declined to its lowest level in 2001. The female spawning biomass of Pacific whiting in 2001 was estimated to be less than 20 percent of the unfished biomass. As a result, the stock was believed to be below the overfished threshold ($B_{25\%}$) and was declared overfished on April 15, 2002 (67 FR 18117).

Since 2001, the Pacific whiting stock has increased substantially due to a strong 1999 year class that matured and entered the spawning population. NMFS announced that the Pacific whiting stock was estimated to be above the target rebuilding biomass ($B_{40\%}$) in 2003 and was no longer considered to be an overfished stock. A Pacific whiting stock assessment was prepared in early 2006, and the Pacific whiting biomass was estimated to be between 31 percent and 38 percent of its unfished biomass. In 2006, the United States allowable biological catch (ABC) (73.88 percent of the United States -Canada coastwide ABC) was 518,294 mt and the United States total catch OY with a 40-10 precautionary adjustment was 269,069 mt. In the absence of a strong year class recruiting to the fishery, the Pacific whiting stock is projected to decline to near or below the overfished threshold in the next few years. A 2007 stock Pacific whiting stock assessment, which was available to the Council at its March 2007 meeting shows that the stock biomass is continuing to decline. Whiting is currently considered a precautionary zone stock.

3.2.2 Overfished Groundfish Species

In 2007, seven groundfish species continue to be managed via overfished species rebuilding plans: bocaccio (south of Monterey) (*Sebastes paucispinis*), canary rockfish (*Sebastes pinniger*), cowcod (south of Point Conception) (*Sebastes levis*), darkblotched rockfish (*Sebastes* crameri), Pacific ocean perch (*Sebastes alutus*), widow rockfish (*Sebastes entomelas*), and yelloweye rockfish (*Sebastes ruberrimus*). The most common overfished groundfish species taken in Pacific whiting at-sea and shore-based fishery between 2002 and 2006 have been widow rockfish, darkblotched rockfish, canary rockfish, and POP (Tables 3-5). The Pacific whiting fishery has no impact on the overfished cowcod stock because this stock is found farther south than where the Pacific whiting fishery has historically occurred. Bocaccio's overfished southern stock (south of Monterey) does not overlap with the whiting fishery's geographic distribution; therefore, the whiting fishery also has no impact on the overfished boccacio stock.

Bycatch limits have been used to constrain the incidental catch of overfished rockfish species in the Pacific whiting fishery (i.e., all sectors together) since 2004 (Table 6). If a bycatch limit is reached, all commercial Pacific whiting fisheries are closed for the remainder of the year, regardless of whether or not the Pacific whiting allocations have been reached. Because the entire fishery is closed when bycatch caps are reached, participants have generally demonstrated great sensitivity to the need to avoid rockfish and minimize their bycatch, so that all benefit from the total allowable catch. However, because the distribution of rockfish relative to whiting

changes between years and even during the season, participants know that even when fishing cautiously, a "disaster tow" (a tow with very high amounts of overfished species bycatch) is possible. Such disaster tows can have very severe consequences for all the vessels involved, and disaster tows would be more likely with a race to fish, when participants may not be able to fish as cautiously as possible, than with a more stable season. The following tables (Tables 3-5)outline historical bycatch catch by non-tribal sector from 2002-2006 and compare 2004-2007 harvests of 2004-2007 catches to limits for species where all non-tribal sectors fish against a common bycatch limit (Table 6).

Table 3. Catch of Overfished Species (in mt) in the Shore-based Sector, 2002-2006

	YEAR					
SPECIES	2002	2003	2004	2005	2006	Total
Canary rockfish	0.43	0.11	1.16	2.24	1.64	5.59
Darkblotched rockfish	0.01	0.26	0.84	5.51	2.27	8.89
Pacific Ocean perch	0.19	0.29	0.40	0.15	0.03	1.06
Yelloweye rockfish	0.00	0.00	0.00	0.01	0.06	0.07
Widow rockfish	5.32	12.54	28.26	77.24	49.51	172.87
Total	5.96	13.20	30.67	85.16	53.46	188.48

Table 4. Catch of Overfished Species (in mt) in the Mothership Sector, 2002-2006

	YEAR					
SPECIES	2002	2003	2004	2005	2006	Total
Canary rockfish	0.81	0.08	4.11	0.70	0.85	6.55
Darkblotched rockfish	0.93	0.10	3.02	5.08	4.24	13.37
Pacific Ocean perch	2.17	0.11	0.10	0.86	1.88	5.12
Yelloweye rockfish	0	0	0	0	0.02	.02
Widow rockfish	20.50	0.69	11.43	35.50	71.80	139.92
Total	24.56	0.98	18.75	42.30	78.87	164.98

Table 5. Catch of Overfished Species (in mt) in the Catcher/processor Sector, 2002-2006

	YEAR					
SPECIES	2002	2003	2004	2005	2006	Total
Canary rockfish	1.59	0.17	0.48	0.34	0.10	2.68
Darkblotched rockfish	2.19	4.21	4.36	5.95	6.73	23.44
Pacific Ocean perch	1.45	5.04	0.95	0.78	0.75	8.97
Yelloweye rockfish	0.02	0	0	0	0.01	0.03
Widow rockfish	115.10	11.56	8.37	43.14	66.99	245.16
Total	120.37	21.04	14.23	50.32	74.56	280.28

Table 6. Combined Non-Tribal Sector Harvests and Range of bycatch limits (mt) set by the Council for the non-tribal whiting fishery.

Bycatch Harvests	2004	2005	2006	2007[a]
Canary	5.75	3.28	2.11	3.98
Darkblotched	8.22	16.54	13.24	12.96
Widow	48.06	155.88	188.30	234.73
Bycatch Limits	2004	2005	2006	2007[a]
Canary	6.2 – 7.3	4.7	4.0 – 4.7	4.7
Darkblotched	9.5	n/a	25	25
Widow	n/a	200 – 212	200 – 220	275

[a] Year 2007 Limits represent the numbers currently outlined in the Federal Regulations, which can be modified by the Council during inseason action.

Widow Rockfish

Widow rockfish range from Albatross Bank off Kodiak Island to Todos Santos Bay, Baja California, Mexico (Eschmeyer et al. 1983; Miller and Lea 1972; NOAA 1990). They occur over hard bottoms along the continental shelf (NOAA 1990) and prefer rocky banks, seamounts, ridges near canyons, headlands, and muddy bottoms near rocks. Large widow rockfish concentrations occur off headlands such as Cape Blanco, Cape Mendocino, Point Reyes, and Point Sur. Adults form dense, irregular, midwater and semi-demersal schools deeper than 100 m (55 fm) at night and disperse during the day (Eschmeyer et al. 1983; NOAA 1990; Wilkins 1986). All life stages are pelagic, but older juveniles and adults are often associated with the bottom (NOAA 1990). Pelagic larvae and juveniles co-occur with yellowtail rockfish, chilipepper, shortbelly rockfish, and bocaccio larvae and juveniles off Central California (Reilly et al. 1992).

Similar to other rockfish species, the biomass of widow rockfish has decreased steadily since the early 1980s, and recruitment during early 1990s is estimated to have been considerably smaller than before the mid 1970s. The reason for the lower recruitment during the period could be due to lower spawning stock biomass, but it could also be due to environmental conditions. Widow rockfish was declared overfished on January 11, 2001, because the stock was assessed and estimated to be below 25 percent of its unfished biomass. A 2005 coastwide stock assessment and rebuilding analysis were completed for widow rockfish. The 2005 stock assessment estimated that the widow rockfish stock was at 31.1 percent of its unfished biomass in 2004. In retrospect, the 2005 stock assessment shows that the widow rockfish biomass may not have declined below the overfished species threshold of 25 percent of its unfished biomass as had been estimated in previous stock assessments.

In 2006, the widow rockfish bycatch limit was 200 mt at the start of the season but was later revised to 220 mt (Table 6). In the past 5 years, the widow rockfish catch in the Pacific whiting shore-based fishery has ranged from a low of 5 mt in 2002 with a catch rate of 0.0001 mt of widow rockfish per mt of Pacific whiting to a high of 77 mt in 2005 with a catch rate of 0.0008 mt of widow rockfish per mt of Pacific whiting (Table 3). In 2006, the mothership sector encountered the largest amount of widow rockfish in the 5 year period with a catch rate of 0.0013 mt of widow per whiting mt, but in most years the catch was lower than 40 mt (Table 4).

The catcher/processor sector encountered the lowest amount of widow rockfish in 2004, 8.34 mt with a catch rate of 0.00011 and a high of 115.50 mt with a catch rate of .0032 mt widow per mt of whiting (Table 5).

Darkblotched Rockfish

Darkblotched rockfish (*Sebastes crameri*) are found from the Bering Sea to near Santa Catalina Island, California at depths of 29-549 m (16-300 fm) (Eschmeyer et al.1983). Commercially important concentrations are found from Northern CA through the Canadian border, on or near the bottom, in depths of approximately 183-366 m (100-200 fm). This species co-occurs with other slope rockfish, including Pacific ocean perch (*Sebastes alutus*), splitnose rockfish (*Sebastes diploproa*), yellowmouth rockfish (*Sebastes reedi*), and sharpchin rockfish (*Sebastes zacentrus)*.

In 2006, the darkbloched rockfish bycatch limit was 25 mt (Table 6). In the past 5 years, the darkblotched rockfish catch in the Pacific whiting shore-based fishery has ranged from a low of 0.01 mt in 2003 to a high of 5.51 mt in 2005 (Table 3). The change in incidental catch rates coincides with the darkblotched rockfish biomass increase since 2002. Alternately, the increased catch rates in the 2005 Pacific whiting shore-based fishery may have resulted from increased fishing effort in deeper water to avoid Chinook salmon catch. The at-sea processing sectors tend to fish in deeper waters where darkblotched rockfish are more abundant. The mothership sector maintained low levels of darkblotched rockfish in 2002 and 2003, and in later years their catches have been less than or equal to 5 mt (Table 4). The catcher/processor sector encountered the largest amount of darkblotched rockfish in 2006 (6.73 mt); in earlier years the catchers were less than 6 mt (Table 5).

Canary Rockfish

Canary rockfish range from northern Baja California, Mexico, to southeastern Alaska (Boehlert and Kappenman 1980; Hart 1988; Love et al. 1991; Miller and Geibel 1973; Richardson and Laroche 1979). There is a major population concentration of canary rockfish off Oregon (Richardson and Laroche 1979). Canary rockfish primarily inhabit waters that are 91 m (50 fm) to 183 m (100 fm) deep (Boehlert and Kappenman 1980). In general, they inhabit shallow water when they are young and deep water as adults (Mason 1995). Adult canary rockfish are associated with pinnacles and sharp drop-offs (Love et al. 1991) and are most abundant above hard bottoms (Boehlert and Kappenman 1980).

Canary rockfish recruitment has shown a steady decline over the last 50 years. Recent recruitments have generally been low, with 1998 producing the largest estimated year-class of recruitment in the last decade. Canary rockfish was declared overfished on January 4, 2000 (65 FR 221). A canary rockfish stock assessment and rebuilding analysis was prepared in 2005. The results of the stock assessment estimated that the canary rockfish stock was at 9.4 percent of its unfished biomass coastwide in 2005. The 2005 stock assessment estimated that the canary rockfish spawning stock biomass was at its lowest level in 2000, but has been increasing since then. The result of the 2005 stock assessment estimated that darkblotched rockfish was at 16 percent of its unfished biomass in 2005, and was notably lower in 2000 (8 percent) than had been estimated in the previous stock assessment. However, the stock assessment indicates that the spawning output has more than doubled since 1999. This growth is resulting in rapid rebuilding of the stock due to the strong numbers of fish spawned in 1999 and 2000 that are maturing and

entering the fishery. This strong recruitment combined with low exploitation rates in recent years has resulted in more rapid rebuilding than was projected following the 2000 stock assessment.

In 2006, the canary rockfish bycatch limit was initially set at 4.7 mt, but was revised downward to 4.0 mt during the season due to higher than expected canary rockfish research catch (Table 6). Canary catch in the shore-based fishery in the last 5 years has ranged from a low of 0.11 mt to a high of 2.24 mt (Table 3). The mothership sector has maintained low levels of canary bycatch, except in 2004 when 4.11 mt was landed with an associated catch rate of 0.00002 mt canary per mt whiting (Table 4). The majority of this catch, 3.9 mt, occurred in a single tow of fish. Canary catch in the catcher/processor sector was highest in 2002 (1.59 mt catch rate of 0.00004 mt canary per mt whiting) and has been low since (Table 5).

Pacific Ocean Perch

POP are found from La Jolla, California to the western boundary of the Aleutian Archipelago (Eschmeyer et al. 1983; Gunderson 1971; Ito et al. 1986; Miller and Lea 1972), but are common from Oregon northward (Eschmeyer et al percent 1983). They primarily inhabit waters of the upper continental slope (Dark and Wilkins 1994) and are found along the edge of the continental shelf (Archibald et al. 1983). POP are found in waters as deep as 825 m, but are usually found in depths of 100 m to 450 m (55 to 246 fm) and along submarine canyons and depressions (NOAA 1990). Throughout their range, POP are generally associated with gravel, rocky, or boulder type substrate (Ito 1986). Larvae and juveniles are pelagic; subadults and adults are benthopelagic (living and feeding on the bottom and in the water column). Adults form large schools 30 m wide, to 80 m deep, and as much as 1,300 m long (NOAA 1990). They also form spawning schools (Gunderson 1971). Juvenile POP form ball-shaped schools near the surface or hide in rocks (NOAA 1990).

POP was formally declared overfished in March 3, 1999, but had been managed as a depleted stock prior to being declared overfished. From 1965 to 1998, POP recruitment was relatively stable and showed recruits per spawning output as an increasing trend over time. However, when compared with the 1950s and 1960s, POP recruitment has been rather poor in recent years, although the 1999 and 2000 year classes (2002 and 2003 recruitment years) appear to be the largest since the early 1970s. A new stock assessment was prepared for POP in 2005 that updates the stock assessment from 2003 for the United States waters north of 43° N. lat. Like the 2003 stock assessment, the 2005 stock assessment did not show an obvious increasing trend in recruits per spawning output, nor are the recruitments completely stable. The updated stock assessment estimated the stock to be at 23.4 percent of its unfished biomass in 2005. Despite this, the low exploitation rate (1 percent) since 2000, has allowed the stock to rebuild slowly. Since that time, the POP stock has increased from 20.9 percent of the unfished biomass to 23.4 percent.

In the past 5 years, the POP catch in the Pacific whiting shore-based fishery has ranged from a low of 0.15 mt in 2006 to a high of 0.40 mt in 2004 (Table 3). Like darkblotched rockfish, POP is a shelf species that is found in deeper waters and is more commonly seen as incidental catch in the at-sea sectors of the Pacific whiting fishery. The mothership sector range of POP bycatch ranged from 0.11 mt (2003) to 2.17 mt (2002) (Table 4). The catcher/processor sector saw a high level of POP bycatch in 2003 (5.04 mt, catch rate of 0.0001) and less than 1 mt in recent years (Table 5).

Yelloweye Rockfish
Yelloweye rockfish range from the Aleutian Islands, Alaska, to northern Baja California, Mexico, and are common from Central California northward to the Gulf of Alaska (Eschmeyer et al. 1983; Hart 1988; Love et al. 1991; Miller and Lea 1972; O'Connell and Funk 1986). Yelloweye rockfish occur in water from 25 m (14 fm) to 550 m (301 fm) deep with 95 percent of survey catches occurring in waters between 50 m (27 fm) and 400 m (219 fm) (Allen and Smith 1988). Yelloweye rockfish are bottom dwelling, generally solitary, rocky reef fish, found either on or just over reefs (Eschmeyer et al. 1983; Love et al. 1991; Miller and Lea 1972; O'Connell and Funk 1986). Boulder areas in waters deeper than 180 m (98 fm), are the most densely populated habitat type for adult yelloweye rockfish. Juveniles prefer shallow-zone broken-rock habitat (O'Connell and Carlile 1993). Yelloweye rockfish also occur around steep cliffs and offshore pinnacles (Rosenthal et al. 1982).

Yelloweye rockfish was declared overfished on January 11, 2002. In March 2006, a new stock assessment was prepared for yelloweye rockfish. The results of the coastwide stock assessment estimated that yelloweye rockfish is at 17.7 percent of its unfished biomass coastwide in 2006 and projected that the stock is lagging behind the original rebuilding schedule.

In the past five years, the yelloweye rockfish catch in the Pacific whiting shore-based fishery has ranged from a low of 0 mt in 2002 and 2003 to a high of 0.06 mt in 2006 (Table 3). Yelloweye rockfish is encountered even more infrequently in the at-sea sector, from a low of 0 mt in 2002 to 2005 to a high of 0.03 mt in 2006 (Tables 4-5). Because yelloweye rockfish is less vulnerable to trawl gear than the fixed gears, it is not commonly seen as incidental catch.

Bocaccio
Bocaccio is a common rockfish occurring in coastal waters of the northeastern Pacific from Krozoff and Kodiak Islands in the Gulf of Alaska to central Baja California, Mexico (Hart 1988; Miller and Lea 1972). Historically, bocaccio are most abundant in waters off central and southern California. The population is considered to be two stocks, northern and southern, which are separated by an area of scarcity off northern California and southern Oregon (Macall and He 2002). The northern stock of bocaccio, which is taken in the Pacific whiting fishery, has not been assessed nor has the northern stock been declared overfished like the southern stock.

3.2.3 Pacific Salmon

Several species of salmon found along the Pacific Coast have been listed under the ESA. Because several Chinook salmon runs are listed under the ESA, the incidental catch of Chinook salmon in the Pacific whiting fishery is a concern. Chinook is the salmon species most likely to be affected by the groundfish fishery because of the spatial/temporal overlap between the Pacific whiting fishery and the distribution of Chinook salmon such that it could result in incidental take of listed salmon. On an annual basis, there is some temporal and spatial variation in bycatch that can be accounted for by the behavior and biology of Chinook salmon and Pacific whiting. Bycatch rates tend to be higher closer to shore and earlier in the season (PFMC and NMFS 2006).

In March 2006, NMFS conducted an ESA Section 7 Consultation – Supplemental Biological Opinion on the effects of the groundfish fishery as managed under the FMP on evolutionarily

significant units of salmon species listed as threatened or endangered under the ESA (NMFS 2006b). This consultation updated the original 1999 Biological Opinion on the groundfish fishery, which had defined the expected level of Chinook salmon take in the whiting fishery as 11,000 fish annually. NMFS concluded in its March 2006 update that the continued operation of the whiting fishery would not jeopardize Chinook salmon recovery under ESA, and that it was reasonable to expect that the whiting fishery would continue to stay within, with the possibility of occasionally exceeding, the expected annual incidental take limit of 11,000 fish. See Table 7 for Chinook salmon bycatch by sector from 1994-2006.

Table 7. Chinook Salmon Bycatch in the Pacific Whiting Fisheries For All Sectors and the Tribal Fisheries 1994-2006 (Source: NMFS 2006b; NMFS 2006a)

	1995*	1996*	1997*	1998	1999	2000	2001	2002	2003	2004	2005	2006
MOTHERSHIP												
CHINOOK (number of fish)	8487	795	845	966	1687	4421	1721	709	2078	417	2206	1080
WHITING (mt)	40588	44416	50402	50087	47580	46840	35823	26593	26021	24102	48571	55355
RATE: (# chinook/mt whiting)	0.2091	0.0179	0.0168	0.0193	0.0355	0.0944	0.048	0.2269	0.0798	0.0173	0.045	0.01951
CATCHER/PROCESSOR												
CHINOOK (number of fish)	3092	650	553	511	2704	1839	847	970	570	388	1754	112
WHITING (mt)	61571	68359	70771	70365	67679	67815	58628	36341	41214	73175	78890	78864
RATE: (# chinook/mt whiting)	0.0502	0.0095	0.0078	0.0073	0.04	0.0271	0.0144	0.0265	0.0138	0.0053	0.0222	0.00142
TOTAL NONTRIBAL ATSEA												
CHINOOK (number of fish)	11579	1445	1398	1477	4391	6260	2568	1679	2648	805	3960	1192
WHITING (mt)	102159	112775	121173	120452	115259	114655	94451	62934	67235	97277	127461	134219
RATE: (# chinook/mt whiting)	0.1133	0.0128	0.0115	0.0123	0.0381	0.0546	0.0272	0.0267	0.0394	0.0083	0.0311	0.008881
TRIBAL (MOTHERSHIP)												
CHINOOK (number of fish)	na	1707	2524	2085	4497	1947	959	1018	3430	3690	3862	652
WHITING (mt)	na	14999	24839	24509	25844	6251	6080	21793	19375	23313	23419	5545
RATE: (# chinook/mt whiting)	na	0.1138	0.1016	0.0851	0.174	0.3115	0.1577	0.0467	0.177	0.1583	0.1649	0.117583
TOTAL OF ALL ATSEA												
CHINOOK (number of fish)	11579	3152	3922	3562	8888	8207	3527	2697	6078	4495	7822	1844
WHITING (mt)	102159	127774	146012	144961	141103	120906	100531	84727	86610	120590	150880	139764
RATE: (# chinook/mt whiting)	0.1133	0.0247	0.0269	0.0246	0.063	0.0679	0.0351	0.0318	0.0701	0.0373	0.0518	0.013194
TRIBAL SHORE-BASED												
CHINOOK (number of fish)	na	na	na	na	na	na	na	na	9	50	76	1271
WHITING (mt)	na	na	na	na	na	na	na	na	4079	5335	10938	29896
RATE: (# chinook/mt whiting)	na	na	na	na	na	na	na	na	0.0021	0.0094	0.0069	0.042514
SHORE-BASED												
CHINOOK (number of fish)	2954	651	1482	1699	1696	3306	2627	1062	425	4206	4018	839
WHITING (mt)	73397	84680	87499	87627	83388	85563	73326	45276	51061	89670	97378	96619

	1995*	1996*	1997*	1998	1999	2000	2001	2002	2003	2004	2005	2006
RATE: (# chinook/mt whiting)	0.0402	0.0077	0.0169	0.0194	0.0203	0.0386	0.0358	0.0235	0.0083	0.0469	0.0413	0.008684
TOTAL ALL FISHERIES												
CHINOOK (number of fish)	14533	3803	5404	5261	10584	11513	6154	3759	6512	8751	11916	3954
WHITING (mt)	175556	212454	233511	232588	224453	206471	173857	130003	141885	215176	259196	266279
RATE: (# chinook/mt whiting)	0.0828	0.0179	0.0231	0.0226	0.0472	0.0558	0.0354	0.0289	0.0459	0.0409	0.046	0.014849

* NOTE: 1991-1997 is based final inseason data files and may vary from estimates derived from NORPAC data. Shore-based data updated from Nottage and Parker 2005.

2002 shore-based landings does not include 432 mt of whiting or salmon taken in trip limit fishery

2003 shore-based landings does not include 195 mt of whiting or salmon taken in trip limit fishery

2004 shore-based landings does not include 1,644 mt of whiting or salmon taken in trip limit fishery - first year of video monitoring at-sea

2005 shore-based landings does not include 310 mt of whiting or salmon taken in trip limit fishery

2006 does not include 678 mt of whiting that was sorted at sea or associated salmon take

For further information on salmon bycatch as it applied to the entire Pacific whiting fishery, readers are referred to subsection 5.1.1 of the EIS for the Proposed Acceptable Biological Catch and Optimum Yield Specifications and Management Measures for the 2007-2008 Pacific Coast Groundfish Fishery (PFMC 2006).

3.2.4 Protected Species

Marine Mammals
The waters off Washington, Oregon, and California support a wide variety of marine mammals. Approximately 30 species, including seals and sea lions, sea otters, and whales, dolphins, and porpoise occur within the EEZ. Many marine mammal species seasonally migrate through Pacific Coast waters, while others are year round residents.

The Marine Mammal Protection Act (MMPA) and the ESA are the Federal legislative acts that guide marine mammal species protection and conservation policy. Under the MMPA, NMFS is responsible for the management of cetaceans and pinnipeds, while the U.S. Fish and Wildlife Service manages sea otters. Stock assessment reports review new information every year for strategic stocks (those whose human-caused mortality and injury exceeds the potential biological removal (PBR)) and every 3 years for non-strategic stocks. Marine mammals whose abundance falls below the optimum sustainable population are listed as "depleted" according to the MMPA.

Fisheries that interact with species listed as depleted, threatened, or endangered may be subject to management restrictions under the MMPA and ESA. Species listed as endangered under the ESA include: sperm whale (Physeter macrocephalus), humpback whale (Megaptera novaeangliae), blue whale (Balaenoptera musculus) and fin whale (Balaenoptera physalus).
Species listed as threatened under the ESA include: Steller sea lion (Eumetopias jubatus) eastern stock Guadalupe fur seal (Arctocephalus townsendi), southern sea otter (Enhydra lutris) California Stock. Species listed as depleted under the MMPA include: northern fur seal (Callorhinus ursinus), eastern Pacific stock killer whale (Orcinus orca) eastern north Pacific, southern resident stock.

NMFS publishes an annual list of fisheries in the Federal Register separating commercial fisheries into one of three categories, based on the level of serious injury and mortality of marine mammals occurring incidentally in that fishery. The categorization of a fishery in the list of fisheries determines whether participants in that fishery are subject to certain provisions of the MMPA, such as registration, observer coverage, and take reduction plan requirements. The Pacific Coast groundfish fisheries are in Category III, indicating a remote likelihood of, or no known serious injuries or mortalities, to marine mammals.

Seabirds
The California Current System supports more than two million breeding seabirds and at least twice that number of migrant visitors. Tyler et al. (1993) reviewed seabird distribution and abundance in relation to oceanographic processes in the California Current System and found that over 100 species have been recorded within the EEZ including: albatross, shearwaters, petrels, storm-petrels, cormorants, pelicans, gulls, terns and alcids (murres, murrelets, guillemots,

auklets and puffins). In addition to these "classic" seabirds, millions of other birds are seasonally abundant in this oceanic habitat including: waterfowl, waterbirds (loons and grebes), and shorebirds (phalaropes). There is considerable overlap of fishing areas and areas of high bird density in this highly productive upwelling system. The species composition and abundance of birds varies spatially and temporally. The highest seabird biomass is found over the continental shelf and bird density is highest during the spring and fall when local breeding species and migrants predominate. Seabird species listed as Endangered under the ESA include: short tail albatross (Phoebastria albatrus), California brown pelican (Pelecanus occidentalis), and California least tern (Sterna antillarum browni). The only species Listed as "threatened" under the ESA is the marbled murrelet (Brachyramphs marmoratus).

Green Sturgeon (Acipenser medirostris)
The Southern Distinct Population Segment (DPS) of Green sturgeon (71 FR 17757, April 7, 2006) were recently listed as threatened under the ESA. Green sturgeon are found from Ensenada, Mexico, to Southeast Alaska (NMFS 2002). Green sturgeon are not abundant in any estuaries along the Pacific coast, although they are caught incidentally in the estuaries by the white sturgeon fishery (NMFS 2002).

The green sturgeon is an anadromous fish that spends most of its life in salt water and returns to spawn in fresh water. It is a slow growing and late maturing fish that apparently spawns every 4 to 11 years during the spring and summer months. Feeding on algae and small invertebrates while young, green sturgeon migrate downstream before they are 2 years old. Juveniles remain in the estuaries for a short time and migrate to the ocean as they grow larger. Adult green sturgeon feed on benthic invertebrates and small fish. The green sturgeon can become highly migratory later in life. They have been documented as traveling over 600 miles between freshwater and estuary environments (NMFS 2002).

3.3 Socioeconomic Characteristics of the Affected Environment

3.3.1 Management Structure of the Non-Tribal Pacific Whiting Fishery

The Pacific groundfish limited entry program was implemented in 1994. Vessels that did not initially qualify for a permit had to buy or lease one from qualifying vessels to gain access to the fishery. To harvest whiting, all at-sea catcher/processors had to purchase permits. This changed the composition of the at-sea processing fleet considerably because vessels that had previously operated as catcher/processors switched to mothership-only activity since permits are not required for vessels that only process fish (PFMC 1998).

Regulations at 50 CFR 660.323(a) (4) divide the commercial OY into separate allocations for the non-tribal catcher/processor, mothership, and shore-based sectors of the Pacific whiting fishery. The catcher/processor sector is comprised of vessels that harvest and process Pacific whiting. The mothership sector is comprised of catcher vessels that harvest Pacific whiting for delivery to mothership processors. Motherships are vessels that process but do not harvest Pacific whiting. The shore-based sector is comprised of vessels that harvest Pacific whiting for delivery to shore-based processors. Each sector receives a portion of the commercial OY, with the catcher/processor sector getting 34 percent, the mothership sector getting 24 percent, and the

shore-based sector getting 42 percent. Prior to the formal three-sector whiting allocation of 1997 (62 FR 27519, May 19, 1997,) 60 percent of the OY was available in open competition between the shore-based and at-sea sectors and the remaining 40 percent was reserved for the shore-based fishery.

Since 1992, the shore-based whiting fishery has been managed via an Exempted Fishing Permit program. EFPs allow vessels to engage in activities that are otherwise illegal for the purpose of collecting information that may lead to a management decision or to address specific environmental concerns (50 CFR 600.10 and 600.745). Each year during 1992-2007, EFPs have been issued to vessels in the Pacific whiting shoreside fishery to allow unsorted catch to be landed. Without an EFP, groundfish regulations at 50 CFR 660.306 (a)(2) and (a)(6) require vessels to sort their catch at sea. Whiting flesh deteriorates rapidly after the fish has been caught, which is why common harvest practice for catcher vessels in the shore-based sector is to dump their whiting codends directly into refrigerated seawater holds. Landing the whiting on deck and then sorting catch from bycatch would cause a loss of product quality and increase vessel operating costs. From 2004-2007, NMFS and the states used the EFPs to experiment with monitoring catch retention in this sector with onboard electronic monitoring via cameras and other devices. The EFPs required in the shore-based sector have routinely required vessels to deliver EFP catch to state designated processors. Like shore-based processors, no federal permits are required of motherships. Shore-based processors must have the appropriate state licenses. Under EFPs, designated shore-based processors have been identified by the states and have maintained signed agreements that specify the standards and procedures they agree to follow when accepting unsorted EFP catch.

Just as the Capper-Volstead Act of 1922 allowed and defined the role of agricultural cooperatives, the Fisherman's Collective Marketing Act of 1934 (FCMA) allows fishermen to form cooperatives under certain circumstances. "The intent of both acts is to allow farmers and fishermen to jointly market, price and sell their products without being in violation" of U.S. antitrust laws. (Kitts and Edwards, 2003).

"In 1997, the catcher/processors in the Pacific Coast whiting fishery created the Pacific Whiting Conservation Cooperative (PWCC). The primary purpose of the cooperative was to allocate portions of the catch among its members, creating informal property rights in the harvest similar to ITQs. Because there were so few firms involved, each sharing a common interest, the coordination costs were low enough to reach a quick agreement on how to divide the catch. They further agreed to make their allocations transferable among each other. The Antitrust Division of the Justice Department consented to the formation of the cooperative because the four firms agreed to continue processing, marketing, and selling their products on a competitive basis, and because the agreement would not further reduce fishery output." (Adler, 2004)

The series of EFP-based management experiments in the shore-based whiting fishery ultimately led the Council to develop a full retention and monitoring program to be implemented for the fishery via long-term Federal regulations. At its June 2007 meeting, the Council made its final recommendations on this program and requested that NMFS review and implement the recommendations in time for the 2008 whiting fishery. At-sea monitoring to ensure maximized catch retention would be accomplished using industry-funded electronic monitoring system (EMS.) In addition to a limited entry permit with a trawl endorsement, vessels participating in future shore-based whiting fisheries would need to apply for and obtain an annual Pacific whiting shoreside fishery certification, which will be used to identify the intent to fish with a particular vessel. As with the 2007 EFP, the Council recommended that the vessels continue to pay 100 percent of the EMS equipment costs while NMFS will continue to provide funding for data review. Catch monitors (data quality monitors) would be stationed at the processing facility to ensure that the catch is sorted and weighed according to federally-

defined standards. These catch monitors would be third-party employees trained to NMFS specifications who would be responsible for observing unsorted Pacific whiting catch delivered to Pacific whiting first receivers, verifying fish ticket weights, and collecting biological data.

Since May 1997, the catcher/processor fishery has operated as a voluntary quota share program where each of the catcher/processor companies has agreed to take a specific share of the harvest. The Pacific Whiting Conservation Cooperative (PWCC) is comprised of four member companies that operate 10 catcher/processor vessels licensed to participate in the United States West Coast Pacific whiting fishery. Since formation of the PWCC, only 6 or 7 of the 10 eligible catcher/processor vessels have participated in the fishery annually, providing a significant reduction in fishing effort. PWCC member vessels share real-time information among themselves on inseason bycatch experiences and sponsor scientific research on Pacific whiting.

West Coast groundfish fisheries for species other than whiting are managed under a trip limit structure, where catch limits are specified by gear type and species (or species group), and vessels can land catch up to the specified limits. In these fisheries, the total allowable harvest of target species is usually constrained by the available harvest of species that may co-occur with the target species as incidental catch. The Pacific whiting fishery, however, is managed under a primary season structure, where vessels harvest Pacific whiting until either a sector's whiting allocation is reached and that sector is closed, or until the non-tribal fishery reaches an overfished species bycatch limit and the fishery is closed. Under this management structure, the primary season combined with bycatch limit management, the whiting fishery is allowed to access a greater portion of the biologically available whiting harvest than other non-whiting groundfish fisheries, which have the OYs of their target species reduced or otherwise constrained to protect bycatch species. To date, bycatch limits have been established for darkblotched, canary, and widow rockfish, the three overfished groundfish species most commonly taken as incidental catch in the non-tribal whiting fishery. Overfished species bycatch limits are not sector-specific and if any one bycatch limit is reached, all of the whiting sectors are closed. (For more background see Section 3.2.2 above).

Over the past few years, there have been a series of major inseason and other actions undertaken to reduce the whiting fishery's bycatch of overfished species or endangered salmon. while there have been other actions that close the fishery or portions of the fishery prematurely when whiting allocations were reached. Below are summaries of these actions listed by their effective dates as published in the *Federal Register*. Additional information taken from the Notices is provided for the first and last actions in the series as a means of showing the evolution in: the use of bycatch limits in the whiting fishery, the management structure of this fishery, and management processes. This additional information also provides useful background to trends in participation rates and season length described in the next section.

> **August 8, 2004**: Emergency Rule, Routine Management Measure; Closure Authority. This emergency rule establishes routine management measure authority, under the Pacific Coast Groundfish Fishery Management Plan (Pacific Coast Groundfish FMP), to close the Pacific whiting (whiting) primary season fisheries by sector before the sector's whiting allocation is reached in order to minimize impacts on overfished species. This action is necessary to establish a mechanism that can be used to quickly close the

commercial whiting primary season fisheries if NMFS estimates that the incidental catch of an overfished species is too high.

In 2004, the primary seasons for the non-tribal mothership and catcher-processor sectors began May 15. The shore-based season in most of the Eureka area (between 42[deg] and 40[deg]30' N. lat.) began on April 1, and the fishery south of 40[deg]30' N. lat. opened April 15. The shore-based fishery north of 42[deg] N. lat. began on June 15. As in previous years, most shore-based whiting vessels were issued exempted fishing permits (EFPs) for landing unsorted whiting during the primary season. EFPs allow vessels delivering to shore-based harvesters to delay sorting the catch until offload. Delaying sorting until offload, allows state biologists and industry-hired monitors to collect information on the incidental catch of prohibited species at the processing facilities. Beginning in 2004, all EFP participants have been required to carry video cameras for monitoring full retention at sea. To provide total catch data for monitoring the at-sea processing sectors of the fishery, all at-sea processing vessels voluntarily carry two NMFS-trained observers while participating in the fishery. Total catch data from the whiting fisheries are available more swiftly for use in management decisions than data from many other West Coast groundfish fisheries.

Canary Rockfish Catch in the 2004 Whiting Fisheries

During the early season shore-based fishery off California and the first 2 weeks of the at-sea catcher-processor and mothership fisheries, the incidental catch of canary rockfish was relatively low. However, in early June a single tow taken from the Heceta Bank area, by a vessel in the mothership sector, was estimated to contain 3.9 mt of canary rockfish. This single haul exceeded the 0.9-mt total catch projection for the mothership sector. As of June 9, 2004, the total catch estimate for canary rockfish in the catcher-processor and non-tribal mothership sectors was 4.2 mt, as compared with the projected 2.2 mt. Through June 9, 2004, only 35 percent of the whiting allocation for catcher-processor and non-tribal mothership sectors had been taken. At this time, the primary season fisheries are open for all sectors of the whiting fishery. In response to the elevated catches of canary rockfish in the whiting fishery, the Council requested that NMFS implement an emergency rule that allows appropriate sectors of the commercial whiting fishery to be closed if the canary rockfish impacts reach 7.3 mt. Therefore, NMFS is publishing this emergency rule to established routine management measure authority, under the Pacific Coast Groundfish FMP, in order to close the whiting primary season fisheries by sector before the sector's whiting allocation is reached and to minimize impacts on overfished species. After implementation of this emergency rule, NMFS plans to use this authority, if appropriate, to implement the new routine management measure recommended by the Council. That is, if NMFS estimates, using the best available data, that 7.3 mt of canary rockfish have been taken in the 2004 whiting fisheries, NMFS will take inseason action and publish a Federal Register document to close appropriate sectors of the commercial fisheries.

In addition to the Council's recommendation that NMFS establish routine management measure authority to close the whiting primary season fisheries in order to minimize the impacts on overfished species, the Council also recommended asking the whiting vessel owners to voluntarily avoid areas of known high canary rockfish bycatch. This recommendation applied to all sectors of the whiting fishery. After the Council's June meeting, commercial whiting fishery data, NMFS trawl survey information, Washington State exempted fishing permit data findings, and other NMFS submersible research data were compiled in an effort to identify areas where high canary rockfish bycatch is likely to occur. On June 23, 2004, NMFS made these maps available to the participants in the whiting fishery to identify geographic locations that are known as areas of high canary rockfish bycatch, and that should be avoided.

May 25, 2005: Temporary Rule, Suspension of the Primary Pacific Whiting Season for the Shore-based Sector South of 42[deg] North Latitude NMFS announces the suspension of the primary season for Pacific whiting (whiting) fishery for the shore-based sector south of 42[deg] N. lat. at 1800 hours local time (l.t.) May 25, 2006. ``Per trip'' limits for whiting will be reinstated until 0001 hours June 15, 2005, at which time the primary season for the shore-based sector will be open coastwide. [Federal Register: June 1, 2006 (Volume 71, Number 105) pages 31104-31105]

August 18, 2005: Temporary rule; fishing restrictions; request for comments. NMFS announces the end of the 2005 primary season for the Pacific whiting (whiting) shore-based sector at 2100 local time (l.t.) August 18, 2005, because the allocation is projected to be reached. This action is intended to keep the harvest of whiting at the 2005 allocation levels. [Federal Register: August 22, 2005 (Volume 70, Number 161.pages 48897-48898)]

August 31, 2005: Emergency rule; This emergency rule, implemented under the authority of the Pacific Coast groundfish fishery management plan (FMP), establishes a salmon conservation zone for the primary Pacific whiting (whiting) fishery, shoreward of a boundary line approximating the 100-fm (183-m) depth contour. Under this rule, fishing for Pacific whiting within the salmon conservation zone is prohibited. [Federal Register: August 31, 2005 (Volume 70, Number 168, pages 51682-51684)]

August 2, 2006: Temporary rule; End of the Pacific Whiting Primary Season for the Shore-based Sector and the Resumption of Trip Limits. NMFS announces the end of the 2006 primary season for the Pacific whiting (whiting) shore-based sector at 6 p.m. local time (l.t.) August 2, 2006, because the allocation is projected to be reached. This action is intended to keep the harvest of whiting at the 2006 allocation levels. [Federal Register: August 7, 2006 (Volume 71, Number 151, pages 44590-44591)]

May 14, 2007: Emergency rule; NMFS publishes a temporary rule to prohibit any vessel from participating in either the mothership, catcher-processor or shoreside delivery sector of the directed Pacific whiting (whiting) fishery off the West Coast in 2007 if it does not

have a history of sector-specific participation in the whiting fishery between January 1, 1997, and January 1, 2007. This rule is intended to prevent serious conservation and management problems that could be caused by new entrants in 2007 and to maintain the status quo while the Pacific Fishery Management Council (Council) addresses the issue of increased effort in the whiting fishery through an amendment to the Pacific Groundfish Fishery Management Plan (FMP) for the long term. [Federal Register: May 17, 2007 (Volume 72, Number 95, pages 27759-27765)]

July 26, 2007: Fishing restrictions; End of the Pacific Whiting Primary Season for the Catcher-processor, Mothership and Shore-based Sectors. NMFS announces the end of the 2007 Pacific Whiting (whiting) primary Season for the catcher-processor, mothership and shore-based sectors at 1800 local time (l.t.) July 26, 2007. This action is intended to minimize impacts on widow rockfish and to keep the harvest of widow rockfish, an overfished species, within its 2007 optimum yield (OY). [Federal Register: August 17, 2007 (Volume 72, Number 159, pages 46176-46177)]

(Note-This closure was affected by uncovering of illegal dumping. In mid-to-late July, state enforcement officials found evidence that in one instance a fishing boat and a processing plant were illegally dumping unwanted overfished yelloweye and widow rockfish and a second instance where a vessel dumped canary and widow rockfish at sea. It is estimated that the two events were associated with about 26,000 pounds (nearly six percent of the cap) of widow rockfish. These instances point out that in highly competitive situations where prices are high and closures are becoming evident, the pressures fishermen and processors face in adhering to the rules.)

October 4, 2007: Final rule; inseason adjustments to groundfish management measures; This final rule announces inseason changes to management measures in the commercial and recreational Pacific Coast groundfish fisheries and the reopening of the 2007 Pacific whiting primary season. These actions, which are authorized by the Pacific Coast Groundfish Fishery Management Plan (FMP), are intended to allow fisheries to access more abundant groundfish stocks while protecting overfished and depleted stocks. [Federal Register: October 4, 2007 (Volume 72, Number 192, pages 56664-56676)]

> The 2007 Pacific whiting (whiting) primary season closed for the catcher-processor, mothership and shore-based sectors on July 26, 2007 (72 FR 46176) when estimates indicated that the bycatch limit for widow rockfish had been reached. The limited availability of overfished species that can be taken as incidental catch in the whiting fisheries, particularly canary, darkblotched and widow rockfish, led to NMFS implementing bycatch limits for those species. With bycatch limits, the industry has the opportunity to harvest a larger whiting OY, providing the incidental catch of overfished species does not exceed the adopted bycatch limits. If a bycatch limit is reached, all non-tribal sectors of the whiting fishery are closed for the remainder of the year. For 2007, the following bycatch limits were specified for the non-tribal whiting sectors: 4.7 mt for canary rockfish, 25 mt for darkblotched rockfish and 220 mt for widow rockfish. The best available information on July 25, 2007, indicated that 220.7 mt of widow

rockfish had been taken in the non-tribal whiting fisheries in 2007. Accordingly, the primary seasons for the catcher-processor sector, mothership sector and the shore-based sectors were closed at 1800 l.t. July 26, 2007. Data corrections were made and some additional data were incorporated into the catch estimates after the closure, and estimates from September 10, 2007 indicate the non-tribal fishery took: 158,036 mt of the 208,091 mt of whiting available to the non-tribal fishery, 241.6 mt of widow rockfish, 4 mt of canary rockfish, and 12.8 mt of darkblotched rockfish.

At its September meeting, the Council considered reopening the non-tribal whiting fishery based on availability of bycatch species and fishing impacts on protected species through the end of 2007. The Council also considered an inseason adjustment of the widow rockfish bycatch limit for the whiting fishery in order to allow the fishery to reopen. Updated fishery information indicates that the entire coastwide groundfish fishery, including the 241.6 mt of widow rockfish taken in the non-tribal whiting fishery, is projected to take 301.9 mt of widow rockfish through the end of the year. This leaves 66.1 mt of the 368-mt OY available to provide additional groundfish fishing opportunity in 2007. The Council considered an increase in the widow rockfish bycatch limit for the non-tribal whiting fishery to 275 mt, resulting in 32.7 mt of widow rockfish projected to remain unharvested through 2007. Widow rockfish is primarily taken as bycatch in the whiting fisheries.

The whiting fishery exceeded their initial 2007 bycatch limit for widow rockfish of 220 mt by 21.6 mt. This is likely due to several factors, including: fishing effort increased during the period when fishery participants knew that the fishery was nearing the widow rockfish bycatch limit; some final landings data were delayed, which caused a delay in the total catch estimates that should have closed the fishery earlier; and, the bycatch limit for widow rockfish was set too low to accommodate the 2007 whiting OY because the bycatch rate of widow rockfish in 2007 was higher than projected at the beginning of the year, likely due to the widow rockfish stock rebuilding while the whiting stock is in a period of decline. Therefore, at its September meeting, the Council purposefully recommended setting the widow rockfish bycatch limit well under the amount of widow rockfish estimated to be available through the end of 2007. In order to ensure more timely data reporting from the shore-based sector when the fishery reopened, the Council also recommended delaying reopening of the whiting fishery until after the new catch accounting requirements went into effect for whiting processors on October 5, 2007 (72 FR 50906). This new regulation requires first receivers of whiting deliveries of 4,000 lb (1,814 kg) or more to submit catch reports to the Pacific States Marine Fish Commission within 24 hours of landing. Prior to this rulemaking, NMFS had no regulations in place to delineate a time frame in which reports should be received by fishery managers.

At its September meeting, the Council also addressed concerns with availability of canary rockfish if the whiting fishery were to reopen under the higher widow

rockfish bycatch limit. The whiting fishery had closed with 0.7 mt available in the canary rockfish bycatch limit, and an increase in this bycatch limit was not considered by the Council due to limited availability of canary rockfish from other fisheries. If the whiting fishery were reopened under the same management measures that were in place earlier in the year, approximately 1.7 mt of canary rockfish would be estimated to be taken if the entire remaining 2007 whiting OY were caught, exceeding the canary rockfish bycatch limit of 4.7 mt by 1 mt. The Council discussed reopening the whiting fishery seaward of a line approximating the 150-fm (274-m) depth contour to reduce the impacts on canary rockfish, which are strongly associated with shelf habitat in depths shoreward of 150 fm (274 m), and to keep the total catch of canary rockfish within the bycatch limit of 4.7 mt. Estimates show that if the entire remaining whiting OY were prosecuted seaward of 150 fm (274 m), the canary rockfish catch would be 4.7 mt, equivalent to the 2007 bycatch limit.

Shifting all of the non-tribal whiting fishery effort seaward of a line approximating the 150-fm (274-m) depth contour is expected to increase impacts on darkblotched rockfish; however, the whiting fishery has only taken 12.8 mt of the 25-mt darblotched rockfish bycatch limit, or 51 percent, while they have taken 76 percent of the 2007 non-tribal whiting allocation. If all of the fisheries that are anticipated to take darkblotched rockfish reach their projected take for 2007, including the 25-mt bycatch limit for darkblotched rockfish in the non-tribal whiting fishery, there would be 37.7 mt of darkblotched rockfish projected to remain unharvested through 2007.

A depth-based closure is not a routine management measure for the whiting fishery; therefore, a closure shoreward of the line approximating the 150-fm (274-m) depth contour cannot be implemented via inseason action. The shore-based sector operates in the non-tribal whiting primary season under an exempted fishing permit (EFP). A second 2007 EFP will be issued to each participant in the shore-based fishery qualified to fish in the reopening of the fishery. The new EFP must be signed and returned to NMFS NWR prior to participation in the fishery, and will require that the vessel fish seaward of a line approximating the 150-fm (274-m) depth contour. Although a depth-based closure cannot be imposed on the mothership or catcher-processor sector via timely regulation or EFP, these sectors have agreed to fish seaward of a line approximating the 150-fm (274-m) depth contour. On several past occasions, these fleets have successfully taken similar voluntary action to constrain their bycatch of overfished groundfish species or salmon.

> The Council considered possible dates that could be set for reopening the non-tribal whiting fishery. The Council agreed that reopening the fishery as quickly as possible would be beneficial for several reasons, particularly: aggregations of whiting will begin to disperse later in the year, potentially causing increased bycatch rates for non-whiting species, and; increasing the danger of operating in less favorable late autumn weather. Based on

their discussion of the October 5, 2007 implementation of the first receiver reporting rule, described above, the Council recommended reopening the fishery as close as possible to October 5, 2007. Subsequent Council discussions also highlighted the benefits to the data-reporting structure for this fishery of reopening on a Sunday or a Monday to shorten the lag time between when the fishery reopens and when managers have access to fishery data.

Based on Council recommendations and discussions, NMFS is implementing: (1) an increase in the 2007 non-tribal whiting widow rockfish bycatch limit from 220 mt to 275 mt; (2) re-opening the 2007 non-tribal whiting primary season for the catcher-processor, mothership, and shore-based sectors at 0800 l.t. on Sunday, October 7, 2007 and restricting of the shore-based sector to fishing seaward of a line approximating the 150-fm (274-m) depth contour through the EFP.

There are numerous costs to state and federal governments for monitoring and managing the whiting fishery and for enforcing the laws governing its participants. Some of these costs are detailed in the EAs for *A Maximized Retention and Monitoring Program for the Pacific Whiting Shore-based Fishery, Implementing Amendment 10 to the Pacific Coast Groundfish Fishery Management Plan* (draft, NMFS 2007b) and for *Catch Accounting Requirements for Pacific Whiting Shoreside Processors Participating in the Shore-based Fishery* (NMFS 2007c). This action, however, addresses a limited entry program for the whiting fishery, not the overall harvest level setting or management or monitoring practices for the fishery. NMFS currently has no program costs for permitting whiting fishery participants, other than the exempted fishing permits issued to shore-based fishery catcher vessels, which would be eliminated under the maximized retention and monitoring program. Otherwise, all permitting costs for whiting fishery participants are part of the overall costs of managing and implementing the limited entry permitting program for all limited entry trawl vessels. Similarly, enforcement costs for this fishery tend to be associated with monitoring vessel activities at sea and processing plant activities on land, not with enforcing the requirement that all participating vessels hold limited entry permits. As shown below in subsection 3.3.2, the number of participants in each of the whiting sectors is relatively small, which means that it is relatively simple for fishery enforcement entities to verify that fishery participants have the proper Federal permit.

3.3.2 Pacific Whiting Fishery Participants and Fishery Participation Trends

This action is intended to limit participation in the West Coast whiting fishery and the Council's statement on the purpose of and need for the action speaks to that intent (subsection 1.3). To ensure that that adequate background is provided for NMFS's concerns on fishery participation levels, this subsection reviews whiting fishery participation levels over time against each of the Council concerns expressed in that purpose and need statement.

Vessel and processor participation in the non-tribal whiting fishery has varied over time, influenced by a variety of factors, including but not limited to: whiting abundance and available whiting harvest levels, whiting prices on the worldwide market, and alternative West Coast and Alaska fishing opportunities for vessel owners with the gear and fishing skills to operate in multiple fisheries. As discussed in subsection 3.3.1, the current era of whiting fishery management began in 1994 with the implementation of the West Coast groundfish limited entry permit program, which restricted participation in all groundfish fisheries, including whiting. This program was followed in 1997 by an inter-sector allocation scheme between the three sectors and a co-op program within the catcher/processor sector, both of which continue to this day. Since that time, the only West Coast program to restrict participation in the limited entry trawl fishery has been the 2003 limited entry trawl permit/vessel buyback program, which bought 91 vessels out of the trawl fleet. Beyond these direct controls on fishery participation levels, vessel participation levels in the whiting fishery have likely been influence by a variety of biological and socioeconomic factors, including both the availability and price of whiting itself.

As discussed in subsection 3.2.1, whiting has highly variable annual recruitment trends, which ultimately result in highly variable allowable whiting harvest levels. Figure 1 plots the number of vessels that have annually participated in the whiting fishery against the whiting OYs from 1994-2006. As can be seen from this figure, the number of vessels participating in the whiting fishery over this period has tracked fairly closely to the amount of whiting available for harvest. In other words, in years when the whiting OY has been low, participation has also been relatively low. The figure also shows the sharp increase in new entrants in 2004.

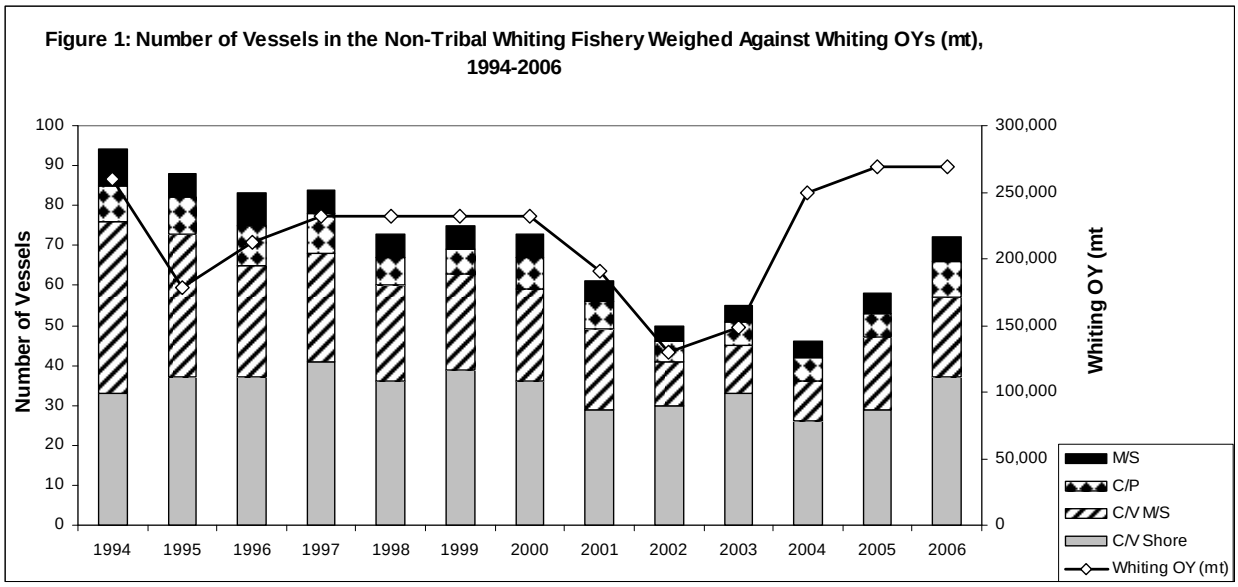


Figure 2 plots the number of vessels that have annually participated in the whiting fishery against the ex-vessel whiting prices from 1994-2006. NMFS downloaded these prices from the Pacific Fisheries Information Network (PacFIN) website and used Port of Newport, Oregon prices because Newport is a larger whiting receiving port with consistent participation in the fishery over time, with several processing plants, and with plants that process whiting both as surimi and as headed-and-gutted product. Prices are likely different between the shore-based and at-sea sectors; however, price data are not reported from the at-sea sectors. (Note there are no explicit ex-vessel prices for the catcher-processor sector as the harvesting and processing of fish is vertically integrated—that is the catcher-processor does not pay itself for the fish harvested.) Therefore, shore-based sector price data is used as a proxy indicator of changing prices over time, rather than as an exact measure of those prices. The recent rise in the number of vessels participating in the fishery also mirrors the recent rise in ex-vessel prices.

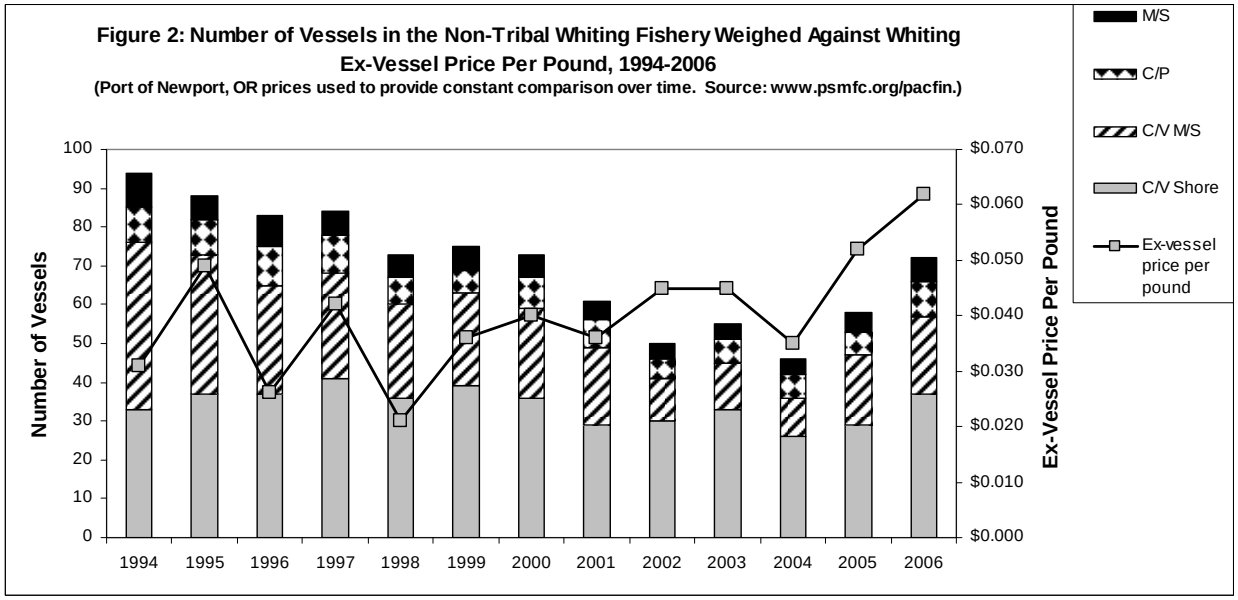
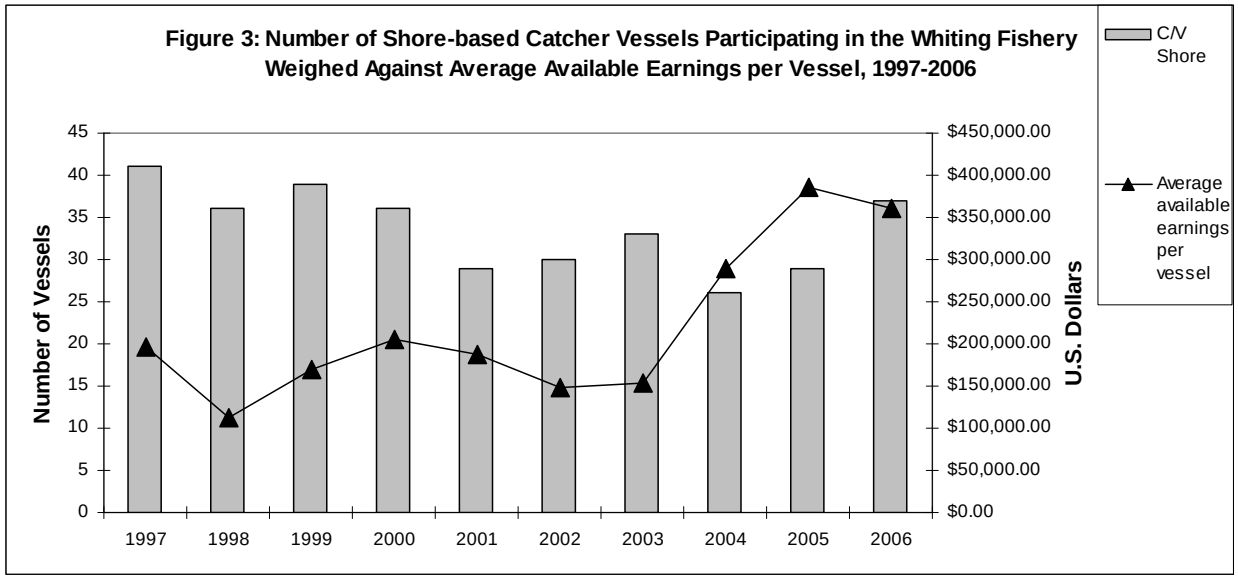


Figure 3 uses the Port of Newport, Oregon prices shown in Figure 2 and weighs them against the shoreside whiting allocations for 1997-2006 and the number of vessels participating in those years. The 1997-2006 period is used because the shore-based sector's allocation has consistently been 42 percent of the non-tribal whiting OY throughout that period, while its allocation varied in the 1994-1996 period. Figure 3 shows the average available whiting earnings per vessel in each of these years by multiplying the shoreside whiting OY times the shoreside price per pound, and then dividing that number by the number of vessels participating in any one year.



In the earlier years of this fishery, participation was apparently less well correlated with price than with OY—and other factors such as OY levels were influencing participation. From 2004 to 2005, both whiting OY and price per pound rose, whereas whiting OY remained constant from 2005 to 2006, but both price per pound and fishery participation levels rose. Taking these two figures together, it appears that fishery participation levels were largely dependent on available OY up until 2005, when prices rose over historic levels to attract more vessels to participate in the fishery on an annual basis. Despite the continued increase in ex-vessel price, average revenues per vessel fell in 2006 as a result of increased participation

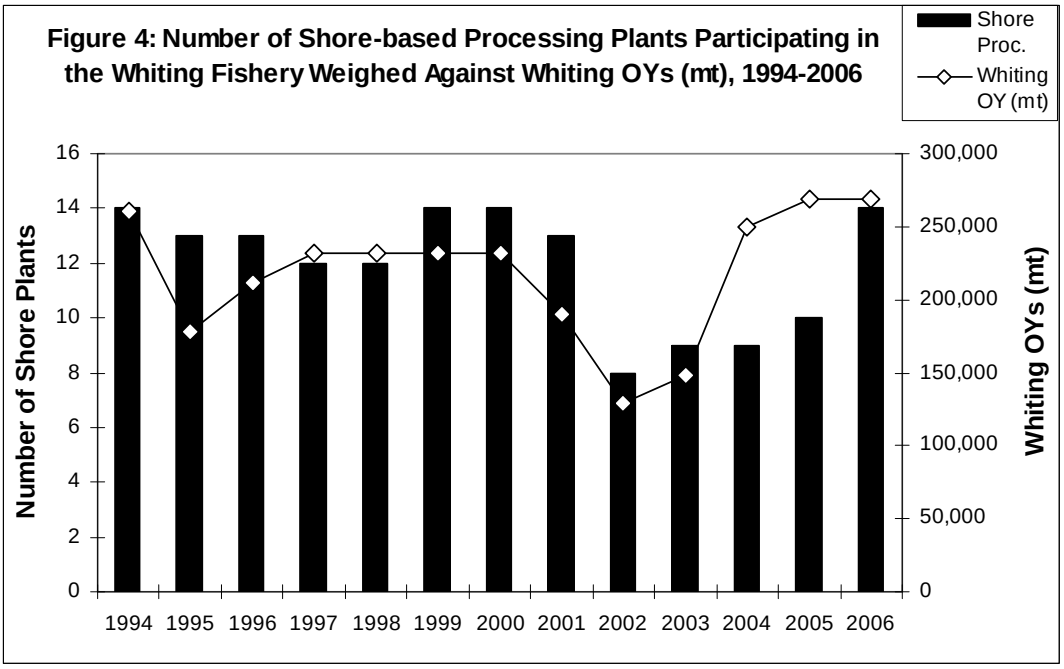
Table 8 shows the trends in the number of vessels and processors participating by sector from 1997 to 2006. Again, this table shows a decreasing trend in the number of vessels participating in all three sectors during years when the OY was constrained to allow the stock to rebuild, 2002-2003. All three sectors also saw increases in participation in 2005 and 2006. This table also shows the ratios of catcher vessels to motherships and catcher vessels to shore-based plants, which illustrates how the number of motherships and shoreplants affects the number of harvesting—in recent years, there were 3 to 4 vessels per mothership and about 3 catcher vessels per shoreplant.

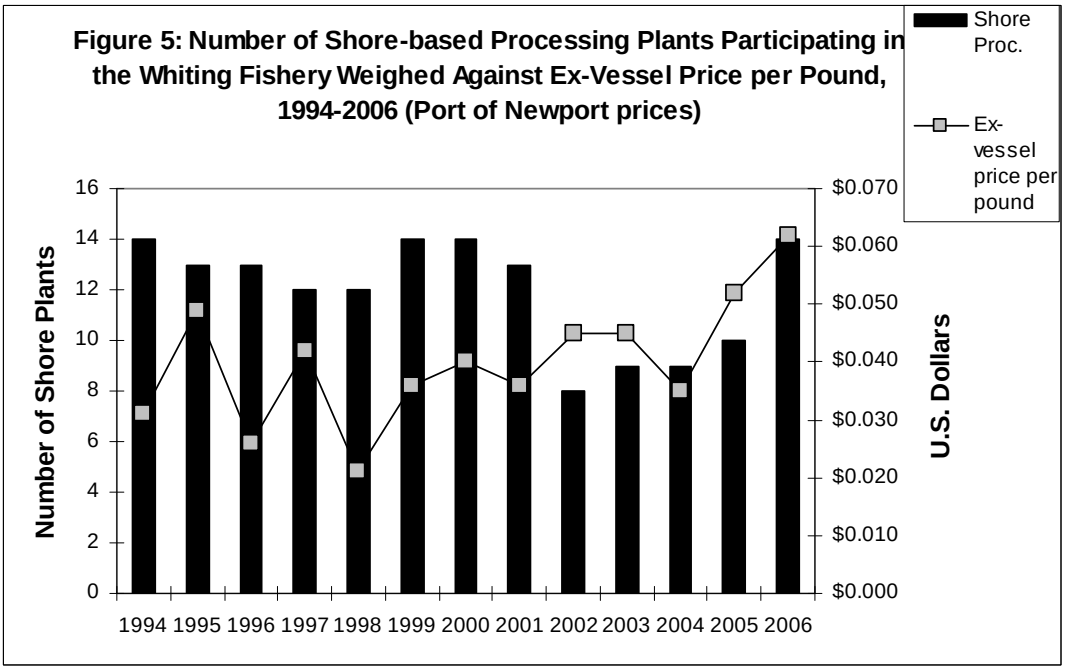
Table 8. Vessels and processors participating in the non-tribal whiting fishery, 1997-2006

Year	Catcher /processors	Mothership-Catcher Vessels	Motherships	Ratio of mothership Catcher Vessels to Motherships	Shore-based Catcher Vessels	Shore-based Processors	Ratio of shore-based catcher vessels to shore-based processors
1994	9[1]	43	9[1]	4.8/1	33	14	2.4/1
1995	9	36	6	6.0/1	37	13	2.9/1
1996	10[2]	28	8[2]	3.5/1	37	13	2.9/1
1997	10	27	6	4.5/1	41	12	3.4/1
1998	7	24	6	4.0/1	36	12	3.0/1
1999	6	24	6	4.0/1	39	14	2.8/1
2000	8	23	6	3.8/1	36	14	2.6/1
2001	7	20	5	4.0/1	29	13	2.2/1
2002	5	11	4	2.8/1	30	8	3.8/1
2003	6	12	4	3.0/1	33	9	3.7/1
2004	6	10	4	2.5/1	26	9	2.9/1
2005	6	18	5	3.6/1	29	10	2.9/1
2006	9	20	6	3.3/1	37	14	2.6/1

[1] In 1994, one vessel participated in both the catcher/processor sector and the mothership sector.
[2] In 1996, two vessels participated in both the catcher/processor sector and the mothership sector.

For shore-based processing plants, participation trends shown in Figures 4 and 5 indicate some correlation with price and OY level in recent years, although participation in earlier years appears to be more closely correlated with OY level than ex-vessel price. In the 1994-2006 period, 14 is the greatest number of plants to participate in any one year, a level of participation that occurred in 1994, 1999, 2000, and 2006, with participation ranging from 12-14 plants annually for the period 1994-2001. During this period as discussed below, the shorebased sector has undergone a transition where the major shoreside processing plants were focused on surimi, where currently these plants are focused on headed and gutted production. In addition to rising prices of headed and gutted product, this may partially explain the rise of in the number of shorebased processing plants as headed and gutted production is labor intensive and does not require the high start-up costs associated with the purchase of equipment to produce surimi.





Catcher vessels that participate in both the shore-based and mothership sectors are licensed with limited entry permits that give them access not only to whiting allocations, but also to trip limits for non-whiting groundfish. Many whiting catcher vessels also participate in the year-round groundfish trip limit fisheries. In the Council's statement on the purpose of and need for this action, the Council expressed concern that increases in participation in the whiting fishery may have resulted from declining trawling opportunities for non-whiting groundfish species off the West Coast and for walleye pollock taken off Alaska.

The 2008 pollock quota the Bering Sea subarea was set at 1,318,000 mt by the 2007 and 2008 harvest specification for groundfish in the BSAI (72 FR 9451, March 2, 2007). In December 2007, the North Pacific Fishery Management Council recommended a 2008 pollock quota of 1,000,000 mt for the Bering Sea subarea. This amount is less than the 1,318,000 mt established by the 2007 and 2008 harvest specification for groundfish in the BSAI (72 FR 9451, March 2, 2007). The quota recommended by the North Pacific Fishery Management Council is based on the Stock Assessment and Fishery Evaluation report (SAFE), dated November 2007, which NMFS has determined is the best available scientific information for this fishery.

In 1999, NMFS declared bocaccio, lingcod, and Pacific ocean perch as overfished, followed in subsequent years by canary rockfish and cowcod in 2000, darkblotched and widow rockfish in 2001, and yelloweye rockfish in 2002. Lingcod has since been rebuilt to a biomass level above the long-term maximum sustainable yield (MSY) level. The rockfish species managed via overfished species rebuilding plans tend to be long-lived and slow growing; making their recovery to MSY levels a long-term process. Additionally, these species are taken in common with other more abundant and healthy stocks, which means that harvest of healthy groundfish stocks commonly taken with bottom trawl gear has had to be curtailed in order to minimize the bycatch of co-occurring overfished species.

Although catcher/processor vessels have limited entry licenses that make them eligible to harvest non-whiting groundfish, the trip limits for non-whiting groundfish are too low for catcher/processors to profitably pursue those species. Therefore, the effect of the availability of non-whiting groundfish fishing opportunities on vessel participation in the whiting fishery is only relevant for catcher vessels in the shore-based and mothership sectors. (However, the availability of non-whiting groundfish fishing opportunities does affect catcher-processor companies through the effects on permit prices. More fishing opportunities leads to higher permit prices and raises the costs for new catcher-processors to enter the fishery through permit purchase or for already-permitted catcher-processors to increase vessel length through the purchase of additional permits). Figure 6 uses non-whiting groundfish landed catch as an indicator of non-whiting fishing opportunities in the 1994-2006 period and plots those catch levels against whiting fishery participation levels (landed catch data from annual PacFIN data reports #001 – www.psmfc.org/pacfin.)

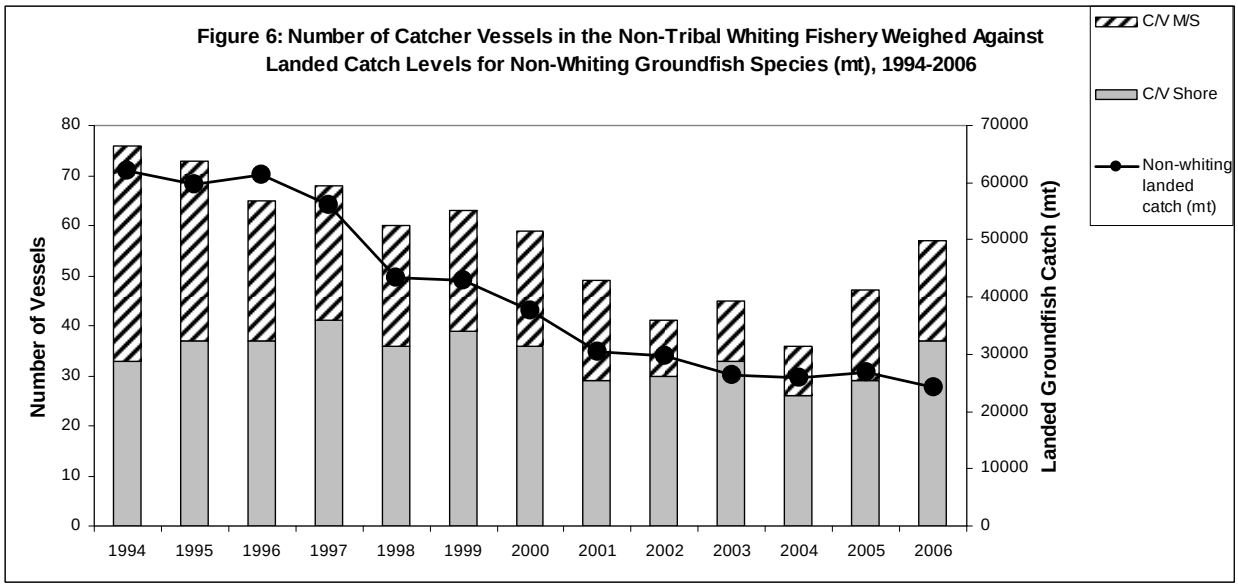


Figure 6 shows that although non-whiting groundfish fishing levels in the 1994-2006 period have declined severely – by 61 percent – whiting fishery participation trends by catcher vessels vary throughout that period and do not show a close inverse relationship to non-whiting fishing opportunity. In 2005 and 2006, substantial increases in the whiting OY and in prices over historic levels and these are likely to be the prime reasons for the increased participation and increased groundfish fishery.

Fishing opportunities for walleye pollock taken in Federal waters off Alaska are constrained both by the biological availability of the pollock stock and by a complex series management programs developed by the North Pacific Fishery Management Council to restrict participation in the pollock fisheries. In the statement on the purpose of and need for this action, the Pacific Council was concerned that declining pollock quotas for waters off Alaska could give traditional pollock vessels an incentive to become new entrants to the West Coast whiting fishery. Figure 7 shows total allowable catch (TAC) levels for walleye pollock in the Eastern Bering Sea (EBS) and Gulf of Alaska (GOA) over the 1994-2007 period. The draft 2007 walleye pollock stock assessment shows a decrease in EBS + GOA total TAC of about 7 percent.

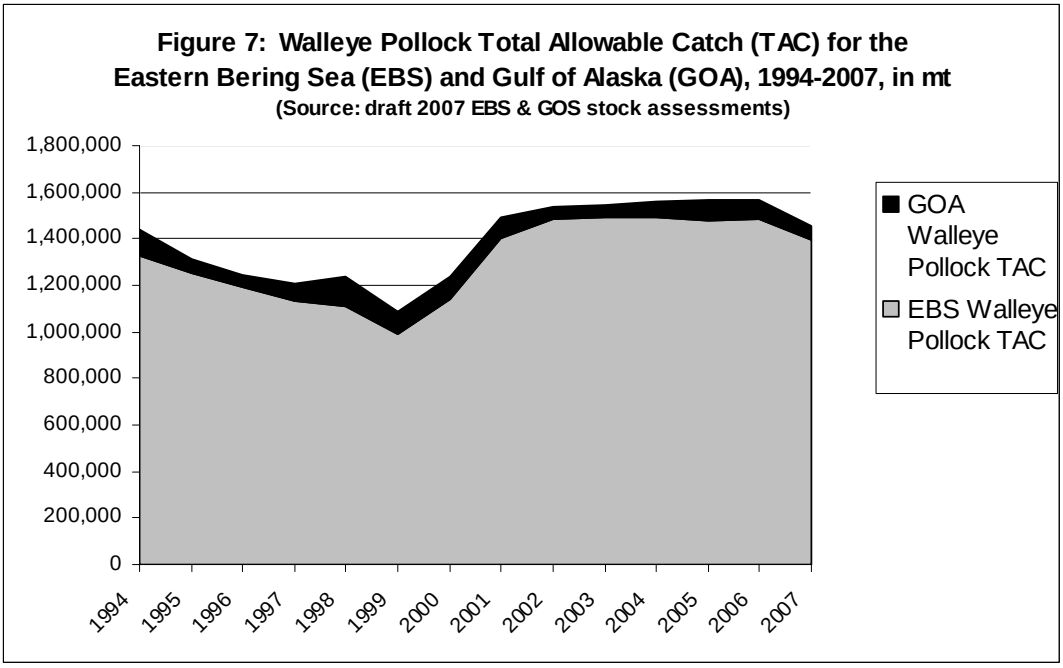
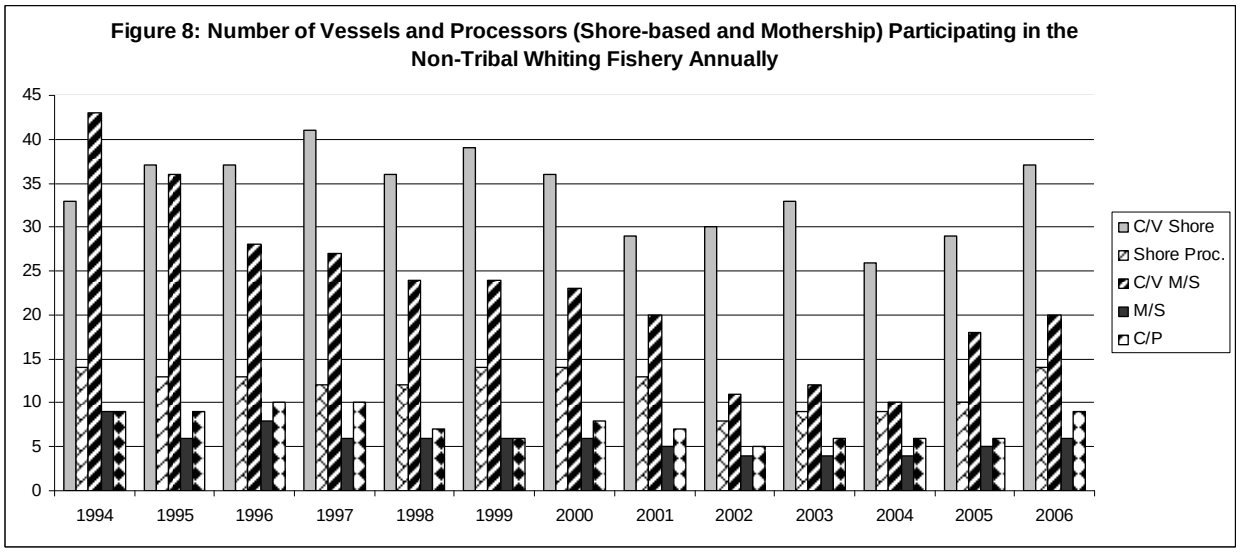


Figure 8 shows the numbers of vessels and processors participating in each of the sectors over the 1994-2006 period. From 2005 to 2006, the number of shore-based processing plants participating went from 10 to 14 plants, a 40 percent increase. From 2005 to 2006, the number of catcher vessels participating in the shore-based sector went from 29 to 37 vessels, a 28 percent increase. While participation in the mothership sector also increased for both catcher vessels and processing motherships, the difference was less pronounced than in the shore-based sector. From 2005 to 2006, the number of mothership processors participating went from 5 to 6 vessels, a 20 percent increase, while the number of catcher vessels in this sector went from 18 to 20 vessels, an 11 percent increase. The catcher-processor sector saw the greatest increase in participation in going from 6 to 9 vessels, a 50 percent increase. All of these participation numbers for all sectors were greater than in then 2002-2005 period.



One of the Council's concerns was the recent entry of new vessels. The analysis below examines the entry and exit patterns of AFA and non-AFA vessels. Although the participation of AFA-permitted vessels is not part of the Council's current statement on the purpose of and need for the action, the entry of AFA vessels into the fishery is of Council concern. As discussed in the Section 1.2 Background, in response to recent entry into the fishery, the Council's first efforts to control entry were focused on AFA vessels, especially those without prior West Coast experience. Participation trends by AFA vessels is also an indicator of increased interest in the fishery from vessels associated with Alaska Pollock fisheries.

Since 2002, there have been vessels from both the AFA and non-AFA fleets entering and exiting the fishery. Most likely because of the high quotas and revenues in the 2005 and 2006 seasons, there were no exits in either fleet -- only entrants. Table 9 shows entry and exit patterns for the period 2002 – 2006.

Table 9. Entry and Exit Patterns in the Shorebased Whiting Fisheries, 2002 – 2006

Comparison Years	Total Entrants	Total Departures	AFA Entrants	AFA Departures	Non-AFA Entrants	Non-AFA Departures
2003-2002	6	3	2	0	4	3
2004-2003	4	9	0	2	4	7
2005-2004	3	0	2	0	1	0
2006-2005	6	0	3	0	3	0

During the period 2002-2006, 15 different AFA-permitted vessels participated in shorebased whiting fisheries - 14 of these vessels fished under Pacific Groundfish permits prior to 1999, and the remaining AFA vessel first entered the Pacific groundfish fishery in 2006. The larger capacity AFA-permitted vessels had higher per vessel revenues and landings than non-AFA vessels throughout the 2002-2006 period. From 2005 to 2006 participants in the shore-based fishery increased with 3 new AFA and 3 new non-AFA vessels joining the fishery. When considering the landings by all vessels, the larger capacity AFA-permitted vessels took a greater proportion of the shore-based allocation in 2006 than in 2005 (Table 11). In 2005, AFA-permitted vessels landed 51 percent of the shore-based allocation and 58 percent in 2006. Despite the increase in ex-vessel prices, the per-vessel non-AFA revenues fell in 2006 compared to 2005. The following tables show the details, first for the combined set of vessels (Table 10), and then for the separated AFA and non-AFA vessels (Table 11).

Table 10. Number, landings and revenues for AFA and non-AFA vessels combined 2002 – 2006

Year	Number of Vessels	Landings per Vessel Million lbs	Revenues per Vessel ($1,000)
2002	28	3.6	161
2003	31	3.7	167
2004	26	7.6	262
2005	29	7.4	391
2006	35	6.1	373

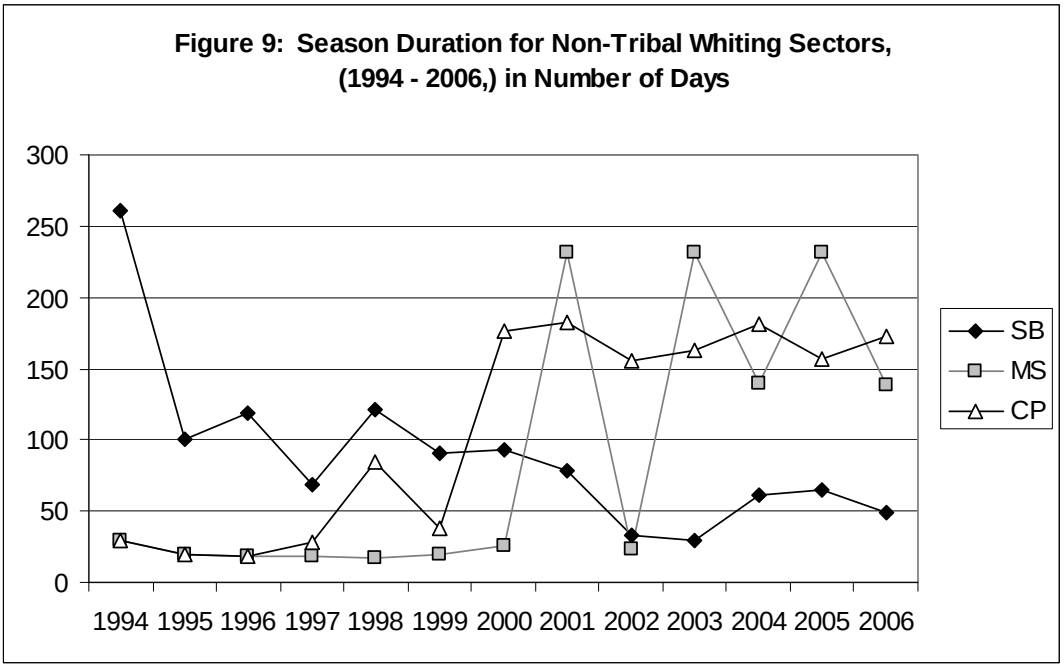
Table 11. Number, landings and revenues for AFA and non-AFA vessels, 2002 – 2006

Year	Number AFA Vessels	Number Non-AFA Vessels	percent of Landings AFA	AFA Landings per vessel Million lbs	Non-AFA Landings per vessel Million lbs	AFA Revenues per Vessel ($1,000)	Non-AFA Revenues per Vessel ($1,000)
2002	10	18	43	4.4	3.2	196	142
2003	12	19	47	4.4	3.2	200	146
2004	10	16	49	9.6	6.3	336	216
2005	12	17	51	9.2	6.2	482	327
2006	15	20	58	8.2	4.5	510	271

In addition to the vessels described above, an additional vessel entered the fishery in 2006. This vessel is not quite a pure harvesting vessel and not quite a catcher processor because it processes headed and gutted whiting at sea but does not freeze the product as catcher-processors typically do. The vessel used a smaller net and towed for short duration to maintain quality. Head and gut machines were used at sea and the product was immediately placed in thick slurry of ice. As a result, the vessel was able to significantly increase its at-sea production of Pacific whiting in 2006. Because fish that are headed and gutted (i.e., leaving the tail on) with no further processing (such as freezing) are not considered to be a final product, the vessel's activities do not qualify as a catcher/processor. The ex-vessel price of the partially processed catch was approximately four times greater than the price for whiting landed whole in unsorted EFP landings, and approximately double the price when taking the weight conversion from dressed head off form to round weight into account, i.e., when comparing prices on the basis of a common weight measure.

The Council's final concern for this fishery, as expressed in its statement on the purpose of and need for the action, was that continuing the status quo practice of allowing any vessel with a limited entry trawl permit access to the whiting fishery could result in ever-faster races for fish. The Council expressed concern that accelerated fishing activity that could be spurred by increased competition in the fishery could result in less careful fishing practices that could both increase the rate of bycatch of non-whiting species and increase the frequency of unsafe fishing practices. As shown in Figure 9, season durations for each of the three non-tribal whiting sectors has varied considerably over the 1994-2006 period. Although the at-sea sectors have had longer seasons in during 2000-2006 than in prior years, this same period has seen notable declines in season duration for the shore-based sector. For the shore-based sector, the low OYs of 2002 and 2003 notably reduced season duration. Several vessels participate in both the shoreside and mothership sectors as catcher vessels. Since 1994, the number of catcher vessels that participated in both the shore-based and mothership sectors has fluctuated from a low of three vessels to a high of 21 vessels, with the average around 11 vessels per year. Historically, the at-sea sector has started on May 15, while the coastwide shoreside sector has started on June 15. If the mothership fishery season were greatly reduced as a result of an increase in whiting catch due to new entrants in the sector, catcher vessels that had the opportunity to fish in both the mothership and shore-based sectors could shift from a closed mothership fishery to the open shore-based sector and maintain their opportunity to fish. However, an accelerated race for fish could also result in higher bycatch rates in the at-sea sectors and the closure of all sectors of the

fishery if a bycatch limit is reached, or higher bycatch rates in the at-sea sectors could reduce the availability of bycatch limit species once the shoreside sector begins on June 15th.

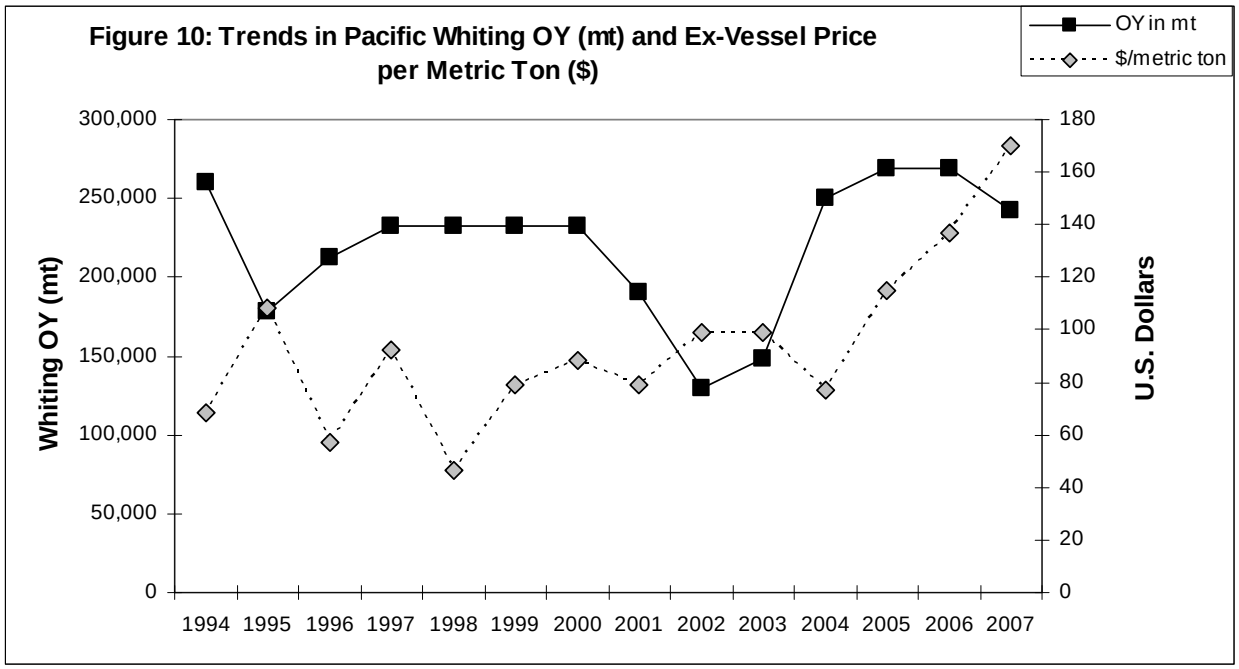


Counties that are actively involved in the Pacific whiting shore-based industry include Pacific County, Washington; Grays Harbor County, Washington; Clatsop County, Oregon; Lincoln County, Oregon; Coos County, Oregon; Del Norte County, California; and Humboldt County, California. These counties tend to have economies that are based on tourism, natural resources, and government. The largest industries reported by the Bureau of Economic Analysis in counties associated with the Pacific whiting shore-based industry are generally forestry, fishing, and other, manufacturing, government and government enterprise, health care and social assistance, accommodation and food services, and retail trade. Industries falling within the forestry, fishing, and other, and manufacturing sectors are largely made up of timber and fishing industry related business, and timber and seafood processing. Food services, accommodation, and retail trade are largely made up of businesses reliant on the tourism sector. The two leading counties actively involved in the at-sea whiting sector are Lincoln County, Oregon, a county that is also actively involved in the shore-based whiting industry, and King County, Washington. King County, Washington contains several large urban communities, including Seattle, Washington, and has a mixed economy with a long history in the fishing industry, but with much more diverse economic interests than the other counties active in the whiting fishery.

Readers interested in further information on Counties and communities, are referred to Chapter 7 of the EIS for the Proposed Acceptable Biological Catch and Optimum Yield Specifications and Management Measures for the 2007-2008 Pacific Coast Groundfish Fishery (PFMC 2006.)

3.3.3 Fishery Values and Market Trends

Figure 10 shows annual trends in Pacific whiting OY levels and ex-vessel prices per ton, using preliminary PacFIN price data for 2007 that indicates a price of $0.077 per pound or $169.75 per mt for whiting. As described in subsection 3.3.5, prices are taken from PacFIN data on the Port of Newport, Oregon, using that port as providing representative prices for the fleet. Because this data comes from a single port and from the shore-based sector only, Figure 10 should be viewed as showing changing trends in the fishery over time, rather than a precise indication of fleet-wide ex-vessel prices.

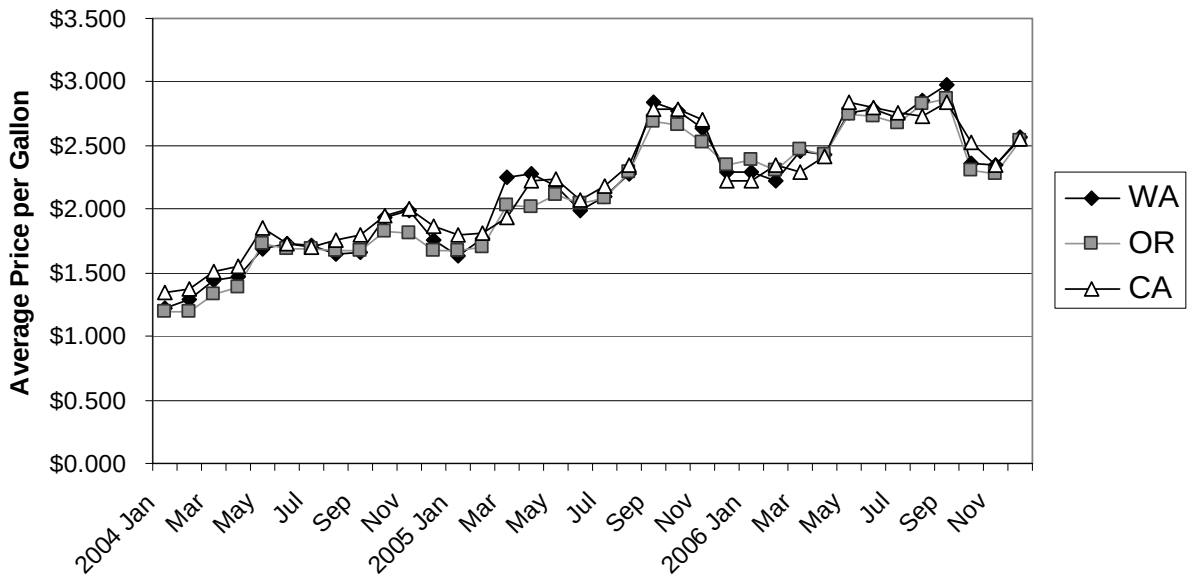


There is some information indicating at-sea ex-vessel prices are about 15 percent lower than prices for shore-based deliveries (Pers. comm., S. Davis, The Research Group, August 2007). According to Davis, each catcher vessel has its own contract with a mothership and contracts may differ between mothership corporations, or between the different catcher vessels that work with each mothership. At-sea prices may be lower because costs are lower per delivery; vessels delivering to motherships, reducing the fuel and time of shore-based vessels delivering to processing plants.

Fuel costs can be a notable proportion of each vessel's total operating costs, especially with the upward trends in prices in recent years. The shore-based whiting sector is a particularly fuel-hungry fishery because vessels must travel quickly to and from the whiting grounds in order to deliver their product to shore plants before the rapid whiting flesh deterioration affects product quality (Park 2005.) Motherships and Catcher-processors while not having to make many trips to port do require fuel to process the fish at sea. Figure 11 shows West Coast marine diesel price trends over the 2004-2006 period, averaged for each state (PSMFC 2007). Higher marine fuel prices may discourage some potential fishery participants from entering the fishery,

depending on whether the recent years' higher prices for whiting offset higher fuel prices. If average crude oil import prices increase over 2006 levels as projected by the United States Energy Information Administration (EIA), higher marine fuel prices are likely to occur which may discourage new vessels from entering the fishery. For crude oil, the EIA projected a 13.5 percent cost increase in 2007 and a 25.3 percent cost increase in 2008 over the cost in 2006. For (highway) diesel fuel, the EIA projected a 5.5 percent cost increase in 2007 and a 14.0 percent cost increase in 2008 over the cost in 2006.

Figure 11: State Average Before-Tax Cash Marine Diesel Price, 2004-2006
From: *West Coast and Alaska Marine Fuel Prices 2004-2006,* Annual Report of the Economic Fisheries Information Network, PSMFC.



During the 2000-2006 period, there was a shift in the major whiting products being produced. When looking at estimates of wholesale production by major product form (surimi, fillets, and headed and gutted), United States export statistics show an upward trend in the prices and production of headed and gutted (H&G) Pacific whiting and a downward trend in the production of Pacific whiting surimi (The Research Group 2007.) In the early 2000s, the amount of Pacific whiting being processed into surimi for export was far greater than that of H&G products. Simultaneous with the decline in the Pacific whiting OY, one of the three major surimi processors stopped production in 2003 and has yet to return to production. Meanwhile, a new foreign market has spurred the production of H&G products to the extent that in 2006, H&G exports greatly exceeded surimi exports. (See Table 13).

As shown in Tables 12-14, whiting ex-vessel price-per-pound, ex-vessel revenues, and product exports have all increased since the 2002-2003 low OY levels. Not only is a greater volume of whiting being exported, that whiting is being sold in higher-value product forms, and the overall fishery profits have shown notable upward trends. In addition, the annual growth rate in exports from West Coast ports (Seattle, Portland, San Francisco, and Los Angeles) has increased in

tonnage, but the value per pound has increased as well. Through December 2006, 123 million pounds (55,792 mt) and $88 million worth of H&G products were exported through West Coast ports, an increase almost 30 percent in tonnage and 50 percent in value. The export price increased 16 percent to $0.73 per pound compared to the average export price for 2005. These export growth rates appear to have affected ex-vessel prices as well, which increased by 44 percent in 2005 and 19 percent in 2006.

Tables 12-14 present summary information from whiting industry market data, summarized from information available through the NMFS Office of Science and Technology on United States trade of processed fishery products: http://www.st.nmfs.noaa.gov/st1/trade/index.html.

Table 12. Key Pacific Whiting Market Indicators 2000 – 2006 Landings, Ex-vessel Revenues, and Ex-vessel Prices

Year	Ex-vessel Revenue (millions $)	Percent Change*	Landings mt	Landings millions of lbs	Percent Change*	Ex-vessel price ($)	Ex-vessel price percent change
2000	8.0		88,842	195.86		0.041	
2001	5.7	-28%	73,411	161.84	-17%	0.035	-13%
2002	4.6	-21%	45,707	100.77	-38%	0.045	27%
2003	5.5	21%	55,333	121.99	-21%	0.045	0%
2004	7.7	40%	96,364	212.44	74%	0.036	-2-%
2005	12.6	64%	109,395	241.17	14%	0.052	44%
2006	17.4	38%	127,167	280.35	16%	0.062	19%

Table 13. West Coast Exports of Headed and Gutted Pacific Whiting 2000 - 2006

Year	Export Revenue (millions $)	Percent Change	Exports millions of kg	Exports millions of lbs	Percent Change Export Weight	Export price ($/lb)	Export price percent change
2000	3.7		4.2	9.24		0.400	
2001	14.4	289%	12.9	28.38	207%	0.507	27%
2002	7.5	-48%	6.6	14.52	-49%	0.517	2%
2003	14.9	99%	12.5	27.50	89%	0.542	5%
2004	44.7	200%	38.0	83.60	204%	0.535	-1%
2005	59.2	32%	43.4	95.48	14%	0.620	16%
2006	88.2	49%	55.9	122.98	29%	0.717	16%

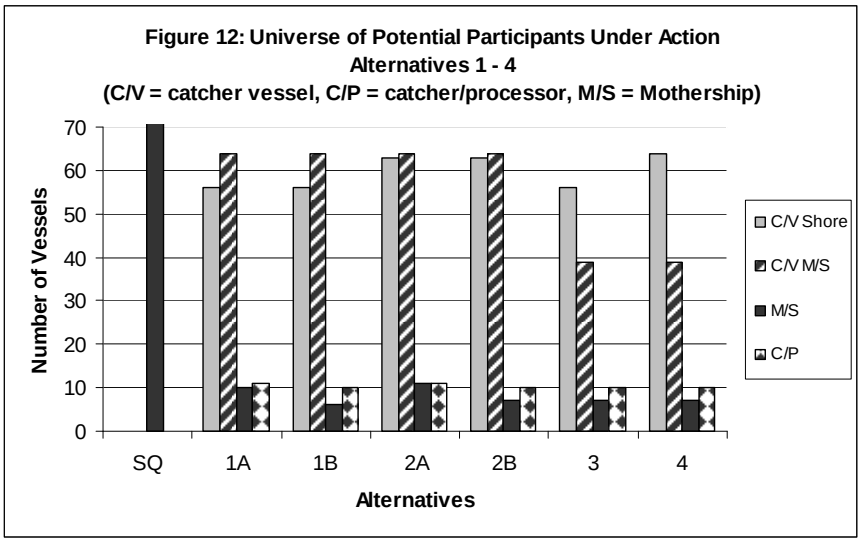
Table 14. West Coast Exports of Pacific Whiting Surimi 2000 - 2006

Year	Export Revenue (millions $)	Percent Change	Exports millions of kg	Exports millions of lbs	Percent Change Export Weight	Export price ($/lb)	Export price percent change
2000	18.2		11.4	25.08		0.726	
2001	28.0	54%	17.4	38.28	53%	0.731	1%
2002	16.8	-40%	9.3	20.46	-47%	0.821	12%
2003	10.6	-37%	5.9	12.98	-37%	0.817	-1%
2004	25.6	142%	16.3	35.86	176%	0.714	-13%
2005	28.5	11%	14.5	31.90	-11%	0.893	25%
2006	6.3	78%	3.2	7.04	-78%	0.895	0%

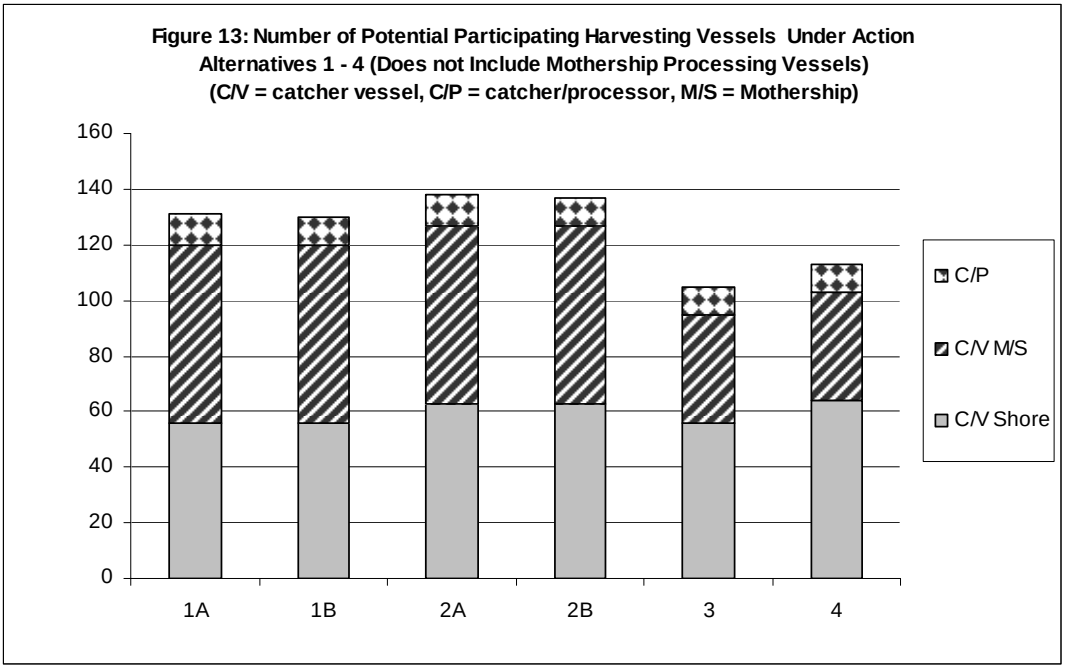
4.0 ENVIRONMENTAL CONSEQUENCES

The impact analysis in this EA is based on the expected change in the overall pool of potential participants in the whiting fishery from the baseline level, or the status quo alternative, that would occur under each of the action alternatives. The only real difference between the action alternatives, in terms of their effects on the environment, is in the number of vessels in the pool of potential whiting fishery participants in 2008 and beyond. Under the status quo alternative, in addition to the availability of markets, the pool of potential whiting fishery participants is limited by the current number of limited entry trawl permits, 176 permits, their associated length endorsements, and the requirements to combine smaller sized permits into a larger permit that meets the length of any new vessel wishing to enter the fishery. The actual number of vessels historically participating in the whiting fishery has been much lower (Figure 8) reflecting not only the availability of permits but market conditions, fishing opportunities elsewhere, ability and interest of the vessel's company to participate in the fishery; and in particular for shorebased catcher vessels, the ability to secure arrangements to sell their harvests to a processor.. It should be noted that, limiting the pool of potential fishery participants would restrict the number of vessels eligible to participate in the whiting fishery in future years, but it would not necessarily restrict fishing effort in the fishery from current and past participants or since none of the proposed actions include effort-restricting measures, such as additional limits on the lengths of licensed vessels, or limits on net capacity, etc. However, what is being prevented are new sources of effort from areas that have no prior history in the Pacific groundfish fishery while the Council develops its Trawl Rationalization program where either though the use of co-ops or transferable property rights, incentives to expand or reduce capacity and/or increase effort will be not be due to the "race to fish" but from normal market forces..

Figure 12: Universe of Potential Participants Under Action Alternatives 1 - 4
(C/V = catcher vessel, C/P = catcher/processor, M/S = Mothership)



The impact estimates below will use average bycatch rates for all vessels within a sector to assess the likely impacts of the alternatives. Bycatch mitigation measures for the whiting fishery are also provided via other management programs, such as the at-sea sector observer program, and the maximized retention and monitoring program under consideration for the shore-based sector. None of the alternatives is expected to result in a shift in the geographic distribution of fishing activities, since that distribution is based on the whiting stock's availability for harvest in a given year, rather than on the number of vessels participating in the fishery.



4.1 Effects of the Alternatives on the Physical Environment

This action would implement a vessel limitation program for the whiting fishery. Federal regulations require that participants in the Pacific whiting fishery use midwater trawl gear, a gear that operates within the water column. The schooling habits of whiting also make midwater trawl gear, which is deployed in open water between the sea surface and the bottom of the ocean, the most efficient gear for large-scale prosecution of the whiting fishery. Habitat impacts generally associated with fishery management actions are effects resulting from changes in the physical structure of the benthic environment. Given the biophysical characteristics of the water column, where midwater trawl gear is deployed, the gear does not affect the biophysical environment. For this reason, there is no likelihood that the proposed action would cause substantial damage to habitats or EFH and this EA does not further evaluate this category of impacts.

4.2 Effects of the Alternatives on the Biological Environment -- Target Groundfish Species and Non-Target Overfished Groundfish Species, Pacific Salmon

4.2.1 Status Quo Alternative (No Action): Limit Participation in the Pacific Whiting Fishery by Using Only the Current Limited Entry System

The status quo alternative represents the state of the environment if the pool of vessels eligible to participate in the whiting fishery were not constrained, such that the pool of potential fishery participants would be any vessel registered for use with one of the 176 limited entry trawl permits.

Direct effects on the biological environment resulting from fishery management actions primarily include changes in species mortality levels resulting from implementation of the

alternatives. Under the status quo, ABCs and OYs for Pacific whiting would continue to be set annually and would be based on the best scientific information available and based on the sustainability principles of the Magnuson-Stevens Act or the United States-Canada Pacific Whiting Treaty. Allocation of Pacific whiting between the United States and Canada and the allocation between commercial sectors would continue as specified in regulations at 50 CFR 660.323 (a)(2), and the allocation to the treaty tribes would continue to be specified at 50 CFR 660.385 (e). The Pacific whiting fishery would continue as a primary season fishery, as specified in regulations at 50 CRF 660.373, and with the same season dates as have been in place since 1997.

The status quo action of maintaining a pool of eligible whiting fishery participants as all of the vessels currently registered to limited entry trawl permits has no effect on the whiting stock assessments or on the process by which allowable whiting harvest levels are set. Likewise, the status quo action would have no effect on the management of the fishery, which requires each sector to close when its whiting allocation is estimated to have been reached. NMFS has a consistent record of managing the fishery such that total whiting harvest has been below annual allowable harvest limits (NMFS 2006a, and see prior years of same report.) Therefore, the status quo action, which deals only with the number of potential participants in the fishery and not with the setting of harvest limits or the fishery's management parameters, is not expected to have any effect on the health of the whiting resource.

The ABCs and OY for groundfish stocks taken incidentally with Pacific whiting would be based on the best scientific information available and on the sustainability principles of the Magnuson-Stevens Act. Consistent with the Magnuson-Stevens Act requirements, the ABCs and OYs for overfished species (canary rockfish, cowcod, darkblotched rockfish, bocaccio, yelloweye rockfish, widow rockfish, and POP) would continue to be based on overfished species rebuilding plans adopted under Amendment 16-4 regulations (71 FR 78638, December 29, 2006).

At its April 2007 meeting, the Council expressed its desire to continue managing the Pacific whiting fishery with bycatch limits for the overfished species most commonly caught in the fishery (canary, widow, and darkblotched rockfish). Bycatch limit management requires all sectors of the non-tribal fishery to close once any of the overfished species bycatch limits have been reached. With this management scheme, the Pacific whiting industry has the opportunity to harvest the full Pacific whiting OY, provided those bycatch limits are not reached. The bycatch limits used in the Pacific whiting fishery would continue to be based on the rebuilding OYs for each species, the amount projected to be taken in other fisheries, the more abundant overfished species historical weighted averages or linear interpolation (widow rockfish) of incidental catch as reported by observers in the at-sea fisheries, and fish tickets in the shore-based fishery.

Overfished species catch in the whiting fishery is constrained by bycatch limits. Proposed monitoring and maximized retention measures for the shore-based sector are expected to strengthen NMS's ability to effectively manage the Pacific whiting fishery to stay within the specified allocations and bycatch limits. The bycatch limit amounts, however, are much smaller than the amount of whiting available for harvest, requiring more precaution and precision in management practices to keep the fishery below the limits. With a larger potential pool of fishery participants, the number of vessels in the fishery could increase such that total catch

amounts of bycatch species could not be estimated quickly or precisely enough to prevent the fishery from exceeding a bycatch limit. A small exceedance of a bycatch limit for an overfished species could be accounted for in the overall groundfish management process by deducting the exceedance from the amount of that species available to another groundfish fishery. However, a large exceedance could jeopardize NMFS's ability to manage the groundfish fisheries as a whole to stay within overfished species OYs. Since overfished species OYs are set at levels intended to rebuild those species as quickly as possible, taking into account the status and biology of the stocks and the needs of fishing communities that depend on the stocks, an OY exceedance could ultimately slow the rate of rebuilding for an overfished species. Exceeding an OY is of greatest concern to overfished species such as canary rockfish which is sensitive to changes in harvest. For example, if the 2007 canary rockfish OY were exceeded by 3 mt, it is projected to result in the rebuilding time being extended by 11 years (PFMC and NMFS 2006). The status quo alternative would affect overfished species rebuilding, to the extent that a potentially large number of fishery participants could pose a greater risk that the fishery could exceed a bycatch limit to a greater degree than a smaller number of fishery participants.

This action does not contemplate revising management measures already in place to constrain the bycatch of salmon in the whiting fishery, such as the Klamath River, Columbia River, and Ocean Salmon Conservation Zones (50 CFR 660.373(c)). Under the status quo alternative, or under any of the action alternatives, these protective measures would remain in place. The catch of salmon in the Pacific whiting fishery depends on many factors, including the abundance of Pacific whiting and salmon in any given year, the overlap in time and area where these species occur, and the care taken to avoid fishing in areas with high salmon bycatch (e.g., areas nearshore in close proximity to rivers) In many years, the actual incidental catch of Chinook salmon in the whiting fishery is much lower than the expected incidental take threshold of 11,000 fish annually. (The current incidental take statement prepared pursuant to the Endangered Species Act requires reinitiation of consultation if the fishery exceeds an 11,000–Chinook salmon annual bycatch amount.) If vessels are attracted into the whiting fishery under status quo, annual Chinook salmon bycatch could increase simply as a result of the increased number of nets in the water. This increased participation could raise the annual average take by increasing interceptions even in years when environmental conditions would normally result in a relatively low level of interaction between the whiting fishery and Chinook salmon.

The Pacific Coast groundfish fisheries are considered Category III fisheries under the MMPA, meaning that they have a remote likelihood of, or no known serious injuries or mortalities to marine mammals. The status quo alternative is not expected to affect the incidental mortality levels of species protected under the MMPA. No change in incidental mortality levels of seabirds is expected to occur, because there is no change in the gear type used to harvest Pacific whiting, the fishing season, or the geographical location of the fishery. Sea turtle interactions have not occurred in the Pacific whiting fishery because the geographic extent of the fishery does not overlap with marine turtle habitat; this action would not affect the geographic extent of the fishery. Green sturgeon have been caught with midwater trawl gear in the commercial non-tribal Pacific whiting fishery, however it is unlikely that the green sturgeon caught were from the ESA-listed southern DPS (south of the Eel River, California, 40/40' N. lat.), as all documented catches

were north of 44/49' N. lat. Allowing the fishery to continue under this action would not change this level of interaction.

4.2.2 Alternative 1: Limit Participation through the 2005 Season

Alternative 1 represents the state of the environment if the pool of vessels eligible to participate in the whiting fishery were limited to those that qualify for future participation based on historic participation during the period 1994-2005 (Alternative 1A) with a suboption to base historic participation requirements for catcher/processors and mothership on participation in 1997-2005 (Alternative 1B), Alternative 1 would constrain the pool of potential fishery participants to 57 shore-based catcher vessels, 62 mothership catcher vessels, 7 motherships under Alternative 1A; 6 motherships under Alternative 1B; and 11 catcher/processors under Alternative 1A; and 10 catcher/processors under Alternative 1B. Under the status quo alternative, mothership vessels would not be required to hold limited entry permits, while under Alternative 1, they would be subject to a vessel license limitation program. Under Alternative 1, the pool of potential fishery participants would be much smaller than under the status quo alternative, but would be greater than the number of vessels that have historically participated in the fishery on an annual basis. It is reasonable to expect that not all of the potential participants under Alternative 1 will participate, just as not all potential participants have participated under status quo.

Similar to the status quo alternative, Alternative 1 would not affect the setting of Pacific whiting ABCs and OYs, nor would it alter inseason whiting fishery management practices. As a result, the effects of Alternative 1 on the Pacific whiting resource are expected to be the same as those of the status quo alternative.

Under the status quo alternative, the historical average number of participants over 1994-2006 has been 34 shore-based catcher vessels, 23 mothership catcher vessels, 6 motherships, and 8 catcher/processors. To the degree that Alternative 1 limits the pool of potential fishery participants so that the actual number of annual participants is similar to or less than the historical average number of actual annual participants (status quo alternative), Alternative 1 may have a beneficial effect on all incidentally caught groundfish because the risk of more intensive fishing (race for fish) that may result in an OY being exceeded is reduced. The benefit would be greatest for overfished species, particularly those species that are most sensitive to changes in harvest levels, followed by the precautionary zone stocks. Under the status quo alternative, potential growth in the whiting fishery is only constrained by the 176 available limited entry permits. Alternative 1 cap the potential growth in the whiting fishery at a much lower level. Should whiting prices continue to climb, participation in the fishery may also climb. Unlike the status quo alternative, Alternative 1 would protect against the potential that an increased number of participating vessels could jeopardize an overfished species bycatch limit with a large exceedance of that limit such that it affected the rebuilding time for the stock.

To the degree that Alternative 1 constrains the pool of potential fishery participants so that the actual number of annual participants is similar to or less than the historical average number of actual annual participants, Alternative 1 may have a beneficial effect on Chinook salmon over status quo. Alternative 1 would cap the potential growth in the whiting fishery at a much lower level than under the status quo alternative. Should participation in the whiting fishery climb,

Alternative 1 would protect against the potential that an excessive number of participating vessels would increase annual incidental catch of Chinook salmon in years when incidental Chinook encounter rates are most closely linked to the number of whiting nets in the water.

The Pacific Coast groundfish fisheries are considered Category III fisheries under the MMPA, meaning that they have a remote likelihood of, or no known serious injuries or mortalities to marine mammals. Alternative 1 is not expected to affect the incidental mortality levels of species protected under the MMPA. No change in incidental mortality levels of seabirds is expected to occur, because Alternatives 1 does not change the gear type used to harvest Pacific whiting, the fishing season, or the geographical location of the fishery. Sea turtle interactions have not occurred in the Pacific whiting fisher because the geographic extent of the fishery does not overlap with marine turtle habitat; this action would not affect the geographic extent of the fishery, therefore there would be no change over status quo conditions. Green sturgeon have been caught with midwater trawl gear in the commercial non-tribal Pacific whiting fishery, however it is unlikely that the green sturgeon caught were from the ESA-listed southern DPS (south of the Eel River, California, 40/40' N. lat.), as all documented catches were north of 44/49' N. lat. Allowing the fishery to continue under this action would be no change over status quo conditions.

4.2.3 Alternative 2: Limit participation through the 2006 Season

Alternative 2 represents the state of the environment if the pool of vessels eligible to participate in the whiting fishery were constrained to those that qualify for future participation based on historic participation during the period 1994-2006 (Alternative 2A), with a suboption to base historic participation requirements for catcher/processors and mothership on historic participation in 1997-2006 (Alternative 2B). Alternative 2 would constrain the pool of potential fishery participants to 64 shore-based catcher vessels; 62 mothership catcher vessels, 8 motherships under Alternative 2A; and 7 motherships under 2B; and 11 catcher/processors under Alternative 2A; and 10 catcher/processors under Alternative 2B. Under the status quo alternative, mothership vessels would not be required to hold limited entry permits, while under Alternative 2, they would be subject to a vessel license limitation program. Under Alternative 2, the pool of potential fishery participants would be much smaller than under the status quo alternative and modestly greater than under Alternative 1, but would be greater than the number of vessels that have historically participated in the fishery on an annual basis. It is reasonable to expect that not all of the potential participants under Alternative 2 will participate, just as not all potential participants have participated under status quo.

The number of vessels eligible to participate in the whiting fishery in 2008 and beyond under Alternative 2 would similar to the number of vessels eligible to participate under Alternative 1. Therefore, the effects on the biological environment under Alternative 2 are expected to be the same as under Alternative 1.

4.2.4 Alternative 3: Conditions Under the 2007 Emergency Rule

Alternative 3 represents the state of the environment if the pool of vessels eligible to participate in the whiting fishery were constrained to those that qualify for future participation based on

historic participation during the period 1997-2006 for all sectors. Alternative 3 would constrain the pool of potential fishery participants to: 56 shore-based catcher vessels, 39 mothership catcher vessels, 7 motherships, and 10 catcher/processors. Under the status quo alternative, mothership vessels would not be required to hold limited entry permits, while under Alternative 3, they would be subject to a vessel license limitation program. Under Alternative 3, the pool of potential fishery participants would be much smaller than under the status quo alternative and modestly smaller than under Alternative 1, but is greater than the number of vessels that have historically participated in the fishery on an annual basis. It is reasonable to expect that not all of the potential participants under Alternative 3 will participate, just as not all potential participants have participated under status quo.

The number of vessels eligible to participate in the whiting fishery in 2008 and beyond under Alternative 3 would be similar to the number of vessels eligible to participate under Alternative 1. Therefore, the effects on the biological environment under Alternative 3 are expected to be the same as under Alternative 1.

4.2.5 Alternative 4: Proposed Action (Council Preferred)

Alternative 4 represents the state of the environment if the pool of vessels eligible to participate in the whiting fishery were constrained to those that qualify for future participation based on historic participation during the period 1994-2006 for catcher vessels in the shore-based sector and the period 1997-2006 for catcher vessels in the mothership sector, for motherships, and for catcher/processors. Alternative 4 would constrain the pool of potential fishery participants to: 64 shore-based catcher vessels, 39 mothership catcher vessels, 7 motherships, and 10 catcher/processors. Under the status quo alternative, mothership vessels would not required to hold limited entry permits, while under Alternative 4, they would be subject to a vessel license limitation program. Under Alternative 4, the pool of potential fishery participants would be much smaller than under the status quo alternative and modestly smaller than under Alternative 1, but is greater than the number of vessels that have historically participated in the fishery on an annual basis. It is reasonable to expect that not all of the potential participants under Alternative 4 will participate, just as not all potential participants have participated under status quo.

The number of vessels eligible to participate in the whiting fishery in 2008 and beyond under Alternative 4 would be similar to the number of vessels eligible to participate under Alternative 1. Therefore, the effects on the biological environment under Alternative 4 are expected to be the same as under Alternative 1.

4.3 Effects of the Alternatives on the Socioeconomic Environment -- Management Structure of the Non-Tribal Pacific Whiting Fishery, Pacific Whiting Fishery Participants and Fishery Participation Trends, Fishery Values and Market Trends

4.3.1 Status Quo Alternative (no Action): Limit Participation in the Pacific Whiting Fishery by Using Only the Current Limited Entry System

The status quo alternative represents the state of the environment if the pool of vessels eligible to participate in the whiting fishery were not constrained, such that the pool of potential fishery

participants would be any vessel registered for use with one of the 176 limited entry trawl permits.

Direct effects to the socioeconomic environment, with respect to the management structure of the fishery, result from the implementation of new regulations that do or do not affect fishery participants. Under the status quo alternative, the management process for setting whiting harvest levels, fishery monitoring procedures, season dates, the inseason management process, and inter-sector allocation would all remain unchanged, as would the limited entry permit program for the West Coast groundfish fishery. Annual permitting costs to whiting fishery participants would be only those associated with the limited entry program, which in 2007 charged fishery participants $152 per permit renewal in order to recover costs to NMFS for the permit renewal process.

As discussed in subsection 3.3.2, the primary current determinant of how many vessels will participate in the whiting fishery in any given year appears to be the rising price of whiting on the world market, dependent largely on the industry's shift from processing whiting into surimi to processing it as higher-value H&G product. Assuming continued rising whiting prices, the number of participants in the fishery may also be expected to increase, with the rate of increased participation somewhat mitigated by increasing fuel costs. Figure 8, above, shows sector participation trends in terms of number of vessels and processing plants over the 1994-2006 period. During 2004-2006, the period when whiting price appears to have been a greater determinant of fishery participation than the level of the whiting OY, participation trends were as shown in Table 15:

Table 15: Participation trends, in number of entities, for 2004-2006, plus highest participation levels for each sector during the 1994-2006 period										
	C/V Shore	% Change from Prior Year	Shore Processors	% Change from Prior Year	C/V Mother-ship	% Change from Prior Year	Mother-ships	% Change from Prior Year	Catcher/ Processors	% Change from Prior Year
2004	26		9		10		4		6	
2005	29	12%	10	11%	18	80%	5	25%	6	0%
2006	37	28%	14	40%	20	11%	6	20%	9	50%
Highest # from 1994-2006	41		14		43		9		10	

For catcher vessels in the shore-based and mothership sectors, increased levels of participation are strongly dependent on those vessels having additional shore plants or motherships to deliver to. The whiting fishery is necessarily fast-paced, both because it is managed as an open competition fishery and because participants need to ensure that whiting enters the processing stream before its flesh quality deteriorates. For these reasons, both at-sea and shore-based processing plants need to restrict the number of vessels from which they receive whiting deliveries. The number of participating shore plants in 2006 was at its highest for the 1994-2006 period, although the same number of plants also participated in the fishery in 1994, 1999, and 2000. In 1994 and 1996, nine and eight mothership vessels, respectively, participated in the whiting fishery. Otherwise, the number of mothership vessels participating has ranged from 4-6, with six vessels receiving whiting delivery in each year from 1997-2000 and in 2006. Under the status quo alternative and assuming the continued incentive of higher whiting prices, processing capacity could increase in both sectors, which would in turn promote increased catcher vessel participation.

Under the status quo alternative, participation in the catcher/processor sector would be open to any vessel able to purchase a limited entry permit of appropriate vessel length, an expensive but not insurmountable undertaking. NMFS cannot predict the rate at which whiting prices and fuel costs may increase, nor does NMFS believe that a 3-year trend of increasing participation provides enough data to predict the rate at which participation could increase were it not constrained in 2008 and beyond, as would be the case under the status quo alternative. However, taking into consideration the 2004-2006 whiting price and fishery participation trends shown in Figure 2, it is probable that under the status quo alternative, fishery participation would increase given an expected increase in whiting price per pound. Taking into consideration the trend in average available earnings per participating vessel shown in Figure 3, it may also be probable that increases in participation may outstrip increases in total fishery revenue, ultimately leading to declines in average available earnings per participating vessel

The Council expressed concern that increased participation in the whiting fishery may result from declining trawling opportunities for walleye pollock taken off Alaska under the status quo alternative. The likelihood that additional AFA-permitted vessels would be attracted to the

fishery given increased exvessel prices for whiting would vary between vessels. Because the midwater trawl fishing gear used in the shore-based whiting fishery is similar to gear used in the Bering Sea/Aleutian Islands pollock fishery, the added equipment cost for participation would be minimal for Alaskan pollock vessels. However, individuals interested in entering the whiting fishery would need to acquire the necessary West Coast trawl limited entry permit(s); the number of permits needed is directly related to the size of the vessel. The availability and cost to purchase West Coast trawl limited entry permit(s) is likely to restrict the number of new unpermitted vessels interested in entering the fishery, this is particularly true for the larger catcher/processor vessels. Although mothership vessels do not need permits under the status quo alternative, like shore-based catcher vessels, the catcher vessels in the mothership sector would be required to have permits.

The status quo alternative is not predicted to have any measurable effects on any particular fishing community. Under this alternative, limited entry permits would still be freely tradable between different persons living in different fishing communities. The long association of the at-sea sectors with Seattle, Washington is unlikely to change, since the companies that manage the vessels that participate in these fisheries are based in that city. Shore-based processing plants in different coastal communities could lose or gain contracts with catcher vessels, but those contracts grow out of business relationships and the compensation plants provide to vessels for making deliveries. In recent years, more new shore-based processing capacity has opened in Washington State, but the status quo alternative neither supports nor undermines the continuing participation of any fishing community in the shore-based fish processing business.

As just discussed, fishery values and market trends have a very definite direct effect on fishery participants and fishery participation levels. The effects of fishery participation under the status quo alternative would have an indirect effect on fishery values and market trends and would be less predictable than the under the other alternatives. If under status quo, additional vessels were to enter the fishery, more intensive fishing or an accelerated race for fish could occur because each participant would be trying to maximize his vessel's total season catch levels as quickly as possible to compete for a larger share of available sector quota. An accelerated race for fish could result in fishery participants having less time to handle their products with care, ultimately resulting in a decline in the value of those products. The presence of excess capacity and overcapacity in commercial fisheries causes substantial economic waste in the form of higher than necessary costs of production and reduced net benefits to society (Department of Commerce, 2006).

4.3.2 Alternative 1: Limit Participation through the 2005 Season

Alternative 1 represents the state of the environment if the pool of vessels eligible to participate in the whiting fishery were limited to those that qualify for future participation based on historic participation during the period 1994-2005 (Alternative 1A), with a suboption to base historic participation requirements for catcher/processors and mothership on historic participation in 1997-2005 (Alternative 1B).

Like the status quo alternative, under Alternative 1, the management process for setting whiting harvest levels, fishery monitoring procedures, season dates, the inseason management process,

and inter-sector allocation would all remain unchanged. Beyond the status quo alternative, Alternative 1 would require vessel owners to complete applications for licenses for future participation in the fishery. NMFS implementing regulations for Amendment 15 would provide license application processes, and NMFS would be required to review and approve or disapprove of applications received. Permits to participate in the whiting fishery in 2008 and beyond would be issued to applicants demonstrating that their vessels meet the appropriate sector-specific permitting qualifications under this alternative. For NMFS, the cost of reviewing initial permit applications is always greater than the cost of re-issuing permits for which qualifications have already been met. NMFS anticipates issuing an invitation to apply to the universe of eligible vessels, processing applications received for the veracity of the evidence provided, completing any appeals processes needed, and issuing permits prior to the start of the 2008 whiting fishery. NMFS is authorized by the Magnuson-Stevens Act to recover the costs of this process from permit recipients. NMFS initially estimates that it could be reviewing as many as 120 applications for all sectors, with an initial cost estimate of $650 per permit issued. The cost to NMFS of reviewing and issuing permits and dealing with appeals, if any, would be averaged over the permitted fleet and will become permit fees to be paid by permit recipients as a condition of receipt of the permit. This one-time fee compares to the current $125 fee charged for renewing the current groundfish limit entry permit (398 permits) and to the one-time cost of $700 charged those receiving a sablefish permit endorsement (164 endorsements).

The total number of unique catcher vessels that would be qualified to participate in the Pacific whiting fishery, under either Alternative 1A or 1B is 57 in the shore-based sector and 62 in the mothership sector. This is in contrast to 37 catcher vessels in the 2006 shore-based fishery and 20 catcher vessels in the mothership fishery. The total number of unique catcher/processors that would qualify to participate in the Pacific whiting fishery is 11 under Alternative 1A and 10 under Alternative 1B. This is in contrast to nine catcher/processors in 2006. The total number of unique motherships that would qualify to participate in the Pacific whiting fishery is seven under Alternative 1A and six under Alternative 1B, in contrast to six motherships that participated in 2006. If all of the vessels that are eligible to receive permits under Alternative 1 apply for those permits and use them to participate in the fishery each year in 2008 and beyond, Alternative 1 could ultimately increase levels of fishery participation over the status quo alternative. However, since not all of the vessels that are eligible to participate in the fishery under the status quo alternative actually do participate in the fishery, it is reasonable to expect that not all of those vessels eligible for whiting vessel permits under Amendment 15 would apply for those permits, nor would all permit holders necessarily then participate in the fishery each year. The ultimate pool of potential fishery participants is notably lower under Alternative 1 than under the status quo alternative. Because Alternative 1 specifically excludes vessels with fishery participation history in 2006, one of the primary effects of this alternative over status quo would be to exclude future whiting fishery participation by the seven catcher vessels that newly entered the shore-based sector and in 2006 and the one mothership processor that newly entered the mothership sector in 2006.

As discussed above in subsection 3.3.2 and shown in Table 8, catcher vessel participation in both the shore-based and mothership sectors is largely determined by processor participation in those sectors. Unlike the status quo alternative where mothership participation is open to any at-sea processing vessel, Alternative 1 would restrict participation by mothership vessels in the whiting

fishery. Using the average 1994-2006 ratio of 3.8 catcher vessels per mothership, Alternatives 1A and 1B would have the indirect effect of restricting mothership processing capacity such that, on average, 23 and 27 catcher vessels could be expected to be associated with the six and seven qualifying motherships under those alternatives, respectively. Alternative 1 does not propose to restrict shore-based processing plant participation in the whiting fishery. If all 57 of the eligible shore-based catcher vessels were to apply for and receive permits under Amendment 15, shore-based processor participation in the fishery could expand from 14 plants in 2006 to up to 20 plants, using the average 1994-2006 ratio of 2.9 catcher vessels per processing plant.

Catcher/processor vessels are not dependent on a separate platform for either catching or processing fish. As a result, participation in this sector is restricted only by the availability of limited entry permits and their associated size endorsements. Under Alternative 1, however, participation in the catcher/processor sector would be limited to vessels with historic participation in the fishery. The current agreement would be maintained. In the public comment section of the May 14, 2007 Emergency Rule to temporarily limit any vessel from participating in the fishery unless it had a past history in the fishery, PWCC's comment was summarized:" The Pacific Whiting Conservation Cooperative wrote reiterating its support for emergency action. It noted that the voluntary industry arrangement that results in the slow pace of fishing early in the season and that includes collaboration and communication to avoid bycatch would likely end if there were new entry to the fishery. It indicated that there would be a ``race for fish" leading to all the problems discussed by the Council when it agreed to request emergency action." (Federal Register, Volume 72, May 17, 2007, Number 95, page 27762.) Current mothership participants do not require a limited entry permit so this option would impose a permitting requirement on this sector. For all three sectors, the potential benefits to the biological environment discussed above in subsection 4.2 would only be realized if the fishery participation restrictions discussed in this subsection 4.3 are implemented under one of the alternatives.

Like the status quo alternative, this alternative is not predicted to have any measurable effects on any particular fishing community. Historic participation in all three sectors would be maintained by qualifying vessels, and the owners would base their decisions on where to homeport their vessels on a variety of factors not associated with this action. With regard to shore-based processing plants, this alternative neither supports nor undermines the continuing participation of any fishing community in the shore-based fish processing business.

Although this alternative would constrain the overall pool of fishery participants, the number of eligible permittees exceeds the number of vessels that have historically participated in the whiting fishery. To the extent that this alternative more tightly caps potential expansion of the current number of fishery participants than the status quo alternative, it is expected to constrain the race for fish and to allow fishery participants to fish in a manner more conducive to producing higher value products for the fishery products market.

Fishery values and market trends have a very definite direct effect on fishery participants and fishery participation levels. The effects of fishery participation under the Alternative 1 may have an indirect effect on fishery values and market trends. Alternative 1 constrains the pool of potential fishery participants, but like the status quo alternative, the actual number of vessels that

will participate in the whiting fishery in any given year under Alternative 1 would continue to be determined in part by price of whiting on the world market, as will the production of specific products (surimi or H&G products). Assuming continued rising whiting prices, the number of participants in the fishery may also increase if the whiting OY remains strong. Like the status quo alternative, the rate of increased participation would be somewhat mitigated by increasing fuel costs.

If additional vessels were to enter the fishery, more intensive fishing or an accelerated race for fish could occur because each participant would be trying to maximize his vessel's total season catch levels as quickly as possible to compete for a larger share of available sector quota. An accelerated race for fish could result in fishery participants having less time to handle their products with care, ultimately resulting in a decline in the value of those products. The presence of excess capacity and overcapacity in commercial fisheries causes substantial economic waste in the form of higher than necessary costs of production and reduced net benefits to society (Department of Commerce, 2006).

4.3.3 Alternative 2: Limit participation through the 2006 Season

Alternative 2 represents the state of the environment if the pool of vessels eligible to participate in the whiting fishery were constrained to those that qualify for future participation based on historic participation during the period 1994-2006 (Alternative 2A), with a sub-option to base historic participation requirements for catcher/processors and mothership on historic participation in 1997-2006 (Alternative 2B).

The effects of this alternative on the management process for setting whiting harvest levels, fishery monitoring procedures, season dates, the inseason management process, and inter-sector allocation are the same as Alternative 1 and the status quo alternative. Alternative 2 would require the same permitting process as Alternative 1, although NMFS initially estimates that it could be reviewing as many as 145 applications for all sectors. The cost of permit application review and issuance would be the approximately the same as that under Alternative 1.

The total number of unique catcher vessels that would be qualified to participate in the Pacific whiting fishery, under either Alternative 2A or 2B, is 64 in the shore-based sector and 62 in the mothership sector. This is in contrast to 37 catcher vessels in the 2006 shore-based fishery and 20 catcher vessels in the 2006 mothership fishery. The total number of unique catcher/processors that would qualify to participate in the Pacific whiting fishery is 11 under Alternative 2A and 10 under Alternative 2B. This is in contrast to the 9 catcher/processors that participated in 2006. The total number of unique motherships that would qualify to participate in the Pacific whiting fishery is 8 under Alternative 2A and 7 under Alternative 2B, in contrast to 6 motherships that participated in 2006. Similar to Alternative 1, this alternative could result in increased annual participation levels, although the potential pool of participants in greater than under Alternative 1 and notably less than under the status quo alternative. Because Alternative 2 allows all sectors to have the broadest range of qualifying years of any of the alternatives, its primary effect on fishery participation is to ensure that the greatest number of vessels with historic fishery participation are eligible to continue to participate into the future, while also prohibiting any vessels without historic participation from participating in the fishery into the future.

Using the average 1994-2006 ratio of 3.8 catcher vessels per mothership, Alternatives 2A and 2B would have the indirect effect of restricting mothership processing capacity such that, on average, 30 and 27 catcher vessels could be expected to be associated with the eight and seven qualifying motherships under those alternatives, respectively. Alternative 2 does not propose to restrict shore-based processing plant participation in the Pacific whiting fishery. If all 64 of the eligible shore-based catcher vessels were to apply for and receive permits under Amendment 15, shore-based processor participation in the fishery could expand from 14 plants in 2006 to up to 22 plants, using the average 1994-2006 ratio of 2.9 catcher vessels per processing plant. Alternative 2 would have the same capacity-restricting benefits for the catcher/processor sector as Alternative 1.

Alternative 2 is not expected to have measurably different effects on fishing communities from the effects of either the status quo alternative or Alternative 1. The number of vessels eligible to participate in the whiting fishery in 2008 and beyond under Alternative 2 is similar to the number of vessels eligible to participate under Alternative 1. Therefore, the effects on the fishery values and market trends under Alternative 2 are expected to be the same as under Alternative 1.

4.3.4 Alternative 3: Conditions under the 2007 Emergency Rule

Alternative 3 represents the state of the environment if the pool of vessels eligible to participate in the whiting fishery were constrained to those that qualify for future participation based on historic participation during the period 1997-2006 for all sectors.

The effects of this alternative on the management process for setting whiting harvest levels, fishery monitoring procedures, season dates, the inseason management process, and inter-sector allocation would be the same as under Alternative 1 and the status quo alternative. Alternative 3 would require the same permitting process as Alternative 1, although NMFS initially estimates that it could be reviewing as many as 112 applications for all sectors. The cost of permit application review and issuance would be the approximately the same as that under Alternative 1.

The total number of unique catcher vessels that would be qualified to participate in the Pacific whiting fishery, under Alternative 3 is 56 in the shore-based sector and 39 in the mothership sector. The total number of unique catcher/processors that would qualify to participate in the Pacific whiting fishery is 10 under Alternative 3. The total number of unique motherships that would qualify to participate in the Pacific whiting fishery is seven under Alternative 3. In 2006, there were 37 boats participating in the shore-based sector and 14 processors. At sea participation consisted of 9 catcher/processors, 6 motherships, and 20 mothership catcher vessels. Similar to Alternative 1, this alternative could result in increased annual participation levels, although the potential pool of participants under this alternative is smaller than under any of the other alternatives and notably less than under the status quo alternative. Because Alternative 3 restricts eligible participation to only those vessels with history in the 1997-2006 period, its primary effect on fishery participation would be to exclude those vessels have not participated in any of the fishery sectors since 1996. When NMFS initially implemented its 2007

emergency rule restricting fishery participation, two vessels objected to the agency's use of a 1997-2006 qualification period for participation in the 2007 fishery.

Using the average 1994-2006 ratio of 3.8 catcher vessels per mothership, Alternative 3 would have the indirect effect of restricting mothership processing capacity such that, on average, 27 catcher vessels could be expected to be associated with the seven qualifying motherships under the alternative. Alternative 3 does not propose to restrict shore-based processing plant participation in the whiting fishery. If all 56 of the eligible shore-based catcher vessels were to apply for and receive permits under Amendment 15, shore-based processor participation in the fishery could expand from 14 plants in 2006 to up to 19 plants, using the average 1994-2006 ratio of 2.9 catcher vessels per processing plant. Alternative 3 would have the same capacity-restricting benefits for the catcher/processor sector as Alternative 1.

Alternative 3 is not expected to have measurably different effects on fishing communities from the effects of either the status quo alternative or Alternative 1. The number of vessels eligible to participate in the whiting fishery in 2008 and beyond under Alternative 3 would be similar to the number of vessels eligible to participate under Alternative 1. Therefore, the effects on the fishery values and market trends under Alternative 3 are expected to be the same as under Alternative 1.

4.3.5 Alternative 4: Proposed Action (Council Preferred)

Alternative 4 represents the state of the environment if the pool of vessels eligible to participate in the whiting fishery were constrained to those that qualify for future participation based on historic participation during the period 1994-2006 for catcher vessels in the shore-based sector and the period 1997-2006 for catcher vessels in the mothership sector, for motherships, and for catcher/processors.

The effects of this alternative on the management process for setting whiting harvest levels, fishery monitoring procedures, season dates, the inseason management process, and inter-sector allocation would be the same as under Alternative 1 and the status quo alternative. Alternative 4 would require the same permitting process as Alternative 1, although NMFS initially estimates that it could be reviewing as many as 120 applications for all sectors. The cost of permit application review and issuance would be the approximately the same as that under Alternative 1- approximately $550 per application.

The total number of unique catcher vessels that would be qualified to participate in the Pacific whiting fishery, under Alternative 4 is 64 in the shore-based sector and 39 in the mothership sector. The total number of unique catcher/processors that would qualify to participate in the Pacific whiting fishery is 10 under Alternative 4. The total number of unique motherships that would qualify to participate in the Pacific whiting fishery is seven under Alternative 4. In 2006, there were 37 boats participating in the shore-based sector and 14 processors. At sea participation consisted of 9 catcher/processors, 6 motherships, and 20 mothership catcher vessels. Similar to Alternative 1, this alternative could result in increased annual participation levels, although the potential pool of participants under this alternative is smaller than under either Alternative 1 or 2 and notably less than under the status quo alternative. The primary

effect of Alternative 4 on fishery participation would be to restrict participation in the at-sea sectors to those vessels with historic participation during 1997-2006, and to allow participation in the shore-based sector by any vessel with participation history throughout 1994-2006. The Council developed this proposed action, a hybrid of Alternative 2 for the shore-based sector and Alternative 3 for the at-sea sectors, based on public testimony received at its September 2007 meeting on preferred historic qualification requirements.

Using the average 1994-2006 ratio of 3.8 catcher vessels per mothership, Alternative 4 would have the indirect effect of restricting mothership processing capacity such that, on average, 27 catcher vessels could be expected to be associated with the seven qualifying motherships under the alternative. Alternative 4 does not propose to restrict shore-based processing plant participation in the whiting fishery. If all 64 of the eligible shore-based catcher vessels were to apply for and receive permits under Amendment 15, shore-based processor participation in the fishery could expand from 14 plants in 2006 to up to 22 plants, using the average 1994-2006 ratio of 2.9 catcher vessels per processing plant. Alternative 4 would have the same capacity-restricting benefits for the catcher/processor section as Alternative 1.

Alternative 4 is not expected to have measurably different effects on fishing communities from the effects of either the status quo alternative or Alternative 1. The number of vessels eligible to participate in the whiting fishery in 2008 and beyond under Alternative 4 would be similar to the number of vessels eligible to participate under Alternative 1. Therefore, the effects on the fishery values and market trends under Alternative 4 are expected to be the same as under Alternative 1.

4.4 Cumulative Effects

The CEQ regulations implementing the procedural provisions of NEPA define cumulative effects as:

The impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (Federal or non-Federal) or person undertakes such other actions.

Past actions affecting the same environment as the proposed action include:

- Groundfish harvest specifications and management measures for 2007-2008 and Amendment 16-4 to the FMP, also including the 2007 Pacific whiting harvest specifications;
- Re-initiated Endangered Species Act consultation on the Pacific Coast Groundfish FMP (effects of the groundfish fisheries on threatened and endangered salmon stocks);
- Bycatch minimization measures requirements adopted under Amendment 18 to the FMP;

- Whiting first-receiver reporting requirements for the shore-based whiting fishery in 2007 and beyond.

Reasonably foreseeable future actions affecting the same environment as the proposed action include:

- 2008 Pacific whiting harvest specifications;
- Maximized retention and monitoring program for the Pacific whiting shore-based fishery (implementing Amendment 10 to FMP);
- Restrictions on overfished species catch to provide for rebuilding under the 2009-2010 annual specifications and harvest measures.
- Trawl Rationalization

Table 16 Anticipated cumulative effects

Past Actions	
Actions	Expected Effects
• Groundfish harvest specifications, particularly the 2007 whiting specifications	• Status quo: participation in the whiting fishery would be constrained only by available limited entry trawl permits, but would be influenced by whiting stock status and market prices. • Alternatives 1-4: participation in the whiting fishery would be constrained by historic catch qualification requirements. If 2007 biologically available harvest levels were to continue into the future, accompanied by continued high prices, participation in the whiting fishery would likely continue to be strong. • Alternatives 1-4: to the degree that the alternatives slow the race for fish and allow participants to take more care in avoiding bycatch of overfished groundfish, Alternative 3 would be the most constraining on fishery participation and could be of the greatest potential benefit in terms of bycatch reduction, followed by Alternatives 4, 1, and 2, in decreasing level of effects.
• ESA consultation on Pacific coast groundfish fisheries	• All alternatives including status quo: salmon bycatch in the whiting fisheries tends to be most affected by whether whiting are concentrated in nearshore areas where salmon congregate, and by the timing of the fishery. Under all of the alternatives, the Klamath and Columbia River Conservation Zones would remain in place. The Ocean Salmon Conservation Zone would also remain available as to be implemented inseason during years when ocean conditions result in higher-than-average commingling between salmon and whiting. • Alternatives 1-4: to the degree that the alternatives slow the race for fish and allow participants to take more care in avoiding bycatch of salmon, Alternative 3 would be the most constraining on fishery participation and could be of the greatest potential benefit in terms of salmon bycatch reduction, followed by Alternatives 4, 1, and 2, in decreasing level of effects.
• Amendment 18 bycatch minimization	• All alternatives, including status quo: overfished species bycatch limits would continue to be in effect in the whiting fisheries. • Alternatives 1-4: By constraining participation in the whiting fishery, Amendment 15 furthers some of the bycatch minimization principles that Amendment 18 brought into the FMP. In particular, Amendment 15 implements a sector-specific license limitation program, as endorsed by Section 6.9.2 of the FMP. In doing so, Amendment 15 furthers the FMP's Conservation Objective #2, which was modified by Amendment 18 to read, "Adopt harvest specifications and management measures consistent with resource stewardship responsibilities for each groundfish species or species group. *Achieve a level of harvest capacity in the fishery that is appropriate for a sustainable harvest and low discard rates, and which results in a fishery that is diverse, stable, and profitable.* This reduced capacity should lead to more effective management for many other fishery problems."
• First-receiver reporting requirements	• These reporting requirements affect shore-based first receivers of Pacific whiting, while Amendment 15 constrains participation in the fishery by vessels. For all alternatives, including status quo, these reporting requirements would be expected to improve data collection both inseason and over time, allowing NMFS to more efficiently and effectively manage the fishery inseason to better constrain this sector's total catch.

Reasonably Foreseeable Future Actions	
• 2008 whiting harvest specifications	• All alternatives, including status quo: In recent years, whiting stock assessments have indicated a downward trend in the whiting spawning stock biomass. Although whiting stock trends can be influenced by fishing, the stock's abundance normally fluctuates broadly over time, regardless of fishing effects. The 2007 U.S. whiting OY was set at approximately half the 2007 U.S. ABC level, as a precautionary measure to prevent fishing effects from exacerbating the breadth of the natural stock fluctuation cycle. If the 2008 stock assessment indicates a lower maximum sustainable yield level, the stock's 2008 ABC will be lower than its 2007 ABC. It is unknown whether the Council will, as they did in 2007, recommend precautions in setting the 2008 OY beyond those already required by the FMP. If the available 2008 harvest declines from 2007 and market prices continue their upward trend, then participation may be strong from all sectors of the fishery. • Alternatives 1-4: to the degree that Amendment 15 constrains the potential participation in the fishery, the alternatives could be expected to allow each participating vessel greater access to available harvest, buffering the negative socioeconomic effects that could occur from a reduced 2008 whiting OY.
• Maximized retention and monitoring program for the shore-based whiting fishery	• Status quo: The maximized retention and monitoring program is separate from Amendment 15 and primarily affects the shore-based sector. Under the status quo alternative, this program would be open to all limited entry trawl permit holders wishing to participate in the whiting fishery. • Alternatives 1-4: The primary effect from the combination of this program with Amendment 15 would be some easing of annual administrative burden for NMFS. Amendment 15 constrains the universe of potential fishery participants and makes those persons easier to identify. NMFS anticipates that the license limitation program that would be implemented by Amendment 15 would make communication with the fleet affected by the maximized retention and monitoring program more efficient and effective.
• Overfished species catch restrictions in the 2009-2010 harvest specifications and management measures	• All alternatives, including status quo: Under all alternatives, the whiting fishery would continue to be constrained by bycatch limits for overfished species. At this time, bycatch limits have been established for those overfished species most commonly taken as incidental catch in the whiting fishery: canary, darkblotched, and widow rockfish. Recently completed 2007 stock assessments completed in preparation for the 2009-2010 harvest specifications and management measures indicate slightly greater-than-current potential rebuilding periods for darkblotched and widow rockfish and a notably shorter-than-current potential rebuilding period for canary rockfish. Potential rebuilding periods are based solely on the result of the new stock assessments when compared to prior assessments for those same species. If any overfished species rebuilding parameters are revised via the 2009-2010 specifications and management measures process, those revisions would be made within the FMP's philosophical framework of rebuilding as quickly as possible, taking into account the status and biology of the stocks and the needs of fishing communities. Therefore, it is unknown at this time whether the revised stock assessments will have ultimately affect bycatch limits for the 2009-2010 whiting fisheries. • Alternatives 1-4: to the degree that the alternatives slow the race for fish and allow participants to take more care in avoiding bycatch of overfished groundfish, Alternative 3 would be the most constraining on fishery participation and could be of the greatest potential benefit in terms of bycatch reduction, followed by Alternatives 4, 1, and 2, in decreasing level of effects. •

• Trawl Rationalization (Amendment 20) • Intersector Allocation (Amendment 21)	• Under Amendment 20, the Council is currently considering alternatives that would rationalize the trawl fishery either through a Trawl Individual Quota (TIQ) program for all trawl sectors, or co-ops for the whiting sectors. To support Amendment 20 and other efforts, Amendment 21, the Council is also considering alternatives that will set formal allocations of groundfish species and species' complexes for sectors of the groundfish fishery. Both Amendments are expected to be implemented in 2010. The Council intends Amendment 15 to serve as an interim measure with the proposed provisions sunsetting at such time the Council adopts and NMFS implements Amendment 20.

5.0 CONSISTENCY WITH THE FMP AND OTHER APPLICABLE LAWS

5.1 Consistency with the FMP

The socioeconomic framework in the FMP requires that proposed management measures and viable alternatives be reviewed and consideration be given to the following criteria: a) how the action is expected to promote achievement of the goals and objectives of the FMP; b) likely impacts on other management measures; c) biological impacts; d) and economic impacts, particularly the cost to the fishing industry; and e) accomplishment of one of a list of criteria defined in subsection 6.2.3 of the FMP.

The alternative actions are consistent with goals and objectives of the FMP as discussed below.

Goal 1 Conservation
Objective 1. Maintain an information flow on the status of the fishery and the fishery resource which allows for informed management decisions as the fishery occurs.

The alternative actions would assist in maintaining a more stable whiting fishery compared to that under status quo. Alternative actions will continue the existing data collection burden. Preventing an accelerated race for fish limits the potential for additional difficulties in monitoring the fishery and obtaining quality data on catch, effort, and bycatch. Alternative actions decrease the potential for harvest limit overruns that can result from the difficulty of monitoring catches during short fishing seasons.

Objective 2. Adopt harvest specifications and management measures consistent with resource stewardship responsibilities for each groundfish species or species group. Achieve a level of harvest capacity in the fishery that is appropriate for a sustainable harvest and low discard rates, and which results in a fishery that is diverse, stable, and profitable. This reduced capacity should lead to more effective management for many other fishery problems.

The proposed actions limit capacity in the Pacific whiting fishery by reducing the number of potential fishery participants. These actions would not change harvest specifications or management measures. An accelerated race for fish, like that which would ensue under the no alternative, does not promote resource stewardship or sustainable fishing. The alternatives limit competition, which provides a greater opportunity (i.e., time) to reduce unwanted incidental catch and minimize waste, resulting in a fishery that is more stable and profitable. Slowing the race for fish, with the proposed actions, will also limit the number and timing of entrants into other West Coast groundfish fisheries that are also operating under strict overfished species limits. Limiting the overall impacts to overfished species and endangered or threatened species is expected to aid in the success of the rebuilding plans. Further, the alternatives limit disruption to the existing whiting cooperatives that have been successful at minimizing bycatch. Alternatives promote sustainable harvest by reducing the possibility of harvest limit overruns that can result from the difficulty of monitoring catches during short fishing seasons.

Goal 3 - Utilization.

Objective 9. Develop management measures and policies that foster and encourage full utilization (harvesting and processing), in accordance with conservation goals, of the Pacific Coast groundfish resources by domestic fisheries.

The alternative actions, by limiting entry, promote conditions in the fishery such that focusing fishing effort later in the season is favorable. The yield per fish in usable meat for surimi and the marketability of the fish for direct consumption both improve as the fish recover from spawning in the spring, therefore under the alternative actions there is likely to be more production of whiting products along with revenue and value from the fishery. Alternatives effectively slow the race for fish, which should improve the handling and processing of whiting, resulting in full utilization of the catch.

Objective 11. Develop management programs that reduce regulations-induced discard and/or which reduce economic incentives to discard fish. Develop management measures that minimize bycatch to the extent practicable and, to the extent that bycatch cannot be avoided, minimize the mortality of such bycatch. Promote and support monitoring programs to improve estimates of total fishing-related mortality and bycatch, as well as those to improve other information necessary to determine the extent to which it is practicable to reduce bycatch and bycatch mortality.

Under the alternative actions there is less likelihood of an accelerated race for fish in which participants may be less likely to avoid areas and times in which rockfish and salmon bycatch would be higher. Therefore, the alternatives may minimize the interactions of the fishery with non-target species and associated mortality of incidental catch.

Objective 14. When considering alternative management measures to resolve an issue, choose the measure that best accomplishes the change with the least disruption of current domestic fishing practices, marketing procedures, and the environment.

The proposed actions are intended, in part, to constrain the universe of potential Pacific whiting fishery participants to those vessels with some historic level of participation in the fishery. By preventing entry of new vessels into the fishery and excessive fleet growth, Amendment 15 ensures continued participation by those vessels with Pacific whiting history, and may minimize future disruption to current domestic fishing practices and marketing procedures.

Furthermore, the Pacific whiting fishery is currently managed under a limited entry system, in addition to the West Coast limited entry program, via the May 2007 emergency rule (72 CFR 27759). Therefore, the least disruption of current fishing practices, marketing procedures, and the environment would occur through the alternative actions. The no alternative could result in shorter seasons, economic waste, unsafe fishing conditions, and more complicated resource management and conservation efforts.

Objective 15. Avoid unnecessary adverse impacts on small entities.

As with Objective 14, preventing the entry of new vessels into the fishery and excessive fleet growth is expected to minimize potential future adverse impacts to small entities that could result from participating in a greater competitive pool than under status quo.

Objective 16. Consider the importance of groundfish resources to fishing communities, provide for the sustained participation of fishing communities, and minimize adverse economic impacts on fishing communities to the extent practicable.

By preventing new entry to the whiting fishery, the alternatives will minimize adverse impacts on fishing communities to the extent practicable. Alternatives may enable harvesters and processors to continue to participate at about the current pace, depending on how many eligible vessels decide to participate in future fisheries. Failure to prevent new entry would be expected to reduce the current harvest and processing levels, either due to excessive bycatch of overfished rockfish species or endangered or threatened salmon, or due to the accelerated race to fish that would be more likely to occur under the status quo.

Objective 17. Promote the safety of human life at sea.

The alternative actions are intended to limit the entry and constrain future participation in the Pacific whiting fishery. The accelerated race for fish, or derby fishing, which is often a consequence of overcapacity in a fishery, will be lessened by limiting access. Derby fishing compromises vessel safety at sea, as vessels may fish in unsafe conditions to get as much as possible, as quickly as possible. Under the alternative actions there would be less competition for the available harvest, thus less incentive to fish and take risks in dangerous conditions.

5.2 Magnuson-Stevens Conservation and Management Act

The Magnuson-Stevens Act provides parameters and guidance for Federal fisheries management, requiring that the Councils and NMFS adhere to a broad array of policy ideals. Section 104-297 of the Magnuson-Stevens Act defines the term “optimum”, with respect to the yield from the fishery, as the amount of fish which

> (A) will provide the greatest overall benefit to the Nation, particularly with respect to food production and recreational opportunities, and taking into account the protection of marine ecosystems;
>
> (B) is prescribed as such on the basis of the maximum sustainable yield from the fishery, as reduced by any relevant economic, social, or ecological factor; and
>
> (C) in the case of an overfished fishery, provides for rebuilding to a level consistent with producing the maximum sustainable yield in such fishery.

Alternatives under Amendment 15 are designed to limit access in the whiting fishery, which should provide the greatest overall benefit to the Nation and considers the relevant economic, social, and ecological factors.

Further Magnuson-Stevens states that Councils can

(6) establish a limited access system for the fishery in order to achieve optimum yield if, in developing such system, the Council and the Secretary take into account--

(A) present participation in the fishery,
(B) historical fishing practices in, and dependence on, the fishery,
(C) the economics of the fishery,
(D) the capability of fishing vessels used in the fishery to engage in other fisheries,
(E) the cultural and social framework relevant to the fishery and any affected fishing communities, and
(F) any other relevant considerations;

Currently, entry into the West Coast groundfish fisheries is governed by a limited entry system and alternatives would further limit entry into the whiting fishery. The alternatives consider present participation in the fishery (end dates through 2005 and 2006) as well as historical fishing practices in, and dependence on, the fishery, (start dates 1994 or 1997 as well as poundage requirements for catcher/processors and motherships). The EA explores the economics of the fishery and the impacts of the status quo alternative (i.e., participation limited only by the current LE permit). The EA also discusses the capability of fishing vessels used in the fishery to engage in other fisheries, and potential impacts on those fisheries. Finally, the cultural and social framework relevant to the fishery and affected fishing communities are discussed.

Overarching principles for fisheries management are found in the Act's National Standards. The alternative actions consistency with these standards is discussed below.

National Standard 1 requires 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.

Alternative action decrease the potential for harvest limit overruns that can result from the difficulty of monitoring catches during short fishing seasons. The alternative actions should help prevent conditions that would risk the rebuilding of overfished rockfish stocks or the biological opinion for endangered or threatened salmon. To the extent that the proposed actions results greater within fleet cooperation, the actions, compared to status quo, have a greater likelihood of allowing the whiting and other groundfish fishing sectors to achieve optimum yields.

National Standard 2 requires the use of the best available scientific information.

None of the alternatives considered under this action are expected to affect the collection or use of scientific information in the management of the Pacific whiting fishery.

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

The Pacific whiting fishery is managed as a stock throughout its range as agreed upon by the United States and Canada. The alternative actions would not affect the management of the stock in this regard.

National Standard 4 requires that conservation and management measures not discriminate between residents of different States.

The alternative actions would not discriminate between residents of different States. The prohibition of new entry in the fishery would apply to any and all U.S. vessels.

National Standard 5 addresses efficiency in the utilization of fishery resources.

This action is intended to restrict the universe of potential participants in the whiting fishery. To the extent that the alternatives can reduce the number of actual annual participants, this action is expected to result in a more efficient utilization of fishery resources.

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

This action affects each of the non-tribal whiting sectors, and would require sector-specific catch history qualifications for future participation in the fishery.

National Standard 7 requires that conservation and management measures minimize costs and avoid unnecessary duplication.

Although this action is seen as an interim measure to be implemented during the development of Amendment 20, it is exclusive from Amendment 20 and from any other action, and none of the alternatives considered mirror alternatives under development for Amendment 20.

National Standard 8 provides protection to fishing communities by requiring that conservation and management measures be 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.

By requiring vessels to meet historic participation qualifications in order to be permitted to participate in future years' fisheries, this action is intended to ensure that the universe of potential fishery participants is stabilized. The more stable potential universe of fishery participants is expected to maintain historic vessel connections to particular West Coast fishing communities.

Additionally, the alternative actions have less likelihood to result in early closure of the fishery which may lead to periods in which vessels are forced to sit idle and even serious disruption of processing facilities, both of which can mean adverse economic impacts to fishing communities.

National Standard 9 requires that conservation and management measures minimize to the extent practicable, bycatch and minimize the mortality of bycatch.

The alternative actions would serve to reduce bycatch by reducing the pressure for vessels to fish in areas and times when bycatch would be higher.

National Standard 10 Conservation and Management measures shall, to the extent practicable, promote the safety of human life at sea.

The alternative actions promote a stable and well-paced fishery. The accelerated race for fish, or derby fishing, which is often a consequence of overcapacity in a fishery, will be avoided by limiting access. Derby fishing compromises vessel safety at sea, as vessels may fish in unsafe conditions to get their share as quickly as possible. Under the alternative actions there will be less competition for the available harvest, thus less incentive to fish and take risks in dangerous conditions.

5.3 Endangered Species Act

NMFS issued Biological Opinions under the ESA on August 10, 1990, November 26, 1991, August 28, 1992, September 27, 1993, May 14, 1996, and December 15, 1999 pertaining to the effects of the Pacific Coast groundfish FMP fisheries on Chinook salmon (Puget Sound, Snake River spring/summer, Snake River fall, upper Columbia River spring, lower Columbia River, upper Willamette River, Sacramento River winter, Central Valley spring, California coastal), coho salmon (Central California coastal, southern Oregon/northern California coastal), chum salmon (Hood Canal summer, Columbia River), sockeye salmon (Snake River, Ozette Lake), and steelhead (upper, middle and lower Columbia River, Snake River Basin, upper Willamette River, central California coast, California Central Valley, south-central California, northern California, southern California). These biological opinions have concluded that implementation of the FMP for the Pacific Coast groundfish fishery was not expected to jeopardize the continued existence of any endangered or threatened species under the jurisdiction of NMFS, or result in the destruction or adverse modification of critical habitat.

NMFS reinitiated a formal Section 7 consultation under the ESA in 2005 for both the Pacific whiting midwater trawl fishery and the groundfish bottom trawl fishery. The December 19, 1999 Biological Opinion had defined an 11,000 Chinook incidental take threshold for the Pacific whiting fishery. During the 2005 Pacific whiting season, more than 11,000 Chinook were taken, triggering reinitiation. NMFS prepared a Supplemental Biological Opinion dated March 11, 2006, which addressed salmon take in both the Pacific whiting midwater trawl and groundfish bottom trawl fisheries. In that Supplemental Biological Opinion, NMFS concluded that catch rates of salmon in the 2005 Pacific whiting fishery were consistent with expectations considered during prior consultations. Chinook bycatch has averaged about 7,300 fish over the last 15 years and has only occasionally exceeded the reinitiation trigger of 11,000. Since 1999, annual Chinook bycatch has averaged about 8,450 fish. The Chinook ESUs most likely affected by the Pacific whiting fishery have generally improved in status since the 1999 Section 7 consultation.

Although these species remain at risk, as indicated by their ESA listing, NMFS concluded that the higher observed bycatch in 2005 does not require a reconsideration of its prior "no jeopardy" conclusion with respect to the fishery. For the groundfish bottom trawl fishery, NMFS concluded that incidental take in the groundfish fisheries is within the overall limits articulated in the Incidental Take Statement of the 1999 Biological Opinion. The groundfish bottom trawl limit from that opinion was 9,000 fish annually. NMFS will continue to monitor and collect data to analyze take levels. NMFS also reaffirmed its prior determination that implementation of the Groundfish FMP is not likely to jeopardize the continued existence of any of the affected ESUs.

Lower Columbia River coho (70 FR 37160, June 28, 2005) and the Southern Distinct Population Segment (DPS) of green sturgeon (71 FR 17757, April 7, 2006) were recently listed as threatened under the ESA. As a consequence, NMFS has reinitiated its Section 7 consultation on the Council's Groundfish FMP. Green sturgeon have been caught with midwater trawl gear in the commercial non-tribal Pacific whiting fishery, however it is unlikely that the green sturgeon caught were from the ESA-listed southern DPS (south of the Eel River, California, 40/40' N. lat.), as all documented catches were north of 44/49' N. lat. After reviewing the available information, NMFS concluded that, in keeping with Section 7(a)(2) of the ESA, allowing the fishery to continue under this action would not result in any irreversible or irretrievable commitment of resources that would have the effect of foreclosing the formulation or implementation of any reasonable and prudent alternative measures.

Oregon Coast Coho On Feb. 11, 2008, NOAA Fisheries published a final determination listing Oregon coast Coho as threatened (73FR7816). This final rule also designated critical habitat and issued final protective regulations. The listing, critical habitat and protective regulations are effective on May 12, 2008.

The fishery as managed under proposed alternatives does not affect endangered/threatened species listed under the ESA or their habitat in any way that would alter the conclusions referenced above. The alternative actions would actually increase the probability of reduced salmon bycatch in the fishery as compared to the no alternative.

5.4 Marine Mammal Protection Act

Under the MMPA, marine mammals whose abundance falls below the optimum sustainable population level (usually regarded as 60 percent of carrying capacity or maximum population size) can be listed as "depleted". Populations listed as threatened or endangered under the ESA are automatically depleted under the terms of the MMPA. Currently, the Stellar sea lion population off the West Coast is listed as threatened under the ESA and the fur seal population is listed as depleted under the MMPA. Incidental takes of these species in the Pacific Coast fisheries are well under their annual Potential Biological Removals. The West Coast groundfish fisheries are considered Category III fisheries, where the annual mortality and serious injury of a stock by the fishery is less than or equal to one percent of the PBR level. The alternative actions are not expected to affect the incidental mortality levels of species protected under the MMPA.

5.5 Coastal Zone Management Act

Section 307(c)(1) of the CZMA of 1972 requires all Federal activities that directly affect the coastal zone be consistent with approved state coastal zone management programs to the maximum extent practicable. The proposed action is consistent to the maximum extent practicable with applicable State coastal zone management programs. A copy of this document will be submitted to the State coastal zone agencies in Washington, Oregon and California with a request for consistency determinations.

5.6 Paperwork Reduction Act

Each of the alternatives contains a collection-of-information requirement needed to verify qualification for future participation in the whiting fishery.
In order to implement a limited entry program for the non-tribal sectors of the Pacific Whiting Fishery, NMFS requests a collection to require the following information to be submitted:

A Pacific Whiting vessel license would require that whiting vessel owners submit an application requesting the license and to provide certain information to determine if a particular vessel is qualified for the license. The Pacific Whiting vessel license would be required in addition to the Pacific Coast Groundfish Limited Entry Permit to continue to participate in the Pacific Whiting Fishery.

NMFS will mail an application to current trawl endorsed Pacific Coast Groundfish limited entry permit owners and holders, former permit owners/holders registered during the qualifying years and other vessels owners (i.e.; motherships) that may qualify for the license. The applicant would be requested to provide the name of the vessel, documentation number and vessel owner name and address information. Additionally, the vessel owner would be requested to indicate which sector(s) (catcher vessel to shoreside facilities, catcher vessel to motherships, and catcher processors) the vessel may qualify for, indicate one year during the qualifying years that the vessel participated in that sector, and indicate the amount of whiting landed and/or processed in that year. Supplemental documents (i.e.; fish tickets, bill of sale) will be required to substantiate qualifying amounts of whiting landed or processed. Such documents will need to show the vessel name, date of landing/receipt of whiting, number of pounds of whiting landed/processed. If the vessel qualifies for the license, NMFS would issue printed license with relevant vessel and vessel owner information taken from the application form. The deadline for making the application will be September 1, 2008. Any application received after this date will not be accepted.

The Pacific Whiting vessel license will remain in effect indefinitely and will not be renewed annually. The permit will not be transferrable to another vessel. However, after the initial issuance of the license, the license holder (vessel owner) will be required to notify NMFS in writing any time the vessel owner change, their address changes or the vessel name is changed.

NMFS estimates that approximately 120 vessel owners will submit applications under the proposed action. The time burden for the applicant to submit the license application is estimated

to be 1 hour. Similarly, NMFS estimates the time burden for license holders to notify NMFS in writing of a change in the vessel owner, vessel owner address or vessel name is 30 minutes. NMFS estimates that it will charge applicants a one-time application fee $650 for the administrative costs associated with establishing this program, reviewing license applications, and making initial issuances of the licenses. This one time fee compares to the current $125 fee charged for renewing the current groundfish limit entry permit (398 permits) and to the one time cost of $700 charged those receiving a sablefish permit endorsement (164 endorsements).

5.7 Executive Order 12866

This action is not significant under E.O. 12866. This action will not have a cumulative effect on the economy of $100 million or more, nor will it result in a major increase in costs to consumers, industries, government agencies, or geographical regions. No significant adverse impacts are anticipated on competition, employment, investments, productivity, innovation, or competitiveness of United States-based enterprises.

5.8 Executive Order 13175

Executive Order 13175 is intended to ensure regular and meaningful consultation and collaboration with tribal officials in the development of Federal policies that have tribal implications, to strengthen the United States government-to-government relationships with Indian tribes, and to reduce the imposition of unfunded mandates upon Indian tribes.

The Secretary of Commerce recognizes the sovereign status and co-manager role of Indian tribes over shared Federal and tribal fishery resources. At Section 302(b)(5) of the Magnuson-Stevens Act, a seat on the Council is to be reserved for a representative of an Indian tribe with Federally recognized fishing rights from California, Oregon, Washington, or Idaho.

The U.S. government formally recognizes that the four Washington Coastal Tribes (Makah, Quileute, Hoh, and Quinault) have treaty rights to fish for groundfish. In general terms, the quantification of those rights is 50 percent of the harvestable surplus of groundfish available in the tribes' usual and accustomed (U and A) fishing areas (described at 50 CFR 660.324). Each of the treaty tribes has the discretion to administer their fisheries and to establish their own policies to achieve program objectives. The alternative actions do not alter the treaty allocation of whiting, nor does it affect the prosecution of the tribal fishery.

5.9 Migratory Bird Treaty Act and Executive Order 13186

The Migratory Bird Treaty Act of 1918 was designed to end the commercial trade of migratory birds and their feathers that, by the early years of the 20th century, had diminished populations of many native bird species. The Act states that it is unlawful to take, kill, or possess migratory birds and their parts (including eggs, nests, and feathers) and is a shared agreement between the United States, Canada, Japan, Mexico, and Russia to protect a common migratory bird resource. The Migratory Bird Treaty Act prohibits the directed take of seabirds, but the incidental take of seabirds does occur. The alternative actions are not likely to affect the incidental take of seabirds protected by the Migratory Bird Treaty Act.

Executive Order 13186 (Responsibilities of Federal Agencies to Protect Migratory Birds) is intended to ensure that each Federal agency taking actions that have, or are likely to have, a measurable negative effect on migratory bird populations develops and implements a Memorandum of Understanding (MOU) with the United States Fish and Wildlife Service that shall promote the conservation of migratory bird populations. The alternative actions are not likely to have a measurable effect, if any, on migratory bird populations.

5.10 Executive Order 12898 (Environmental Justice) and 13132 (Federalism)

There is no specific guidance on application of E.O. 12898 to fishery management actions. The E.O. states that environmental justice should be part of an agency's mission "by identifying and addressing disproportionately high and adverse human health or environmental effects of its programs, policies, and activities on minority or low-income populations." The alternative actions do not target low income or minority communities; they would affect all populations segments equally. None of the alternative actions would have federalism implications subject to EO 13132.

6.0 REGULATORY IMPACT REVIEW AND REGULATORY FLEXIBILITY ANALYSIS

In order to comply with Executive Order (EO) 12866 and the Regulatory Flexibility Act (RFA), this document also serves as a Regulatory Impact Review (RIR). The RIR and Initial Regulatory Flexibility Analysis (IRFA) have many aspects in common with each other and with EAs. Much of the information required for the RIR and IRFA analyses has been provided above in the EA.

Table 17 identifies where previous discussions in the EA relevant to the IRFA/RIR may be found in this document.

Table 17 Regulatory Impact Review and Regulatory Flexibility Analysis Components

RIR Elements of Analysis	Corresponding Sections in EA	IRFA Elements of Analysis	Corresponding Sections in EA
Description of management objectives	1.3	Description of why actions are being considered	1.3
Description of the fishery	1.4, 3.0	Statement of the objectives of and legal basis for actions	1.1, 1.2, 1.3
Statement of the problem	1.3	Description of projected reporting, recordkeeping and other compliance requirements of the proposed action	
Description of each selected alternative	2.0	Identification of all relevant Federal rules	5.0, 6.0
An economic analysis of the expected effects of each selected alternative relative to status quo	4.3		

This action is about prohibiting additional capacity from entering the Pacific whiting fishery in part as result of high quotas, prices, and rationalization of the Alaska fisheries under the AFA and from recent North Pacific Fishery Management Council decisions. In 2004, 217,000 tons of Pacific whiting worth $22 million ex-vessel ($0.046/lb) were harvested and processed through the activities of 26 shorebased catcher vessels, 10 mothership-catcher vessels, 4 motherships, 9 shorebased processors and 6 catcher-processors. In sharp contrast, during 2006, 265,000 tons of whiting worth $36 million ($0.62 per lb) involved 37 catcher-vessels, 20 motherships catcher vessels, 14 shoreside processors, 6 motherships, and 9 catcher processors.

Action is needed to restrict new vessels from entering into the fully capitalized Pacific whiting fishery. If fishing capacity increases (becomes further overcapitalized,) the intensity of fishing may increase such that fishers strive to catch as much Pacific whiting as possible as quickly as possible (also referred to a derby fishery or the race for fish). This race constrains the available time for vessels to search for whiting, which can cause fishers to neglect safety and bycatch concerns they would otherwise be more attentive to. An accelerated race for fish would likely increase the incidental catch of non-whiting species, increase management costs, and decrease the economic returns to historical participants and communities. In an accelerated race for fish, there also would be higher risk of reaching the bycatch limits for the established fisheries earlier in the season before a sector's Pacific whiting allocation were reached. Because all sectors of the commercial fishery are closed when a bycatch limit is reached, without other fishing opportunities there could be short periods in which vessels would be forced to sit idle; at worst, the idle periods would be long, with serious disruption of processing facilities that are already under great economic pressure because of the severe cutbacks in groundfish fisheries over the past 10 years. Most recently, on July 26, 2007, the whiting fishery was closed because of attainment of the 220 mt widow bycatch limit for the fishery. At that time, 76 percent of the 208,000 mt available whiting was harvested.

New entry into the whiting fishery is occurring despite the fishery being already greatly overcapitalized, having a limited entry groundfish program in place, being 0heavily regulated in order to protect overfished species, and undergoing planning efforts to rationalize the fishery either through ITQs, and/or co-ops. In recent years, including 2007, fishing seasons have been shortened or otherwise constrained in order to prevent excess incidental catch of protected salmon and overfished groundfish species. With respect to overfished species, the Council is extremely sensitive to any increased probability of a "disaster" tow—one that could lead to closure of a fishery. For example, in 2004, the bycatch cap on canary was 4.7 mt, but the majority of this catch, 3.9 mt, occurred in a single tow of fish. In the summer of 2007, the fishery was closed before the whiting allocation had been taken because the widow bycatch cap had been reached. In part as a response to these inseason closures, and based on a review of past and recent participation in the fishery, the Council has recommended limiting participation to those 64 shore-based vessels that have sector specific participation between January 1, 1994 and January 1, 2007 and to those 10 catcher/processors that have sector participation in the catcher processor sector between January 1, 1997 and January 1, 2007, 39 mothership-catcher-vessels and the 7 mothership vessels have sector specific participation in the mothership sector- between January 1, 1997 and January 1, 2007. The differences in qualifying periods relate to initial definition of fishing sectors—1997 is the first year that the catcher-processor and mothership sectors were explicitly designed.

In 2006, 37 shore-based vessels, 9 catcher/processors, 6 motherships, and 20 mothership catcher vessels participated in the whiting fishery. These numbers show that the Council recommendations for Amendment 15 include a significantly greater number of mothership catcher vessels and shore-based vessels than those that participated in 2006. Consequently it is difficult to assess the potential conservation, management, and economic benefits of the Council's recommendations in comparison to the status quo. The catcher-processor sector has operated under a voluntary co-op agreement for many years. As such, this sector has been able to take actions that greatly aid bycatch reduction and management of the fishery. In 2006, an AFA-permitted catcher/processor with no historical participation secured permits for the whiting fishery. Members of the PWCC, composed of catcher/processors, have testified to the Council that a new entrant would be disruptive to present operations and may lead to more intensive fishing early in the season when bycatch rates are higher and whiting yields are lower. The mothership processing sector will be limited to 7 vessels compared to the 6 that operated in 2006, while the number of mothership catcher-vessels (39) that can potentially participate is far higher than the number that participated in 2006. However, the historic average ratio of mothership catcher-vessels to mothership processing has been 3.3:1, which means that the limit on the number of mothership processing vessels would limit the number of mothership catcher vessels to about 23-24 vessels annually. With respect to the shorebased vessels, there is a potential that the actual number of vessels fishing in the fishery can increase to 64 from the current 2006 level of 37. Therefore, it is not clear if there will be biological and economic benefits from this alternative to this sector that are different from the status quo. The Council may have chosen this alternative for the shore-based sector in recognition of the historic participation of qualifying vessels. Perhaps from a fairness and equity consideration, the Council is stating that it is better to allow increased participation in one fishery from a pool of past participants as opposed to a new pool of participants that have never fished in the fishery before.

Because there is a high degree of overcapitalization in the fishery, in comparison to the status quo, preventing new entrants in the fishery is not likely to significantly change the total costs associated with fishing Pacific whiting. It is expected that new entrants have similar cost structures as existing participants. Revenues would remain unchanged, since this action does not change the total amount of whiting harvested. Ex-vessel prices are largely being influenced by export markets for headed-and-gutted whiting, so domestic consumers are not expected to be negatively affected by this action. In terms of existing permit holders, one catcher-processor company will be affected, since its vessel will continue to be prohibited from fishing in the fishery as it was in 2006—the first year the company attempted to participate in the fishery. The economic effects on this company can be mitigated – the permit for this vessel is a combination of several small sized endorsed permits and NMFS has provided the company with an opportunity uncombined the permits back into smaller-sized permits for use with vessels that meet the whiting participation rules or for use in other groundfish fisheries.

6.1 Regulatory Impact Review

EO 12866, Regulatory Planning and Review, was signed on September 30, 1993, and established guidelines for promulgating new regulations and reviewing existing regulations. The EO covers a variety of regulatory policy considerations and establishes procedural requirements for analysis

of the benefits and costs of regulatory actions. The RIR provides a review of the changes in net economic benefits to society associated with proposed regulatory actions. The analysis also provides a review of the problems and policy objectives prompting the regulatory proposals and an evaluation of the alternative action that could be used to solve the problems.

The RIR analysis and the environmental analysis required by NEPA have many common elements, including a description of the management objectives, description of the fishery, statement of the problem, description of the alternatives and economic analysis, and have, therefore, been combined in this document. See Table 32 above for a reference of where to find the RIR elements in this EA.

The RIR is designed to determine whether the proposed action could be considered a "significant regulatory action" according to E.O. 12866. E.O. 12866 test requirements used to assess whether or not an action would be a "significant regulatory action", and identifies the expected outcomes of the proposed management alternatives. These tests are whether the action would: 1) have a annual effect on the economy of $100 million or more or adversely affect in a material way the economy, a sector of the economy, productivity, competition, jobs, the environment, public health or safety, or state, local, or tribal governments or communities; 2) create a serious inconsistency or otherwise interfere with action taken or planned by another agency; 3) materially alter the budgetary impact of entitlement, grants, user fees, or loan programs or the rights and obligations of recipients thereof; or 4) raise novel legal or policy issues arising out of legal mandates, the President's priorities, or the principles set forth in this executive Order.

Based on results of the economic analysis contained in subsection 4.3, alternative actions are not expected to be significant under E.O. 12866. This action will not have an annual effect on the economy of $100 million or more, nor will it result in a major increase in costs to consumers, industries, government agencies, or geographical regions. In addition, the alternative action is not expected to: create a serious inconsistency or otherwise interfere with action taken or planned by another agency; materially alter the budgetary impact of entitlement, grants, user fees, or loan programs or the rights and obligations of recipients thereof; or raise novel legal or policy issues arising out of legal mandates.

6.2 Initial Regulatory Flexibility Analysis

The Regulatory Flexibility Act (RFA) recognizes and defines three kinds of small entities: (1) small businesses, (2) small nonprofit organizations, and (3) and small government jurisdictions**.**

Small businesses. Section 601(3) of the RFA defines a 'small business' as having the same meaning as 'small business concern' which is defined under Section 3 of the Small Business Act. 'Small business' or 'small business concern' includes any firm that is independently owned and operated and not dominate in its field of operation. The SBA has further defined a "small business concern" as one "organized for profit, with a place of business located in the United States, and which operates primarily within the United States or which makes a significant contribution to the United States economy through payment of taxes or use of American products, materials or labor. A small business concern may be in the legal form of an individual proprietorship, partnership, limited liability company, corporation, joint venture, association,

trust or cooperative, except that where the form is a joint venture there can be no more than 49 percent participation by foreign business entities in the joint venture."

The SBA has established size criteria for all major industry sectors in the US including fish harvesting and fish processing businesses. The RFA recognizes and defines three kinds of small entities: small businesses, small organizations, and small governmental jurisdictions. NMFS March 2007 Economic Guidelines (http://www.nmfs.noaa.gov/sfa/domes_fish/EconomicGuidelines.pdf) establish the current size standards for Magnuson- Stevens Act related rules are as follows: Any fish-harvesting or hatchery business is a small business if it is independently owned and operated and not dominant in its field of operation and if it has total annual gross receipts not in excess of $4.0 million. Total annual gross receipts should include those of affiliates when practicable and appropriate to do so. Any vessel which both harvests and processes fish (also referred to as a catcher processor) is currently considered a small business if its combined total annual gross receipts (including all affiliates, worldwide, where practicable and appropriate) are not in excess of $4.0 million. However, NMFS is currently proposing a new size standard for catcher-processors operating in the Pacific and North Pacific to be combined total annual gross receipts not in excess of $20.0 million. A final determination on this size standard has not yet been made.

The SBA has established "principles of affiliation" to determine whether a business concern is "independently owned and operated." In general, business concerns are affiliates of each other when one concern controls or has the power to control the other, or a third party controls or has the power to control both. The SBA considers factors such as ownership, management, previous relationships with or ties to another concern, and contractual relationships, in determining whether affiliation exists. Individuals or firms that have identical or substantially identical business or economic interests, such as family members, persons with common investments, or firms that are economically dependent through contractual or other relationships, are treated as one party with such interests aggregated when measuring the size of the concern in question. The SBA counts the receipts or employees of the concern whose size is at issue and those of all its domestic and foreign affiliates, regardless of whether the affiliates are organized for profit, in determining the concern's size. However, business concerns owned and controlled by Indian Tribes, Alaska Regional or Village Corporations organized pursuant to the Alaska Native Claims Settlement Act (43 U.S.C. 1601), Native Hawaiian Organizations, or Community Development Corporations authorized by 42 U.S.C. 9805 are not considered affiliates of such entities, or with other concerns owned by these entities solely because of their common ownership.

Affiliation may be based on stock ownership when (1) A person is an affiliate of a concern if the person owns or controls, or has the power to control 50 percent or more of its voting stock, or a block of stock which affords control because it is large compared to other outstanding blocks of stock, or (2) If two or more persons each owns, controls or has the power to control less than 50 percent of the voting stock of a concern, with minority holdings that are equal or approximately equal in size, but the aggregate of these minority holdings is large as compared with any other stock holding, each such person is presumed to be an affiliate of the concern.

Affiliation may be based on common management or joint venture arrangements. Affiliation arises where one or more officers, directors or general partners controls the board of directors

and/or the management of another concern. Parties to a joint venture also may be affiliates. A contractor and subcontractor are treated as joint venturers if the ostensible subcontractor will perform primary and vital requirements of a contract or if the prime contractor is unusually reliant upon the ostensible subcontractor. All requirements of the contract are considered in reviewing such relationship, including contract management, technical responsibilities, and the percentage of subcontracted work. Small organizations. The RFA defines "small organizations" as any nonprofit enterprise that is independently owned and operated and is not dominant in its field. Small governmental jurisdictions. The RFA defines small governmental jurisdictions as governments of cities, counties, towns, townships, villages, school districts, or special districts with populations of less than 50,000.

When an agency proposes regulations, the RFA requires the agency to prepare and make available for public comment an Initial Regulatory Flexibility Analysis (IRFA) that describes the impact on small businesses, non-profit enterprises, local governments, and other small entities. The IRFA is to aid the agency in considering all reasonable regulatory alternatives that would minimize the economic impact on affected small entities. To ensure a broad consideration of impacts on small entities, NMFS has prepared this IRFA without first making the threshold determination whether this proposed action could be certified as not having a significant economic impact on a substantial number of small entities. NMFS must determine such certification to be appropriate if established by information received in the public comment period.

1) A description of the reasons why the action by the agency is being considered. This action is necessary to satisfy the requirements of the 1996 Sustainable Fisheries Act amendments to the Magnuson-Stevens Act.

In addition, this action will benefit fisheries conservation and management by restricting entry into all sectors of the Pacific Whiting fishery. Amendment 15 to the GFMP is designed as an interim step prior to the adoption of a set of regulations that is expected to enable the rationalization of fisheries for Pacific Whiting and other WOC groundfish.

NMFS believes that it is necessary to move forward with this proposed rule at this time.

2) A succinct statement of the objectives of, and legal basis for, the proposed rule.

The objective of this rule to prevent new entrants into the whiting fishery. Current market conditions and the changing nature of Alaska fisheries are likely to bring new entrants to the fishery. Increased vessel participation in the whiting fishery accelerate the race for fish, reduce the per vessel revenues of existing participants, may have undesirable consequences on overfished and protected species, and could result in a fishery that is more costly and difficult to manage in an effective manner.

3) A description of and, where feasible, and estimate of the number of small entities to which the proposed rule will apply;

Either because of participation in Alaska Pollock and other fisheries or being affiliated with large seafood companies, catcher/processor and mothership operations operating in the WOC, and are not considered small businesses.

Approximately 10 WOC groundfish catcher/processors and 7 mothership processors will be affected by this proposed rulemaking. The Small Business Administration (SBA) guidelines for fishing firms use a $3,000,000 gross revenue threshold to separate small from large operations. In the application to any one firm, the $3,000,000 threshold considers income to all affiliated operations. NMFS records indicate that the gross annual revenue for each of the catcher/processor and mothership operations operating in the WOC exceeds $3,000,000 and are therefore not considered small businesses.

Since 1994, approximately 26-31 catcher vessels participated in the shoreside fishery annually. Approximately 10-43 catcher vessels participated in the mothership fishery annually since 1994. These companies are all assumed to be small businesses. This rulemaking is expected to have minimal impacts on the business that catcher vessels conduct with the mothership processors and shore-based processors. It is also expected to have minimal impact on vessels in the catcher/processor sector of the fishery. If anything, this rule maintains the economics of the existing small business participating in the fishery as it prevents new vessels, potentially the larger vessels from Alaska, from participating in the fishery.

4) A description of the projected reporting, recordkeeping and other compliance requirements of the proposed rule, including an estimate of the classes of small entities which will be subject to the requirement and the type of professional skills necessary for preparation of the report or record.

Additional reporting, recordkeeping and compliance requirements defined by the proposed rule would primarily if not exclusively be the acquisition of a limited entry permit specific to the Pacific Whiting fishery by all vessels that are eligible and whose owners/operators desire to participate in the fishery. NMFS initially estimates that it could be reviewing as many as 137 applications for all sectors, with an initial cost estimate of $650 per permit issued. The cost to NMFS of reviewing and issuing permits and dealing with appeals, if any, will be averaged over the permitted fleet and will become permit fees to be paid by permit recipients as a condition of receipt of the permit. This one time fee compares to the current $125 fee charged for renewing the current groundfish limit entry permit (398 permits) and to the one time cost of $700 charged those receiving a sablefish permit endorsement (164 endorsements).

5) An identification, to the extent practicable, of all relevant Federal rules which may duplicate, overlap, or conflict with the proposed rule.

None.

6) A summary of economic impacts.

Economic impacts were reviewed in Chapter 4 and then summarized in the introduction of Section 6.0, above. Adoption of Amendment 15 is expected to maintain the existing economic

character of the Pacific Whiting fishery. The actual levels of jobs, revenues, profits and total personal income for fishery participants and the affected communities will be influenced by such things as the abundance of whiting, market prices for whiting and substitute commodities and the condition of other fishery resources. Some of the other fishery resources are substitute products in consumption. Other fishery resources (bycatch) are incidentally harvested during the conduct of the Pacific Whiting fishery. The bycatch should be viewed as a constraint on the level of harvest of whiting in each season.

Beyond these exogenous factors, the number of fishery participants is expected to stay relatively consistent with the numbers observed in past years as no new entrants to the whiting fishery will be permitted. Accordingly, the economic impacts of the proposed action per se on existing businesses are expected to be minimal provided that a significant number of historically active vessels is not both eligible for the limited whiting permits and choose to enter the fishery. There is no reliable methodology available to determine whether the eligibility entry of previous participants will occur to a significant degree. In spite of this possibility, the aggregate landings and values of whiting are expected to vary only to the extent caused by variations in the exogenous factors indicated.

7) A description of any alternatives to the proposed rule which accomplish the stated objectives of applicable statutes and which minimizes and significant economic impacts of the proposed rule on small entities.

No additional alternatives other than Alternatives 1A, 1B, 2A, 2B and 3 would achieve the same goal of preventing new entrants to the Pacific Whiting fishery. The preferred alternative (Alternative 4) is actually comprised of parts from several of these alternatives and allows the greatest number of shorebased catcher vessels which are considered small businesses.

NMFS prepared a proposed rule to amend the regulations implementing the Pacific Coast Groundfish Fishery Management Plan (FMP) to provide for a limit on the number of vessels participating in the Pacific Whiting fishery based on prior participation in the fishery during base years specified in the alternatives. This action would also require the creation of a whiting specific limited entry permit to be administered by NMFS. The ESA terms and conditions for incidental take of Chinook salmon in the whiting fishery are also more likely to be met. Also, excessive harvests of certain groundfish species are more likely to be avoided.

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8.0 LIST OF PREPARERS

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9.0 AGENCIES CONSULTED

National Marine Fisheries Service
Pacific Fishery Management Council
Oregon Department of Fish and Wildlife
Washington Department of Fish and Wildlife

10.0 FINDING OF NO SIGNIFICANT IMPACT (FONSI)

FINDING OF NO SIGNIFICANT IMPACT FOR FINAL RULE TO IMPLEMENT A LIMITED ENTRY PROGRAM FOR THE NON-TRIBAL SECTORS OF THE PACIFIC WHITING FISHERY

10.1 Introduction

National Oceanic and Atmospheric Administration Administrative Order 216-6 (NAO 216-6) (May 20, 1999) contains criteria for determining the significance of the impacts of a proposed action. In addition, the Council on Environmental Quality regulations at 40 C.F.R. 1508.27 state that the significance of an action should be analyzed both in terms of "context" and "intensity." Each criterion listed below is relevant in making a finding of no significant impact and has been considered individually, as well as in combination with the others. The significance of this action is analyzed based on the NAO 216-6 criteria and CEQ's context and intensity criteria. These include:

1) Can the proposed action reasonably be expected to jeopardize the sustainability of any target species that may be affected by the action?

Response: The proposed action would implement a license limitation program for the three non-tribal sectors of the Pacific whiting fishery (shore-based, catcher/processor, mothership) to protect the fishery participants from adverse impacts caused by vessels that have not historically participated in a specific sector of the fishery. Because the action is for a licensing program it is not expected to change the annual number of vessels that participate in the fishery from annual levels historically seen in the fishery, the gear type used to harvest Pacific whiting, the general dates of the fishing season, or the geographical location where the fishery occurs. Therefore, no direct biological effects are projected to result from the proposed action. Beneficial indirect biological impacts on the target species could result if the annual number of fishing vessels would be reduced over historical levels. The benefit to the target resource is not expected to be significant.

2) Can the proposed action reasonably be expected to jeopardize the sustainability of any non-target species?

Response: Because the proposed action is for a license limitation program it is not expected to change ongoing fishing practices. Therefore, no direct biological effects are projected to result from the proposed action. Beneficial indirect biological impacts could result if the program results in the annual number of vessels in the fishery dropping below historical levels such that an accelerated race for fish does not occur and fishery participants have more time to avoid the incidental catch of non-whiting species. An accelerated race for fish would likely increase the incidental catch of non-whiting species, increase management costs, and decrease the economic

returns to historical participants and communities. The benefit to the non-target resource is not expected to be significant.

3) Can the proposed action reasonably be expected to cause substantial damage to the ocean and coastal habitats and/or essential fish habitat as defined under the Magnuson-Stevens Act and identified in FMPs?

Response: Habitat impacts generally associated with fishery management actions are effects resulting from changes in the physical structure of the benthic environment. The Pacific whiting fishery requires the use of midwater trawl gear. Midwater trawl gear is deployed in the water column between the ocean surface and the ocean floor and is not known to significantly affect the biophysical environment of the water column where it is deployed. For this reason, there is no likelihood that the proposed action would cause substantial damage to ocean and coastal habitats and/or essential fish habitat as defined under the Magnuson-Stevens Act and identified in FMPs.

4) Can the proposed action be reasonably expected to have a substantial adverse impact on public health or safety?

Response: The proposed action is not reasonably expected to have a substantial adverse impact on public health or safety because it is for a license limitation program and is not expected to change ongoing fishing practices or any related health or safety issues.

5) Can the proposed action reasonably be expected to adversely affect endangered or threatened species, marine mammals, or critical habitat of these species?

Response: A formal Section 7 consultation for the Pacific whiting fishery has been prepared by NMFS for salmon listed under the Endangered Species Act. The proposed action would be consistent with expectations considered during the prior consultation. The proposed action does not constitute an action that may significantly affect other endangered or threatened species listed under the Endangered Species Act or their habitat. The proposed action is not expected to affect the incidental mortality levels of species protected under the Marine Mammal Protection Act. No change in incidental mortality levels of seabirds protected under the Migratory Bird Species Act is expected to occur, because there is no change in the gear type used to harvest Pacific whiting, the fishing season, or the geographical location of the fishery. Sea turtle interactions have not occurred in the Pacific whiting fishery because the geographic extent of the fishery does not overlap with marine turtle habitat; this action would not affect the geographic extent of the fishery.

6) Can the proposed action be expected to have a substantial impact on biodiversity and/or ecosystem function within the affected area (e.g., benthic productivity, predator-prey relationships, etc.)?

Response: The proposed action is not expected to have a substantial impact on biodiversity and/or ecosystem function within the affected area because it is not expected to change the annual number of vessels that participate in the fishery from historical levels, the gear

type used to harvest Pacific whiting, the general dates of the fishing season, or the geographical location where the fishery occurs.

7) Are significant social or economic impacts interrelated with natural or physical environmental effects?

Response: There would be no significant social or economic impacts interrelated with natural or physical environmental effects because the proposed action is not expected to change the annual number of vessels that participate in the fishery from historical levels, the gear type used to harvest Pacific whiting, the general dates of the fishing season, or the geographical location where the fishery occurs, all of which affect social and economic conditions.

8) Are the effects on the quality of the human environment likely to be highly controversial?

Response: The effects on the quality of the human environment are not likely to be highly controversial because the proposed action would be consistent with existing fishing practice for the Pacific whiting fishery and would not result in significant impacts to natural or social resources.

9) Can the proposed action reasonably be expected to result in substantial impacts to unique areas, such as historic or cultural resources, park land, prime farmlands, wetlands, wild and scenic rivers, or ecologically critical areas?

Response: The proposed action is not reasonably expected to result in substantial impacts to unique areas, such as historic or cultural resources, park land, prime farmlands, wetlands, wild and scenic rivers, or ecologically critical areas because the proposed action would not in any way impact or involve these unique areas. Further, the action would not involve the construction of any new infrastructure.

10) Are the effects on the human environment likely to be highly uncertain or involve unique or unknown risks?

Response: The effects to the human environment from the proposed action are all known. No unique or unknown risks have been identified.

11) Is the proposed action related to other actions with individually insignificant, but cumulatively significant impacts?

Response: The cumulative impacts of the proposed action have been considered in the Final Environmental Assessment (EA) for this action. Cumulative effects would not be significant.

1*2) Is the proposed action likely to adversely affect districts, sites, highways, structures, or objects listed in or eligible for listing in the National Register of Historic Places or may cause loss or destruction of significant scientific, cultural, or historical resources?*

Response: The proposed action is not likely to adversely affect districts, sites, highways,

structures, or objects listed in or eligible for listing in the National Register of Historic Places nor cause loss or destruction of significant scientific, cultural, or historical resources because of the limited scope of the action area, which includes none of the aforementioned structures or resources.

13) Can the proposed action reasonably be expected to result in the introduction or spread of a nonindigenous species?

Response: The proposed action would not result in the introduction or spread of a nonindigenous species because the proposed action would implement a vessel licensing program and would not involve any activities that could cause this outcome.

14) Is the proposed action likely to establish a precedent for future actions with significant effects or represents a decision in principle about a future consideration?

Response: The proposed action is not likely to establish a precedent for future actions with significant effects nor would it represent a decision in principle about a future consideration because it would not trigger other future actions that could impact the environment. It is possible that additional monitoring licensing requirements may be contemplated in the future, but they would not be predicated upon implementation of this licensing action. Further, additional licensing requirements would be analyzed through new NEPA reviews at the time of the request, and any possible cumulative significant effects would again be analyzed.

15) Can the proposed action reasonably be expected to threaten a violation of Federal, State, or local law or requirements imposed for the protection of the environment?

Response: The proposed action is not expected to threaten a violation of Federal, State, or local laws or requirements imposed for the protection of the environment. The proposed action would implement a license limitation program for the Pacific whiting fishery and would be consistent with existing state requirements. The proposed action would be in full compliance with all applicable laws.

16) Can the proposed action reasonably be expected to result in cumulative adverse effects that could have a substantial effect on the target species or non-target species?

Response: The proposed action is for a license limitation program for the Pacific whiting fishery and is not expected to result in cumulative adverse effects on target or non-target species because it is not expected to change the annual number of vessels that participate in the fishery from historical levels, the gear type used to harvest Pacific whiting, the general dates of the fishing season, or the geographical location where the fishery occurs. This proposed action would be consistent with the parameters considered in previous NEPA analyses on the existing fishery.

10.2 EA and FONSI Reviewers

- Kathe Hawe, NWR NEPA Coordinator
- Frank Lockhart, NWR SFD Assistant Regional Administrator

- Eileen Cooney, NOAA General Council

10.3 Determination

In view of the information presented in the EA and analysis prepared for the expanded coverage of the limited entry program for the three non-tribal sectors of the Pacific whiting fishery, it is hereby determined that the approval by NMFS of this the action will not significantly impact the quality of the human environment as described above and in the EA. In addition, all beneficial and adverse impacts of the proposed action have been addressed to reach conclusion of no significant impacts. Accordingly, preparation of an Environmental Impact Statement is not necessary.

D. Robert Lohn, Regional Administrator

11.0 APPENDIX

Table A-1. Summary of Rockfish Bycatch by Year and Sector, 1994-2006.

1994

ROCKFISH SPECIES	MOTHERSHIP	CATCHER/PROCESSOR	SHORESIDE	TOTAL
Bocaccio	0.20	1.29	0.00	1.49
Other rockfish	23.81	19.06	26.15	69.01
POP	33.02	28.54	10.77	72.33
Thornyheads	0.01	0.20	4.49	4.70
Canary	2.82	2.01	0.00	4.83
Yellowtail	408.90	210.93	255.30	875.12
Widow	191.68	185.49	245.80	622.97
Chilipepper	0.70	5.15	0.00	5.86
Shortbelly	1.08	0.82	0.00	1.91
TOTAL ROCKFISH	662.21	453.50	542.51	1,658.22
Mt whiting	91,925.94	87,146.60	73,512.68	252,585.22
Mt rockfish/mt whiting	0.007203712	0.005203875	0.007379798	0.00656498

1995

ROCKFISH SPECIES	MOTHERSHIP	CATCHER/PROCESSOR	SHORESIDE	TOTAL
Bocaccio	0.04	0.34	0.00	0.38
Other rockfish	12.76	78.96	33.35	125.07
POP	30.51	13.28	0.19	43.98
Thornyheads	0.12	5.66	0.01	5.79
Canary	0.18	0.13	0.50	0.81
Yellowtail	708.32	84.60	290.06	1,082.98
Widow	155.28	85.25	236.46	476.99
Chilipepper	0.15	28.02	0.00	28.17
Shortbelly	7.24	2.92	0.00	10.16
TOTAL ROCKFISH	914.60	299.16	560.56	1,774.32
Mt whiting	40,586.00	61,572.00	74,884.51	177,042.51
Mt rockfish/mt whiting	0.022534864	0.004858702	0.007485603	0.01002198

1996

ROCKFISH SPECIES	MOTHERSHIP	CATCHER/PROCESSOR	SHORESIDE	TOTAL
Bocaccio	0.11	0.05	0.00	0.16
Other rockfish	14.77	20.73	42.11	77.61
POP	2.32	3.68	20.71	26.71
Thornyheads	0.00	1.93	0.10	2.03
Canary	1.14	0.08	0.67	1.89
Yellowtail	379.36	251.59	519.32	1,150.27
Widow	141.89	124.68	576.06	842.63
Chilipepper	0.00	0.00	0.00	0.00
Shortbelly	0.00	6.15	0.00	6.15
TOTAL ROCKFISH	539.59	408.89	1,158.97	2,107.45
Mt whiting	44,416.70	68,359.40	84,935.07	197,711.17
Mt rockfish/mt whiting	0.012148359	0.005981474	0.01364533	0.01065922

1997

ROCKFISH SPECIES	MOTHERSHIP	CATCHER/PROCESSOR	SHORESIDE	TOTAL
Bocaccio	0.15	0.06	0.00	0.21
Other rockfish	12.30	69.30	23.02	104.62
POP	1.46	1.82	6.23	9.51
Thornyheads	0.02	0.44	0.36	0.82
Canary	0.70	1.11	0.95	2.76
Yellowtail	174.04	116.11	226.48	516.63
Widow	133.88	73.33	160.21	367.42
Chilipepper	0.01	0.00	0.00	0.01
Shortbelly	0.28	0.48	0.01	0.77
TOTAL ROCKFISH	322.84	262.65	417.27	1,002.76
Mt whiting	50,402.00	70,771.00	87,143.80	208,316.80
Mt rockfish/mt whiting	0.006405301	0.003711266	0.004788257	0.00481362

1998

ROCKFISH SPECIES	MOTHERSHIP	CATCHER/PROCESSOR	SHORESIDE	TOTAL
Bocaccio	1.17	0.03	0.00	1.20
Other rockfish	19.79	42.57	45.54	107.90
POP	6.50	14.78	16.66	37.94
Thornyheads	0.01	2.51	0.20	2.72
Canary	2.46	0.25	0.86	3.57
Yellowtail	313.26	63.72	496.41	873.39
Widow	171.84	120.92	360.31	653.07
Chilipepper	0.01	0.00	0.00	0.01
Shortbelly	0.00	0.02	1.28	1.30
TOTAL ROCKFISH	515.04	244.80	921.26	1,681.10
Mt whiting	50,087.10	70,365.00	87,573.35	208,025.45
Mt rockfish/mt whiting	0.010282887	0.003479002	0.010519848	0.00808121

1999

ROCKFISH SPECIES	MOTHERSHIP	CATCHER/PROCESSOR	SHORESIDE	TOTAL
Bocaccio	0.07	0.25	0.00	0.32
Other rockfish	14.32	18.83	15.77	48.92
POP	4.44	9.71	1.05	15.20
Thornyheads	0.00	0.02	0.68	0.70
Canary	0.19	1.03	1.89	3.11
Yellowtail	253.26	430.87	475.09	1,159.22
Widow	47.70	101.25	195.18	344.13
Chilipepper	0.54	0.00	0.01	0.55
Shortbelly	0.00	0.00	5.50	5.50
TOTAL ROCKFISH	320.52	561.96	695.16	1,577.64
Mt whiting	47,580.25	67,679.89	83,302.77	198,562.91
Mt rockfish/mt whiting	0.006736408	0.008303205	0.008345039	0.00794531

2000

ROCKFISH SPECIES	MOTHERSHIP	CATCHER/PROCESSOR	SHORESIDE	TOTAL
Bocaccio	2.20	0.45	0.48	3.13
Other rockfish	29.06	91.28	18.91	139.25
POP	3.03	6.57	0.21	9.81
Thornyheads	0.14	18.93	2.43	21.50
Canary	0.56	0.86	1.09	2.51
Yellowtail	285.54	270.02	190.29	745.85
Widow	150.65	69.97	76.56	297.18
Chilipepper	4.83	0.00	27.67	32.50
Shortbelly	0.00	0.86	2.33	3.19
TOTAL ROCKFISH	476.01	458.94	319.98	1,254.93
Mt whiting	46,840.32	67,814.63	85,756.78	200,411.73
Mt rockfish/mt whiting	0.010162399	0.006767566	0.003731274	0.00626177

2001

ROCKFISH SPECIES	MOTHERSHIP	CATCHER/PROCESSOR	SHORESIDE	TOTAL
Bocaccio	0.09	0.21		0.30
Other rockfish	20.48	57.74	5.46	83.68
POP	0.05	19.69		19.74
Thornyheads	0.02	15.19	0.02	15.23
Canary	0.95	0.65	1.39	2.99
Yellowtail	91.82	33.16	101.62	226.60
Widow	29.19	139.71	44.04	212.94
Chilipepper	3.34	0.22	1.03	4.59
Shortbelly	27.28	0.04	0.62	27.94
TOTAL ROCKFISH	173.22	266.61	154.20	594.03
Mt whiting	35,823.00	58,627.62	73,293.52	167,744.14
Mt rockfish/mt whiting	0.004835441	0.004547515	0.002103826	0.00354127

2002

ROCKFISH SPECIES	MOTHERSHIP	CATCHER/PROCESSOR	SHORESIDE	TOTAL
Bocaccio	0.15	0.04	0.00	0.19
Other rockfish	1.11	19.44	0.36	20.91
POP	2.17	1.45	0.19	3.81
Thornyheads	0.00	11.91	0.03	11.94
Canary	0.81	1.59	0.43	2.83
Yellowtail	1.42	12.86	41.38	55.66
Widow	20.50	115.10	5.32	140.92
Chilipepper	1.92	2.97	0.52	5.41
Shortbelly	0.10	0.49	0.05	0.64
Darkblotched rockfish	0.93	2.19	0.01	3.13
TOTAL ROCKFISH	29.11	168.04	48.30	245.45
Mt whiting	26,593.29	36,341.41	45,278.79	108,213.49
Mt rockfish/mt whiting	0.001094637	0.004623926	0.001066686	0.00226819

2003

ROCKFISH SPECIES	MOTHERSHIP	CATCHER/PROCESSOR	SHORESIDE	TOTAL
Bocaccio	0.00	0.06	0.00	0.06
Other rockfish	0.59	24.15	0.88	25.62
POP	0.11	5.04	0.29	5.44
Thornyheads	0.15	15.50	0.08	15.73
Canary rockfish	0.08	0.17	0.11	0.36
Yellowtail rockfish	0.57	1.75	43.92	46.24
Widow rockfish	0.69	11.56	12.54	24.79
Chilipepper rockfish	1.15	0.11	9.54	10.80
Shortbelly rockfish	0.02	0.48	0.04	0.54
Darkblotched rockfish	0.10	4.21	0.26	4.57
TOTAL ROCKFISH	3.46	63.03	67.66	134.15
Mt whiting	26,021.00	41,214.00	51,099.25	118,334.25
Mt rockfish/mt whiting	0.00013297	0.001529335	0.00132407	0.00113364

2004

ROCKFISH SPECIES	MOTHERSHIP	CATCHER/PROCESSOR	SHORESIDE	TOTAL
Bocaccio	0.09	0.07	0.01	0.17
Other rockfish	0.69	25.13	5.76	31.58
POP	0.10	0.95	0.40	1.45
Thornyheads	0.01	5.62	0.39	6.02
Canary rockfish	4.11	0.48	1.16	5.75
Yellowtail rockfish	12.16	6.33	117.63	136.12
Widow rockfish	11.43	8.37	28.26	48.06
Chilipepper rockfish	0.88	1.10	20.60	22.58
Shortbelly rockfish	0.02	0.00	0.01	0.03
Darkblotched rockfish	3.02	4.36	0.84	8.22
TOTAL ROCKFISH	32.51	52.42	175.05	259.98
Mt whiting	24,102.02	73,174.96	89,437.70	186,714.68
Mt rockfish/mt whiting	0.001348712	0.000716309	0.001957278	0.00139238

2005

ROCKFISH SPECIES	MOTHERSHIP	CATCHER/PROCESSOR	SHORESIDE	TOTAL
Bocaccio	0.16	0.11	0.03	0.30
POP	0.86	0.78	0.15	1.79
Thornyheads	0.74	6.34	0.29	7.37
Canary rockfish	0.70	0.34	2.24	3.28
Yellowtail rockfish	25.52	47.44	172.69	245.65
Widow rockfish	35.50	43.14	77.24	155.88
Chilipepper rockfish	0.89	0.26	25.85	27.00
Shortbelly rockfish	2.68	0.01	0.00	2.69
Darkblotched rockfish	5.08	5.95	5.51	16.54
Other rockfish	18.81	40.42	5.62	64.85
TOTAL ROCKFISH	90.94	144.79	289.62	525.35
Mt whiting	48,571.23	78,889.57	97,574.52	225,035.32
Mt rockfish/mt whiting	0.001872302	0.00183535	0.002968164	0.00233451

2006

ROCKFISH SPECIES	MOTHERSHIP	CATCHER/PROCESSOR	SHORESIDE	TOTAL
Bocaccio	0.10	0.01	0.01	0.11
POP	1.88	0.75	0.03	2.65
Thornyheads	0.03	0.49	0.08	0.60
Canary rockfish	0.85	0.10	1.64	2.59
Yellowtail rockfish	59.28	3.41	155.88	218.58
Widow rockfish	71.80	66.99	49.51	188.29
Chilipepper rockfish	1.29	2.54	12.65	16.48
Shortbelly rockfish	11.06	0.30	0.28	11.64
Darkblotched rockfish	4.24	6.73	2.27	13.24
Other rockfish	1.37	7.00	4.02	12.39
TOTAL ROCKFISH	151.90	88.30	226.37	466.57
Mt whiting	55,355.21	78,863.88	96,599.70	230,818.79
Mt rockfish/mt whiting	0.002744119	0.001119667	0.002343332	0.00202136