# A MAXIMIZED RETENTION AND MONITORING PROGRAM FOR THE PACIFIC WHITING SHORESIDE FISHERY

IMPLEMENTING AMENDMENT 10
TO THE PACIFIC COAST GROUNDFISH FISHERY MANAGEMENT PLAN

DRAFT ENVIRONMENTAL ASSESSMENT

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**Abstract:** This Environmental Assessment analyzes the effects of establishing a maximized retention and monitoring program in the Pacific whiting shoreside fishery off the coast of Washington, Oregon, and California. The shorebased whiting fishery has been managed under exempted fisheries permit since 1992. Exempted fishing permits are intended to be used as a short-term temporary and exploratory response to issues that potentially should be addressed by permanent regulations. Establishing maximized retention requirements and a federal monitoring program will allow NMFS to: account for Chinook salmon catch as specified in the Endangered Species Act section 7 Biological Opinion for Chinook salmon catch in the Pacific groundfish fishery; meet standardized bycatch reporting requirements specified by the Magnuson-Stevens Fishery Conservation and Management Act; collect biological data on catch that would otherwise not be available; and create the regulatory structure necessary to efficiently manage the Pacific whiting fishery without exempted fishing permits. The alternative programs considered in this Environmental Assessment provide a benefit to the fishery participants by allowing the fishery to be prosecuted efficiently and the quality of Pacific whiting to be maintained. This EA analyzes the effects that a maximized retention program with different approaches for catch monitoring has on the socioeconomic, biological, and physical environments.

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# 1.0 PURPOSE OF AND NEED FOR 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), while the nearshore areas are managed by the states and tribes. 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.

NEPA regulations require that NEPA analysis documents be combined with other agency documents to reduce duplication and paperwork (40 CFR§§1506.4). Therefore, this EA will ultimately become a combined regulatory document to be used for compliance with not only NEPA, but also E.O. 12866, RFA, 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.

- Chapter One describes the purpose and need of the proposed action.
- Chapter Two describes a reasonable range of alternative management actions that may be taken to meet the proposed need.
- Chapter Three contains a description of the socioeconomic, biological, and physical characteristics of the affected environment.
- Chapter Four examines changes in the socioeconomic, biological, and physical environments resulting from the alternative management actions.
- Chapter Five addresses consistency with the FMP and other applicable laws.
- Chapter Six is the regulatory impact review and regulatory flexibility analysis.
- Chapter Seven is a list of individuals who help prepare this document.
- Chapter Eight provides a list of references for this document.

## 1.2 Summary of the Proposed Action

The proposed action is to create the regulatory framework for a maximized retention and monitoring program for the Pacific whiting shoreside fishery. Maximized retention encourages full retention of all catch while recognizing that minor discard events that include large animals (>6ft in length) and minor levels of operational discard may occur. The program would included a monitoring mechanism for catch accounting that is adequate to maintain the integrity of the program and ensure that resource management objectives are being met.

Council consideration of this action has developed from several issues and priorities under recent Council discussion and analysis. In 1996, the Council adopted a combined amendment to the groundfish and salmon FMPs: Amendment 10 to the groundfish FMP and Amendment 12 to the salmon FMP. Under the combined amendment, the FMPs allowed for salmonids to be retained in the Pacific whiting trawl fishery (otherwise prohibited for all net gear) when the fishery was managed with a Council-approved monitoring program. As discussed in more detail below, the Pacific whiting shoreside fishery is currently managed annually under exempted fishing permits (EFPs) that provide for the required monitoring program. This action is intended to transition the Pacific whiting shoreside fishery from annual EFPs to management via long-term Federal regulations, in keeping with the goals and objectives of the FMP, and with Council and NMFS objectives as requirements of the ESA and the Magnuson-Stevens Act.

NMFS is considering a related action under an EA titled "Catch Accounting Requirements for Pacific Whiting Shoreside Processors/First Receivers Participating in the Shore-Based Fishery" This related action considers the required submission of electronic fish tickets within 24 hours of landing, the sorting of catch at the time of offload and prior to transporting catch from the port of landing, and the use of scales with appropriate accuracy ranges for the amount of fish being weighed. Proposed federal regulations for the related action mirror or enhance existing state regulations and associated paper-based fish ticket systems or put into federal regulation provisions associated with 2007 EFP management. The related action is expected to provide more timely reporting and improved estimates of the catch of Pacific whiting, ESA listed salmon species, and overfished groundfish species. If approved, the related action would be implemented in 2007.

This EA addresses all components of a monitoring program for the Pacific whiting shoreside fishery while the related EA considers only a small portion of a monitoring program that occurs at the processing facilities. The alternatives considered in the related EA are not repeated in this EA. However, if the Council requests additional catch accounting requirements for processor/first receiver that were not analyzed under the related EA, these new requirements will be analyzed under this EA before it is finalized.

## 1.3 Purpose and Need for the Proposed Action

The purpose of the proposed action is to create the regulatory structure necessary to efficiently prosecute and manage the Pacific whiting shoreside fishery without an EFP while providing accurate catch data such that the ESA and Magnuson-Stevens Act requirements are adequately met. The Pacific whiting shoreside fishery needs to have a catch monitoring system in place to adequately track the incidental take of Chinook salmon as required in the ESA Section 7 Biological Opinion for Chinook salmon catch in the Pacific whiting fishery; to meet the standardized reporting methodology defined by the Magnuson-Stevens Act; and to track the catch of target and overfished groundfish species such that the fishing industry is not unnecessarily constrained and that optimum yields (OYs), harvest guidelines, sector allocations and bycatch limits are not exceeded.

**The purpose of the proposed action is to**:

- ➢ Establish a regulatory standardized reporting methodology for the collection and verification of accurate and timely catch data for the Pacific whiting shoreside fishery
- ➢ Establish a regulatory monitoring mechanism that is adequate to maintain the integrity of the maximized retention program.
- ➢ Establish a regulatory program that minimizes discarding of catch to the extent practicable.
- ➢ Establish a regulatory program that benefits shore-based Pacific whiting sector participants by allowing the fishery to be prosecuted efficiently.

## 1.4 Management of the Pacific Whiting Shoreside Fishery

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 limits structure.

To allow the Pacific whiting industry to have the opportunity to harvest the full Pacific whiting OY, the non-tribal commercial fishery is managed with bycatch limits for certain overfished species. To date, bycatch limits have been established for darkblotched, canary and widow rockfish. With bycatch limits, the industry has the opportunity to harvest a larger amount of Pacific whiting, if they can do so while keeping the total catch of specific overfished species within adopted bycatch limits. Regulations provide for the automatic closure of the commercial (non-tribal) portion of the Pacific whiting fishery, upon attainment of a bycatch limit. This is different from the bottom trawl fishery where harvest availability of target species is often constrained by the projected catch of overfished species.

In 1991, the first year that the Pacific whiting fishery was fully a domestic fishery (i.e. all available harvest was fully utilized by domestic fishing entities,) vessels in the at-sea processing sector began to voluntarily carry observers to provide much needed catch data. In 1992, when significant landings were expected to be harvested by the Pacific whiting shoreside fishery, an observer program was established through the use of EFPs. 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 since 1992, 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. The vessels fishing under the EFPs are required to deliver catch to designated processors. Each designated processor has a written agreement with the state where they are located that specifies the term of participation. The designated processor agreements require processors to follow more rigorous catch accounting and reporting requirements than those required by existing state law.

Because vessels fishing under the Pacific whiting EFPs are allowed to land unsorted catch, landings tend to included species in excess of the trip limits, non-groundfish species, protected species, and prohibited species such as salmon that would otherwise be illegal to have on board the vessel. Vessels fishing for Pacific whiting without EFPs must discard as soon as practicable all prohibited species (including salmon and halibut), protected species, non-groundfish species, and groundfish species in excess of cumulative limits.

Unlike the at-sea sectors (catcher/processor and mothership sectors) of the Pacific whiting fishery, where catch is sorted and processed shortly after it has been taken, vessels in the shoreside fishery must hold primary season Pacific whiting on the vessel for several hours or days until it can be offloaded at a shoreside processor. Pacific whiting deteriorates rapidly, so it must be handled quickly and immediately chilled to maintain product quality. This is particularly true if the Pacific whiting is to be used to make surimi (a fish paste product). The quality or grade of surimi is highly dependent on the freshness of the Pacific whiting, which demands careful handling and immediate cooling or processing for the fishery to be economically feasible. Because rapid cooling can retard flesh deterioration, most vessels prefer to dump their unsorted catch directly below deck into the refrigerated salt water tanks. However, dumping the unsorted catch into the refrigerated salt water tanks precludes the immediate sorting or sampling of the catch. Fishers generally prefer to quickly and efficiently handle the catch so they can return to port for offloading.

***50 CFR 660.370 (Groundfish) Specifications and management measures*** * * *

(e) *Prohibited species*. Groundfish species or species groups under the PCG FMP for which quotas have been achieved and/or the fishery closed are prohibited species. In addition, the following are prohibited species:

(1) Any species of salmonid.
(2) Pacific halibut.
(3) Dungeness crab caught seaward of Washington or Oregon.

The Shoreside Whiting Observation Program (SHOP), is a coordinated monitoring effort by the States of Oregon, Washington, and California. The SHOP was initially established in 1992 to provide oversight to the EFP activities including: coordination of

observer sampling, collection of other necessary catch data, and transmission of summarized catch data to NMFS. Although the program's structure and priorities have changed over the years and observers are no longer used, the SHOP has maintained the primary responsibility of monitoring EFP activities and for providing catch data collected at the processing facilities to NMFS for management of the fishery.

Management of the salmon and groundfish fisheries has also changed substantially since the early 1990's. Since 1992, new salmon evolutionarily significant units (ESUs) have been listed under the ESA, and several groundfish species that are incidentally taken in the Pacific whiting fishery have been declared overfished. These changes have affected management of the Pacific whiting fishery and are summarized below.

### *1.4.1 ESA Opinions and Thresholds for the Pacific Whiting Fishery*

NMFS has issued Biological Opinions under the ESA pertaining to the effects of the Pacific Coast groundfish FMP fisheries on Chinook salmon on August 10, 1990, November 26, 1991, August 28, 1992, September 27, 1993, May 14, 1996, and December 15, 1999. The August 1992, Biological Opinion included an analysis of the effects of the Pacific whiting fishery on listed Chinook salmon. The Biological Opinions have concluded that Chinook is the salmon species most likely to be affected, while other salmon species are rarely encountered in the Pacific whiting and other groundfish fisheries. The analysis determined that there was a spatial/temporal overlap between the Pacific whiting fishery and the distribution of ESA listed Chinook salmon such that it could result in incidental take of listed salmon. The 1992 Biological Opinion included an incidental take statement that authorized the incidental take of 0.05 salmon per metric ton of Pacific whiting. The Biological Opinion identified the need for continued monitoring of the fishery to evaluate impacts on salmon, and specifically emphasized the need to monitor the emerging shoreside fishery because fishing patterns and bycatch rates were likely to differ from those observed on the at-sea processors.

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.

### *1.4.2 Amendment 10 and Subsequent FMP Developments*

In 1996, to address the treatment and disposition of salmon in the Pacific whiting shoreside fishery, an EA was prepared to analyze amendments to both the groundfish FMP (FMP Amendment 10) and salmon FMP (FMP Amendment 12). The 1996 EA analyzed two management alternatives regarding the retention of salmon taken with groundfish trawl gear. The first alternative was to maintain the then current salmon and groundfish FMPs, under which retention of salmon in the groundfish trawl fisheries would not have been permitted and the practice of retaining salmon in the Pacific whiting shoreside fishery was only authorized under an EFP. The second and preferred alternative was to maintain salmon as a prohibited species in the groundfish FMP and add trawl gear to the list of gears that may retain salmon if allowed under other pertinent regulations such as salmon fishing regulations at 50 CFR Part 660, Subpart H. The preferred alterative also included a provision for the salmon FMP to be amended to allow retention of salmonids in the trawl fishery when a Council-approved monitoring program, one that meets certain minimum guidelines (see section 3.3.2), was established in the Pacific whiting shoreside fishery (PFMC 1996). At their October 21-25, 1996, meeting the Council recommended the preferred alternative, including the temporary use of EFPs to monitor the incidental take of salmon until a permanent monitoring program could be implemented. Both the salmon and groundfish FMPs were amended to include the provisions of the preferred alternative; however, implementing regulations for the Pacific whiting shoreside fishery were never adopted.

In 1996, the Sustainable Fisheries Act (SFA) amended the Magnuson Fishery Conservation and Management Act (renamed the Magnuson-Stevens Fishery Conservation and Management Act). The SFA required that FMPs establish a standardized reporting methodology to assess the amounts and types of bycatch in a fishery, and required that FMPs identify and rebuild overfished stocks. The FMP was revised to include, an overfished species threshold of $B_{25\%}$ (25 percent of estimated unfished biomass level). Groundfish stocks with depletion levels that fall below $B_{25\%}$ are to be considered overfished. At this time, seven stocks continue to managed via overfished species rebuilding plans: bocaccio, canary rockfish, cowcod, darkblotched rockfish, POP, widow rockfish, and yelloweye rockfish.

Amendment 16-1 set a framework for overfished species rebuilding parameters and requirements into the FMP, and set an initial requirement that NMFS implement an observer program in the groundfish fishery through a Council-approved Federal regulatory framework. Amendments 16-2 and 16-3 revised the FMP to include rebuilding plans for the seven overfished species identified above, plus lingcod. Lingcod was most recently assessed in 2005 and declared rebuilt at that time, the coastwide stock having exceeded the FMP's rebuilding goal of a stock size of at least 40 percent of estimated unfished biomass level. Amendment 16-4, approved December

2006, revised the rebuilding parameters for the seven species currently managed via rebuilding plans.

Amendment 18 to the FMP, approved September 2006, revised the FMP to include the Council's bycatch minimization policies, programs, and requirements. Among other requirements, the FMP, as revised by Amendment 18, now includes a detailed discussion of the groundfish fishery's standardized total catch reporting and compliance monitoring program (Section 6.4). At the same time that the Council was developing Amendment 18, it was also taking a look back at Amendment 10 to determine how to move the Pacific whiting shoreside fishery out of EFP management. Amendment 18 includes provisions that facilitate that move to a long-term Federal regulatory structure: parameters for electronic monitoring programs in Section 6.4.1.1, and parameters for full retention programs in 6.5.3.1.

### 1.5 Environmental Review Process and Public Scoping

The purpose of the environmental review process is to determine the range of issues that the NEPA document (in this case the EA) needs to address. The environmental review process is intended to ensure that problems are identified early and properly reviewed; issues of little significance do not consume time and effort; and that the draft NEPA document is thorough and balanced. The environmental review process should: identify the public and agency concerns; clearly define the environmental issues and alternatives to be examined in the NEPA document; eliminate non-significant issues; identify related issues; and identify state and local agency requirements that must be addressed. The following public review and scoping presented in this document is in reference to the development of a regulatory amendment for a full retention and monitoring program in the Pacific whiting shoreside fishery.

An EA was prepared in 1996 to analyze amending both the groundfish FMP (FMP Amendment 10) and salmon FMP (FMP Amendment 12) to address the treatment and disposition of salmon in the Pacific whiting shoreside fishery these amendments were approved in 1996, but have not had implemented through regulation. This EA considers an action to revise Federal groundfish regulations to move the Pacific whiting shoreside fishery out of EFP management, in support of FMP provisions from Amendment 10 and the subsequent FMP amendments described above.

In April 2003, NMFS Northwest Region staff met with the Northwest Fisheries Science Center (NWFSC) and West Coast groundfish Observer Program (WCGOP) staff to begin discussion on the development of a monitoring program to support a full retention management structure in the Pacific whiting shoreside fishery. This was followed in May 2003, by a meeting with the staff from Washington Department of Fish and Wildlife (WDFW), Oregon Department of Fish and Wildlife (ODFW), and California Department of Fish and Game (CDFG) to further discuss the development of Federal regulations for a full retention and monitoring program.

In September 2003, NMFS brought a preliminary EA before the Council that contained a range of alternatives for the Council to consider. The Council recommend that the range of alternatives be further developed prior to public review, therefore NMFS held a public scoping meeting on December 8, 2003, in Newport, Oregon to further engage Federal and State

personnel and to involve industry in the development of the alternatives. NMFS Northwest Region staff met with staff from WDWF, ODFW, and CDFG as well as with individuals from Archipelago Marine Research Ltd.[1] (Archipelago) and the Pacific whiting shoreside industry to discuss full retention and monitoring.

At its June 2004, meeting in Foster City, California the Council reviewed the initial EA and adopted a revised range of alternatives for public review. Following this meeting, the alternatives were revised and a draft EA was sent out for public review in August 2004. The Council was scheduled to select a preferred alternative at their October 31 - November 5, 2004, meeting in Portland, Oregon, however the selection of a preferred alternative was delayed.

In November 2004, NMFS Northwest Region staff meet with representatives from NMFS Office for Law Enforcement (OLE), WCGOP, WDFW, ODFW, and CDFG to discuss the 2005 Pacific whiting shoreside fishery, the application of EMS technology, and the development of full retention requirements. In 2005, the fishery was managed under EFPs.

In November 2005, NMFS Northwest Region staff meet with representatives from NMFS OLE, the WCGOP, ODFW, and CDFG to discuss the 2006 fishery, available resources for monitoring, sampling at shoreside processing facilities, and the use of an EFP for the 2006 fishery. In 2006, the fishery was managed under EFPs.

In addition to the meetings described above, prior to the start of the 2004, 2005 and 2006 Pacific whiting seasons, NMFS and Archipelago staff have attended the ODFW-sponsored meetings for EFP participants. The outcome of data collection to evaluate EMS and monitoring as well as the range of alternative management actions have been discussed at these meetings. Fruitful discussions at these meetings helped shape the range of alternatives presented and analyzed in this EA.

In May 2006, NMFS Northwest Region staff met with representatives from WCGOP, WDFW, ODFW, and CDFG to further discuss the development of a Federal program to replace the need for annual EFPs. In July 2006, NMFS Northwest Region staff meet with technical staff from, WCGOP, WDFW, ODFW, and CDFG to discuss technical issues associated with implementing a monitoring program in the Pacific whiting shoreside fishery. The purpose of the monitoring program was reaffirmed during the meeting. Discussions focused on the data reporting needs and the current reporting structures in each states; the need to reduce under reporting and delayed fish ticket submissions; the different state approaches to sampling catch at shoreside processing facilities; and the use of bycatch limits to reduce impacts on overfished species. In August 2006, NMFS Northwest Region staff and representatives from WCGOP, WDFW, ODFW, and CDFG discussed the outcome of the technical meeting and held further discussions on the implementation of a Pacific whiting shoreside fishery monitoring program.

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[1]Archipelago Marine Research Ltd is a world leader in the field of fisheries monitoring and marine environmental assessment. Based in Victoria, British Columbia, Archipelago has been providing marine biological services since 1978.

At the Council's September 2006, meeting in Foster City, California, NMFS presented a summary of the discussions it had held with the states, and suggested a process and schedule for implementing Federal regulations for a maximized retention and monitoring program for the Pacific whiting shoreside fishery. The Council received public comment on the issue before providing guidance to NMFS on the range of alternatives for consideration in the EA. At this same meeting, the Council recommended that NMFS host a listening session to allow the states and fishery participants to further present NMFS staff with information concerns on the Pacific whiting shoreside monitoring program development. The listening session was held on September 29, 2006, and participants included NMFS staff, WCGOP, ODFW, CDFG, and industry stakeholders.

At the Council's November 2006 meeting, NMFS presented a draft of Chapters One and Two of this EA, which identified a range of alternative actions. After consideration, the Council recommended that the range of alternatives presented by NMFS be analyzed . In addition, the Council recommended that a Shoreside Whiting Amendment Workgroup (SWAG) be formed to develop an additional alternative which was to be a hybrid of the Alternatives 3 and 4. On January 2, 2007 the SWAG meet to define the hybrid Alternative. The hybrid Alternative (Alternative 5) has been included in this analysis.

### *1.5.1 Issues and Concerns Raised Through Scoping*

While the initial purpose of the proposed action was to develop and implement a monitoring program for the treatment and disposition of incidentally taken salmon in the shore-based Pacific whiting fishery, the importance of establishing full retention and monitoring options to reduce bycatch and track multiple aspects of the shore-based Pacific whiting fishery became apparent through the scoping process. Below is a summary of issues that stakeholders asked NMFS to take into consideration when preparing the EA and regulatory amendment:

Full/Maximized retention:

- The need to consider the merits of a full retention program
- The need to define full retention
- Need for an allowance to sort catch at sea
- The need to discontinue annual EFPs
- The importance of having industry support for a monitoring program
- The need to verify catch shoreside

Monitoring:

- The need to have clearly defined objectives for the monitoring program
- The need for the monitoring program to be built on the existing EFP infrastructure
- The need for consistency across states
- Resources available to implement a monitoring program differ by state
- The need for appropriate monitoring levels
- Allowing discard at sea would require observers to be aboard the vessels
- Using Federal observers on catcher vessels is an inefficient use of resources

- The logistics of port sampling is difficult/unusual for NMFS's WCGOP
- Implementation of a monitoring program must be appropriate for IFQs
- Having Pacific States Marine Fish Commission (PSMFC) administer a NOAA directed observation program
- How the need for industry samplers changes
- If weighmasters are appropriate

EMS:

- Letting vessel owner/operators have access to their EMS images
- Insurance and liability concerns for industry with video cameras
- The need to protect vessel owner/operators
- The need to address data confidentiality and privacy rights
- The adequacy of EMS testing for supporting a rulemaking
- The need to have more than one company providing EMS services
- The failure rate of EMS
- The time it takes to do analysis

Overages:

- The need to ensure that overages are handled appropriately
- The need for port-specific market values of overage fish

Recordkeeping and Reporting:

- The ability to track bycatch with an audit process
- The ability to audit logbooks for discard
- The need for almost realtime data to monitor bycatch limits
- The applicability of current paper logbooks for this fishery
- The need to have a way to correct fish tickets
- If program includes electronic fish ticket, there is a need to meet the requirements of all three states
- Processors need to have a specific person responsible for bycatch accounting

Costs:

- The funding source
- The need for improved cost estimates
- The cost to the fishery of full retention monitoring program
- The costs relative to the economic importance of the fishery to each state
- The inclusion of Federal, State, and/or Industry funding options
- The shore-based Pacific whiting fleet's ability to fund a monitoring program

Other:

- The use of Pacific whiting shoreside fishery hard bycatch caps
- The use of individual vessel bycatch caps
- The possible use of a "penalty box" system
- The importance of the States and industry to be involved in the process
- The need to accommodate the early California fishery
- The use of permit endorsements

## 1.6 Decision to be Made

From the information in this EA, NMFS must decide whether or not to establish a maximized retention and monitoring program for the Pacific whiting shoreside fishery. It must also be determined if the proposed action and/or preferred alternative would or would not be a major Federal action, significantly affecting the quality of the human environment. If NMFS determines that the proposed action would not significantly affect the quality of the human environment, then a Finding of No Significant Impact (FONSI) may be prepared. If the NMFS determines that the action would significantly affect the Pacific Coast groundfish fishery, then preparation of an Environmental Impact Statement will be required prior to making the decision on wether and how to establish the program.

## 1.7 Applicable Federal Permits, Licences, or Authorizations Needed in Conjunction with Implementing this Proposal

A Pacific Coast groundfish limited entry permit with a shoreside Pacific whiting endorsement is being considered as part of Alternatives 3, 4 and 5. Such an endorsement would be available to vessels with trawl-endorsed limited entry permits. The primary purpose of the endorsement is to support fishery monitoring logistics; the endorsement would be an annual declaration by a vessel owner/operator of an intent to fish in the primary Pacific whiting shoreside fishery, such a declaration allows the pool of vessels requiring monitoring to be known to managers in advance of the season.

Requiring processor permits is not currently included within the alternative actions. However, processor permits may be considered in a future, but related action.

## 2.0 ALTERNATIVES

### 2.1 Introduction

This chapter describes the alternative management actions that could be taken to eliminate the need to issue EFPs for management and monitoring the Pacific whiting shoreside fishery. The primary issues taken into consideration when developing the alternatives were:

- The management approach for the fishery,
- Federal permits and endorsements,
- Recordkeeping and reporting,
- Methods of monitoring catcher vessels at sea, including the funding mechanisms,
- Methods for monitoring catch at the shoreside processors, including the funding mechanisms, and,
- The disposition of overage fish and prohibited species.

Five different approaches to managing and monitoring the Pacific whiting shoreside fishery are defined and analyzed in this EA. The following alternatives, which are fully explained later in this section, include:

- Alternative 1: (No Action) - Require all vessels participating in the Pacific whiting shoreside fishery to sort their catch at sea. Vessels would continue to be included in the pool of vessels that are sampled by the existing WCGOP.

- Alternative 2: (Status Quo) - Continue to use EFPs and manage the fishery as a maximized retention fishery. Vessels would pay for EMS coverage and NMFS would continue to pay for or conduct EMS monitoring and analysis. The states would continue to manage the Pacific whiting shoreside vessels under EFPs.

- Alternative 3: (Groundfish Observers) - Adopt Federal regulations for a maximized retention program with Federal or industry funded observers. Observers would monitor catch retention at sea and collect catch data at the processing facility for fish ticket verification.

- Alternative 4: (Electronic Monitoring System) - Adopt Federal regulations for a maximized retention program with Federal or industry funded EMS and catch monitors. EMS would be used to monitor full retention at sea and catch monitors would collect catch data at the processing facility for fish ticket verification.

- Alternative 5: (Hybrid) - Adopt Federal regulations for a maximized retention program with industry-funded EMS and if needed, Federal observers for monitoring catch retention at sea. Industry funded data compliance monitors would collect catch data for fish ticket verification and to assure data quality. Industry funded plant monitors would collect biological data and transport

donation fish to a food bank storage location.

The No Action Alternative (Alternative 1) defines the default management structure that would occur if EFPs were discontinued and no other program were implemented for the Pacific whiting shoreside fishery. Alternative 2 defines the Status Quo management structure, which has been in place since 1992 under annual EFPs. Alternatives 3, 4 and 5 define different approaches for establishing maximized retention programs with monitor and reporting requirements. The purpose of the programs specified under Alternatives 3, 4, and 5 is to minimize the discarding of catch, while allowing for the collection of accurate total catch data. Alternatives 3, 4 and 5 offer suboptions for funding provisions and handling of overage fish (identified as 3A, 3B, 4A, 4B, 5A and 5B). Alternative 5 is the hybrid alternative, which blend parts of Alternatives 3 and 4. Table 2.1 is a summary of the five alternatives which are described in detail in sections 2.2.1 to 2.2.5.

**Table 2.1. Summary of Monitoring Program Alternatives for the Pacific Whiting shoreside Fishery.**

| Issues | Alternative 1 (No Action) Trip Limit Regime | Alternative 2 (Status Quo) Maximized Retention with annual EFPs | Alternative 3 (Groundfish Observers) Maximized Retention with Observers | Alternative 4 -NMFS Preferred (EMS and Catch monitors) Maximized Retention with EMS and Catch Monitors | Alternative 5 (Hybrid) |
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| **Management structure** | • Trip limits for species other than whiting<br>• Catch sorted at sea; prohibited species and groundfish must be discarded at sea.<br>• Whiting OY likely to be constrained by projected bycatch of overfished species | • Issue annual EFPs<br>• Maximized retention<br>• Whiting OY may be fully available with fleetwide bycatch limits for overfished species<br>• In cooperation with NMFS, states coordinate and oversee monitoring program | • Implement Federal regulations<br>• Maximized retention<br>• Whiting OY may be fully available with fleetwide bycatch limits for overfished species<br>• With high coverage level, may be adequate to support sector bycatch limits.<br>• NMFS coordinates and oversees monitoring program | • Same As Alternative 3<br>• NMFS coordinates and oversees monitoring program | • Same As Alternative 3<br>• NMFS coordinates and oversees monitoring program |
| **Federal permits and endorsements** | • Vessels required to have limited entry permit with trawl endorsement | • Vessels required to have limited entry permit with trawl endorsement<br>• Voluntary EFP permit issued annually | • Vessels required to have limited entry permit with trawl endorsement<br>• Annual whiting endorsement to identify intent to fish | • Same As Alternative 3 | • Same As Alternative 3<br>• Whiting endorsement includes vessel requirements (e.g. 100% EMS, carry at-sea observer if needed, report high bycatch areas, mandatory pre-season meeting**)** |
| **Recordkeeping and reporting** | • Paper trawl logs<br>• Paper fish tickets<br>• No Federal reporting requirements | • Paper trawl logs - with discard events noted<br>• Paper fish tickets<br>• Begin field testing of electronic logbooks and fish tickets in 2007 | • When fully developed, (as early as 2008) require electronic logbooks<br>• Processors - Daily electronic fish ticket submission requirements. Required in 2007 under related action, may be revised as needed by this action | • Same As Alternative 3 | • When fully developed, (as early as 2008) require electronic logbooks and electronic fish tickets<br>• Processors - Daily whiting and bycatch reporting requirements (to NMFS) for catch limit monitoring c/ |

| Issues | Alternative 1 (No Action) Trip Limit Regime | Alternative 2 (Status Quo) Maximized Retention with annual EFPs | Alternative 3 (Groundfish Observers) Maximized Retention with Observers | | Alternative 4 -NMFS Preferred (EMS and Catch monitors) Maximized Retention with EMS and Catch Monitors | | Alternative 5 (Hybrid) |
|---|---|---|---|---|---|---|---|
| **Monitoring shore-based catcher vessels at-sea** | • WCGOP observers quantify discards at sea; vessel selected at random from pool of all trawl vessels | • EMS on vessels to monitor maximized retention<br>• NMFS issues EFPs<br>• States manage fishery under EFP<br>• NMFS coordinates EMS monitoring<br>• Retain current authority to place WCGOP observers | • Observers monitor maximized retention at sea and quantify discard events | | • EMS used to monitor maximized retention at sea**.** Full coverage of all trips<br>• Retain current authority to place WCGOP observers | | • EMS used to monitor maximized retention at sea. Full coverage of all trips<br>• WCGOP observers deployed by NMFS to quantify discard events, if needed.<br>• NMFS funds EMS analysis<br>• Vessels procure EMS service from permitted provider |
| | | | **3A Federally funded** | **3B Industry funded** | **4A Federally funded** | **4B Industry funded NMFS Preferred** | |
| | | | • WCGOP selects vessels at random from pool of all trawl vessels<br>• NMFS deploys observers | • Direct pay by industry a/<br>• NMFS funds infrastructure<br>• Vessels procure observers from permitted provider | • Vessels selected from pool of all trawl vessels<br>• NMFS coordinates EMS<br>• NMFS funds EMS analysis | • Direct pay by industry a/<br>• NMFS funds EMS analysis<br>• Vessels procure EMS service from permitted provider | |
| **Monitoring shoreside processors** | • OR - Port samplers collect fish tickets, prepare landing and prohibited species summaries. Industry samplers collect species composition samples and biological data<br>• WA & CA – Port samplers collect fish tickets, species composition samples and biological data | • OR - Port samplers collect fish tickets, prepare landing and prohibited species summaries. Industry samplers collect species composition samples and biological data<br>• WA & CA – Port samplers collect fish tickets, species composition samples and biological data<br>• States collects and summarize fish ticket data inseason | • Observers sample deliveries at processing facility to collect data for fish ticket verification; salmon counts; and biological data<br>• State port sampler effort may be used elsewhere | | • Monitors observe weighing and collect data for fish ticket verification<br>• State port samplers continue to collect biological data<br>• Plant samplers (processor employees) continue to collect age structure data in OR | | • Data compliance monitors collect data for fish ticket verification. Direct pay by industry a/<br>• Plant monitors (processor employees) collect biological data and transport donation catch.<br>• NMFS responsible for overseeing training<br>• Offloads monitored at a level that assures accurate accounting of Chinook salmon and overfished rockfish<br>• Use current industry funding as starting point for number of data compliance monitors that could be hired. |
| | | | **3A Federally funded** | **3B Industry funded** | **4A Federally funded** | **4B Industry funded NMFS Preferred** | |
| | | | • WCGOP observers b/<br>• NMFS deploys observers | • Direct pay by industry a/ | • WCGOP observers b/ | • Direct pay by industry a/ | |

| Issues | Alternative 1 (No Action) Trip Limit Regime | Alternative 2 (Status Quo) Maximized Retention with annual EFPs | Alternative 3 (Groundfish Observers) Maximized Retention with Observers | | Alternative 4 - NMFS Preferred (EMS and Catch monitors) Maximized Retention with EMS and Catch Monitors | | Alternative 5 (Hybrid) | |
|---|---|---|---|---|---|---|---|---|
| **Disposition of Overage Fish** | • No overages landed | • Overages reported on fish tickets or overage tickets<br>• Vessel abandons overage and value remitted to state upon landing<br>• Prohibited species donated<br>• State enforcement tracks compliance | • Overages reported on fish tickets and sales abandoned or donated to charity | | • Same As Alternative 3 | | • Same As Alternative 3 | |
| | | | **3A State system (Status Quo)** | **3B Federal system** | **4A State system (Status Quo)** | **4B Federal system** | **5A State system (Status Quo)** | **5B Federal system** |
| | | | • Overage fish abandoned to state<br>• Prohibited species donated<br>• State enforcement tracks compliance | • Profit from sale of overage fish illegal<br>• Donation program | • Same As Alternative 3 | • Same As Alternative 3 | • Same As Alternative 3 | • Same As Alternative 3 |

a/ The legal and policy issues for new direct pay observer programs, where industry members pay directly for observer services, have not yet been fully explored.
b/ Vessel and processor observers may or may not be the same individual and would depend on the chosen sample design.
c/ Processors allowed to correct daily reports, however, a penalty will be developed for non-compliance.

## 2.2 Alternatives

### *2.2.1 Alternative 1 (No Action): Trip Limit Regime*

Management Structure: Under this alternative the management of the Pacific whiting shorebased fishery would revert to a trip limit regime. All catch would be required to be sorted at sea. Vessels using midwater trawl gear in the Pacific whiting shoreside fishery would be subject to prohibitions specified at 50 CFR 660.306 (a)(2) and (6), and 50 CFR 660.405 (a)(1), which prohibit the retention of prohibited species as defined at §§ 660.302 and 660.370 (e), and prohibit the retention of groundfish in excess of cumulative trip limits.

Federal Permits and Endorsements: A Pacific Coast groundfish limited entry permit with a trawl endorsement would be required to participate in the fishery.

Recordkeeping and Reporting: No Federal reports are required of fishers or processors under the No Action Alternative. Federal regulations at 50 CFR 660.303 would continue to require vessels to make and/or file, retain, or make available any and all reports (i.e., logbooks, fish tickets, etc.) of groundfish harvests and landings as required by the applicable state law.

Monitoring Shore-based Catcher Vessels At Sea: Under the No Action Alternative, the WCGOP would be responsible for providing at-sea observer coverage for Pacific whiting shoreside vessels as specified at 50 CRF 660.314 (c)(2). When notified by NMFS of any requirement to carry an observer, the regulations at 50 CFR 660.303 (i)(5) prohibit a vessel from taking and retaining, possessing, or landing any groundfish without a WCGOP observer.

The sampling priorities for WCGOP observers deployed to trawl vessels are to collect data that are used for total catch estimates of each groundfish species or species group over the entire fishing year, and to collect fishery dependent biological data that are otherwise not available on shore. The WCGOP sets coverage priorities for different fisheries and fleets that comprise the groundfish fishery. Observers are deployed on vessels in the active sampling unit or pool of vessels selected for coverage. Vessels in the pool are generally selected at random. However, in the case of the open access fishery observers may be deployed on vessels of opportunity[2]. The proportion of a particular fishery or fleet that receives observer coverage is based on the WCGOP coverage plan.

Although the WCGOP strives for a 20 percent coverage level of vessels in the bottom trawl fisheries, it is likely the Pacific whiting shoreside fishery would be given a lower coverage priority when considering: 1) the data needs of the Pacific whiting fishery relative to the total catch data needs for the entire groundfish fishery, 2) the limited number of observers available to be deployed, 3) current data available from other sectors of the Pacific whiting fishery, and 4) the availability of historical data that can be factored in to catch estimates.

Monitoring Shoreside Processors: Under the No Action Alternative, each state would continue to hire, train, and pay for port biologists to: collect fish ticket data; complete landing summaries; and, to collect biological data. Additional port samplers may also be funded by the PSMFC. In the state of Oregon, industry samplers may continue to be used to collect biological data from whiting and other groundfish that are landed on Pacific whiting trips.

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[2]A vessel of opportunity is a vessel that was not prescheduled for coverage; rather, it is a vessel that was contacted prior to leaving on a fishing trip and was willing and able to carry an observer for that trip.

Disposition of Overage Fish: Under this alternative there are no allowances for landing legal overages. Therefore, all overage fish would need to be discarded at sea.

*2.2.2 Alternative 2 (Status Quo): Maximized Retention under Annual Exempted Fishing Permits*

Management Structure: Under the Status Quo Alternative, the fishery would continue to operate under annual EFPs. Each year, the three states would submit an EFP request to NMFS and NMFS would issue EFPs. The three states would continue to coordinate certain EFP activities including: identification of interested vessels; hosting mandatory meetings; preparing designated shoreside Pacific whiting processor agreements; coordination of inseason data collection and transmission to NMFS; and, preparation of year end summaries.

Under this alternative, a maximized retention program would be defined within the terms and conditions of the EFPs. Vessels targeting Pacific whiting with midwater trawl gear during the primary season for the shore-based sector would be allowed to land unsorted catch that may include species that are prohibited by regulations at 50 CFR 660.306 (a)(2) and (6), and 50 CFR 660.405 (a)(1). Maximized retention encourages full retention of all catch while recognizing that minor discard events that include large animals (>6ft in length) and minor levels of operational discard may occur.

Federal Permits and Endorsements: A Pacific Coast groundfish limited entry permit with a trawl endorsement would be required to participate in the fishery. In addition, each participating vessel would need to apply for and be issued an EFP.

Recordkeeping and Reporting: Under the No Action alternative, Federal regulations at 50 CFR 660.303 would continue to require vessels to make and/or file, retain, or make available any and all reports (i.e., logbooks, fish tickets, etc.) of groundfish harvests and landings as required by the applicable state law. Recordkeeping and reporting requirements needed to support the maximized retention program would be specified within the terms and conditions of the EFP.

Field testing of electronic logbooks could be conducted under the EFP. When requested by the states, NMFS or PSMFC, selected vessels would be required to use electronic logbooks. As the system became more fully developed, the terms and conditions of the EFPs could require all vessels to carry and use electronic logbooks.

Under the terms and conditions of the EFP, vessels may only land catch at processing facilities that are listed as a designated processor. Each state would continue to hold designated processor agreements with the Pacific whiting shoreside processing facilities. Specific requirements for how deliveries of Pacific whiting must be sorted and reported, and how overage fish and prohibited species are to be handled would continue to be specified in the designated processor agreements and state regulations. In the absence of a rulemaking that puts recordkeeping and reporting requirements for Pacific whiting shoreside processing facilities into regulation for 2007, field testing of electronic fish tickets would be on a voluntary basis.

Monitoring Shore-based Catcher Vessels At Sea: Under the Status Quo Alternative, observer and other monitoring requirements would continue to be specified in the terms and conditions of the EFPs.

Vessels could be required to carry a state-sponsored sampler or a WCGOP observer when requested to collect data at-sea. The terms and conditions of the EFPs specify that observer regulations at 50 CFR 660.306 and 50 CFR 660.314 regarding vessel responsibilities and prohibitions, would apply to both state samplers and WCGOP observers. Observer coverage requirements at 50 CFR 660.360 and 50 CFR 660.314 are independent of the EFP, meaning

when notified by NMFS of any requirement to carry an observer under regulations specified at 50 CRF 660.314 (c)(2), a vessel is prohibited from taking and retaining, possessing, or landing any groundfish without a WCGOP observer (50 CFR 660.303 (i)(5)). However, given the full retention management approach for the fishery, the Pacific whiting shoreside fishery would likely be a low priority for WCGOP observer coverage.

Requirements for vessels to have EMS would continue to be specified in the terms and conditions of the EFP and NMFS would continue to maintain a service contract with a qualified EMS provider. Vessel responsibilities specified in the EFP would continue to include: requirements to have EMS coverage to conduct EFP fishing; requirement for EMS installations; prohibition from intentionally damaging EMS equipment; responsibility for scheduling EMS equipment maintenance and data retrieval; need to conduct regular system checks; and, responsibility for scheduling EMS removal. Violations of the terms and conditions of an EFP would continue to be a violation of Federal regulations at 50 CFR 660.306 (a) (4).

Monitoring Shoreside Processors: Under the Status Quo Alternative, the State would continue to hire, train, and pay for port biologists to collect fish ticket data; complete landing summaries, and collect biological data; and verify salmon counts. Additional port samplers may also be funded by the PSMFC. In the state of Oregon, industry samplers would continue to be used to take species composition data, and to collect biological data from groundfish.

Disposition of Overage Fish: Under the Status Quo Alternative, unless otherwise specified, the terms and conditions of the EFP would continue to require vessels to abandon overage fish and prohibited species to the state of landing. Each state would be responsible for the distribution, tracking, and sales of the overage fish. How overages are handled would likely vary between states.

### *2.2.3 Alternative 3 (Groundfish Observers): a Maximized Retention Program with Observer Monitoring*

Management Structure: Under Alternative 3, a maximized retention program would be specified in Federal regulation. The groundfish regulations would be revised to allow vessels targeting Pacific whiting with midwater trawl gear during the primary season for the shore-based sector to land unsorted catch that may include species that are currently prohibited by regulations at 50 CFR 660.306 (a)(2) and (6), and 50 CFR 660.405 (a)(1). Maximized retention encourages full retention of all catch while recognizing that minor discard events that include large animals (>6ft in length) and minor levels of operational discard may occur.

Federal Permits and Endorsements: A Pacific Coast groundfish limited entry permit with a trawl endorsement would be required. A Pacific whiting shoreside endorsement is being considered as part of this alternative. Such an endorsement could be attached to any limited entry permit with a trawl endorsement. The purpose of the endorsement would be to indicate the vessels' intent to fish in the Pacific whiting shoreside fishery.

Recordkeeping and Reporting: Under Alternative 3, recordkeeping and reporting requirements would be specified in Federal regulation. The recordkeeping and reporting requirements would be adequate to support a "real-time" inseason data system (i.e. preliminary catch weights would be available in a central database within a relatively short period of time from the date the was catch landed) as is needed for managing fleetwide or sector bycatch limit management. To the extent possible, Federal recordkeeping and reporting requirements would be consistent with state regulatory requirements to avoid the burden of unnecessary duplication.

As software becomes more fully developed and is adequately field tested, vessels may be

required to submit electronic vessel logbooks. Implementation of a maximized retention program under this alternative would not be delayed by the electronic logbooks development process. If such software is not adequately developed by the effective date of the final action, interim action would be taken and final regulations would be adopted at a later date.

Requirements for vessels to use electronic logbooks are being implemented under the related action, "Catch Accounting Requirements for Pacific Whiting Shoreside Processors/First Receivers Participating in the Shore-based fishery." Revisions to the related action could be taken under this action if the results of the initial year indicate that revisions are needed for 2008. Processors may be required to submit printed electronic fish tickets or state paper fish tickets to meet state regulatory requirements. As with electronic vessel logbooks, it should be noted that implementation of a maximized retention program under this alternative would not be delayed by the electronic fish ticket development process.

To support electronic recordkeeping and reporting, computer hardware and software requirements for vessels and processing facilities would be specified in Federal regulation. Vessels and processors would be required to provide particular computer hardware, operating system, and basic software (i.e. Microsoft Access version 2003 or later is PSMFC software is used). Electronic fish ticket software would be provided at no cost by NMFS or PSMFC or compatible data transmission procedures could be NMFS-approved.

Monitoring Shore-based Catcher Vessels At Sea: Under Alternative 3, observer coverage requirements would be specified in Federal regulation for vessels that target Pacific whiting during the primary season for the shore-based sector. Observers would be deployed on vessels in the Pacific whiting shoreside fishery to monitor compliance with maximized retention regulations and to estimate species and weight of catch that may be discarded at sea. Observers would: provide documentation on compliance with maximized retention regulations; may be able to estimate species and quantities of discarded groundfish; and may collect biological data that would otherwise not be available at the processing facility (i.e. marine mammal and seabird interactions).

> *Alternatives 3A and 3B*: Alternative 3 is further divided into Alternatives 3A for Federally funded observers and Alternative 3B for industry funded observers.
>
> Under Alternative 3A, NMFS would use Federally appropriated funds to provide observers for monitoring Pacific whiting vessels at-sea. This is the funding approach currently used in the non-whiting groundfish fisheries. At this time, the WCGOP funds are the only Federal funds available for hiring observers for the Pacific Coast groundfish fishery. Under this alternative, existing WCGOP funds would be used to provide observer coverage for the Pacific whiting shoreside fishery. Selection of vessels for observer coverage would likely be similar to that described under Alternative 1, the No Action Alternative, or WCGOP could choose to include the Pacific whiting vessels in the same coverage pool as non-whiting trawl fisheries. In the non-whiting or bottom trawl fisheries, vessels are randomly selected from the pool of all trawl vessels. Because existing resources are not adequate to cover a larger pool of vessels, coverage levels in the non-whiting fisheries would likely be reduced below current levels during the summer months, if no additional resources became available.
>
> Under Alternative 3B, vessel owners or operators would be required by regulation to procure the services of a NMFS-certified or -permitted observer from a NMFS permitted observer provider. This type of observer is commonly referred to as a "pay-as-you-go" or "third party" observer. This is the funding approach currently used in the mothership and catcher processor sectors of the Pacific whiting fishery. NMFS would be required to

use existing funds for administrative and analytical infrastructure unless an amendment to the Magnuson-Stevens Act was made to allow NMFS to accept funds directly from industry for administrative and analytical infrastructure costs. Under a Federally regulated pay-as-you-go or third party system fishery participants would be responsible for: making arrangements with a NMFS permitted observer provider; having an observer available for their vessels; and, paying the observer providers directly for the observer costs. The observer providers collect the fees directly from the vessels, recruit qualified individuals, provide insurance and benefits to the observers, deploy the observers, and assure that the observer data is delivered to NMFS.

Monitoring Shoreside Processors: Under Alternative 3, processors would be required to have an observer: to collect data for estimating total catch of groundfish and verifing the accuracy of fish tickets; and, to quantify the total catch of prohibited species, particularly salmon. Because observers are biological technicians, they may also collect biological data on Pacific whiting and other marine species that are landed with Pacific whiting. If adequate observer coverage were obtained under this alternative, industry and port sampler efforts may be available for use in collecting data from non-whiting fishing activities.

*Alternatives 3A and 3B*: Alternative 3 is further divided into Alternatives 3A for Federally funded observers and Alternative 3B for industry funded observers.

Under Alternative 3A, NMFS would use Federally appropriated funds to provide observers to monitor Pacific whiting deliveries at the shoreside processing facilities. The mechanics of this structure are the same as that described in the previous section (monitoring shore-based catcher vessels at sea) under Alternative 3A. At this time, the WCGOP funds are the only Federal funds available for hiring observers for the Pacific Coast groundfish fishery. Under Alternative 3A, WCGOP observer coverage would be extended to the Pacific whiting shore-based processors. Individual observers assigned to sample at Pacific whiting shoreside processors may be different individuals from the vessel observers and therefore the coverage level would likely to be similar to that described for vessels under Alternative 1, the No Action alternative. Under Alternative 1, the number of observers available to sample at Pacific whiting shoreside processors would be weighed against the need for those same observers to sample other groundfish fisheries to meet the Magnuson-Stevens Act requirements on bycatch accounting. If WCGOP chooses to use the same observer for both the Pacific whiting shoreside vessel and processor, they would likely be included as part of the same coverage pool as non-whiting trawl fisheries. In the non-whiting or bottom trawl fisheries, vessels are randomly selected from the pool of all trawl vessels. Because existing resources would need to cover a larger pool of vessels and processors, coverage levels in the non-whiting fisheries would be reduced below current levels during the summer months.

Under Alternative 3B, Pacific whiting shoreside processors would be required by regulation to procure the services of a NMFS-certified or -permitted observer from a NMFS permitted observer provider. This type of observer is commonly referred to as a "pay-as-you-go" or "third party" observer, this is the funding approach currently used for processors in the mothership and catcher processor sectors of the Pacific whiting fishery. NMFS would be required to use existing funds for administrative and analytical infrastructure because an amendment to the Magnuson-Stevens Act would be required for NMFS to accept funds directly from industry for administrative and analytical infrastructure costs. Under a Federally regulated pay-as-you-go or third party system, fishery participants would be responsible for: making arrangements with a NMFS permitted observer provider; having an observer available for their processing facility; and, paying the observer providers directly for the observer costs. The observer

providers collect the fees directly from the processor, recruit qualified individuals, provide insurance and benefits to the observers, deploy the observers, and assure that the observer data is delivered to NMFS.

Disposition of Overage Fish: Federal regulations would specify how overage fish and prohibited species must be handled.

*Alternatives 3A and 3B*: Alternative 3 is further divided into Alternative 3A for a state system in which overage fish and prohibited species are abandoned to the state of landing and Alternative 3B for a Federal system in which overage fish and prohibited species cannot be sold.

Under Alternative 3A, overage fish would continue to be abandoned to the state of landing. Vessels would be required to abandon all overage fish and prohibited species. The weight and/or number of species being abandoned would be required to be reported on fish tickets. Payment from the sales of overage fish that are required to be remitted shall be at "fair market" value. This structure was defined above under Alternative 2.

Under Alternative 3B, Federal regulations would prohibit the sale of overage fish and prohibited species. However, overage fish and prohibited species could be donated to a hunger relief organization.

*2.2.4 Alternative 4 (Electronic Monitoring System): a Maximized Retention Program with an EMS for Monitoring Vessels at Sea and Catch Monitors for Verification of Fish Ticket Data.*

Management Structure: Under Alternative 4, a maximized retention program would be specified in Federal regulation. The groundfish regulations would be revised to allow vessels targeting Pacific whiting with midwater trawl gear during the primary season for the shore-based sector to land unsorted catch that may include species that are currently prohibited by regulations at 50 CFR 660.306 (a)(2) and (6), and 50 CFR 660.405 (a)(1). Maximized retention encourages full retention of all catch while recognizing that minor discard events that include large animals (>6ft in length) and minor levels of operational discard may occur.

Federal Permits and Endorsements: A Pacific Coast groundfish limited entry permit with a trawl endorsement would be required. A Pacific whiting shoreside endorsement is being considered as part of this alternatives. Such an endorsement could be attached to any limited entry permit with a trawl endorsement. The purpose of the endorsement would be to indicate the vessels' intent to fish in the Pacific whiting shoreside fishery.

Recordkeeping and Reporting: Under Alternative 4, recordkeeping and reporting requirements would be specified in Federal regulation. The recordkeeping and reporting requirements would be adequate to support a "real-time" inseason data system (i.e. preliminary catch weights would be available in a central database within a relatively short period of time from the date the was catch landed) as is needed for managing fleetwide or sector bycatch limit management. To the extent possible, Federal recordkeeping and reporting requirements would be consistent with state regulatory requirements so that the burden of unnecessary duplication can be avoided.

As the software becomes more fully developed and is adequately field tested, vessels may be required to submit electronic vessel logbooks. Requirements for vessels to use electronic logbooks could be implemented as early as 2008. However, it should be noted that implementation of a maximized retention program under this alternative would not be delayed by the electronic logbooks development process. If such software is not adequately developed by the effective date of the final action, interim action would be taken and electronic logbook requirements would be adopted into final regulation at a later date.

Requirements for processors to use electronic fish tickets are being implemented under the related action, "Catch Accounting Requirements for Pacific Whiting Shoreside Processors/First Receivers Participating in the Shore-based fishery." Processors may be required to submit printed electronic fish tickets or state paper fish tickets to meet state regulatory requirements. As with electronic vessel logbooks, it should be noted that implementation of a maximized retention program under this alternative would not be delayed by the electronic fish ticket development process.

To support electronic recordkeeping and reporting, computer hardware and software requirements for vessels and processing facilities would be specified in Federal regulation. Vessels and processors would be required to provide particular computer hardware, operating system, and basic software (i.e. Microsoft Access version 2003 or later is PSMFC software is used). Electronic fish ticket software would be provided at no cost by NMFS or PSMFC or compatible data transmission procedures could be NMFS-approved.

Monitoring Shore-based Catcher Vessels At Sea: Under Alternative 4, EMS coverage requirements would be specified in Federal regulation for vessels that target Pacific whiting during the primary season for the shore-based sector. EMS would be installed on vessels in the Pacific whiting shoreside fishery to monitor compliance with maximized retention regulations. EMS has been used to document retention and/or discard of catch. EMS is a data collection tool that uses a software operating system connected to an assortment of electronic components, including video recorders, to create a data collection of vessel activities. The EMS is designed to independently monitor vessel fishing activities and provide accurate, timely, and verifiable data. Because EMS would be used as a compliance monitoring tool, NMFS believes it is necessary for 100 percent of the Pacific whiting trips to be monitored.

EMS requirements specified in Federal regulations would include: EMS service provider permitting process; EMS service provider responsibilities; EMS service provider data confidentiality standards, EMS coverage requirements for vessels; prohibitions against intentionally damaging EMS equipment on vessels; vessel responsibilities for scheduling EMS installations, equipment, maintenance and data retrieval; and, vessel responsibilities for scheduling EMS removal.

> *Alternatives 4A and 4B*: Alternative 4 is further divided into Alternatives 4A for Federally funded EMS and Alternative 4B for industry funded EMS.
>
> Under Alternative 4A, (Status Quo) NMFS would use existing WCGOP funds to provide EMS for monitoring Pacific whiting vessels at-sea. Currently, no money is available specifically for the implementation of an EMS monitoring program in the Pacific whiting shoreside fishery. Under Alternative 4A, only a small number of EMS units may be provided. Vessels chosen to use EMS could be selected at random from the pool of all Pacific whiting shoreside vessels. Given the need to use WCGOP base funds for observer coverage in non-whiting groundfish fisheries, the availability of Federal funds to provide for EMS coverage in the Pacific whiting shoreside fishery would likely be quite low.
>
> Under Alternative 4B, vessel owners or operators would be required by regulation to procure EMS services from a permitted EMS service provider. NMFS would be required to use base funds for administrative costs and analysis without an amendment to the Magnuson-Stevens Act to allow NMFS to accept funds directly from industry for administrative and analytical infrastructure costs. The fishing industry would be responsible for: making arrangements with an EMS permitted observer provider; having an EMS available for their vessel; and, paying directly for the EMS costs. The EMS service providers collect the fees directly from the vessels; purchase and maintain EMS

equipment; provide for timely installation and removal of EMS equipment; and, assure that the EMS data analysis is delivered to NMFS.

Monitoring Shoreside Processors: Under Alternative 4, dockside monitoring at Pacific whiting shoreside facilities would be conducted by catch monitors. The phrase "catch monitor" is being used in a general sense to describe individuals whose duty station is at the Pacific whiting shoreside processing facilities and who collect independent data that can be used for verification of fish tickets or used to evaluate the accuracy of fish tickets.

Catch monitors under this action could be defined as any of following individuals or be specifically defined to meet the identified needs of the proposed program:

- *Observers* are biological technicians, educated in the natural sciences, trained in species identification and biological sampling. They collect catch and effort data used to estimate total catch;

- *Weigh masters* are standards inspectors that are employed by the states, by independent third parties, or are self employed and who are licensed or certified as a weigh master. These individuals are trained in the types and use of commercial scales, species identification, recordkeeping, and non-compliance. Weigh masters monitor weighing activities for accuracy, and sign or certify fish ticket weights;

- *Enforcement technicians* are individuals employed by NMFS OLE who are trained in compliance standards and species identification and who monitor the weighing process for compliance with weighing and sorting requirements (see section 2.3 Alternatives considered but rejected from detailed analysis);

- *Port samplers* are biological aides who are employed by the states or PSMFC and trained in interviewing fishermen, species identification, recordkeeping, and summarizing basic field data;

- *Industry samplers* are individuals directly employed by the processors who have basic training in biological data collection[3] and species identification and who collect basic biological information on the catch and catch composition.

Monitoring Shoreside Processors (NMFS preferred approach)

- Data Quality Monitors - third party employees paid for by industry and trained by NMFS in techniques used for the verification of fish ticket data. These individuals would be trained in: species identification; observation and sub-sampling techniques relative to the verification of fish ticket data; the types and use of commercial scales; documentation procedures for compliance purposes; and recordkeeping. NMFS would define verification methods and would coordinate or conduct the training of these individuals. One data quality monitor would be required at each Pacific whiting first receiver. NMFS would work with PSMFC to provide oversight to the program for data quality purposes.

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[3] The use of processors as samplers in Oregon was based on a cooperative research development study conducted in 1998 (Builder 2000). The study examined the quality of fish length data collected by processors who were provided with basic training. The study found that the length data collected by trained processors was adequate to provide much need length data for stock assessment purposes. The accuracy of catch data used for management of the fishery was not evaluated in this study.

- Industry samplers and port biologists would continue to collect fishery dependent data with the decision to use industry samplers and/or port biologists to collect length data being made by the individual states. Training of industry samplers in species identification and measuring techniques would be coordinated by NMFS. These individuals would be responsible for storing and enumerating prohibited species, retrieving salmon snouts and coded wire tags, and transporting prohibited species for food bank donation.

*Alternatives 4A and 4B*: Alternative 4 is further divided into Alternatives 4A for Federally funded catch monitors and Alternative 4B for industry funded catch monitors.

Under Alternative 4A, NMFS would use Federally appropriated funds to monitor Pacific whiting deliveries at the shoreside processing facilities. At this time, there are no Federal funds specifically appropriated for catch monitors for Pacific whiting shoreside processors. Therefore, a Federally funded program would use observers as catch monitors unless other funds became available. This is the same structure as was described above for Alternative 3A in the section titled "monitoring shoreside processors".

Under Alternative 4B, Pacific whiting shoreside processors would be required by regulation to procure the services of a catch monitor. NMFS would be required to use existing funds for administrative and analytical infrastructure because an amendment to the Magnuson-Stevens Act would be required for NMFS to accept funds directly from industry for administrative and analytical infrastructure costs. Under a Federally regulated third party system, the fishing industry would be responsible for: procuring the services of a catch monitor; having the catch monitor available at the processing facility; assuring that the specified coverage requirements are met; and, paying for the services of the catch monitor.

Disposition of Overage Fish: Federal regulations would specify how overage fish and prohibited species must be handled.

*Alternatives 4A and 4B*: Alternative 4 is further divided into Alternative 4A for a state system in which overage fish and prohibited species are abandoned to the state of landing and Alternative 4B for a federal system in which overage fish and prohibited species cannot be sold.

Under Alternative 4A, overage fish would continue to be abandoned to the state of landing. Vessels would be required to abandon all overage fish and prohibited species. The weight and/or number of species being abandoned would be required to be reported on fish tickets. Payment from the sales of overage fish that are required to be remitted shall be at "fair market" value. This structure was defined above under Alternative 2.

Under Alternative 4B, Federal regulations would prohibit the sale of overage fish and prohibited species. However, overage fish and prohibited species could be donated to a hunger relief organization.

*2.2.5 Alternative 5 (Hybrid): a Maximized Retention Program with an EMS for Monitoring Vessels at Sea, Compliance Monitors for Verification of Fish Ticket Data, and Plant Monitors for the Collection of Biological Data.*

Management Structure: Under Alternative 5, a maximized retention program would be specified in Federal regulation. The groundfish regulations would be revised to allow vessels targeting

Pacific whiting with midwater trawl gear during the primary season for the shore-based sector to land unsorted catch that may include species that are currently prohibited by regulations at 50 CFR 660.306 (a)(2) and (6), and 50 CFR 660.405 (a)(1). Maximized retention encourages full retention of all catch while recognizing that minor discard events that include large animals (>6ft in length) and minor levels of operational discard may occur. As with Alternatives 3 and 4, adopting a monitoring program for the Pacific whiting shoreside fishery into Federal regulation implies that NMFS would provide oversight, including the coordination of the monitoring program.

Federal Permits and Endorsements: A Pacific Coast groundfish limited entry permit with a trawl endorsement would be required. A Pacific whiting shoreside endorsement is being considered as part of this alternatives. Such an endorsement could be attached to any limited entry permit with a trawl endorsement. The purpose of the endorsement would be to indicate the vessels' intent to fish in the Pacific whiting shoreside fishery. The endorsement could be used to define other requirements of participation such as, EMS coverage, at-sea observer coverage as requested, reporting of high bycatch areas, and mandatory participation in a pre-season meeting.

Recordkeeping and Reporting: Under Alternative 5, recordkeeping and reporting requirements would be specified in Federal regulation. Processors would be required to submit a summarized version of state fish ticket data daily. Processors would be allowed to correct daily reports. A penalty will be developed for processors who do not correct daily reports.

As the software becomes more fully developed and is adequately field tested, vessels may be required to submit electronic vessel logbooks. Requirements for vessels to use electronic logbooks could be implemented as early as 2008. However, it should be noted that implementation of a maximized retention program under this alternative would not be delayed by the electronic logbook development process. If such software is not adequately developed by the effective date of the final action, interim action would be taken and electronic logbook requirements would be adopted into final regulation at a later date.

As software for electronic fish tickets becomes more fully developed and is adequately field tested, processors would be required to submit electronic fish tickets daily. Processors may be required to submit printed electronic fish tickets or state paper fish tickets to meet state regulatory requirements. As with electronic vessel logbooks, it should be noted that implementation of a maximized retention program under this alternative would not be delayed by the electronic fish ticket development process. Electronic fish ticket requirements would be adequate to support a real-time inseason data system (i.e. Microsoft Access version 2003 or later is PSMFC software is used). Electronic fish ticket software would be provided at no cost by NMFS or PSMFC or compatible data transmission procedures could be NMFS-approved.

To support electronic recordkeeping and reporting, computer hardware and software requirements for vessels and processing facilities would be specified in Federal regulation. Vessels and processors would be required to provide a personal computer, operating system, and basic software (i.e. Microsoft Access version 2003 or later is PSMFC software is used). Electronic fish ticket software would be provided at no cost by NMFS or PSMFC or compatible data transmission procedures could be NMFS-approved.

Monitoring Shore-based Catcher Vessels At Sea: Under Alternative 5, EMS coverage requirements would be specified in Federal regulation for vessels that target Pacific whiting during the primary season for the shore-based sector. EMS would be installed on vessels in the Pacific whiting shoreside fishery to monitor compliance with maximized retention regulations. EMS has been used to document retention and/or discard of catch. EMS is a data collection tool that uses a software operating system connected to an assortment of electronic components,

including video recorders, to create a data collection of vessel activities. The EMS is designed to independently monitor vessel fishing activities and provide accurate, timely, and verifiable data. As with Alternative 4B, full EMS coverage would be used so all Pacific whiting trips are monitored.

EMS requirements specified in Federal regulations would include: EMS service provider permitting process; EMS service provider responsibilities; EMS service provider data confidentiality standards, EMS coverage requirements for vessels; prohibitions against intentionally damaging EMS equipment on vessels; vessel responsibilities for scheduling EMS installations, equipment, maintenance and data retrieval; and, vessel responsibilities for scheduling EMS removal.

Vessel owners or operators would be required by regulation to procure EMS services from a permitted EMS service provider. NMFS would be required to use base funds for administrative costs and analysis without an amendment to the Magnuson-Stevens Act to allow NMFS to accept funds directly from industry for administrative and analytical infrastructure costs. The fishing industry would be responsible for: making arrangements with an EMS permitted observer provider; having an EMS available for their vessel; and, paying directly for the EMS costs. The EMS service providers: collect the fees directly from the vessels; purchase and maintain EMS equipment; provide for timely installation and removal of EMS equipment; and, assure that the EMS data analysis is delivered to NMFS.

Monitoring Shoreside Processors: Under Alternative 5, dockside monitoring at Pacific whiting shoreside facilities would be conducted by two different types of catch monitors who collect independent data that can be used for verification of fish tickets, for the collection of biological data, and for transporting donation catch .

Catch monitors under this action could be defined as any of following individuals:

> *Data compliance monitors*: independent individuals hired through a third party who collect data to verify fish ticket data and verify information collected by plant monitors, and provide information to NMFS.
>
> *Industry monitors*: plant employees who have basic training in biological data collection and species identification and who collect biological information on the catch. These individuals would be responsible observing vessel offload, conducting bycatch species composition, enumerating and storing prohibited species, retrieving salmon snouts and other coded wire tag (CWT), transporting prohibited species for food bank donation, and collecting biological information for Pacific whiting and for predominate bycatch species.

Disposition of Overage Fish: Federal regulations would specify how overage fish and prohibited species must be handled.

*Alternatives 5A and 5B*: Alternative 5 is further divided into Alternative 5A for a state system in which overage fish and prohibited species are abandoned to the state of landing and Alternative 5B for a federal system in which overage fish and prohibited species cannot be sold.

> Under Alternative 5A, overage fish would continue to be abandoned to the state of landing. Vessels would be required to abandon all overage fish and prohibited species. The weight and/or number of species being abandoned would be required to be reported on fish tickets. Payment from the sales of overage fish that are required to be remitted shall be at “fair market” value. This structure was defined above under Alternative 2.

Under Alternative 5B, Federal regulations would prohibit the sale of overage fish and prohibited speicies. However, overage fish and prohibited species could be donated to a hunger relief organization.

## 2.3 Alternatives Considered but Eliminated from the Detailed Analysis

Approaches that were considered but not analyzed in this document, include:

- Amending the Pacific Coast Groundfish and Pacific Salmon FMPs to allow salmon taken with trawl gear to be retained and landed without the development of an adequate monitoring mechanism;
- Using existing Federally funded WCGOP observers at coverage levels that are greater than coverage levels in the non-whiting trawl fisheries to monitor maximized retention at sea;
- Having NMFS enforcement agents or enforcement officers monitor maximized retention at sea or to monitor weighing activities at shoreside processing facilities;
- Having state funded maximized retention monitors at sea or for monitoring weighing activities at shoreside processing facilities;
- A maximized retention program with unmonitored fishing at sea;
- A maximized retention program with less than 100 percent of the hauls being monitored at sea;
- Vessel owned EMS equipment or EMS equipment from non-permitted service providers;

Amending the Pacific Coast Groundfish and Pacific Salmon FMPs to allow salmon taken with trawl gear to be retained and landed without an adequate monitoring mechanism.
Management of the salmon and groundfish fisheries has changed substantially since the mid-1990's, when it was first determined that monitoring of salmon retained by vessels using trawl gear was necessary. Since the mid-1990s, new salmon ESUs have been listed under the ESA, commercial salmon fisheries have been severely restricted, and the importance of bycatch reduction and accounting have been mandated by the Magnuson-Stevens Act. Allowing unmonitored landings of trawl caught salmon would not be consistent with the ESA or the Magnuson-Stevens Act.

Using existing Federally funded WCGOP observers at coverage levels that are greater than coverage levels in the non-whiting trawl fisheries to monitor maximized retention at sea.
The sampling priorities for WCGOP observers deployed to trawl vessels are to collect data that are used for total catch estimates of each groundfish species or species group over the entire fishing year, and to collect fishery dependent biological data that are otherwise not available on shore. The WCGOP sets coverage priorities for different fisheries and fleets that comprise the groundfish fishery. Observers are deployed on vessels in the active sampling unit, and vessels are selected at random for coverage. The target coverage level for a particular fishery or fleet is based on the WCGOP coverage plan, which is driven by total catch and bycatch data needs.

It is likely the Pacific whiting shoreside fishery would be given one of the lowest coverage

priorities by the WCGOP when considering: 1) the data needs of the Pacific whiting fishery relative to needs for the entire groundfish fishery, 2) the limited number of observers, 3) data availability from other sectors of the Pacific whiting fishery, and 4) the availability of historical data. To require greater observer coverage would have a direct effect on the ability of the WCGOP to monitor other fisheries and to meet the Magnuson-Stevens Act mandates.

Having NMFS enforcement agents or enforcement officers monitor maximized retention at sea or to monitor weighing activities at shoreside processing facilities.
No funds are currently available for the development a catch monitoring program by NMFS OLE.

Having state funded maximized retention monitors at sea or for monitoring weighing activities at shoreside processing facilities.
None of the three states participating in the management of this fishery have funds available for the development or ongoing support of a monitoring program for the Pacific whiting shoreside fishery. Resources available for catch monitoring are limited and can vary greatly between years. Basing future regulatory requirements on an unknown funding base could result in either the fishery being severely constrained or data and monitoring needs being unmet.

A maximized retention program with unmonitored fishing at sea or a maximized retention program with less than 100 percent of the hauls being monitored at sea.
To verify maximized retention of catch in the Pacific whiting shoreside whiting fishery, it is necessary for all vessels to be monitored from the time that the first haul is retrieved until the time that the catch is offloaded at the processing facility. The sampling scheme applied to the Pacific whiting shoreside fishery is a census, meaning that the total catch values are not derived from estimates or extrapolations, but from actual counts or weights of each species or species complex. NMFS determined that a level of 100 percent monitoring was the only monitoring level that was appropriate for accurately documenting compliance with maximized retention.

Because the catch of prohibited species and overfished species are rare and intermittent, any discarding at sea of these species would also be rare and intermittent. Only high levels of monitoring are appropriate for documenting such occurrences.

Vessel owned EMS equipment or EMS equipment from non-permitted service providers.
Having equipment that meets a specific performance standard is critical to the success of an EMS based monitoring program. At this time, this is a relatively new monitoring tool for fisheries management and there are no Federal equipment or performance standards for EMS systems, nor has there been a type-approval process developed for EMS systems. The development of either Federal standards or a type approval processes are timely and costly. In the absence of either Federal standards or a type approved process, and given the rapid change in technology, NMFS believes that permitting EMS providers will assure that the EMS equipment used to monitor the Pacific whiting fishery meets the needs of the fishery and fisheries management, while allowing new EMS providers to enter the fishery.

Permitting EMS service providers allows for better oversight of the businesses that handle confidential EMS data. Allowing EMS services to be provided without a permitting process may impair the ability to remove or sanction business who do not provide adequate service or who do not abide by the defined responsibilities.

## 3.0 AFFECTED ENVIRONMENT

This chapter describes the Pacific Coast groundfish fishery and the resources that would be affected by the alternative action. Physical resources are discussed in Chapter 3.1, biological resources are described in Chapter 3.2, and socio-economic resources are described in Chapter 3.3. Other recent NEPA documents prepared for the Pacific Coast groundfish fishery provide detailed information pertaining to the physical, biological and socio-economic environment. These NEPA documents include: the EIS for the Pacific Coast Groundfish Fishery Management Plan, 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; and; the EA for a related action titled "Catch Accounting Requirements for Pacific Whiting Shoreside Processors/First Receivers Participating in the Shore-based fishery." 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 coastal ocean off Washington, Oregon, and California is a biogeographic region that is referred to as the Coastal Upwelling Domain (Ware and McFarlane 1989). Coastal upwelling results in high production of phytoplankton from April through September fueled by the nearly continuous supply of nutrients, and a high biomass of copepods, euphausiids and other zooplankton during summer. The Coastal Upwelling Domain is part of the California Current system. The California Current is a broad, slow, meandering current that moves toward the equator. In deep waters offshore of the continental shelf, the currents flow southward all year round; however, over the continental shelf, southward flows occur only in spring, summer, and fall. During winter months, the flow over the shelf reverses, and the water moves northward as the Davidson Current.

Pacific whiting are a California current species that undertake an extended spawning migration during which the adults swim south to spawn in the southern California Bight in fall and winter. Pacific whiting migrate from as far north as Vancouver Island to southern California, a distance of several thousand kilometers. The Pacific whiting fishery has historically occurred during the northern migration of adults. The northern migrating adults and the northward drift of larvae and juveniles takes place at depths where fish take advantage of the poleward undercurrent.

The physical environment and its relation to Pacific whiting are more fully described in the April 2007 EA for a related action titled "Catch Accounting Requirements for Pacific Whiting Shoreside Processors/First Receivers Participating in the Shore-based fishery". In addition, the Pacific Coast Groundfish Fishery Management Plan, EFH Designation and Minimization of Adverse Impacts, contains detailed information on the physical environment. Readers who are interested in detailed information on the West Coast marine habitat and physical oceanography are referred to Section 3.2 of the final EFH EIS. A copy of the EFH EIS can be obtained by contacting the Sustainable Fisheries Division, Northwest Region, NMFS, 7600 Sand Point Way, NE, Seattle, WA 98115–0070; or viewing the internet posting at www.nwr.noaa.gov/Groundfish-Halibut/Groundfish-Fishery-Management/NEPA-Documents/index.cfm.

### 3.2 Biological Characteristics of the Affected Environment

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.

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 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. 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 U.S. ABC (73.88 percent of the U.S.-Canada coastwide ABC) was 518,294 mt and the U.S. 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.

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. The most common groundfish species taken in EFP catches between 2002 and 2006 include: yellowtail rockfish, widow rockfish, sablefish, spiny dogfish (*Squalus acanthias*), chilipepper rockfish and lingcod. Major factors affecting bycatch are: area, depth, season, time of day, and environmental conditions. Overall abundance of a particular species is also relevant.

The Magnuson-Stevens Act requires an FMP to rebuild overfished stocks. The term "overfished" describes a stock whose abundance is below its overfished/rebuilding threshold. Overfished/rebuilding thresholds are generally linked to the same productivity assumptions that determine the ABC levels. In 2007, seven groundfish species continue to be designated as overfished: bocaccio (south of Monterey), canary rockfish, cowcod (south of Point Conception), darkblotched rockfish, Pacific ocean perch, widow rockfish, and yelloweye rockfish. The most common overfished groundfish species taken in Pacific whiting shoreside fishery between 2002 and 2006 have been widow rockfish, canary rockfish, POP, and darkblotched rockfish. The Pacific whiting fishery has no impact on overfished cowcod and bocaccio stocks because these stocks are found farther south than where the Pacific whiting fishery has historically occurred.

Non-groundfish species are also encountered in the Pacific whiting shoreside fishery. Species managed under the Coastal Pelagic Species Fishery Management Plan were incidentally taken in the Pacific whiting shoreside fishery between 2000 and 2006, including jack mackerel (*Trachurus symmetricus*), Pacific mackerel (*Scomber japonicus*), and squid. Like Pacific

whiting, mackerel are schooling species that are not associated with the ocean bottom, and that migrate in coastal waters. In addition, walleye pollock (*Theragra chalcogramma*) and American shad (*Alosa sapidissima*) were observed in the fishery between 2001 and 2006.

Prohibited species, including salmon (primarily Chinook salmon), Dungeness crab, and Pacific halibut are also encountered in the fishery. 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. Infrequent encounters with marine mammals have also been documented in the Pacific whiting shoreside fishery.

The biological environment and its relation to the Pacific whiting shoreside fishery were fully described in a April 2007 EA for a related action titled "Catch Accounting Requirements for Pacific Whiting Shoreside Processors/First Receivers Participating in the Shore-based fishery" and are not repeated in this EA. Readers who are interested in further biological information including information on the status of the groundfish resources, are referred to Section 4.0 of the EIS, prepared for the Proposed Acceptable Biological Catch and Optimum Yield Specifications and Management Measures for the 2007-2008 Pacific Coast Groundfish Fishery. Copies of the EIS can be obtained from the Council, by writing to 7700 NE Ambassador Place, Suite 200, Portland, OR 97220-1384; or calling 503-820-2280; or viewing the internet posting at http://www.pcouncil.org. Appendix B2 to the final EFH EIS titled: The Pacific Coast Groundfish Fishery Management Plan, EFH Designation and Minimization of Adverse Impacts, also contains detailed information on the life histories of the groundfish species. A copy of the EFH EIS can be obtained by contacting the Sustainable Fisheries Division, Northwest Region, NMFS, 7600 Sand Point Way, NE, Seattle, WA 98115–0070; or viewing the internet posting at www.nwr.noaa.gov/Groundfish-Halibut/Groundfish-Fishery-Management/NEPA-Documents/index.cfm.

## 3.3 Socio-Economic Characteristics of the Affected Environment

### *3.3.1 The Pacific Whiting Shoreside Fishery*

Section 1.4 of this document describes the management structure of the Pacific Whiting Shoreside Fishery, including how EFPs have been used to support a catch monitoring program. The purpose of this section is to describe the socio-economic environment related to the alternative action including: allocations, recent harvests, harvesters, processors, and fishing communities where Pacific whiting are landed and processed. Detailed information on the socio-economic environment as it relates to the shoreside processing sector was presented in the April 2007, EA for a related action titled "Catch Accounting Requirements for Pacific Whiting Shoreside Processors/First Receivers Participating in the Shore-based fishery" and therefore will not be repeated in this EA. Readers who are interested in reading more about the socio-economic characteristics of the affected environment as they relate to Pacific whiting harvest levels, sector allocations, season start dates, and shoreside processors are referred to the EA for the related action. Relevant information on Pacific whiting shoreside vessels, the monitoring and catch accounting mechanisms for the fishery, and Pacific whiting communities are presented in this EA.

*Pacific Whiting Shoreside Vessels:* Vessels participating in the Pacific whiting shore-based fishery are required to have a general limited entry groundfish permit with a trawl endorsement. In 2007, there are approximately 175 limited entry trawl permits, with trawl endorsements that are identified as being registered to a catcher processor vessels in the Pacific whiting fishery. Any of those permits could be used by a vessel wishing to participate in the Pacific whiting

shoreside fishery.

The number of catcher vessels participating in the Pacific whiting primary season fishery (EFP and non-EFP vessels) has varied slightly over the past several years. Total shore-based vessel participation has ranged from thirty-eight vessels in 2000, to thirty-one vessels in 2002, with subsequent years participation being within that range. Though most Pacific whiting shoreside vessels are less than 80 feet (ft) in length, the proportion of vessels less than 80 ft has decreased from 68 percent of the fleet in 2002 to 58 percent of the fleet in 2006. Table 3.3.1.1. shows the numbers of vessels by length group that participated in the Pacific whiting shoreside fishery between 2002 and 2006.

In addition to the Pacific whiting primary season, vessels participating in the Pacific whiting shoreside fishery also participate in other West Coast fisheries. Most Pacific whiting shoreside vessels also participate in the bottom trawl groundfish fishery and my Pacific whiting shoreside vessels landed catch in the coastal pelagic and crab fisheries. Catch data shows that Pacific whiting shoreside vessels have landed catch in every other West Coast fishery management group; however revenues from the shrimp, salmon, and highly migratory fisheries may be considered minor compared to revenues from the general groundfish and crab fisheries. Table 3.3.1.1. shows the estimated revenues by fishery that vessels actively engaged in the Pacific whiting shoreside fishery received from their participation in the Pacific whiting and other West Coast fisheries between 2002 and 2006. In addition to West Coast fisheries, several whiting vessels also participate in the Alaska groundfish fisheries. Revenues from participation in the Alaska fisheries are not shown here.

Average gross revenues per vessel have more than doubled since 2002. Gross revenues from Pacific whiting in 2002 were approximately $139,606 per vessel and have increased to $454,728 and $379,014 per vessel in 2005 and 2006 respectively (Table 3.3.1.2). During this same period, the exvessel price of Pacific whiting increased from approximately $0.045 per pound in 2002 to $0.062 per pound in 2006 as the demand for Pacific whiting has increased, particularly in the export market for headed and gutted product. With higher OYs in 2005 and in 2006 than were available from 2002 to 2004, the average number of pound harvested by each vessel also increased from 2002 to 2006 (Table 3.3.1.3). Assuming that changes in gross revenues are an indicator of changes in net revenues, then the increase interest in participation in the Pacific whiting shoreside fishery in 2007 is likely due to increasing net revenues.

Table 3.3.1.1. Revenue of Shore-Based Pacific Whiting Vessels by Year, Vessel Length, and Species Management Group, 2002-2006. (PacFIN January 2007)

| Year | Vessel Length (ft) | No. of vessels issued EFPs | Pacific Whiting ($) | Crab ($) | Other Groundfish ($) | Other Species ($) | Shrimp/Prawn ($) |
|---|---|---|---|---|---|---|---|
| 2002 | <70 | 5 | 412,086 | 407,138 | 715,279 | (D) | 172,494 |
| | 70-74 | 5 | 914,620 | 91,871 | 397,033 | (D) | 160,585 |
| | 75-79 | 10 | 1,403,347 | 252,184 | 597,202 | (D) | 46,746 |
| | 80-84 | 4 | 770,883 | 389,005 | 421,834 | 2,932 | -- |
| | 85-89 | 4 | 687,231 | -- | 177,398 | (D) | -- |
| **2002 Total** | | 30 | 4,188,166 | 1,140,198 | 2,308,745 | 4,414 | 379,824 |
| 2003 | <70 | 8 | 537,890 | 1,238,027 | 1,103,348 | (D) | 279,582 |
| | 70-74 | 4 | 931,816 | 237,971 | 545,605 | (D) | 98,839 |
| | 75-79 | 11 | 1,877,797 | 1,267,603 | 1,171,440 | 1,607 | 36,114 |
| | 80-84 | 3 | 595,391 | 794,243 | 236,531 | (D) | -- |
| | 85-89 | 5 | 856,464 | -- | 54,049 | 2,085 | -- |
| **2003 Total** | | 34 | 5,715,780 | 5,260,538 | 3,218,331 | 11,371 | 414,535 |
| 2004 | <70 | 4 | 808,740 | 1,673,677 | 819,442 | (D) | -- |
| | 70-74 | 6 | 2,055,228 | 726,841 | 1,640,110 | 3,835 | -- |
| | 75-79 | 6 | 2,193,020 | 802,903 | 968,681 | 7,262 | -- |
| | 80-84 | 4 | 1,681,745 | 454,976 | 840,124 | 19,092 | (D) |
| | 85-89 | 4 | 1,152,754 | -- | 60,870 | 2,673 | -- |
| | >89 | 2 | (D) | -- | (D) | (D) | -- |
| **2004 Total** | | 26 | 7,890,487 | 3,658,397 | 4,329,226 | 39,861 | (D) |
| 2005 | <70 | 4 | 872,374 | 894,509 | 417,607 | (D) | -- |
| | 70-74 | 6 | 2,447,081 | 189,484 | 1,389,033 | 59,131 | 158,797 |
| | 75-79 | 7 | 3,256,265 | 326,055 | 1,030,668 | 68,546 | 44,124 |
| | 80-84 | 4 | 2,392,754 | 476,212 | 426,068 | 7,538 | -- |
| | 85-89 | 4 | 1,962,455 | (D) | 122,014 | 41,843 | -- |
| | >89 | 3 | 1,801,452 | (D) | 129,051 | 15,727 | -- |
| **2005 Total** | | 28 | 12,732,381 | 1,886,260 | 3,514,441 | 192,785 | 202,921 |
| 2006 | <70 | 6 | 1,265,587 | 2,172,725 | 744,687 | (D) | -- |
| | 70-74 | 7 | 2,131,813 | 604,605 | 1,170,100 | (D) | 21,632 |
| | 75-79 | 6 | 2,513,579 | 601,905 | 707,860 | 2,150 | -- |
| | 80-84 | 4 | 1,325,662 | 699,112 | 92,375 | 7,400 | -- |
| | 85-89 | 6 | 3,135,570 | (D) | 235,788 | 8,715 | -- |
| | >89 | 4 | 2,135,240 | 210,593 | 250,464 | 16,373 | -- |
| **2006 Total** | | 33 | 12,507,451 | 4,288,951 | 3,201,272 | 37,676 | 21,632 |

Note: (D) indicates data concealed for disclosure/confidentiality purposes

Table 3.3.1.2. Average Per Vessel Revenue of Pacific Whiting and Non-whiting, 2002-2006 (PacFIN January 2007)

| Year | Whiting revenue per vessel ($) | Non-whiting revenue per vessel ($) |
|---|---|---|
| **2002** | 139,606 | 127,773 |
| **2003** | 168,111 | 261,905 |
| **2004** | 303,480 | 308,480 |
| **2005** | 454,728 | 207,015 |
| **2006** | 379,014 | 228,773 |

Note: values in table are not all encompassing and protect confidential ity

Table 3.3.1.3. Pacific Whiting Shoreside Fishery, Number of Vessels by Weight of Whiting, 2002-2006 (PacFIN January 2007)

| Year | Number of Vessels | | | | |
|---|---|---|---|---|---|
| | < 2 million lb (907 mt) | 2-5 million lb (907-2,268 mt) | 5-7 million lb (2,268-3,175 mt) | 7-9 million lb (3,175-4,082 mt) | >9 million lb (>4,082 mt) |
| **2002** | 7 | 19 | 4 | 1 | -- |
| **2003** | 7 | 26 | 4 | 1 | -- |
| **2004** | 3 | 6 | 7 | 7 | 9 |
| **2005** | 2 | 7 | 5 | 13 | 7 |
| **2006** | 5 | 7 | 8 | 8 | 5 |

### *3.3.2 Catch Monitoring and Accounting*

In 1996, to address the treatment and disposition of salmon in the Pacific whiting shoreside fishery, an EA was prepared to analyze amendments to both the groundfish FMP (FMP Amendment 10) and salmon FMP (FMP Amendment 12). The preferred alterative included a provision for the salmon FMP to be amended to allow retention of salmonids in the trawl fishery when a Council-approved monitoring program (one that is sufficient to define the chinook bycatch rate, detect and changing patterns in bycatch, assure compliance with specified management limitations, and provide for the collection of coded wire tags) was established in the Pacific whiting shoreside fishery (PFMC 1996). At their October 21-25, 1996, meeting the Council recommended the preferred alternative, including the temporary use of EFPs to monitor the incidental take of salmon until a permanent monitoring program could be implemented. Both the salmon and groundfish FMPs were amended to include the provisions of the preferred alternative; however, implementing regulations for the Pacific whiting shoreside fishery were never adopted.

Each year since 1992, EFPs have been issued by NMFS to vessels in the Pacific whiting shoreside fishery to allow unsorted catch to be landed at shoreside processing facilities. Each year, most if not all Pacific whiting shoreside vessels apply for and carry EFPs. EFPs specify the terms and conditions that participating vessels must follow to be included. Vessels fishing under the Pacific whiting EFPs are allowed to land unsorted catch at shoreside processing facilities, including species in excess of the trip limits and species such as salmon that would otherwise be illegal to have on board the vessel. Without an EFP, groundfish regulations at 50 CFR 660.306(a)(2) and (a)(6) require vessels to sort their catch at sea and discard as soon as practicable all prohibited species (including salmon and halibut), protected species, and to discard groundfish species in excess of cumulative limits at sea.

Unlike the at-sea sectors of the Pacific whiting fishery, where catch is sorted and processed shortly after it has been taken, vessels in the shoreside fishery hold primary season Pacific whiting on the vessel for several hours or days until it can be offloaded at a shoreside processor. Pacific whiting deteriorates rapidly, so it must be handled quickly and immediately chilled to maintain product quality. This is particularly true if the Pacific whiting is to be used to make surimi (a fish paste product). The quality or grade of surimi is highly dependent on the freshness of the Pacific whiting, which demands careful handling and immediate cooling or processing for the fishery to be economically feasible. Because rapid cooling can retard Pacific whiting flesh deterioration, most primary season vessels prefer to dump their unsorted catch directly below deck into the refrigerated salt water tanks. However, dumping the unsorted catch into the

refrigerated salt water tanks precludes the immediate sorting or sampling of the catch. Fishers prefer to quickly and efficiently handle the catch so they can return to port for offloading. In general, under a primary season structure, vessels that are quick and efficient are able to harvest more catch before the allocation is reached than vessels that sort at sea.

Monitoring and catch accounting of EFP landings has been coordinated by the SHOP since 1992. Participants in the SHOP include: catcher vessels that have been issued EFPs, designated processing plants along the Pacific Coast, PFMC, NMFS, PSMFC, ODFW, CDFG, and WDFW. The SHOP has coordinated the collection of and compilation of catch data to provide information needed to monitor attainment of the Pacific whiting shore-based allocation and for evaluating incidental catch, particularly Chinook salmon and other prohibited species. In recent years, the SHOP has also coordinated the collection of inseason data needed to monitor bycatch limits that have been established for overfished groundfish species.

From 1992 to 1994, catch composition sampling was given highest priority in the management of the EFP fishery. During the 1992-1994 period, SHOP set a goal of having observers sample 30 percent of the deliveries while at sea and having observers sample 20 percent of the unobserved deliveries while at the processing facility (M. Saelens, ODFW, pers. comm. 10/12/06). The at-sea observer's role was to confirm retention of the catch. By 1995, the SHOP sampling goal had declined to 10 percent of the landings and the sampling priority had shifted, with more emphasis being given to the collection of biological information (otoliths, lengths, weight, sex, maturity) on Pacific whiting and select bycatch species such as yellowtail rockfish, widow rockfish, darkblotched rockfish, canary rockfish, sablefish, bocaccio, Pacific chub mackerel and jack mackerel. The sampling rate was decreased following a statistical analysis that had indicated that there was no significant difference between the fish ticket data and observer data during the early 1990's. Given the fishery management needs of the Pacific whiting fishery in 1995, it was determined that fish ticket data was an adequate representation of species composition for landed catch.

To explore the possibility of increasing biological sample data and increasing the precision of statistical estimates and leading to improved stock assessments, a project referred to as the Fishing Industry and Research Scientists Together (FIRST) project, was conducted in Oregon in from June 1998 to November 1998 (Builder 2000). The specific goal of this project was to examine the feasibility of collecting additional fish length data by training and using plant workers. Similar studies had found that it was feasible to have plant workers collect fish lengths, which was considered easier than having plant workers obtain data on fish age or species compositions (Gallucci et.al., 1996). In most groundfish fisheries, fishery-dependent data, including length data, are collected by port biologists hired by the states. However, port biologist sampling has been constrained by financial and logistical considerations. During the FIRST project, plant workers sampled 150 sablefish, Dover sole, and yellowtail rockfish deliveries. When the length data collected by plant samplers was compared to the port samplers, the quality of the length data was similar. However, time constrains on the plant workers, work priorities, and motivation to take samples were identified as being somewhat problematic during the project (Builder 2000).

In 1998, at shoreside processing facilities in Oregon, plant samplers began to be used to increase the collection of biological information (length, weight, age, maturity) from the Pacific whiting shoreside fishery. Data were collected from Pacific whiting and selected bycatch species (yellowtail rockfish, widow rockfish, sablefish, Pacific mackerel, jack mackerel, and prohibited species)(Weeks and Hutton 1998). In Washington and California, port samplers continued to collect biological data. In California and Washington, the port samplers monitor a portion of all deliveries and collect biological data and species composition data that is used to distinguish the species on fish tickets. In all three states, port samplers collect fish ticket data during the Pacific

whiting shoreside fishery and provide information to the SHOP, where it is compiled for inseason monitoring.

In 1999, language was added to the EFPs to require vessels to deliver EFP catch to state designated processors. It was determined that there was a need to better define the roles of shoreside processors and the state agencies in monitoring incidental catch and enforcing management measures, specifically for yellowtail rockfish. Designated processors are identified by each of the states, and have signed written agreements that specify the standards and procedures they agree to follow when accepting unsorted EFP catch.

The proportion of landings observed by shoreside plant samplers and port biologists varied substantially among processors and between years. Table 3.3.2.1 compares the percentage sampled at each designated Pacific whiting shoreside processor from 2002 to 2005. In 2005, the overall sampling rate was 36 percent of the deliveries or 29 percent of the Pacific whiting by weight. In 2006, the overall sampling rate was 48 percent of the deliveries or 43 percent of the Pacific whiting by weight.

Table 3.3.2.1 Percent of trips observed by SHOP at each processor, 2004-2006 (data excerpted from Weidoff and Parker 2004, Nottage and Parker 2005, Jesse and Saelens 2007)

| State | Port | Deliveries | | | | | |
|---|---|---|---|---|---|---|---|
| | | 2004 | | 2005 | | 2006 | |
| | | percent sampled | sampled /total | percent sampled | sampled /total | percent sampled | sampled /total |
| **Washington** | Westport, Ocean Gold | 11.0 | 19/172 | 12.5 | 24/192 | 18.8 | 36/192 |
| | Illwaco, Jessies | 13.2 | 5/38 | 9.8 | 82/8 | 38.3 | 36/94 |
| **Oregon** | Astoria | | | | | | |
| | DeYang | -- | -- | -- | -- | 100.0 | 34/34 |
| | Bornstein | -- | -- | -- | -- | 73.0 | 27/37 |
| | Del Mar | -- | -- | -- | -- | 100.0 | 17/17 |
| | Warrenton | | | | | | |
| | Pacific Coast | 17.3 | 32/185 | 0 | 0/202 /a | 30.8 | 60/195 |
| | Newport | | | | | | |
| | Ocean Beauty | 19.3 | 11/57 | 34.4 | 61/21 | 42.2 | 19/45 |
| | Trident | 22.0 | 53/241 | 20.3 | 51/251 | 28.7 | 47/164 |
| | Pacific Shrimp | 61.5 | 139/225 | 100.0 | 227/227 | 100.0 | 163/163 |
| | Charleston | 100.0 | 106/106 | 100.0 | 87/87 | 100.0 | 93/93 |
| **California** | Cresent City | 10.3 | 3/29 | 13.3 | 2/15 | 25.0 | 7/28 |
| | Eureka | 5.0 | 4/80 | 3.0 | 2/66 | 12.3 | 9/73 |
| | Moss Landing | -- | -- | 100.0 | 1/1 | -- | -- |

a/ Plant sampler observed 23 deliveries, however data reported to SHOP was incomplete and deemed unusable.

The costs associated with operating the SHOP have increased since the program began in 1992. Table 3.3.4.2 shows the In-season budget history for the SHOP between 1995-2005. In 1995, the budget was approximately $93,000, with approximately $25,000 for samplers and $68,000 for coordination/data processing costs) as compared to approximately $141,560 in 2005 (approximately $27,000 for plant samplers and $114,560 for coordination/data processing costs) (Nottage and Parker 2005). These government costs cover state agencies providing sampling personnel, infrastructure, data summary and analysis during winter months, data tracking, and Council support on bycatch issues. In 2005, an additional $70,000 which is not included in

Table 3.3.4.2 were for additional ODFW staff. In the past, the costs were relatively minor. However, the costs have become increasingly substantial over time as management agencies have increased their focus on bycatch issues, which requires the data to be available sooner and require months of staff time for data analysis.

Table3.3.4.2. In-season Budget History for the Shoreside Hake Observation Program, 1995-2005 (data excerpted from Nottage and Parker 2005)

| Year | State Budgets for SHOP ($) | | Industry Funding Oregon ($) | Industry Samplers Oregon ($) | Total Funds All Sources ($) | Cost per day ($) | Cost per mt whiting ($) |
|---|---|---|---|---|---|---|---|
| | Oregon | Washington & California | | | | | |
| **1995** | ~20,000 | 18,000 | ~30,000 | 25,000 | 93,000 | 912 | 1.23 |
| **1996** | ~20,000 | 18,000 | ~30,000 | 29,000 | 97,000 | 815 | 1.11 |
| **1997** | 17,706 | 27,000 | 30,294 | 30,000 | 105,000 | 1,522 | 1.21 |
| **1998** | 19,000 | 27,000 | 30,000 | 30,000 | 106,000 | 876 | 1.22 |
| **1999** | 18,000 | 27,000 | 33,339 | 32,544 | 110,883 | 1,218 | 1.32 |
| **2000** | 18,000 | 27,000 | 38,152 | 32,544 | 115,696 | 1,244 | 1.38 |
| **2001** | 18,000 | 27,000 | 46,738 | 35,770 | 127,508 | 1,678 | 1.76 |
| **2002** | 17,926 | 27,000 | 38,371 | 29,808 | 113,105 | 3,649 | 2.52 |
| **2003** | 18,000 | 18,000 | 40,519 | 29,808 | 106,327 | 3,544 | 2.09 |
| **2004** | 22,000 | 18,000 | 53,467 | 27,000 | 120,467 | 2,008 | 1.33 |
| **2005** | 28,693 | 18,000 | 67,867 | 27,000 | 141,560 | 2,178 | 1.45 |

Vessels fishing under EFPs are required to retain all catch, with a few exceptions such as very large species (>6 feet in length) and hauls where there is a concern about vessel safety. In 2004 a pilot study was initiated and funded by the NWFSC in which a video-based electronic monitoring system (EMS) was used as a tool to verify full retention of catch by Pacific whiting EFP vessels. The 2004 study field-tested EMS on 26 fishing vessels for 100 percent data capture of on-deck fishing operations. EMS systems consist of two or more closed circuit television cameras, global positioning systems (GPS), hydraulic and winch sensors, and on-board data storage. In 2004, the EMS was in place throughout the 61 day season for the shore-based sector. During this time, the EMS captured virtually the entire fishery, with sensors recording 98 percent and the cameras recording 96 percent of the 1,762 fishing events and 1,019 fishing trips.

From the EMS pilot study, it was determined that EMS could be used to accurately identify the time and location of discard events. As a result of the study, EFP criteria were revised to define maximized retention (most catch is retained) rather than full retention (all catch is retained.) The EMS technology (EMS equipment installed on the vessels and data analysis) was again used and funded by the NWFSC during the 2005 and 2006 seasons. Following the 2004 and 2005 seasons, the NWFSC participated in public meetings with the fishery participants to discuss the types of information that had been collected, EMS performance, participants behavior relative to the catch retention standards, and to seek input on mechanism for further reducing documented discard events in the fishery. EMS has moved beyond the experimental stage and has been identified as an effective tool for monitoring full and maximized retention as defined in EFPs for the Pacific whiting fishery. Vessels fishing under the EFP will be required to pay directly to the EMS provider for services in 2007. In 2007, no Federal funding is available for EMS coverage. Further information of the EMS system can be found in Appendix B.

As noted above, unsorted Pacific whiting EFP catch is generally delivered to the shoreside processing facilities, where it is sorted and processed. However, in a few cases catch has been transported by truck from the original processing facility to a secondary processor. This has occurred: during the early season fishery off California when catch has been trucked to Washington state for processing; during the coastwide season when catch from coastal areas in Washington was trucked to a Puget Sound processor; and in Oregon, where sorted catch was trucked to a nearby facility.

Federal groundfish catch sorting requirements are currently specified at 660.370(h)(6) for species or species groups with trip limits, size limits, quotas, harvest guidelines, or OYs. Under Federal regulations at 660.306(a)(7), it is unlawful for any person to fail to sort the catch prior to the first weighing after offloading. The groundfish must be sorted to the appropriate species or species groups for the fishery in which the vessel is participating. The state of landing may have additional sorting requirements, including requirements for non-groundfish species. Sorting requirements for vessels are also specified in the terms and conditions of the EFP. Under the existing Federal groundfish regulations, individuals who receive unsorted catch on land and transport that catch to another location, sometimes out of state, are not required to sort the catch or weigh it prior to transport. Federal law at 50 CFR Subpart K, 300.160-161 requires fish that are transported between states to be marked with an accurate packing list, bill of lading, or other similar document that lists species and number by species or specifies other appropriate measure of the quantity such as weight. When unsorted catch is transported to another location, where all or a portion of the sorting occurs, the availability of data on total Pacific whiting and incidental catch is delayed. One to two week delays in obtaining catch data occurred in the 2006 fishery (Brian Culver, WDFW Pers. Comm.) Regulatory requirements that prohibit unsorted Pacific whiting catch from being transported from the point of first landing are expected to be implemented by early summer 2007 through the related action titled “Catch Accounting Requirements for Pacific Whiting Shoreside Processors/First Receivers Participating in the Shore-based Fishery”.

Current Federal groundfish regulations recognize that each state has recordkeeping and reporting laws or regulations that address the records that need to be kept and/or reports that need to be filed. The Federal groundfish regulations concur with state law by requiring fishery participants to report all data and in the exact manner required by applicable state law or regulation. Regulatory requirements that require processors to submit electronic fish tickets within 24 hours of landing and prior to transporting catch from the port of first landing are expected to be implemented by early summer 2007 through the related action titled “Catch Accounting. Requirements for Pacific Whiting Shoreside Processors/First Receivers Participating in the Shore-based fishery”. The electronic fish tickets are based on information currently required in state fish receiving tickets or landing receipts (hereafter referred to as state fish tickets). The daily reports would be used to track catch allocations, bycatch limits and prohibited species catch. Processors would provide the computer hardware and software (Access 2003 or later) necessary to support the electronic fish ticket program.

Each state requires the submission of fish tickets that include the actual weight or an estimated weight of each species or species group of groundfish. In the State of Oregon, weights reported on fish tickets for the Pacific whiting fishery must have been derived from a certified scale. The states of Washington and California do not specifically require that processors record actual scale weights on fish tickets. For all three states, other data such as the date of landing, gear, vessel, dealer, etc. are also included on the fish tickets. The weights reported on fish tickets are used to determine the total catch by species or species group in the Pacific whiting shoreside fishery. Catch in excess of trip limits, unmarketable catch, and non-groundfish catch are included on the fish tickets. Unlike groundfish, prohibited species are managed by number of of individuals.

Each state has laws and regulations that pertain to the use of scales and scale performance by businesses for commercial purposes. Each state has an agency (county or state) that oversees weights and measures standards and conducts or oversees scale performance testing for commercial scales. Commercial scale requirements and how those requirements apply to seafood processors and catch reports differs substantially between states.

In Oregon, all weighing and measuring devices being used commercially in the state must be licensed with the Department of Agriculture prior to being used. Each scale must meet state standards for design, readability, accuracy, and reliability, based on National Institute of Standards and Technology (NIST) Handbook 44. Oregon Measurement Standards approval seals are applied to only those examined devices which meet all appropriate design, installation, and accuracy requirements. However, the state recognizes that knowledgeable, concerned personnel operating correct equipment, result in correct weighing and measuring. Oregon requires an approved means of sealing any mechanism used for adjusting a measurement element on a commercial weighing or measuring device. The state also recommends that all devices be placed under appropriate planned maintenance and service programs to avoid unexpected correction expense. The user of the device is responsible for the accuracy of the scale at all times.

In Washington, Pacific whiting deliveries are sorted and though not required by law, the catch is weighed on commercial scales that vary in type and performance. There is current Washington State regulatory code pertaining to the use of weighing and measuring devices installed after July 5, 1997 used for commercial purposes (Chapter 16-664 WAC). Like Oregon requirements, commercial scales are required to be traceable to a National Type Evaluation Program (NTEP)[4] Certificate of Conformance[5]. In Washington, the owner or operator of weighing or measuring equipment is responsible for the maintenance and accuracy of weighing or measuring devices at all times. Washington Weights and Measures approval seals are placed on devices which meet all appropriate design, installation and accuracy requirements. The seal indicates that the device passed the inspection during the specified month and year. Weights and Measures officials perform unannounced inspections.

In the State of California, the Division of Measurement Standards is responsible for weights and measures. California requires any scale used commercially to be "type approved" for such use. Commercial use of a non type approved scale is illegal in California. Additionally, each commercial scale must have a registered service agent place it into service, or inspected by a local weights and measures official prior to use. There are a number of requirements such as suitability, position, environmental factors, level, interface with other devices and accessories, etc., which affect proper legal use of the equipment and which require the knowledge of a service agent. County weights and measures inspectors inspect and test various types of weighing and measuring devices. The inspector certifies the devices by affixing a paper seal to them. From time-to-time inspectors conduct inspections for compliance with the requirements set by laws and regulations. At the time this document was being prepared, it was not clear how

[4] A program of cooperation between the National Conference on Weights and Measures, the National Institute of Standards and Technology, the states, and the private sector was created for just this purpose. Through twelve participating laboratories, NTEP evaluates the performance, operating characteristics, features and options of weighing and measuring devices against the applicable standards.

[5] An official National Type Evaluation Program Certificate of Conformance is issued by NCWM following successful completion of the evaluation and testing of a device. This Certificate indicates that the device meets applicable requirements for commercial weighing and measuring equipment in the U.S.

California laws for commercial scales applies to Pacific whiting shoreside processors or what has been in practice in the Pacific whiting fishery. Though weights reported to the state on the landing and receipt of fish are required to be “accurate” there appears to be no specific requirement for the weights to have been derived from a scale.

*3.3.2 Pacific Whiting Fishery Management*

As previously discussed in Section 1.4 of this EA, 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 limits structure.

*Overfished species*: To allow the Pacific whiting industry to have the opportunity to harvest the full Pacific whiting OY, the non-tribal commercial fishery is managed with bycatch limits for certain overfished species. To date, bycatch limits have been established for darkblotched, canary and widow rockfish. With bycatch limits, the industry has the opportunity to harvest a larger amount of Pacific whiting, if they can do so while keeping the total catch of specific overfished species within adopted bycatch limits. Regulations provide for the automatic closure of the commercial (non-tribal) portion of the Pacific whiting fishery, upon attainment of a bycatch limit. This is different from the bottom trawl fishery, where harvest availability of target species is often constrained by the projected catch of overfished species.

*Pacific Salmon*: 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.

NMFS is required to monitor and collect data to analyze take levels. The Biological Opinion defines reasonable and prudent measures that include the continued monitoring of the Pacific whiting fishery such that the data is sufficient to define the bycatch rate for each sector and is adequate to detect any changing patterns of bycatch. In addition, it is necessary to evaluate the projected catch at least monthly, and to determine if action is necessary to reduce the take of Chinook salmon.

*3.3.3 Overages and prohibited species catch*

Because vessels fishing under the Pacific whiting EFPs are allowed to land unsorted catch, landings including species in excess of the trip limits, non-groundfish species, protected species, and prohibited species that would otherwise be illegal to have on board the vessel. Under the EFP structure, vessels are allowed to land the unsorted catch providing that they forfeit the catch in excess of trip limits and prohibited species catch to the state of landing. The processors are allowed to process the marketable catch excluding salmon and Pacific halibut, but they must pay

the state of landing fair market value for the catch. Fair market value is defined differently by each state. Prohibited species catch must be donated to a nonprofit food bank.

### *3.3.4. Pacific whiting shoreside vessels fishing without EFPs*

In 2006, a single shoreside vessel with history in the whiting fishery has found a profitable was to partially process headed and Gutted Pacific whiting at sea . The vessel uses a smaller net and tows of short duration to maintain quality. Head and gut machines were used at sea and the product immediately placed in thick slurry of ice. As a result, the 69 foot vessel was able to significantly increased its at-sea production of Pacific whiting in 2006. Becasue fish that are headed and gutted with no further processing (such as freezing) are not considered to be a product, the vessel's activities does not result in its activity being that of a catcher/processor. The operation which occurred during the primary season for the shore-based sector was allowed to operate within the RCAs without an EFP or other specific monitoring requirements. The ex-vessel price of the partially processed catch was approximately four times greater than whiting landed whole in unsorted EFP landings. All indication is that production of non-EFP catch is expected to increase in 2007 as the shoreside processing facility that accepts, freezes and ships the product, is ready to buy whiting from additional vessels. Particularly, whole round whiting from non-whiting boats that currently discard 100 percent of their whiting catch.

### *3.3.5. Counties Affected by the Pacific Whiting Shoreside Industry*

Counties that are actively involved in the Pacific whiting shoreside industry include: Pacific County, Washington; Grays Harbor County, Washington; Clatsop County, Oregon; Lincoln County, Oregon; Coos County, Oregon; Del Norte County, California; and Humbolt 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 shoreside 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.

Readers who are interested in further information on coastal counties and fishing communities are referred to Section 7 of the EIS, prepared by the Council staff, for the Proposed Acceptable Biological Catch and Optimum Yield Specifications and Management Measures for the 2007-2008 Pacific Coast Groundfish Fishery. Copies of the EIS can be obtained from the Council, by writing to 7700 NE Ambassador Place, Suite 200, Portland, OR 97220-1384; or calling 503 820-2280; or viewing the internet posting at http://www.pcouncil.org.

Table 3..3.5.1 EFP Whiting Landings, Revenue, and Participation by Year and Region
(PacFIN February 2007)

| Year | Port Region | Number of vessels a/ | |
|---|---|---|---|
| 2002 | California | 3 | $272,422 |
| | Newport and Coos Bay | 13 | $1,809,682 |
| | Astoria and Ilwaco | 9 | $1,209,296 |
| | Northern Washington/Puget Sound | 6 | (D) |
| 2003 | California | 3 | $170,011 |
| | Newport and Coos Bay | 15 | $2,195,300 |
| | Astoria and Ilwaco | 13 | $1,670,804 |
| | Northern Washington/Puget Sound | 5 | (D) |
| 2004 | California | 4 | $640,302 |
| | Newport and Coos Bay | 14 | $3,361,010 |
| | Astoria and Ilwaco | 7 | $1,276,740 |
| | Northern Washington/Puget Sound | 5 | (D) |
| 2005 | California | 6 | $427,176 |
| | Newport and Coos Bay | 14 | $4,536,123 |
| | Astoria and Ilwaco | 7 | $2,498,728 |
| | Northern Washington/Puget Sound | 6 | (D) |
| 2006 | California | 6 | $632,222 |
| | Newport and Coos Bay | 11 | $4,536,123 |
| | Astoria and Ilwaco | 13 | $4,194,711 |
| | Northern Washington/Puget Sound | 9 | (D) |

a/ Some vessels deliver to more than one port
(D) Northern Washington / Puget Sound information is hidden because there are fewer than 3 processors

### *3.3.6 West Coast Observer Programs for Groundfish*

In 1996, the SFA amended the Magnuson Fishery Conservation and Management Act (renamed the Magnuson-Stevens Fishery Conservation and Management Act). The SFA required that FMPs establish a standardized reporting methodology to assess the amounts and types of bycatch in a fishery, and required that FMPs identify and rebuild overfished stocks.

There are currently two Federal observer programs being operated by the NMFS Northwest Fishery Science Center in the Pacific coast grounfish fishery: the At-sea Hake Observer Program and the West Coast Groundfish Observer Program (WCGOP). These two programs are very different from each other particularly in how they are funded, the type of sampling and fishery data that is used to derive total catch, and availability of data for inseason management.

The WCGOP is year round federally funded program that provides observers for all of the commercial groundfish fisheries except the Pacific whiting fishery. Because monitoring of the Pacific whiting shoreside sector has been carried out under the EFPs, WCGOP observers have not been used to provide coverage for that sector. The Pacific States Marine Fish Commission is under contract to provide observers who are trained by NMFS. All sampling protocols and coverage strategies are defined by NMFS. Because there are few observers in relation to the number of vessels in the groundfish fishery, observer sampling coverage has focused on obtaining bycatch data at sea which can be combined with state fish ticket data to derive bycatch ratios for different fishing areas and target fishing strategies. Vessel logbook data is used to estimate fleetwide fishing effort. Using observer, fish ticket and logbook the fishery is modeled to derive estimate of total catch by species. Due to the delayed availability of fish ticket and

logbook data, and the time needed to process obsever data, the final analysis of estimated total catch by species is typically not finalized until well over one year after the fishing year has ended.

In contrast, the At-Sea Hake Observer Program which is a seasonal program where the operational costs are shared by NMFS and the vessel owners. Observer coverage levels are defined in regulation for each processing vessel and are based on overall vessel length: all processing vessels over 125 ft are required to carry two observers, and processing vessels 125 ft and under are required to carry one observer. These coverage levels allows very large samples to be taken from almost every haul. Each processing vessel make the necessary arrangements and pays directly to third-party companies that provide observer services and which are licensed by NMFS Alaska Region to provide such services. NMFS provides training and sampling gear for the observers. Sampling protocols are also defined by NMFS. An at-sea hake observer's primary duties include recording haul information, determining the official total catch, and sampling hauls for species composition. Each observer submits electronic data files to NMFS for inclusion in the NorPAC database one or more times per day. These data are available within hours for inseason catch evaluation. Because there is such a high level of sampling coverage, NMFS expands these data during the season to unsampled portions of hauls and unsampled hauls to derive total catch by species (species groups). The data are finalized a few days after the observers return from sea and finalized data are available within weeks after the end of the season.

## 4.0 ANALYSIS OF THE ALTERNATIVES

The terms "effect" and "impact" are used synonymously under NEPA. Impacts include effects on the environment that are ecological, aesthetic, historic, cultural, economic, social, or health, whether direct, indirect, or cumulative. Direct effects are caused by the action itself and occur at the same time and place. Indirect effects are caused by the action and are later in time or farther removed in distance, but are still reasonably foreseeable. Indirect effects may include growth-inducing effects and other effects related to induced changes in the pattern of land use, population density or growth rate, and related effects on air and water and other natural systems, including ecosystems. Cumulative impacts are those impacts on the environment that result 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. Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time.

Sections 4.1 through 4.3 of this document discuss the direct and indirect impacts on the physical, biological, and socio-economic environment that are likely to occur under each of the proposed alternatives, including the Status Quo alternative. Section 4.4 presents the reasonably foreseeable cumulative effects of the environment from the proposed alternatives.

### 4.1 Effects on the Physical Environment

Alternatives 2-5 would implement a maximized retention and monitoring program for the Pacific whiting shoreside fishery. None of the alternative actions is expected to change current fishing behavior and are therefore not expected to have a direct effect on the physical environment over Status Quo (Alternative 1.) The Pacific whiting shoreside vessels are currently required to have and use Vessel Monitoring Systems (VMS) that provide hourly reports of the vessel's fishing position to NMFS. VMS cannot provide data that can be used to verify the type of gear that is being used with the vessel. Midwater trawl gear is required in the Pacific whiting primary season fishery. At this time, there are no habitat protection areas that prohibit the use of midwater trawl gear in the geographic areas where the Pacific whiting fishery occurs. Although groundfish observers under Alternatives 3A and 3B, and EMS under Alternatives 4A, 4B and 5, may be able to provide additional data that could be used to verify the use of midwater trawl gear as it relates to habitat protection areas, the indirect benefit is minimal because there are no habitat protection areas that prohibit the use of midwater trawl gear in the geographic areas where the Pacific whiting fishery occurs.

### 4.2. Effects on the Biological Environment

Effects on the biological environment resulting from fishery management actions primarily include changes in species mortality levels resulting from implementation of the alternatives. Because the alternative action is for a catch monitoring program and does not change existing fishing practices, no direct biological effects are expected to result from the alternative action. Indirect effects from fishery management actions include changes in fishing practices that affect the biological environment, but are further away in time or location than those occurring as a direct impact. Indirect biological impacts could result if catch data were inaccurate or delayed such that fishery specifications (bycatch limits, species allocations, OYs, and biological opinion thresholds) could not be adequately monitored or the fishing stopped before one of the specifications were exceeded. If a fishery specification were exceeded, the magnitude of the impact would depend of the status of the stock (healthy, precautionary zone, or overfished), the proportion of allowable fishing mortality represented by fishery specification that was exceeded, and the stock's sensitivity to changes in fishing mortality. If other fisheries could not be

effectively managed to stay within the same fishery specification, cumulative indirect impacts could result.

### *4.2.1 Indirect Biological Effects*

Valid and timely data are needed to monitor total catch of Pacific whiting, Chinook salmon, and non-whiting groundfish, particularly overfished species. Positive indirect biological effects could occur if the quality of catch data were improved such that more timely and accurate data were available for managing the fishery inseason and keeping total catch within the fishery specifications, including: bycatch limits, species allocations, OYs, and biological opinion thresholds. Negative indirect biological effects could result if catch data used to manage the fishery inseason were inaccurate or delayed such that fishery specifications could not be adequately monitored or the fishing stopped before one of the fishery specifications were exceeded.

In 2007, seven groundfish species continue to be managed via overfished species rebuilding plans: bocaccio (south of Monterey, California), canary rockfish, cowcod (south of Point Conception, California), darkblotched rockfish, POP, widow rockfish, and yelloweye rockfish. The most common overfished groundfish species taken in Pacific whiting shoreside fishery between 2002 and 2006 were widow rockfish, canary rockfish, POP, and darkblotched rockfish. The overfished cowcod and bocaccio stocks are found farther south than where the Pacific whiting shorebased fishery primary season has historically occurred. Therefore the Pacific whiting fishery does not impacts the overfished portion of the cowcod and bocaccio stocks.

If a fishery specification for precautionary zone and healthy groundfish species or species groups is exceeded, the risk to the stock is generally lower than it is for overfished species. If a fishery specification of a constraining overfished species were greatly exceeded due to unreported discarding at sea, inaccurate catch accounting, or delayed catch reporting, the risk of exceeding rebuilding-based OYs is increased. The risk to the stock of exceeding the rebuilding based OY is particularly a concern for canary rockfish because it is sensitive to changes in harvest levels. 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.) There are many variables that affect the time it takes a stock to rebuild, fishing mortality is only one of those variables. However, exceeding the rebuilding based OY could result in an extended rebuilding period for a overfished species.

In the Pacific whiting fishery (all sectors,) salmon are caught over a broad range from northern California to Washington; therefore, the fishery affects many of the ESA listed Chinook. All activities that affect ESA listed species are subject to some form of ESA review and constraint with the goal being to reduce mortality and improve the status of the species to the point where the survival and recovery of the species is reasonably assured. To that end, all activities, including the Pacific whiting fishery, are obligated to be manage to stay within their respective take limits as defined in the associated incidental take statements. Adequate monitoring is required to ensure that activities are operating within their respective take limits. Adequate monitoring is not discretionary. To avoid negative biological consequences that may result to a species if the prescribed take limits are exceeded, there is a collective obligation of all activities to be managed within the defined limits considered necessary for the species' survival and recovery.

*Comparison of the alternatives*: Each of the Alternatives 2, 3A, 3B, 4A, 4B and 5 considers catch monitoring as two distinct components, at-sea monitoring and on shore monitoring. In the following comparison of indirect biological impacts, both components of monitoring are discussed and compared to the other alternatives.

Under Alternative 1, the No Action Alternative, inseason catch accounting would be similar to the bottom trawl fishery. In the bottom trawl fishery, inseason catch estimates are based on: historical data for each target fishery, WCGOP at-sea discard data, logbook data, and unverified fish ticket data. As data becomes available, inseason estimates are updated with the best available data. Under Alternative 1, a one-two year delay in obtaining final catch estimates could be expected. The lack of catch data under Alternative 1 increases the risk of OYs, allocation, or biological opinion thresholds being exceeded over status quo (Alternative 2). Under Alternative 1, twenty percent or less of the fishing trips would have WCGOP observers sampling coverage and there would be no mechanism for fish ticket verification. In a fishery such as Pacific whiting, where the non-target species are generally less than two percent of the catch by weight and where the incidental catch of overfished species and Chinook salmon often occur as rare species (very low occurrence) or rare events (periodic hauls with large amounts of incidental catch of a single species), low levels of observer coverage could result in substantial over or under estimates of the actual catch of an incidentally caught species.

Under Alternative 2, Status Quo, EMS would continue to be used to monitor all fishing trips from the time the gear was first set and until the time that the vessel returned to port. Port biologists and plant samplers would continue to collect biological data and some catch composition data at the processing facility. EMS coverage of all trips assures that catch is retained until landing. Because full EMS coverage reduces the likelihood of catch being discarded at sea, the opportunity to conduct accurate shoreside catch accounting of all species is improved over Alternatives 1, 3A, ad 4A, but similar to Alternatives 3B, 4B and 5.

Biological data collected by plant samplers would include age structure data (lengths, otoliths, scales, snouts, etc .) and would continue to provide much needed fishery dependent length and age data use in stock assessments. Providing quality fishery dependent length and age data is expected to have a beneficial effect, as it helps stock assessment scientists better understand a stock's population status and changes in the stock. Stock assessments are important to the management process because they are generally used as the basis for setting future harvest levels. Catch composition data would continue to be used to compare to fish ticket values for verification, particularly for verification of overfished species, and for to provide a breakdown by species of market categories with mixed catch (i.e. slope rockfish). The quality of fish length data collected by industry samplers who were provided with basic training, was found to be adequate to provide much needed length data for stock assessment purposes (Builder 2000). However, the accuracy of other types of catch data used for management of the fishery has not been fully evaluated. An analysis of data reported to SHOP in 2005 compared species composition and fish ticket values, identified potential sources of error in the collection and reporting of species composition data, and evaluated discrepancies in species composition data reported by industry samplers and port biologists (Nottage and Parker 2006). The SHOP analysis found that the most frequently occurring data discrepancies between composition samples and species reported on fish tickets were in the total weight of rockfish species, including yellowtail rockfish, widow rockfish, yelloweye rockfish, canary rockfish, darkblotched rockfish, and POP. Similar discrepancies were observed in an informal 2004 analysis (Steve Parker, pers. com.) Though the majority of species composition samples appeared to accurately represent catch, the misidentification of species, particularly rockfish, was most prevalent with plant samplers. The SHOP analysis specifically identified the need to further develop species identification skills to improve quality of data collected by plant samplers (Nottage and Parker 2006).

Studies similar to Builder (2000) found that the feasability of having processors obtaining data on fish lengths was easier than obtaining data on fish age or species compositions (Gallucci et.al., 1996 ). Selecting fish from mixed market categories requires fish identification skills, which can be difficult even for a trained port sampler or observer. Age composition sampling by

collecting otoliths, opercle bone, or fin rays is also difficult and requires knowledge of fish anatomy and proper storage and documentation techniques. Incomplete labeling of salmon held for sampling by the processing facilities resulted in data quality issues (Nottage and Parker 2006). Because the sampling rate and approach under Alternative 2 does not specifically focus on fish ticket verification, the risk of catch amounts being underestimated would remain a concern, particularly for overfished rockfish species and Chinook salmon. If the amount of catch is underestimated, the risk of exceeding a fishery specification, including: bycatch limits, species allocations, OYs, and biological opinion thresholds is increased. There is less of a risk of a fishery specification being exceeded under Alternative 2 than under Alternatives 1, 3A, or 4A, but more of a risk than under Alternatives 3B, 4B, or 5. It is important to note that as more constraints are placed on a fishery and as the value of the fishery relative to other fishing opportunities increases, the incentives to intentionally underestimate the weight of constraining species also increases (Randall 2004).

Under Alternative 3A, WCGOP observers would monitor catch retention on less than twenty percent of the Pacific whiting trips. Because existing WCGOP resources would need to cover a larger pool of vessels, coverage levels in the non-whiting fisheries would be reduced below current levels during the April-May period off northern California and in the summer months (June-August) north of 42° north latitude. However, rather than drastically reduce coverage in the non-whiting fisheries, the Pacific whiting shoreside fishery could be given a lower observer coverage priority, resulting in much less than twenty percent observer coverage. Coverage priorities are generally based on the bycatch data needs. When comparing the data needs of the Pacific whiting shoreside fishery to other sectors of the groundfish fishery, the Pacific whiting shoreside fishery is likely to have a lower priority for observer coverage because data are available from other sectors of the Pacific whiting fishery, which could be used to estimate discarded catch, and because of the availability of historical catch data from the fishery. However, the need for adequate monitoring of Chinook salmon catch is not expected to be met if less than twenty percent of the hauls were sampled. With twenty percent or less of all trips being monitored for catch retention at sea, the risk of at sea discarding on non-observed trip is increased. If catch is discarded at sea, it would be expected to result in underestimates of total catch mortality for some or all species. With a twenty percent or less observer coverage level, more conservative management of the Pacific whiting shoreside fishery would be necessary to manage the fishery to stay within the OYs, harvest guidelines, allocations, and bycatch limits.

Under Alternative 3A, WCGOP observers would also sample catch at the processing facilities. Observers are biological technicians, educated in the natural sciences, and trained in species identification and biological sampling. Observers are generally used to collect catch and effort data used for the estimation of total catch. They also collect biological data on length, sex, and age (otoliths, scales, snouts). The observer sample data could be used to support post season analysis to assess the accuracy of fish ticket data, but because of the need for data quality checks and analysis information would not provide fish ticket verification during the season. Catch monitors, weighmasters or enforcement technicians are trained as standards inspectors and in the types and use of commercial scales and documentation of non-compliance. Under Alternative 3A, on shore observer coverage levels would be similar to the coverage of the fleet at-sea, twenty percent or less of all trips. With twenty percent or less sampling coverage of all trips, estimates based on composition sample data could have a high degree of error when compared to fish ticket data. Substantial differences in catch can occur between trips in the Pacific whiting fishery because incidental catch is generally a very small proportion of the overall catch by weight (generally less than two percent by weight). However, incidental catch of the most constraining species and Chinook salmon tend to be rare species or rare events that could result in substantial differences between estimates based on observer data, actual catch, and catch reported on fish tickets. Because an analysis of WCGOP data for fish ticket verification could not be done inseason, the accuracy of fish ticket data used to manage the fishery inseason would

be most similar to Alternatives 1, 2 and 4A. Delayed verification of fish ticket data increases the risk that some reported catch is underestimated. If catch is underestimated, the risk of exceeding a fishery specification (e.g. bycatch limits, species allocations, OYs, and biological opinion thresholds) is increased. Exceeding a fishery specification is of greatest concern for the most sensitive overfished species. It is important to note that as more constraints are placed on a fishery and as the value of the fishery relative to other fishing opportunities increases, the incentives to intentionally underestimate the weight of constraining species also increases (Randall 2004).

If WCGOP effort is shifted from the other groundfish fisheries during the summer months to provide observer coverage under Alternative 3A or 4A, substantial coverage reductions in the non-whiting trawl fisheries would be expected. In 2005, twenty four percent of all non-whiting trawl trips were observed by WCGOP observers. If 35-38 vessels and 12-14 processors participated annually in the Pacific whiting shoreside fishery, about ten-twelve observers (approximately 1/3 of the WCGOP observers) would be needed to provide twenty percent coverage of the Pacific whiting shoreside fishery under Alternative 3A. Under Alternative 4A, approximately three observers would be need to provide twenty percent coverage of the processing facilities. If this occurred, a reduction of coverage in the non-whiting groundfish fisheries would be expected in the major whiting port groups, as observer coverage were shifted to cover vessels and processors in the Pacific whiting shoreside fishery. The affected port groups include: Neah Bay, Astoria, Newport, Coos Bay, Crescent City, and Eureka.

For 2005 (Table 4.2.1), the level of WCGOP coverage for non-whiting catch in each of the major Pacific whiting ports ranged from 21 to 28 percent. The shifts in coverage in the California ports of Crescent City and Eureka, would be from April to June, while the shifts in coverage in Neah Bay, Astoria, Newport, Coos Bay would be from mid-June to Mid August. Given the potential impacts on the collection of discard data in the non-whiting trawl fisheries, reducing coverage in the non-whiting trawl fisheries could have serious implications for overfished species management. Reducing observer coverage could be expected to decrease the accuracy of overfished species encounter estimates. If accuracy were decreased, it could have both biological and economic impacts. A negative biological impact could occur if the overfished species catch estimates were lower than the actual amount of overfished species mortality and fishing opportunities are subsequently liberalized. An economic impact could occur if the catch were overestimated and the amount of overfished species mortality and a subsequent regulation is put in place were overly restrictive on fishery participants.

Table 4.2.1 WCGOP Observed Landings of Non-whiting Limited Entry Trawl Trips by Port, 2005, Excluding Scottish Seine. (NMFS September 2006)

| | All Trawl Trips | | Observed Trawl Trips | | | | |
|---|---|---|---|---|---|---|---|
| Port Group | Landed catch (mt) | Percent of coastwide catch | Landings observed (mt) | Percent of coastwide catch observed | Percent of weight landed in port group observed | Number of trips sampled | Percent of all trips in port group |
| Bellingham | 2,169 | 12% | 420 | 2% | 19% | 21 | 4% |
| Neah Bay | 630 | 3% | 131 | 1% | 21% | 66 | 13% |
| Astoria | 6,035 | 32% | 1,593 | 8% | 26% | 127 | 26% |
| Newport | 1,761 | 9% | 420 | 2% | 24% | 53 | 11% |
| Coos Bay | 2,255 | 12% | 630 | 3% | 28% | 67 | 14% |
| Crescent City | 1,065 | 6% | 224 | 1% | 21% | 24 | 5% |
| Eureka | 1,675 | 9% | 348 | 2% | 21% | 40 | 8% |
| Fort Bragg | 1,549 | 8% | 296 | 2% | 19% | 31 | 6% |
| San Francisco | 532 | 3% | 88 | 0.5% | 16% | 15 | 3% |
| Monterey | 773 | 4% | 178 | 1% | 23% | 39 | 8% |
| Morrow Bay | 360 | 2% | 110 | 1% | 31% | 12 | 2% |
| ALL PORTS | 18,804 | 100% | 4,437 | 24% | 24% | 495 | 100% |

Table 4.2.2. WCGOP Observed Landings of Non-whiting Limited Entry Trawl Trips by Major Port and Cumulative Limit Periods, 2005 (NMFS September 2006)

| | March-April | | May-June | | July-August | |
|---|---|---|---|---|---|---|
| Port Group | Number of sampled trips | Percent of all trips sampled | Number of sampled trips | Percent of all trips sampled | Number of sampled trips | Percent of all trips sampled |
| Bellingham | 2 | 2% | 5 | 5% | 8 | 6% |
| Neah Bay | 28 | 25% | 17 | 16% | 17 | 13% |
| Astoria | 16 | 14% | 44 | 41% | 28 | 21% |
| Newport | 20 | 18% | 4 | 4% | 13 | 10% |
| Coos Bay | 4 | 4% | 13 | 12% | 16 | 12% |
| Crescent City | 8 | 7% | 6 | 6% | 3 | 2% |
| Eureka | 12 | 11% | 13 | 12% | 10 | 8% |

Under Alternative 3B, third-party observers would monitor catch retention of all fishing trips. Unlike EMS cameras, which turn on when the gear is initially set and turn off when the vessel returns to port, the observers would focus on the hauls as they are being dumped into the holds. If discarding from the holds occurred outside the time that the haul was dumped, observers may or may not observe such events. The density and buoyancy of individual target and incidental species taken in the Pacific whiting fishery varies. Because of differences in density and buoyancy, catch stored in refrigerated salt water tanks may become stratified in the tanks with the motion of the vessel. More buoyant species, such as rockfishes, could float to the top of the tanks and be removed from the tank openings.

Under Alternative 3B, Pacific whiting shoreside processors would be required by regulation to procure the services of a third-party observer from a NMFS permitted observer provider. Like Alternative 3A, the data collected by observers would be aggregated and analyzed after the fishery is completed to determine the accuracy of fish ticket data. This is in contrast to catch monitors (Alternative 4B), compliance monitors (Alternative 5), weighmasters or enforcement technicians who oversee processing activities to ensure that the landed catch is sorted and weighed to the defined standards and to verify the values reported on fish tickets. Overseeing processing, sorting and weighing activities ensures data quality when fish ticket data are summed during the season to determine total landed catch or in the case of a full or maximized retention program, total catch.

Observer coverage levels could vary from partial coverage (less than all deliveries) to full coverage (all deliveries). If coverage levels are too low, comparisons between observer sample data and fish ticket data from unsampled trips could have a high degree of error due to between trip differences. A low level of observer coverage could result in substantial differences between the actual catch, catch estimates derived from verification data, and catch reported on fish tickets. Such difference or sampling resulting from sample error could reduce the value of the verification data. When the sampling objective is fish ticket verification of incidental catch that occurs as rare events or rare species, a very large proportion of each randomly selected delivery must be sampled for accurate verification. The overall number of deliveries that can be sampled by an individual observer is limited by factors such as: the number of deliveries received in a day, the time each delivery takes to be sorted and weighed, the process of how the catch is sorted, and how the weighing process occurs. Due to the lack of information on the individual Pacific whiting shoreside processors and the factors that affect the number of deliveries that an individual observer could sample in a day as well as the amount of an individual delivery that could be effectively monitored, the coverage level achieved by a single observer cannot be estimated at this time. Similarly, the number of observers needed to provide full coverage at each facility cannot be estimated at this time. Without money being specifically appropriated for the implementation of an EMS monitoring program in the Pacific whiting shoreside fishery, NMFS would need to use existing WCGOP funds to lease the EMS physical equipment and to pay for data analysis and summary, under Alternative 4A . Given the need to use WCGOP base funds for observer coverage in non-whiting groundfish fisheries, this would reduce the ability to provide observer coverage in the non-whiting groundfish fisheries. NMFS believes that full EMS coverage is necessary to effectively deter and monitor discarding at sea. Reducing monitoring coverage would likely not meet the ESA Biological Opinion monitoring requirements and may result in bycatch and discard concerns of non-whiting.

At the processing facility, Alternative 4A and Alternative 3A are the same in that WCGOP observers would be used to sample catch at the processing facilities for fish ticket verification. Observer coverage on shore would be twenty percent or less of all trips. With less than a twenty percent coverage of all Pacific whiting trips being monitored, a comparison of sampled trip fish tickets and unsampled trip fish tickets for verification purposes could have limited value due to a high degree of error from between trip differences. An analysis for fish ticket verification could not be done inseason. Therefore, the accuracy of fish ticket data used to manage the fishery inseason would be most similar to Alternatives 1 and 2. As more constraints are placed on the fishery, constraints that could result in the fishery being closed before the Pacific whiting allocation is reached (i.e. bycatch limits). As the value of the Pacific whiting fishery catch relative to other opportunities increases, the incentives to underestimate the weight of constraining species increases. Delayed verification of fish ticket data increases the risk that some reported catch is underestimated. If catch is underestimated, the risk of exceeding a fishery specification is increased. Exceeding a fishery specification is of greatest concern for the most sensitive overfished species.

The quality of catch accounting on shore is affected by the level and type of at-sea monitoring. For example, under Alternative 4B, vessels would pay directly for EMS services to monitor catch retention of all fishing trips. EMS cameras turn on when the gear is first set and turn off when the vessel returned to port. An EMS aboard each vessels captures areas fished, fishing activity, and visual images of fishing activity, providing managers a comprehensive picture of fishing behavior of an individual vessel. Because of the ongoing monitoring, EMS is expected to deter any egregious discarding and assure that catch is retained until landing, providing an improved opportunity for improved catch accounting on shore over Alternatives 1, 3A, ad 4A, but similar to Alternatives 2, 3B, and 5.

Under Alternative 4B, Pacific whiting shoreside processors would be required by regulation to procure the services of a third-party catch monitor from a NMFS-permitted or NMFS-approved service provider. Catch monitors would be trained in techniques that could be used for the verification of fish ticket data and in species identification, but would not be trained in biological data collection. Under Alternative 4B, port biologists or industry samplers (Oregon) would continue to collect length and age structure data.

Catch monitor coverage levels could vary from partial coverage to full coverage. However, as coverage levels get lower, unverified fish ticket values would be expected to have a higher degree of error. Because the objective is fish ticket verification, a catch monitor would oversee the sorting and weighing of all the incidental catch in as many deliveries as possible to accurately verify the catch weights of incidental catch. The number of deliveries that can be monitored by an individual catch monitor is limited by factors such as: the number of deliveries received in a day, the time each delivery takes to be sorted and weighed, the process of how the catch is sorted, and the weighing process. As noted above, due to the lack of information for the individual processors on the factors that affect the time required for catch monitoring, the number of deliveries an individual catch monitor could oversee each day cannot be estimated at this time. This will be analyzed over time once sufficient data from processors are available.

Monitoring rates (to confirm accuracy of fish ticket, not to collect biological data) for Pacific whiting shorebased processors should be in proportion to the amount of fish processed and the daily operating hours. Ideally, a monitor would be present during the entire delivery to ensure that all incidental catch makes it to the point of weighing. This includes monitoring the primary sorting stations and confirming the weight of the catch includes species that may have been missed in the initial sorting, and confirming that all catch is recorded accurately. Depending on a processor's capacity and efficiency, and the size of vessel deliveries, a full offload could take a few hours to the majority of the day. To provide accurate fish ticket verification, a large proportion of all deliveries would need to be monitored. To accurately monitor rare occurring species, an large proportions of individual deliveries would also need to be sampled. When allocations for rare occurring species are set at the fishery level (all Pacific whiting sectors,) it is likely that most deliveries would need to be monitored for accurate verification. When allocations for rare occurring species are set at the sector level (Pacific whiting shoreside sector,) it is likely that all deliveries would need to be monitored for accurate verification. However, until further data can be gathered on processors, an analysis of trade-offs at different coverage levels can not be adequately analyzed.

If each processing facility were required to have one catch monitor, it is reasonable to expect that individual to monitor operations up to twelve hours per day. In addition to monitoring processing operations, the catch monitor may be required to prepare and submit data on the delivery. Unlike observers (Alternatives 3A and 3B), data collected by catch monitors (Alternative 4B) could be used to verify the weighing and sorting of catch and could be available inseason for monitoring overall catch of incidental species in the fishery. If catch reporting issues are identified during the season, catch monitor data could be used inseason to modify values used to

monitor the attainment of fishery specifications, and reduce the risk of a fishery specification being exceeded. Given the lack of information, it is reasonable to expect that each processor should at a minimum be required to have one catch monitor until further data can be collected and adequate monitoring levels for the fishery can be analyzed.

Alternative 5 is similar to Alternative 4B in that EMS would be used to monitor catch retention of all fishing trips. EMS cameras turn on when the gear is first set and turn off when the vessel returns to port. However, Alternative 5B goes an added step by specifically including the ability to place WCGOP observers on vessels if needed to address issues that are identified with EMS and cannot otherwise be resolved. At this time groundfish regulations at 660.314 (c) already allows for the placement of WCGOP under all of the alternatives. Therefore, Alternative 5 and 4B are also similar in the allowance to place a WCGOP observer on Pacific whiting shoreside vessels. Because full EMS coverage reduces the likelihood of catch being discarded at sea, the opportunity to conduct accurate shoreside catch accounting of all species is improved over Alternatives 1, 3A, ad 4A, but similar to Alternatives 2, 3B, and 4B.

The greatest difference between Alternatives 5 and 4B is in how the catch is monitored at the processing facilities and the addition of inseason bycatch reports and high bycatch area reports . Under Alternative 5, catch monitors are defined as compliance monitors. Like Alternative 4B, compliance monitors would be paid for by the processors through a third party and their duties would be to collect data to verify fish ticket values and to verify information collected by plant monitors. The compliance monitors would provide information to NMFS. Plant employees who have basic training in biological data collection and species identification and who collect biological information on the catch would be used as plant monitors. These individuals would be responsible for observing vessel offload, conducting bycatch species composition, enumerating and storing prohibited species, retrieving salmon snouts and coded wire tags, transporting prohibited species for food bank donation, and collecting biological information for Pacific whiting and for predominant bycatch species. The plant monitors are similar to the samplers used in Oregon under Alternative 2. Similar Alternative 2, the quality of fish length data collected by plant samplers/industry samplers who were provided with basic training, would likely be adequate to provide much need length data for stock assessment purposes (Builder 2000). However, the accuracy of other types of catch data used for management of the fishery has not been fully evaluated. As noted under Alternative 2, SHOP conducted an analysis of 2005 data that compared species composition and fish ticket values found that the most frequently occurring data discrepancy was a mismatch between composition samples and fish tickets were in the total weight of rockfish species, including yellowtail rockfish, widow rockfish, yelloweye rockfish, canary rockfish, darkblotched rockfish, and POP (Nottage and Parker 2006). Similar discrepancies were observed in an informal 2004 analysis (Steve Parker, pers. com.) The need to further develop plant samplers species identification skills were identified as an area need to improve the data quality (Nottage and Parker 2006) . Incomplete labeling of salmon held for sampling by the processing facilities also resulted in data quality issues. Studies similar to Builder (2000) found that the feasability of having processors obtaining data on fish lengths was easier than obtaining data on fish age or species compositions (Gallucci et.al., 1996 ). Selecting fish from mixed market categories requires fish identification skills, which can be difficult, - even for a trained port sampler or observer. Age composition sampling by collecting otoliths, opercle bone, or fin rays is also difficult and requires knowledge of fish anatomy and proper storage and documentation techniques.

Additional bycatch reports would be required under Alternative 5. The additional bycatch reports may aid vessels in avoiding high bycatch areas. These reports would be submitted inseason and provide fishing location information that is otherwise not available. This may result in reduces impacts on Chinook salmon and overfished species. In addition to electronic fish ticket reports, processors would be required to submit daily reports. Because electronic fish

ticket data must be submitted within 24 hours of the time the catch was landed rather than daily, electronic fish ticket data for some deliveries may not be submitted until almost two days after the catch was landed and would be available to managers shortly thereafter. The daily report required under Alternative 5 would provide more rapid reporting on those groundfish species (Pacific whiting, canary, widow and darkblotched rockfish) that NMFS is authorized to take automatic action on to prevent fishery specifications from being exceeded.

*4.2.2 Non-groundfish species, prohibited species, and protected species*

*Non-groundfish species interactions*: There are no direct impacts on non-groundfish species as a result of the alternative actions. The monitoring requirements under Alternative 3B, 4B and 5 are expected to improve the quality and timeliness of data used for inseason management of the Pacific whiting shoreside fishery over the Status Quo Alternative.

*Salmonids*: The potential effects of inaccurate catch accounting on salmon were discussed above. The monitoring requirements under Alternative 3B, 4B and 5 are expected to improve the quality and timeliness of data used for inseason management of the Pacific whiting shoreside fishery over status quo.

*Marine Mammals*: The alternative actions are not likely to affect the incidental mortality levels of marine mammals over what has been considered in previous NEPA analyses.

*Seabirds*: The alternative actions are not likely to affect the incidental mortality levels of seabirds over what has been considered in previous NEPA analyses.

*Sea Turtles*: The alternative actions are not likely to affect the incidental mortality levels of sea turtles over what has been considered in previous NEPA analyses.

*Endangered Species*: The potential effects of inaccurate catch accounting on salmon were discussed above. The monitoring requirements under Alternative 3B, 4B and 5 are expected to improve the quality and timeliness of data used for inseason management of the Pacific whiting shoreside fishery over status quo.

## 4.3 Effects on the Socioeconomic Environment

This section of the EA looks at impacts, positive and negative, on the socio-economic environment. Basic information regarding the people and the fisheries that are projected to be affected by the management alternatives was presented in Chapter 3. The following section differs in that it discusses what is projected to happen to the affected people and fisheries as well as what social changes are expected to occur, and, how changes are expected to affect fishing communities. The primary socioeconomic considerations when establishing a monitoring program for the Pacific whiting shoreside fishery are: changes in the cost of participation for processors, changes in revenue, changes in how the fishery is managed, the changes in cost to management, and changes in communities.

*4.3.1 Changes in the Cost of Participation*

*Federal permits and endorsements:* Under all of the alternatives, vessels participating in the Pacific whiting shoreside fishery must be registered to a limited entry permit with a trawl endorsement. In 2006, the cost to renew a limited entry permit with a trawl endorsement was $152.00. Under Alternatives 1 and 2, the costs for limited entry trawl permits with trawl endorsements are expected to remain relatively unchanged, with only minor upward adjustments being made when administrative costs increase. Under Alternative 2, vessels would continue to

apply for annual EFPs. At this time, there is no charge to the vessel owners or operators to obtain an EFP. The costs associated with obtaining an EFP includes the time for vessel owners and operators to: complete a request for an EFP; submit vessel documentation; and attend mandatory pre-season meetings, which may require travel in addition to participation time.

In addition to the limited entry permits with trawl endorsement, Alternatives 3A, 3B, 4A, 4B and 5 would also require Pacific whiting endorsements. The primary purpose of the endorsement would be to indicate the vessel's intent to fish in the Pacific whiting shoreside fishery. Pacific whiting endorsements would be issued to all qualified vessels that requested the endorsement and would be issued after the annual renewal process, but prior to the start of the Pacific whiting shoreside fishery. The costs to NMFS for issuing the federal permitting and endorsement responsibilities under Alternatives 3A, 3B, 4A, and 4B are expected to be similar to the current costs of NMFS administering the 2006 EFP was about $12,000 or about $300 per permit. These costs include NMFS review, database programming, and administrative costs. Under Alternative 5, the cost to the vessel to obtain a limited entry permit and whiting endorsement are the same costs identified for Alternatives 3A, 3B, 4A, and 4B plus the costs to participate in mandatory pre-season meetings and the cost of reporting on high bycatch areas. Similar to Alternative 2, the cost to attend mandatory pre-season meetings is the time needed to participate as well as the cost of travel, which will vary between individuals. To obtain a whiting endorsement, vessels owners/permit holders would need to agree to providing high bycatch area reports as necessary.

*Reporting requirements:* Under each of the alternatives, processors in the states of Washington and California would continue to complete and submit the required paper fish tickets on forms as required by the state of landing. In the State of Oregon, processors would either complete paper fish ticket forms provided by the state, or computer generated tickets providing they contain all data fields specified in state law. State requirements for fish ticket submissions would not be changed under any of the proposed alternatives.

On April 9, 2007 (72 FR 17469) NMFS published a proposed rule to establish catch accounting requirements for persons who receive, buy, or accept Pacific whiting (whiting) deliveries of 4,000 pounds (lb) (1.18 mt) or more from vessels using mid-water trawl gear during the primary whiting season. A final rule was published on May XX 2007, (72 FR XXXXX) with the requirements becoming effective on June XX, 2007. The rulemaking included requirements for processors/first receivers to have and use a NMFS-approved electronic fish ticket program (or other NMFS-approved software) and to send daily catch reports to the PSMFC. The electronic fish tickets are used to collect information similar to the information currently required in state fish receiving tickets or landing receipts (state fish tickets). The daily reports will be used to track catch allocations, bycatch limits and prohibited species catch. First receivers provide the computer hardware, operational software (Microsoft Office with Access 2003 or later if PSMFC software is used), and internet access necessary to support the electronic fish ticket program and daily e-mail transmissions. For companies that have developed their own software programs that meet the reporting requirements, provisions were included to allow the software to be NMFS-approved if the software meets specific requirements specified by PSMFC. Electronic fish tickets must be submitted within 24 hours from the date the catch is received.

The electronic fish ticket reporting requirements that are currently in place would remain in place under Alternatives 2, 3A, 3B, 4A , 4B and 5. Under Alternative 5, an additional daily report would be required by email or fax. The daily report would specify the catch weight of whiting and bycatch limits species and the number of Chinook salmon. Because electronic fish ticket data must be submitted within 24 hours of the time the catch was landed, rather than daily, electronic fish ticket data for some deliveries may not be submitted until almost two days after the catch was landed and available to managers shortly thereafter. The report required under

Alternative 5 would provide more rapid reporting on those groundfish species (Pacific whiting, canary, widow and darkblotched rockfish) that NMFS is authorized to take automatic action on, however it also increases the reporting burden on processors/first receivers.

There are approximately 1,200 discrete Pacific whiting primary season deliveries each year, with approximately 400 of the deliveries occurring in Washington and California and the remaining 800 occurring in Oregon. The NMFS-approved electronic fish tickets contain the same types of information as is required to be submitted on state fish tickets. In the States of California and Washington, current state law requires that state fish tickets be reported on standard paper forms provided by the states. In Oregon, the information required to be reported on a state fish ticket is specified in state law and may be submitted either on a paper fish ticket provided by the state or on a computer-generated ticket. Entering the required information into the NMFS-approved electronic fish ticket is expected to take eight minutes per ticket, including the time necessary to check transcription errors. The time required to access the internet and send the data files is two minutes per ticket. The burden on processors in Washington and California to submit electronic fish tickets is estimated to be ten minutes per electronic fish ticket submission, and includes the time to enter the data and the time to submit the data. A total cumulative of 67 hours would be required annually for all processor/first receivers in Washington and California to submit electronic fish tickets. For processors in the State of Oregon, the additional burden is only the time it takes to send the electronic fish ticket (two minutes per submission), since the state laws already requires that the information be gathered and allows the submission of a printed and signed electronic formats. For processors in the State of Oregon, a total of 27 hours is expected to be required annually for the submission of electronic fish tickets.

In total, Pacific whiting processors in all three states are estimated to take 93 hours annually to prepare and submit electronic fish tickets under Alternatives 2, 3A, 3B, 4A , 4B and 5. Each additional daily catch reports required under Alternative 5 is estimated to take five minutes to prepare and two minutes to send. For fourteen processors/first receivers over a 60 day season, it would require an additional 98 hours of time to prepare and send the daily reports, plus the time to send the electronic fish ticket. The total hours for all reporting under Alternative 5 is 191 hours per year for all processors/first receiver (14 hour per respondent under Alternative 5 as compared to seven hours per respondent under Alternatives 2, 3A, 3B, 4A, and 4B).

Table 4.3.1.3. Total Annual Burden Hours for the Submission of Reports

| **Electronic Fish Tickets** | **Total Annual Responses** | **Time per Response** | **Total Time (Hrs)** |
|---|---|---|---|
| **Alternatives 2, 3A, 3B, 4A ,and 4B -Electronic fish tickets** | | | |
| Transcribe information to electronic fish ticket | 400 | 8 minutes | 53 |
| Send electronic fish ticket via email | 1200 | 2 minutes | 40 |
| TOTAL: | | | 93 |
| **Alternative 5 - Electronic fish tickets and daily catch report** | | | |
| Transcribe information to electronic fish ticket | 400 | 8 minutes | 53 |
| Send electronic fish ticket via email | 1200 | 2 minutes | 40 |
| Time to prepare report | 840 | 5 minutes | 70 |
| Send daily catch report via email or fax | 840 | 2 minutes | 28 |
| TOTAL: | | | 191 |

Software for electronic logbooks has not been developed specifically for the Pacific whiting fishery. However, general fishery logbook software is available for some Vessel Monitoring

Systems (VMSs). When electronic vessel logbook software that is suitable to document effort data and for reporting discard events in the Pacific whiting fishery becomes available, it could be implemented through a subsequent rulemaking under Alternatives 3A, 3B, 4A, 4B and 5. The specific details of an electronic vessel logbook, or the costs to the individual vessel, is unknown at this time.

Accuracy of fish ticket weights is an important component of the Pacific whiting shoreside monitoring program. Under Status Quo, all catch is delivered in unsorted deliveries and fish ticket weights are summed to determine the total catch of each species or species group. This is in contrast to the mothership and catcher processor sectors of the Pacific whiting fishery, where catch is sub-sampled and sample weights are extrapolated to the individual haul and summed to derive total catch estimates. Using fish ticket weights for total catch in a maximized retention program or full retention fishery is considered to be a census because all catch is weighed. In general, a census is considered to be most accurate because the understanding of total catch is not dependent on how well the samples represent what was actually caught. However, data quality is paramount to the accuracy of any census. We assume that the weights reported on fish tickets in the Pacific whiting fishery are relatively accurate; however, accuracy of total catch could be significantly affected by inaccurate weights or scale readings, improperly sorted catch, and, recording errors .

The level of accuracy in fish ticket weights needed to manage OYs, allocations, harvest guidelines, and bycatch limits in the Pacific whiting shoreside fishery varies by species. In general, large volume species, such as Pacific whiting, that are managed to the nearest metric ton have much more tolerance for error in weight estimates than species such as canary rockfish, which is managed to the nearest $10^{th}$ of a metric ton. On the other hand, prohibited species, such as salmon, crab and Pacific halibut are reported and managed by number rather than weight. Therefore, the need for accurate scale readings for these species is not as important in the Pacific whiting fishery.

Methods used to derive fish tickets values can vary in accuracy. For most shoreside facilities, Pacific whiting deliveries are sorted and the catch is weighed on commercial scales that vary in type and performance. As described in Section 3.3.2, each state has laws and regulations that pertain to the use of scales and scale performance used by businesses for commercial purposes. Each state has an agency (county or state) that oversees weights and measures standards and conducts or oversees scale performance testing for commercial scales. Commercial scale requirements and how those requirements apply to seafood processors and fish tickets differs substantially between states.

Under Alternatives 1 and 2, each processor is required to meet the existing state requirements described in Section 3.3.2 of this EA and as they apply to seafood processors. Currently, only the State of Oregon specifies the methods that can be used to derive fish ticket weights for each species received (only sablefish is specified for all three states). In Oregon, fish ticket weights may be determined using: actual round weights based on certified scale measurements; actual round weights measured using a hopper scale; or weights converted to round weight by multiplying the appropriate conversion weight. The State of Washington requires all commercial scales to: be tested and have a NTEP certificate of compliance if installed after 1997, be installed according to manufactures requirements, have security seals, be registered

with the Washington State Department of Licensing, be maintained, and be suitable for intended use. However, Washington State Code does not specifically require that fish tickets be completed with weights derived from a scale that is in compliance with weights and measures regulations. The State of California has very broad-reaching and detailed requirements for scales used for commercial purposes. However, at the time this document was prepared it was unclear if California code excludes seafood processors from the requirements. Fish ticket weights submitted to the State of California must use accurate weights, for groundfish species the weights are not required to be derived from scales.

Provisions would be added under Alternatives 3A, 3B, 4A, 4B or 5 that would reinforce in Federal regulation the need for processors to be in compliance with existing state standards and requirements as they apply under Status Quo; require that actual weights derived from scales be used on fish tickets; and that the weights used on fish tickets be derived from scales appropriate to the amount being weighed. Having Federal scale performance and testing requirements concur with state requirements may improve the degree to which state requirements are followed by processors.

*Monitoring Pacific whiting shoreside vessels at-sea:* Currently observer programs in the Pacific coast groundfish fishery use two types of funding mechanisms: Federally funded observers and third-party or pay-as-you go observers. The WCGOP is federally funded and currently provides observer coverage in the limited entry and open access non-whiting fisheries. Federal funds are used to run the program infrastructure (training, debriefing, and data management) and to hire, equip, insure, and transport observers. Observers are employed by the PSMFC, through a Federal contract. The third-party or pay-as-you-go funding approach is currently used in the mothership and catcher processor sectors of the Pacific whiting fishery. In the Federally regulated third-party system used in the Pacific whiting fishery, participants are responsible for: making arrangements with a NMFS-permitted observer provider; having an observer available for their vessels; and, paying the observer providers directly for the observer costs. The NMFS-permitted observer providers collect the fees directly from the vessels, recruit qualified individuals, provide insurance and benefits to the observers, deploy the observers, and assure that the observer data is delivered to NMFS. Federal funds are used to run the program infrastructure (training, debriefing, and data management) and to equip the observers.

Under Alternative 3A, NMFS would use Federal funds to provide at-sea observers for monitoring Pacific whiting shoreside vessels. However, all existing Federal funds for observers are currently being used to run the existing WCGOP. Therefore, under Alternative 3A WCGOP observers would be used to provide coverage for the Pacific whiting shoreside fishery. Selection of vessels for observer coverage would likely be similar to that described under Alternative 1, where the WCGOP would include the Pacific whiting vessels in the same coverage pool as all non-whiting trawl fisheries. In the non-whiting or bottom trawl fisheries, vessels are randomly selected from the pool of all trawl vessels. Because existing resources are limited, using WCGOP observers to provide coverage for Pacific whiting shoreside vessels would reduce the coverage levels in the non-whiting trawl fisheries below recent coverage levels during the summer months.

In July 2006, the WCGOP had 23 observers working year round and approximately twenty additional observers from March through October (NMFS July 2006). WCGOP coverage levels in the non-whiting groundfish fisheries for 2005 are shown in Tables 4.4.1 and 4.4.2. The WCGOP uses a stratified random selection process to select vessels for observer coverage. Vessel must carry an observer on all trips during the cumulative period. This approach allows for representative coverage of a fishery throughout its geographic range. The number of fisheries covered varies by year and with funding. Limited entry trawl has the highest priority for coverage.

While there would be no direct salary cost to industry for WCGOP observers under Alternative 3A, vessels would need to make coverage arrangements and provide food and accommodations for the observers. In addition, some vessels may choose to purchase additional insurance during the observer's time on board their vessel. The average daily cost for meals for an observer is $15/day (NPFMC 2005). Because a selected vessel would be required to carry the observer throughout the whiting season, it is estimated to cost each selected vessel approximately $900 per season for observer meals, assuming a 60 day season. Information necessary to estimate the value of accommodations is not available. The burden on an individual vessels is expected to vary between vessels with the cost being highest for those vessel where crew are displaced because there is lack of extra bunk space. If WCGOP targeted a twenty percent observer coverage[6] level for the Pacific whiting shoreside fishery, the cost to the fleet is estimated to be approximately $6,840 per year (assumes 38 vessels per year). When compared to the revenue from whiting in 2006 (Table 3.3. 1.1) this is 0.05 percent of the exvessel value of the fishery. If WCGOP targeted a 100 percent observer coverage observer level for the Pacific whiting shoreside fishery, the cost to the fleet is estimated to be approximately $34,200 per year (assumes 38 vessels per year). When compared to the revenue from whiting in 2006 (Table 3.3. 1.1) this is 0.27 percent of the exvessel value of the fishery. To attain 100 percent coverage, the WCGOP would have to dedicate 75 percent of its observer resources to the Pacific whiting shoreside fishery during the summer months, severely reducing the coverage in other groundfish fleets.

Under Alternative 3B, vessel owners or operators would be required by regulation to procure the services of an observer from a NMFS permitted observer provider. NMFS believes that full observer coverage (projected to be one observer per vessel on all fishing days) would be required to adequately monitor compliance with the maximized retention requirements. The average daily cost for a third-party observer is $330/day including food, but not including travel (NPFMC 2005). In addition, some vessels may choose to purchase additional insurance during

[6] This document does not analyze using existing Federally funded WCGOP observers at coverage levels that are greater than coverage levels in the non-whiting trawl fisheries to monitor maximized retention at sea. The sampling priorities for WCGOP observers deployed to trawl vessels are to collect data that are used for total catch estimates of each groundfish species or species group over the entire fishing year, and to collect fishery dependent biological data that are otherwise not available on shore. To require greater observer coverage would have a direct effect on the ability of the WCGOP to monitor catch in other fisheries and to meet Magnuson-Stevens Act mandates. In addition, a maximized retention program with less than 100 percent of the hauls being monitored at sea is not considered viable. See section 2.3 for further discussion.

the observer's time on board their vessel. Information necessary to estimate the value of accommodations is not available. The burden on an individual vessel is expected to vary between vessels, with the cost being highest for those vessel where crew are displaced because of a lack of extra bunk space. Because a vessel would be required to carry the observer throughout the whiting season, the estimated cost for a vessel to carry an observer is $24,750 per season, assuming a 60 day season, 15 days for training and debriefing, and no additional insurance. The cost to the fleet is estimated to be approximately $940,500 (assumes 38 vessels per year and a 60 day season). When compared to the revenue from whiting in 2006 (Table 3.3. 1.1,) this is 7.52 percent of the exvessel value of the fishery.

Under Alternative 5, vessels would be required to carry a WCGOP observer if needed. The need for an observer would be determined by NMFS on a case-by-case basis. Similar to Alternative 3A, there would be no direct salary cost to industry for WCGOP; however, vessels would need to make coverage arrangements and provide food and accommodations for the observers. In addition, some vessels may choose to purchase additional insurance during the observer's time on board their vessel. The average daily cost for meals for an observer is $15/day (NPFMC 2005). If a vessel was required to carry the observer throughout the whiting season, it is estimated to cost each vessel approximately $900 for meals for the observer, assuming a 60 day season. Under existing regulations, NMFS already has the authority to place observers on any Pacific whiting shoreside vessels when it is determined to be necessary. The cost to carry a WCGOP observer under Alternative 5 is therefore similar to Alternatives 3A, 3B, 4A, and 4B.

Under Alternative 4A, 4B, and 5, EMS coverage requirements would be specified in Federal regulation. EMS would be installed on vessels in the Pacific whiting shoreside fishery to monitor compliance with maximized retention regulations. EMS has been successfully used to document retention and discard of catch in the Pacific whiting shoreside fishery since 2004. As described in Section 3.3.2, EMS is a data collection tool that uses a software operating system connected to an assortment of electronic components, including video recorders, to create a data collection of vessel activities. The EMS is designed to independently monitor vessel fishing activities and provide accurate, timely, and verifiable data. Because EMS would be used as a compliance monitoring tool, NMFS believes it is necessary for 100 percent of the Pacific whiting trips to be monitored.

The cost of EMS can be broken into two major components: the cost of the physical system and the cost of data analysis, summary and release. As has been the case under EFPs (Alternative 2), under each of the alternatives that considers EMS (Alternatives 4A, 4B and 5), NMFS would continue to be responsible for the costs associated with the data including, analysis, summary and release. The costs associated with the physical system include: the cost to lease the EMS unit (includes installation, maintenance, data downloads, and removal), the time to have the EMS unit installed and removed, and the time for data to be removed.

Because no money has been specifically appropriated for the implementation of an EMS monitoring program in the Pacific whiting shoreside fishery, under Alternative 4A, NMFS would use existing WCGOP funds to lease the EMS physical equipment as well for data analysis and EMS summary. Given the need to use WCGOP funds for observer coverage in non-whiting

groundfish fisheries, this would impact the ability to provide observer coverage in the non-whiting groundfish fisheries. Supporting the entire EMS program would reduce both WCGOP funding and staffing resources focused on the non-whiting fisheries by 7-10 percent.

As noted above, NMFS believes that full at-sea coverage of Pacific whiting shoreside vessels is necessary to effectively deter discarding at sea. Reducing EMS coverage would likely result in more restrictive management due to bycatch concerns, especially give the ESA Biological Opinion monitoring requirements, than is currently in place for the fishery.

Under Alternatives 4B and 5, vessels would be responsible for costs associated with the EMS physical system. Full coverage would be required on all Pacific whiting fishing trips and vessels would be required to lease EMS services from a NMFS-permitted service provider. One company, Archipelago Marine Research, Ltd., which has extensive experience with using EMS to monitor fishing fleets in British Columbia, was selected through an open bid process to provide EMS services for the Pacific whiting shorside fishery EFPs during the 2004-2007 seasons. During the 2004-2006 seasons, the costs of the EMS physical systems for approximately 30 vessels over a 60 day fishing season ranged from $160,000 to $180,000. When implemented, regulations specifying the qualification criteria for EMS permitted service providers may lead to other companies developing suitable EMS. If this occurs, the competition may lead to reduced costs.

When distributed across the fleet, the fleet could choose to approach the cost of EMS in a number of ways including: a flat fee per vessel, a percentage of each vessel's landings, a combination of a lower flat fee with a percentage of landings, etc. Regardless, the cost on a per vessel basis is expected to decrease if the participating vessels approached a provider of qualified EMS as a group rather than as individual vessels. For example, a group could negotiate a group price that could be paid up front and if the overall maintenance of the systems cost less than estimated, some cost could be refunded to the group on a pro-rated basis at the end of the season. As discussed above, the cost to the individual vessel for the physical system under Alternatives 4B and 5B could vary depending on the approach that the fleet chooses. As a rough guide, if a flat fee per vessel scenario were used during the 2004-2005 seasons, the per vessel cost would have ranged from 5,333 to $6,000 ($160,000/30 vessels- $180,000/30 vessels). When compared to the revenue from whiting in 2006 (Table 3.3. 1.1) this is 1.28-1.44 percent of the exvessel value of the fishery.

In addition to the direct costs of EMS vessels, under Alternatives 4A, 4B or 5, vessels would be required to provide additional crew and skipper time to aid in the installation and removal of the EMS system. The estimated time is on a per vessel basis and assumes the vessel crew is readily available to turn hydraulic and electrical systems on and off during installations and/or repairs, the vessel is prepared for sensor installation (pressure fitting for hydraulic sensor installed), it is a typical EMS set-up, the system repair is due to normal wear and tear, downloads are done intermittently throughout the season and coaxial cables are capped and left in place. It takes two to six hours per vessels to install an EMS. During the season, on average, two to ten hours per vessel are needed to repair an EMS repair, during which crew may be needed to help troubleshoot the EMS integration with vessel electrical and hydraulic systems. Access to the

vessel to download the collected data is also needed. While the data download takes two to four hours per season per vessel, crew only has to provide access to the location of the EMS data box and does not have to be available during the entire download. Lastly, to remove the EMS at season's end takes one to two hours per vessel, during which time the crew must provide access to contract staff.

*Monitoring Pacific whiting shoreside processors/first receivers*: Each of the alternatives considers using individuals who collect catch data at the Pacific whiting shoreside processing facility. These individuals include: port biologists, plant monitors/industry monitors/industry samplers, federal observers, third-party observers, data quality monitors and data compliance monitors.

Port samplers are biological aides who are employed by the states or PSMFC and trained in interviewing fishermen, species identification, recordkeeping, and summarizing basic field data. Under Alternatives 1, 2, 3A, 3B, 4A and 4B, existing port samplers would continue to have a data collection role, though the role of the port sampler varies somewhat between the alternatives and between states. The continued use of port samplers would not result in added costs to fishery participants over the Status Quo Alternative. However, minor increases may be needed by individual states to maintain adequate biological sampling.

Plant monitors/industry monitors/industry samplers (industry samplers) are individuals directly employed by the processors who have basic training in biological data collection and species identification and who collect basic biological information on the catch and catch composition. Under the Status Quo Alternative (Alternative 2), the State would continue to hire, train, and pay for port biologists to: collect fish ticket data; complete landing summaries, and collect biological data; and verify salmon counts. Additional port samplers may also be funded by the PSMFC. In the State of Oregon, industry samplers would continue to be used to take species composition data, and to collect biological data from groundfish. The average annual cost to the individual processor for providing an industry sampler increased from $4,649 per season in 2000 to $5,400 per season in 2005 (Table 4.3.1.4). Under Alternative 2, the projected cost per processor is $5,400 per season for a processor in the state of Oregon. The cost to the industry under Alternative 2 is $27,000, since as industry samplers would continue to be used in Oregon while port biologists would collect similar data in Washington and California.

Under Alternative 5, dockside monitoring at Pacific whiting shoreside facilities would be conducted by two different types of individual, data compliance monitors and industry monitors/industry samplers. Industry samplers under Alternative 5 would collect data at processors/first receivers in all three states. Prior to the season, industry samplers receive basic training in biological data collection and species identification. These individuals would be responsible for observing vessel offload, conducting bycatch species composition, enumerating and storing prohibited species, retrieving salmon snouts and other coded wire tag, transporting prohibited species for food bank donation, and collecting biological information for Pacific whiting and for predominant bycatch species. Using costs identified under Alternative 2, the cost per processor would be approximately $5,400 per season. The cost to the fleet under Alternative 5, assuming 14 processors/first receivers annually, is $75,600.

Table 4.3.1.4 Annual costs for industry samplers by Pacific whiting processors in Oregon, 2000 - 2005. (data from Nottage and Parker 2005)

| Year | Annual cost paid directly by industry for samplers a/ ($) | Number of Processors in Oregon | Days in season | Cost per processor ($) | Cost per day per processor ($) |
|---|---|---|---|---|---|
| 2000 | 32,544 | 7 | 93 | 4,649 | 50 |
| 2001 | 35,770 | 7 | 68 | 5,110 | 75 |
| 2002 | 29,808 | 6 | 33 | 4,968 | 151 |
| 2003 | 29,808 | 6 | 30 | 4,968 | 166 |
| 2004 | 27,000 | 5 | 61 | 5,400 | 89 |
| 2005 | 27,000 | 5 | 65 | 5,400 | 83 |
| a/ During 2006 processor samplers were roughly paid an average of $11.25 per hour | | | | | |

Observers are biological technicians, educated in the natural sciences, trained in species identification and biological sampling. They collect catch and effort data used to estimate total catch. Alternatives 3A (WCGOP observers) and 3B (third-party observers) consider using observers to collect data that could be used for verification of fish tickets or used to evaluate the accuracy of fish tickets after the season. While there would be no direct salary cost to industry for WCGOP observers under Alternative 3A, processors would need to make coverage arrangements for the observers and provide adequate accommodations for sampling, including access to the catch and a dedicated sampling station. The cost to provide the necessary accommodations is expected to vary between processors. To provide 100 percent coverage (one observer per processor), 14 observers would be needed during the summer months. When combined with WCGOP observers deployed on vessels, having this number of individuals dedicated to the Pacific whiting shoreside fishery would require dedication 50 to 100 percent of all WCGOP resources.

Under Alternative 3B, processors would be required by regulation to procure the services of an observer from a NMFS- permitted observer provider. One observer would be required at each Pacific whiting processing facility. The average daily cost for a third-party observer is $315/day not including food, accommodations or travel (NPFMC 2005). Because a processor would be required to have one observer throughout the whiting season the estimated cost per processor for an observer is $23,626 per season ($18,226 greater than the Status Quo Alternative), assuming a 60 day season, with 15 days for training and debriefing. The cost to all processors is estimated to be approximately $330,750 (assumes 14 processors per year). When compared to the revenue from whiting in 2006 (Table 3.3. 1.1) this is 2.64 percent of the exvessel value of the fishery.

Under Alternative 4A, NMFS would use Federally appropriated funds to monitor Pacific whiting deliveries at the shoreside processing facilities. At this time, there are no Federal funds

specifically appropriated for catch monitors for Pacific whiting shoreside processors. Therefore, a Federally funded program would use observers as catch monitors unless other funds became available. Therefore, the costs to fisher participants for Alternative 4A is the same as Alternative 3A.

Alternative 4B considers using data quality monitors. Data quality monitors are third party employees paid for by industry and trained by NMFS in techniques used for the verification of fish ticket data. These individuals would be trained in: species identification; observation and sub-sampling techniques relative to the verification of fish ticket data; the types and use of commercial scales; documentation procedures for compliance purposes; and recordkeeping. NMFS would define verification methods and would coordinate or conduct the training of these individuals. One data quality monitor would be required at each Pacific whiting processing facility receiver. Processors would be required by regulation to procure the services of a data quality monitor from NMFS-approved provider, such as PSMFC. The average daily cost for data compliance monitor is estimated to be between $200 and $300 per day including travel, benefits and supplies (Dave Colpo PSMFC pers. com). Because a processor would be required to have the data quality monitor throughout the Pacific whiting season, the estimated cost per processor is between $12,000 and $18,000 per season, assuming a 60 day season. The cost to all processors is estimated to be approximately $168,000 and $252,000 (assumes 14 processor per year). When compared to the revenue from whiting in 2006 (Table 3.3. 1.1) this is 1.34 percent of the exvessel value of the fishery.

Alternative 5 considers using data compliance monitors along with industry samplers. Data compliance monitors are standards inspectors that are employed by independent third parties. These individuals are trained in the types and use of commercial scales, species identification, recordkeeping, and non-compliance. Data compliance monitors observe weighing and sorting activities as well as the activities of industry samplers. One data quality monitor would be required at Pacific whiting processing facility/first receiver. Processor would be required by regulation to procure the services of a data quality monitor from NMFS-approved provider, such as PSMFC. The average daily cost for data compliance monitor is similar to the cost described above for data quality monitor under Alternative 4B.

*Overages:* Overages are the amounts of fish harvested by a vessel in excess of the applicable trip limit. Overages include non-whiting groundfish catch and prohibited species that cannot be sold by the vessel. Under Alternative 1, there are no allowances for landing overages. Therefore, all overage fish would need to be discarded at sea. The cost of Alternative 1 to the industry is the added cost to sort the catch at sea and the reduced value of the whiting catch if sorting reduces its quality. Most Pacific whiting shoreside fishers prefer to quickly and efficiently handle the catch and place it into the refrigerated salt water tanks as quickly as possible so they can return to port for offloading. Under a primary season structure, vessels that are quick and efficient are able to harvest more catch before the allocation is reached than vessels that take more time to handle the catch. Adequately sorting catch at sea is expected to require many hours of deck sorting, where the crew stays on deck to look through the catch before it flow into the holds. It is reasonable to expect that holding whiting on deck in the codend for hours could decrease the quality and value of the catch. However, in 2006, a single

shoreside vessel with history in the whiting fishery found a profitable way to partially process headed and Gutted Pacific whiting at sea. The vessel used a smaller net and tows of short duration to maintain quality. Head and gut machines were used at sea and the product immediately placed in thick slurry of ice. Because fish that are headed and gutted with no further processing (such as freezing) are not considered to be a processed product, the vessel's activities does not result in its activity being that of a catcher/processor. The ex-vessel price of the partially processed catch was approximately four times than whiting landed whole in unsorted EFP landings.

Under the EFP structure (Status Quo), vessels have been allowed to land the unsorted catch providing that they abandon the catch in excess of trip limits and prohibited species catch to the state of landing. The processors are allowed to process the marketable catch excluding salmon and Pacific halibut, but they must pay the state of landing fair market value for the catch. Fair market value is defined differently by each state. Prohibited species catch must be donated to a nonprofit food bank. Under Status Quo (Alternative 2), each state would be responsible for the distribution, tracking, sales of marketable overage fish. How overages are handled would likely vary between states. Salmon and Pacific halibut must be donated to a legitimate hunger relief agency. Port biologists and industry samplers transport donated catch to the hunger relief agencies. Because Alternative, 3A, 4A, and 5A would continue to require catch to be abandoned to the state of landing under the same structure that is in place with the Status Quo Alternative, there is no expected change for industry participants.

Under Alternatives 3B, 4B, and 5B, Federal regulations would prohibit the sale of overage fish and prohibited species. Overage fish and prohibited species could be donated to a hunger relief organization; however, many hunger relief organizations do not accept whole fish. Therefore, processors would need to partially process the catch or dispose of it in another manner, such as donating the catch for rendering. Under Alternative 3B, processors would be responsible for transporting donation catch. Under Alternatives 4B and 5B, industry samplers would transport donation catch. The cost of transporting the catch would be the processor's responsibility.

Under Alternatives 2, 3A, 3B, 4A, 4B and 5 there is a cost associated with port biologists and industry samplers transporting donated catch to hunger relief agencies. Under Alternatives 3A, 4A, and 5A there is a cost to the states process payment received from catch that was abandoned. However, the cost to process overage payments is offset by the revenue from the sale of the marketable catch. At this time data necessary to estimate the value of overage catch or the cost of transporting the catch to hunger relief agencies is not available.

*Impact on participants in the directed Chinook fishery*: There are no direct short-term consequences or implications for the directed Chinook fisheries under the Status Quo Alternative (Alternative 2). The consequences or implications under Alternatives 3B, 4B, and 5 are expected to be similar to the Status Quo Alternative. The groundfish and salmon fisheries are subject to separate regulations and ESA-related standards. When the groundfish fishery exceeds the consultation standard, consultation is reinitiated to examine why the standard was exceeded and changes that NMFS believes are necessary and appropriate to bring the fishery back in line are implemented. For the long term, and in a more general sense, if the status of one

or more ESA-listed species continues to deteriorate, all activities are subject to review and further constraint. As salmon fisheries become increasingly restricted, other activities, including the groundfish fisheries, will be subject to further scrutiny, and could be subject to further constraint.

The Pacific whiting shoreside fishery needs to have an adequate monitoring and catch reporting system in place to track the incidental take of Chinook salmon as required in the ESA Section 7 Biological Opinion for Chinook salmon catch in the Pacific whiting fishery. The whiting fishery must be closely monitored to provide reasonable assurance of continued compliance with efforts to reduce bycatch. Under Alternative 1, Chinook catch in the whiting fishery would not be adequately monitored as specified under the ESA Biological Opinion . Under Alternatives 3A and 4A, it si likely that the level of monitoring is not adequate, therefore the Biological Opinion would need to be reviewed.

*4.3.2 Changes in Fishery Revenue*

There is no direct change in revenue from Alternatives 3A, 3B, 4A, 4B and 5 over Status Quo (Alternative 2). Indirect impacts could occur if catch monitoring and accounting difficulties resulted in the Pacific whiting shoreside fishery no longer being managed under a bycatch limit management strategy. In March of every year, the PFMC recommends harvest specifications for the Pacific whiting fishery that NMFS adopts into regulation. If it's determined that the bycatch limits of overfished species cannot be adequately managed, it may be necessary to take a more conservative approach when establishing the Pacific whiting shore-based allocation. A more conservative approach would be to restrict overall Pacific whiting harvest based on projected bycatch of overfished species, as is done in the bottom trawl fishery. In 2006, had the Council recommended that the whiting allocation be restricted by overfished species bycatch like the bottom trawl fishery, the Pacific whiting OY would have been constrained by a projected catch of 4.7 mt of canary rockfish. This would have resulted in a U.S. Pacific whiting OY of 234,331 mt as compared to the OY of 267,662 mt that was adopted (based on the 2006 GMT whiting fishery bycatch model). The shore-based allocation would have been 83,929 mt rather than 97,718 mt, 13,789 mt less than what was available to the fishery under the bycatch limit management approach.

Table 4.3.2.1 Change in Whiting revenue when OY is constrained by projected overfished species catch. (based on the 2006 GMT whiting fishery bycatch model)

| US Whiting | Change in Exvessel | Bycatch Implications | | | | | |
|---|---|---|---|---|---|---|---|
| OY | Revenue | Canary | Darkblotched | Lingcod | POP | Widow | Yelloweye |
| 300,000 | $34,819,768 | 7.8 | 18.3 | 3.1 | 7.1 | 143.7 | 0.0 |
| 250,000 | $28,977,525 | 6.5 | 15.0 | 2.6 | 5.9 | 118.4 | 0.0 |
| 200,000 | $23,135,282 | 5.2 | 11.9 | 2.1 | 4.7 | 94.0 | 0.0 |
| 150,000 | $17,293,039 | 4.0 | 8.6 | 1.5 | 3.5 | 68.7 | 0.0 |
| 100,000 | $11,450,796 | 2.7 | 5.6 | 1.0 | 2.3 | 45.2 | 0.0 |

Table 4.3.2.2 Change in Whiting revenue by sector when OY is constrained by projected overfished species catch. (based on the 2006 GMT whiting fishery bycatch model)

| US Whiting | | | Bycatch Implications | | | | | |
|---|---|---|---|---|---|---|---|---|
| OY | Sector | Exvessel Rev | Canary | Darkblotched | Lingcod | POP | Widow | Yelloweye |
| 300,000 | Tribal | $4,089,570 | 1.6 | 0.0 | 0.2 | 0.6 | 6.0 | - |
| | Mothership | $7,375,248 | 3.8 | 5.3 | 0.7 | 1.1 | 32.6 | 0.0 |
| | CP | $10,448,267 | 0.8 | 7.1 | 0.4 | 3.3 | 56.7 | 0.0 |
| | Shoreside | $12,906,683 | 1.6 | 5.9 | 1.9 | 2.0 | 48.3 | 0.0 |
| | Total | $34,819,768 | 7.8 | 18.3 | 3.1 | 7.1 | 143.7 | 0.0 |
| 250,000 | Tribal | $3,797,458 | 1.5 | 0.0 | 0.2 | 0.6 | 5.6 | - |
| | Mothership | $6,043,216 | 3.1 | 4.3 | 0.6 | 0.9 | 26.7 | 0.0 |
| | CP | $8,561,223 | 0.7 | 5.8 | 0.3 | 2.7 | 46.5 | 0.0 |
| | Shoreside | $10,575,628 | 1.3 | 4.8 | 1.5 | 1.6 | 39.6 | 0.0 |
| | Total | $28,977,525 | 6.5 | 15.0 | 2.6 | 5.9 | 118.4 | 0.0 |
| 200,000 | Tribal | $3,213,234 | 1.2 | 0.0 | 0.1 | 0.5 | 4.8 | - |
| | Mothership | $4,781,292 | 2.5 | 3.4 | 0.5 | 0.7 | 21.2 | 0.0 |
| | CP | $6,773,497 | 0.5 | 4.6 | 0.2 | 2.2 | 36.8 | 0.0 |
| | Shoreside | $8,367,260 | 1.0 | 3.8 | 1.2 | 1.3 | 31.3 | 0.0 |
| | Total | $23,135,282 | 5.2 | 11.9 | 2.1 | 4.7 | 94.0 | 0.0 |
| 150,000 | Tribal | $2,921,122 | 1.1 | 0.0 | 0.1 | 0.5 | 4.3 | - |
| | Mothership | $3,449,260 | 1.8 | 2.5 | 0.3 | 0.5 | 15.3 | 0.0 |
| | CP | $4,886,452 | 0.4 | 3.3 | 0.2 | 1.6 | 26.5 | 0.0 |
| | Shoreside | $6,036,205 | 0.7 | 2.8 | 0.9 | 0.9 | 22.6 | 0.0 |
| | Total | $17,293,039 | 4.0 | 8.6 | 1.5 | 3.5 | 68.7 | 0.0 |
| 100,000 | Tribal | $2,044,785 | 0.8 | 0.0 | 0.1 | 0.3 | 3.0 | - |
| | Mothership | $2,257,443 | 1.2 | 1.6 | 0.2 | 0.3 | 10.0 | 0.0 |
| | CP | $3,198,044 | 0.2 | 2.2 | 0.1 | 1.0 | 17.4 | 0.0 |
| | Shoreside | $3,950,525 | 0.5 | 1.8 | 0.6 | 0.6 | 14.8 | 0.0 |
| | Total | $11,450,796 | 2.7 | 5.6 | 1.0 | 2.3 | 45.2 | 0.0 |

### *4.3.3 Changes in Management of the Fishery*

The ability to manage overfished species bycatch limits in the Pacific whiting fishery is impaired when the catch is sorted at sea prior to being delivered to the shoreside processor. When the catch is sorted at sea, the overfished species in excess of the trip limits are discarded. Therefore, the catch of species being managed with bycatch limits are not be captured on the fish tickets. Each of the alternatives other than the no-action Alternative, contains a provision that would define 4,000 lb as the amount per trip that defines targeting Pacific whiting or a Pacific whiting delivery. Prior to 2007, 10,000 lb of Pacific whiting per trip was used in the EFPs for defining targeted Pacific whiting trips and deliveries. Reducing the amount used to identify whiting deliveries is necessary to prevent vessels from targeting Pacific whiting and avoiding monitoring by landing less than 10,000 lb. This is particularly a concern under Alternatives 3B, 4B and 5 where vessels would be required to pay directly for monitoring costs.

Table 4.3.3.1. shows the number of deliveries that would be affected if the criteria for defining a Pacific whiting delivery by 10,000 lb and 4,000 lb per delivery and Table 4.3.3.2 shows the total

weight of whiting represented by each category of deliveries. Between 2002 and 2006, only one vessel would be excluded because it did not make a landing in excess of 10,000 lb in 2002.

**Table 4.3.3.1. Number of Midwater Trawl Pacific Whiting Deliveries by Year and Weight Group (PacFIN database, February 2007)**

| Year | Number <4000 lb | Percent <4000 lb | Number 4,000 lb-10,000 lb | Number 4,000 lb-10,000 lb | Percent >10,000 lb | Number 4,000 lb-10,000 lb | Total deliveries |
|---|---|---|---|---|---|---|---|
| 2002 | 234 | 18% | 299 | 22% | 797 | 60% | 1,330 |
| 2003 | 286 | 20% | 279 | 20% | 835 | 60% | 1,400 |
| 2004 | 272 | 12% | 521 | 23% | 1458 | 65% | 2,251 |
| 2005 | 216 | 9% | 471 | 20% | 1659 | 71% | 2,346 |
| 2006 | 168 | 8% | 338 | 15% | 1684 | 77% | 2,190 |

**Table 4.3.3.2. Total Weight in Metric Tons of Pacific Whiting in Midwater Trawls Deliveries by Year and Weight Group (PacFIN database, February 2007)**

| Year | Mt Whiting <4,000 lb | Percent <4,000 lb | Mt Whiting 4,000 lb-10,000 lb | Percent 4,000 lb-10,000 lb | Mt Whiting >10,000 lb | Percent >10,000 lb | Total deliveries |
|---|---|---|---|---|---|---|---|
| 2002 | 202 | 0.4% | 891 | 2% | 44,586 | 98% | 45,679 |
| 2003 | 234 | 0.5% | 799 | 2% | 50,187 | 98% | 51,220 |
| 2004 | 280 | 0.3% | 1,560 | 2% | 87,790 | 98% | 89,630 |
| 2005 | 185 | 0.2% | 1,486 | 2% | 95,904 | 98% | 97,575 |
| 2006 | 151 | 0.2% | 1,057 | 1% | 91,457 | 99% | 92,665 |

**Table 4.3.3.3. Total Weight in Metric Tons of All Species in Pacific Whiting in Midwater Trawls Deliveries by Year and Weight Group (PacFIN database, February 2007)**

| Year | Mt all species <4,000 lb | Percent <4,000 lb | Mt all species 4,000 lb-10,000 lb | Percent 4,000 lb-10,000 lb | Mt all species >10,000 lb | Percent >10,000 lb | Total deliveries |
|---|---|---|---|---|---|---|---|
| 2002 | 378 | 0.8% | 1,028 | 2% | 48,923 | 97% | 50,329 |
| 2003 | 377 | 0.7% | 844 | 2% | 50,309 | 98% | 51,530 |
| 2004 | 637 | 0.7% | 1,690 | 2% | 87,871 | 97% | 90,197 |
| 2005 | 552 | 0.6% | 1,704 | 2% | 96,204 | 98% | 98,460 |
| 2006 | 356 | 0.4% | 1,113 | 1% | 91,552 | 98% | 93,022 |

### *4.3.4 Changes in Cost to Management*

Under the Status Quo Alternative, the states would continue to sponsor and oversee EFP activities and NMFS would continue to issue annual EFPs. The cost of EFPs to NMFS are primarily the labor associated with: notifying the public that an EFP application has been received and that NMFS intends to issue the permits; drafting the terms and conditions of the permit; coordinating with the states; reviewing individual permit applications and working with applicants; and database updates. In addition, there are costs associated with purchasing supplies and mailing the EFPs. The estimated cost to NMFS for issuing the 2006 Pacific whiting shoreside EFPs is $13,000. The cost of the Status Quo Alternative to the states primarily include the labor for: preseason meetings, compiling individual permit applications, preparation of processor agreements and obtaining signatures. In addition, there costs associated with computers, supplies, and travel. The estimated cost to the states for issuing the 2006 Pacific whiting shoreside EFPs is approximately $2,000 (includes preparation, data entry, and assisting in permit issuance).

Under a Federal monitoring program (Alternatives 3A, 3B, 4A, 4B and 5) the task of inseason monitoring becomes solely a duty of NMFS, and is no longer shared with the states as has been the case under EFPs. The cost of inseason management to state agencies under the Status Quo Alternative are mainly the labor costs associated with: port biologist sampling, industry sampler training (Oregon only); collecting, compiling and analyzing inseason catch data; inseason reporting to NMFS; and preparation of post season summary reports. Under the Alternatives 3A, 3B, 4A, 4B and 5, NMFS would use existing electronic fish ticket data, VMS data, web sites and enforcement resources to monitor harvest in the fishery and to provide inseason reports. Existing resources would be used to the extent possible. However, existing federal staff may be needed to monitor, compile, and analyze inseason information from these systems, troubleshoot various issues, and develop inseason reports. With a shoreside season that ranges from April to August and with the expectation of the development of year-end reports, it is estimated that these activities will require a 0.5 GS 11 level FTE which roughly equates to in terms of salary and

benefits to about $40,000. The cost of reporting on high bycatch areas under Alternatives 2 and 5, vary greatly from year to year. During a year when there are few high bycatch events the cost is absorbed as part of every day responsibilities for the shoreside data analyst. During other years when high rates of chinook salmon or rockfish bycatch are encountered the high bycatch reporting task could take 0.25 FTE ($1,500) per month to as much as $12,000 if a lot of post season analysis is needed (pers. com. Saelens ODFW, 5/21/2007).

Under Alternative 3A, the cost of observers to NMFS remains unchanged as existing resources would be used. Under Alternative 3B, the cost to train, equip, and debrief an additional 52 observers (38 for vessels and 14 for processing facilities) for the Pacific whiting shoreside fishery is borne by NMFS, as well as the cost to process and analyze the additional data is estimated to be $190,000. The largest cost is due to the initial purchase of observer gear, including at-sea safety equipment. Once purchased, the cost would be reduce in subsequent years. Under Alternative 4A, the cost to train, equip, and debrief an additional 14 observers for Pacific whiting processing facilities is borne by NMFS, as well as the cost to process and analyze the additional data is estimated to be $23,000.

Under Alternatives 4B and 5, the cost of training, equipping and debriefing catch monitors (Alternative 4B), compliance monitors and industry samplers (Alternative 5) is borne by NMFS. Under Alternative 4B the cost to train, equip, and debrief 14 catch monitors for the Pacific whiting shoreside fishery is projected to be similar to those of observers in Alternative 4A; about $23,000. Under Alternative 4A the cost to train, equip, and debrief 14 compliance monitors and 14 industry samplers for Pacific whiting processing facilities is also similar to that of observers; about $23,000.

Under Alternatives 4B and 5 there are costs associated with permitting EMS service providers. The number of future providers is unknown at this time. To implement and oversee an EMS provider program over a three year period is estimated to cost NMFS $10,000, approximately $3,000 annually. These are costs based on an assumption that five businesses will apply for permits in the first year and one application will be received annually in each of the following years. The costs include assembling the application packages for review, having a five person review board undertake the review, and the development and maintenance of an EMS provider website.

*4.3.5. Pacific Whiting Communities*

Changes occurring under each of the alternatives are not likely to have an effect on Pacific whiting fishing communities over the Status Quo Alternative, given the minimal goods and service needed to support this alternative. Under the No Action Alternative (Alternative 1,) as well as 3A, and 4A, there is a potential for a more conservative management approach to be used if data are not adequate to support a bycatch limit approach. If this were to occur, it is likely that fewer Pacific whiting would be available to the processors and vessels home-porting in communities than would be available under Alternatives 2, 3B, 4B or 5 and this would reduce economic activity in those communities. A reduction in economic activity would translate into a reduced demand for support business that resides in those communities. Demand for

fishing-related services such as fabrication, net manufacture, and mechanical services would tend to be diminished because of less whiting available, less fishing effort needed to catch the available whiting, and less revenue being generated because of that reduced quantity.

Fishing communities along the west coast were recently categorized according to their level of resiliency and their level of dependence on fishing (see PFMC Amendment 16-4). In this analysis, all coastal communities engaged in the shorebased whiting fishery are identified as being dependent on groundfish fishing with the exception of Ilwaco, Washington. Communities engaged in the shorebased whiting industry tend to be larger than other coastal communities and their resiliency tends to be higher than smaller coastal communities. However, shorebased whiting communities suffer from many of the characteristics of rural cities including relatively high unemployment and poverty rates, and less industrial diversification of their economy than urban areas. This means that, while communities engaged in the shorebased whiting fishery may be more resilient to negative economic impacts than other coastal communities, they still suffer from many of the same issues as less resilient communities and are likely to suffer in a similar fashion from negative economic impacts. This means that the No Action alternative is likely to cause economic harm to communities engaged in the shorebased whiting fishery.

### *4.4. Cumulative effects*

[Insert text after preferred alternative is selected ]

## 5.0 CONSISTENCY WITH THE FMP AND OTHER APPLICABLE LAWS

### 5.1 Consistency with the FMP

The socio-economic framework in the Pacific Coast Groundfish 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 Section 6.2.3 of the FMP.

Alternatives 3A, 3B, 4A, 4B and 5 are likely to accomplish Objective 2 , of section 6.2.3 of the FMP by providing information to avoid exceeding a quota, harvest guideline or allocation. Alternatives 3B, 4B and 5 are consistent with the following conservation goals of the FMP:

> *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.

Alternatives 3A and 4A would require WCGOP resources to be shifted from other groundfish fisheries to provide for the collection of management data on the Pacific whiting shoreside fishery. The use of WCGOP funds to provide observer coverage in the various non-whiting groundfish fisheries is driven by the need for basic total catch and bycatch data in those fisheries. To require greater observer coverage would have a direct effect on the ability of the WCGOP to monitor other fisheries and to meet the Magnuson-Stevens Act mandates.

Alternatives 3A, 3B, 4A, 4B and 5 are consistent with the following utilization goal of the FMP:

> *Goal 3- Utilization*: Objective 10-strive to reduce the economic incentives and regulatory measures that lead to wastage of fish. Also, 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. In addition, promote and support monitoring programs to improve estimates of total fishing-related mortality and bycatch, as well as those to improve information necessary to determine the extent to which it is practicable to reduce bycatch and bycatch mortality.

### 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. Overarching principles for fisheries management are found in the Act's National Standards. In crafting fisheries management regimes, the Councils and NMFS must balance their recommendations to meet these different national standards.

*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. The alternative action is for a catch accounting program. Information provided under Alternative 3B, 4B and 5 reduce the risk of overfishing by providing information that could be used to reduce the likelihood of overfishing while allowing for the harvests of healthy stocks.

*National Standard 2* requires the use of the best available scientific information. Alternative 3B, 4B, and 5 improves the quality of the data in the Pacific whiting shoreside 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. This standard is not affected by the alternative actions.

*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.

*National Standard 5* addresses efficiency in the utilization of fishery resources. Alternatives 2, 3A, 3B, 4A, 4B and 5 provide for the efficient prosecution of the Pacific whiting shoreside fishery.

*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. The rule considers variations in the fishery such as a single vessel that is sorting at sea while meeting the monitoring needs.

*National Standard 7* requires that conservation and management measures minimize costs and avoid unnecessary duplication. The alternative actions are consistent with this standard.

*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. The alternative actions are consistent with this standard.

*National Standard 9* requires that conservation and management measures minimize to the extent practicable, bycatch and minimize the mortality of bycatch. NMFS is required to "promote and support monitoring programs to improve estimates of total fishing-related mortality and bycatch, as well as those to improve information necessary to determine the extent to which it is practicable to reduce bycatch and bycatch mortality. Alternatives 3A, 3B, 4A, 4B and 5 are likely to accomplish this standard. Alternatives 3A and 4A would require WCGOP resources to be shifted from other groundfish fisheries to provide

for the collection of management data on the Pacific whiting shoreside fishery. The use of WCGOP funds to provide observer coverage in the various non-whiting groundfish fisheries is driven by the need for basic total catch and bycatch data in those fisheries. To require greater observer coverage would have a direct effect on the ability of the WCGOP to monitor other fisheries and to meet the Magnuson-Stevens Act mandates.

*National Standard 10* Conservation and Management measures shall, to the extent practicable, promote the safety of human life at sea. Alternatives 2, 3A, 3B, 4A, 4B and 5 allow catch to be dumped directly into the holds. Dumping catch directly into the holds rather than requiring catch to be first sorted reduce the amount of time crew are on deck and exposed to hazardous conditions.

*Essential Fish Habitat* This action is for a catch accounting and monitoring system at the Pacific whiting shoreside fishery and will not affect fishing in EFH designated areas. Therefore, the potential effects of the alternative actions are not expected to have a "no adverse effect" on EFH, to have a positive effect resulting from reduced fishing effort in critical areas, or to have a positive effect if used to support regulations to restrict fishing in areas to protect habitat. No EFH consultation is warranted for this action.

### 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.

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.

### 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 alternative action is not likely to affect the incidental mortality levels of species protected under the MMPA. 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.

### 5.5 Coastal Zone Management Act

Section 307(c)(1) of the Federal Coastal Zone Management Act (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. This determination has been submitted to the responsible state agencies for review under Section 307(c)(1) of the CZMA by forwarding a copy of this EA to each of the relevant state agencies.

### 5.6 Paperwork Reduction Act

This proposed rule contains a collection-of-information requirement subject to review and approval by OMB under the Paperwork Reduction Act. This requirement has been submitted to OMB for approval.

[insert summary of PRA burden]

### 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 U.S.-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. This action does 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 action is 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 U.S. Fish and Wildlife Service that shall promote the conservation of migratory bird populations. Currently, NMFS is developing an MOU with the U.S. Fish and Wildlife Service. The alternative actions are for a catch accounting and monitoring progam and 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 does not target low income or minority communities; they would affect all populations segments equally. These recommendations would not have federalism implications subject to E.O. 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. The following table, Table 6.0.1., identifies where previous discussions in the EA relevant to the IRFA/RIR may be found in this document.

**Table 6.0.1. Regulatory Impact Review and Regulatory Flexibility Analysis**

| 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 | 1.2, 1.3 |
| Description of the Fishery | 1.4, 3.0 | Statement of the objectives of, and legal basis for actions | 1.0, 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 | 2.0 |
| 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 | | |

### 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 6.1. 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 Section 4.3, this action is not expected to be significant under E.O. 12866.

Based on the economic analysis found in Section 4.3 of this EA, the alternative action is not significant according to EO 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. 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 RFA, 5 U.S.C. 603 et seq., requires government agencies to assess the effects that various regulatory alternatives would have on small entities, including small businesses, and to determine ways to minimize those effects. When an agency proposes regulations, the RFA requires the agency to prepare and make available for public comment an 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.

[Insert IRFA]

## 7.0 LIST OF PREPARERS

Becky Renko, Steve Freese, Gretchen Arentzen, and Merrick Burden NMFS, Northwest Regional Office staff; and Dave Colpo, Pacific State Marine Fisheries Commission.

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## APPENDIX A

Exempted Fishing Permit - 2007

PACIFIC COAST GROUNDFISH FISHERY
EXEMPTED FISHING PERMIT (EFP)
AUTHORITY: Title 50, Code of Federal Regulations
Sections 600.745 and 660.406, and part 660

MAXIMIZED RETENTION AND CATCH MONITORING
FORVESSELS IN THE SHORE-BASED PACIFIC WHITING FISHERY

F/V **Vessel name**

PERMIT # **07-HAK-XX**
Pacific Coast Groundfish
Limited Entry Permit #**[insert permit no.]**

The Administrator of the Northwest Region of the National Marine Fisheries Service (NMFS), acting on behalf of the Secretary of Commerce, hereby permits the fishing vessel **[insert vessel name]**, documentation number **[insert USCG documentation Number]** to engage in the exempted harvest of Pacific Coast groundfish over which the United States exercises fishery management authority under the Magnuson- Stevens Fishery Conservation and Management Act, 16 United States Code 1801 et seq. (Magnuson-Stevens Act), and implementing groundfish regulations at 50 CFR Part 660 and section 600.745, and under salmon regulations at 50 CFR 660.406. The exempted fishing must be conducted in accordance with the provisions of the Magnuson-Stevens Act and 50 CFR Parts 600 and 660, except as provided in the attached terms and conditions incorporated herein.

This permit implements a cooperative state/federal/industry observation program to monitor the bycatch of salmon and groundfish in the shore-based component of the Pacific whiting fishery. This permit is valid when signed by both the Regional Administrator and the authorized representative of the vessel owner (hereinafter referred to as the "EFP holder"). It expires 24 hours after notification by the Regional Administrator of termination of this permit, or when any of the provisions listed at E.2. are met, or on 11:59 p.m. PST December 31, 2007, whichever is earlier. It also may be terminated or modified earlier by regulatory action pursuant to 50 CFR Part 660, or by revocation, suspension, or modification pursuant to 15 CFR Part 904, or successor regulations, or by the terms and conditions of this permit.

| Signature | Date Signed | Signature | Date Signed |
|---|---|---|---|
| D. Robert Lohn, Regional Administrator<br>Northwest Region<br>National Marine Fisheries Service | | **XX**, EFP holder. | |

By signing this document, the EFP holder agrees that the EFP holder, the vessel owner(s), all vessel operators, and crew members of the vessel will comply with the intent and the terms and conditions of this permit. Further, the EFP holder is responsible for seeing that conditions of this permit are understood by the vessel owner(s), the vessel operator(s) and vessel crew.

EFP Holder's Name/Address:
**name, address, phone, fax XX**

EXEMPTED FISHING PERMIT

MAXIMIZED RETENTION AND CATCH MONITORING
FORVESSELS IN THE SHORE-BASED PACIFIC WHITING FISHERY

# TERMS AND CONDITIONS

## A. PURPOSE.

The purpose of this exempted fishing permit (EFP) is to evaluate a maximized retention and monitoring program in the shore-based Pacific whiting fishery off the coasts of Washington, Oregon, and California.

The objectives of this maximized retention and monitoring program are to allow efficient prosecution of the shore-based whiting fishery, track total catch in the shore-based whiting fishery, and minimize discard to the extent practicable. If these objectives can be achieved in an efficient and enforceable manner, this maximized retention and monitoring program may be transitioned into Federal regulations. If these objectives cannot be achieved in an efficient and enforceable manner, the shore-based whiting fishery may be required to operate under the Pacific Coast groundfish trip limit management system and sort all catch at sea.

## B. BACKGROUND.

A maximized retention program would reduce discards in the Pacific Coast groundfish fishery by enabling the shore-based whiting fleet to land prohibited species as well as groundfish species taken in excess of cumulative trip limits. By allowing vessels to land unsorted catch at processing plants, a maximized retention program helps ensure quality whiting products by enabling catch to be placed in refrigerated seawater tanks immediately after capture. Additionally, a maximized retention and monitoring program will improve the ability of fishery management agencies to track the catch of whiting as well as the incidental catch, including prohibited species as defined in Federal regulation at 50 CFR 660.302 and 660.370(e) (i.e., Pacific salmon, Pacific halibut, and Dungeness crab) and overfished groundfish species (i.e., widow rockfish, darkblotched rockfish, canary rockfish, Pacific ocean perch). The monitoring program supported by this EFP helps to establish a standardized reporting methodology for this fishery.

Using this EFP to target any species other than whiting is contrary to the intent of this EFP. Use of this EFP to target species other than whiting may result in federal fishery violations and early attainment of the 2007 optimum yields (OYs) for groundfish species other than whiting. Early OY attainment of groundfish species other than whiting could result in NMFS having to close the coastwide bottom trawl fishery and/or having to terminate this EFP. If the EFP were terminated, the participants in the shore-based whiting fishery would be required to sort their catch at sea and operate under groundfish trip limit management.

C. SCOPE.

1. This permit applies to all fishing activities by the permitted vessel targeting on Pacific whiting during the effective dates of the permit. **In addition to all applicable terms and conditions in this document, the EFP holder is responsible for instructing all vessel operators and crew members concerning the terms and conditions of this permit.**

2. This EFP authorizes, for limited purposes as described in this permit, the following activities which would otherwise be prohibited by 50 CFR 660.306 (a)(2) and (6) and 50 CFR 660.405 (a)(1):

   a. Retention, until offloading, of prohibited species (defined at §§660.302 and 660.370(e)) incidentally caught in a midwater trawl;

   b. Retention, until offloading, of groundfish in excess of trip limits.

3. All other provisions of 50 CFR Part 660, particularly including restrictions specified by or pursuant to 50 CFR 660.323 and 660.373, apply to fishing conducted under this permit.

D. PERMIT CONDITIONS.

1. This permit is valid only for a vessel participating under the States' observation program that is using legal midwater trawl gear to target Pacific whiting, as defined in paragraph D.3. during the primary season of the shore-based fishery.

2. All fishing trips by the permitted vessel targeting on Pacific whiting, as defined in paragraph D.3., during the effective dates must be conducted in accordance with this permit.

3. A fishing trip targeting on Pacific whiting is defined for the purposes of this permit as a fishing trip resulting in the landing of 4,000 pounds or more of Pacific whiting.

4. If a vessel lands less than 4,000 pounds of Pacific whiting from a fishing trip, then that trip will not be considered as "targeting on Pacific whiting," and therefore that trip will not be governed by this permit. Consequently, for that trip, the vessel must comply with all applicable trip limits and sorting requirements and all fish landed for such a trip will count toward any cumulative trip limits in effect.

5. All groundfish caught in excess of the trip limits set out in this EFP or otherwise implemented by Federal regulation, but required to be retained under this EFP, must be abandoned to the State of landing immediately upon offloading. No vessel can receive payment for any fish landed in excess of any cumulative trip limits in effect, whether those limits are specified in this EFP or in Federal regulation. All groundfish must appear on the State fish ticket, even groundfish with no value. For 2007, the following incidental groundfish cumulative limits are in effect with this EFP:

- Lingcod: 600 lb per calendar month
- Minor slope rockfish, including darkblotched rockfish: 1,000 lb per calendar month
- Minor shelf, shortbelly, widow and yellowtail rockfish: In trips of at least 4,000 lb of whiting, combined widow and yellowtail limit of 500 lb per trip, with a cumulative widow rockfish limit of 1,500 lb per calendar month, and with a cumulative yellowtail rockfish limit of 2,000 lb per calendar month.
- Pacific ocean perch: 600 lb per calendar month
- Pacific cod: 600 lb per calendar month
- Sablefish: 1,000 lb per calendar month

For all other groundfish species or species groups, the trip limits in Table 3 of 50 CFR apply to this fishery. For species that do not have specific midwater trawl trip limits listed in Table 3, the "multiple bottom trawl gear" trip limits apply to vessels fishing under this EFP, even though the participating vessels are required to use midwater gear to participate in this fishery. A copy of the current version of Table 3 is attached to this EFP; Table 3 may be revised as early as[May 1, 2007 for CA early EFP and July 1, 2007 for coastewide fishery.]

6. All prohibited species (defined at §660.302 and 660.370(e)) incidentally caught in a midwater trawl, and required to be retained under this EFP, must be abandoned to the State of landing immediately upon offloading.

7. Regulations governing participation in both the Pacific whiting primary season under this EFP and the bottom trawl groundfish fishery in the same cumulative limit period are found at 50 CFR 660.373(b)(3). During the groundfish cumulative limit periods both before and after the primary whiting season, vessels may use either small and/or large footrope gear, but are subject to the more restrictive trip limits for those entire cumulative limit periods. During the primary whiting season for a sector of the fishery, the limits in D.5., above, apply and are additive to the trip limits for other groundfish species for that fishing period.

E. EFFECTIVE DATES.

1. This permit is effective when signed by the NMFS Regional Administrator and the EFP holder. If the permit is signed by the NMFS Regional Administrator and the EFP holder on different dates, the effective date is the date of the EFP holder's signature.

2. This permit is only valid while the vessel is participating in the 2007 Pacific whiting primary season for the shore-based sector, as announced Federal regulations at §660.373, unless terminated at an earlier date by one of the following actions:

   a. At the request of the vessel owner, in which case the vessel must return to port, then remove and return the original EFP in person or by mail to the NMFS NWR permit office. The vessel owner is responsible for advising the EFP holder of the termination of the permit.

   b. At the request of the cooperating State, when the State observation program ends, or when the processing plant(s) designated in Appendix A are no longer included in the sampling program conducted by the State, in which case written notification

from the State to the vessel owner is required and termination occurs 24 hours after delivery of the notification or any later time specified in the notification. The vessel owner is responsible for advising the EFP holder of the termination of the permit.

c. When the Regional Administrator determines it is necessary to issue amended permits containing additional or revised restrictions, in which case termination occurs upon NMFS receipt of a signed amended permit, or seven days after the NMFS mailing date of the amended permit, whichever occurs first. The vessel owner is responsible for advising the EFP holder of the termination of the permit.

d. When the shore-based sector of the Pacific whiting fishery is closed because of the achievement or projected achievement of the Pacific whiting allocation, commercial harvest guideline, or species' harvest guideline, in which case termination occurs concurrent with the closure, in which case further written notification of the vessel owner is not required.

e. When the shore-based sector of the Pacific whiting fishery is closed because a commercial whiting fishery bycatch limit has been reached, as announced in the Federal Register, in which case further written notification of the vessel owner is not required.

3. A copy of this EFP must be carried on board the vessel while EFP fishing and whenever fish caught while fishing under the EFP are onboard the vessel.

F. FISHING RESTRICTIONS.

a. Maximized Retention. All catch, with the exception of unavoidable discards (see paragraph 2.b. below), must be brought onboard the vessel and retained until offloading.

b. Discard. For the purpose of this EFP, discard is defined as any marine organism, such as any groundfish species (including whiting), prohibited species, marine mammals, seabirds, and sea turtles, captured as a result of fishing activity and returned to the sea. **When fishing under this EFP, efforts must be made to minimize discard.** Only certain types of discard, as described below, are authorized under this EFP.

1. Size: Large individual marine organisms, such as marine mammals, seabirds, or fish species longer than 6 ft in length, may be discarded. If a large individual marine organism is discarded, the species and reason for discarding must be recorded and labeled "discard" in the logbook required by the State of landing.

2. Unavoidable Discard: Unavoidable discard, or discard that results from such things as hazardous weather conditions, unusual codend condition, school density, and net cleaning, must be minimized to the extent practicable. If unavoidable discard occurs, an estimate of the total discard amount for each species, to the extent possible, location of the tow, and reason for discarding must be recorded, and labeled "discard" in the logbook required by the State of landing.

3. Avoidable Discard: Avoidable discard, or discard that results from such events as malfunctioning net sensors and/or catching more fish than is necessary to fill the hold, must be minimized to the extent practicable. Vessels will be required to take whatever gear-related steps are necessary (e.g., shortening the codend, operational net sensors) to avoid discard by preventing overfilling of the net and/or hold.

2. Disposition of salmon. Salmon caught under this permit must be retained and abandoned to the State of landing immediately upon offloading.

3. Groundfish trip limits.

   a. Groundfish trip limits will apply to vessels operating under this permit, except that overages in trip limits will not be in violation of 50 CFR 660.306 (a)(6) so long as such overage is surrendered to the State of landing.

   b. The Regional Administrator may place limits on the overages of groundfish trip limits during the course of the exempted fishery. If such restrictions are necessary, the Regional Administrator will terminate this permit and issue an amended permit containing the additional restrictions on groundfish trip limits as determined necessary by NMFS in consultation with the states.

4. Fishing shoreward of latitude and longitude coordinates approximating the100-fathom contour

   a. In the Eureka area: This permit **does not** authorize a vessel to take and retain more than 10,000 pounds of Pacific whiting per trip shoreward of latitude and longitude coordinates approximating the 100-fathom contour in the Eureka area (43˚00' N. lat. - 40˚30' N. lat.).

   b. Coastwide: Automatic action can be taken to implement the Ocean Salmon Conservation Zone, described at 660.373(c)(3), when NMFS projects the Pacific whiting fishery may take in excess of 11,000 Chinook within a calendar year. If NMFS projects that the Pacific whiting fishery will exceed the take of 11,000 Chinook salmon, fishing shoreward of the 100 fathom depth contour could be prohibited. If this occurs, NMFS will announce the effective date by email (wcgroundfish@noaa.gov), facsimile and/or email to your state coordinators.

5. Fishing shoreward of latitude and longitude coordinates approximating the150-fathom contour to avoid incidental catch of canary rockfish If the fishery is approaching the canary rockfish bycatch limit, NMFS may chose to require all EFP participants to fish seaward of the 150-fathom depth contour as defined in the Federal groundfish regulations at § 660.393. Such action would be taken to allow the fishery to continue and to prevent early closure from a bycatch limit being reached. NMFS would announce the effective date for implementation of the 150-fathom depth contour by email (wcgroundfish@noaa.gov), facsimile and/or email to your state coordinators.

G. GEAR RESTRICTIONS.

1. Only legal midwater trawl gear described at §660.381 may be used for fishing under this EFP.

H. OBSERVER AND OTHER MONITORING REQUIREMENTS.

1. At-sea observations. If requested, a vessel must carry a state-sponsored sampler or Federal observer to collect data that can be used to evaluate data collected by the EM system identified under H.3. Any state sampler must be approved by NMFS before at-sea deployment. Regulations at 50 CFR 660.306 and 50 CFR 660.314 regarding vessel responsibilities and prohibitions apply to both state samplers and Federal observers.

2. Federal observer coverage requirements at 50 CFR 660.360 and 50 CFR 660.314 are independent of state sampler requirements. Vessels that carry a state-sponsored sampler may also be required to carry a NMFS observer. A state sampler is not a substitute for a Federal observer and a vessel carrying a state sampler is not exempt from federal observer requirements.

3. Electronic Monitoring (EM) Equipment A vessel fishing under this EFP will be required to have electronic monitoring equipment supplied by a NMFS-specified EM system provider to monitor for at-sea discarding of catch. The following are NMFS-specified EM system providers for 2007:

Howard McElderry or Morgan Dyas at Archipelago Marine Research, Ltd; tel: 888-383-4535 or 250-383¬4535.

a. A vessel intending to fish under this EFP must schedule a time with the NMFS-specified EM provider for installation of the system. The installation must be scheduled before the vessel leaves port on the first EFP fishing trip. If an EM system is not installed before the first EFP fishing trip, this EFP is invalid.

b. As necessary, the vessel operator must schedule maintenance of EM equipment and data removal by the NMFS-specified EM provider by scheduling an appointment. If the vessel operator does not schedule these services, it will be a violation of the terms and conditions of this EFP.

c. While EM equipment is aboard the vessel, the system must not be interfered with, damaged, or the power source turned off. If the EM system is interfered with, damaged, or the power source turned off, it will be a violation of the terms and conditions of this EFP.

d. The vessel operator must check status lights located on the EM system control box at least once per day to confirm that the EM system is functioning properly. If status lights indicate an EM system malfunction, the vessel must contact the NMFS-specified EM provider immediately.

e. At the end of the shore-based whiting primary season or termination of the EFP, the EFP holder must schedule removal of the EM system with the NMFS specified EM provider.

f. The requirement to have and use the EM system when participating under this EFP may be temporarily waived by NMFS. A waiver would allow reasonable time to resolve the stated problem. All such waivers shall be in writing and would be granted on a case by case basis, when it has been determined that circumstances beyond the control of the vessel prevent the installation or use of the EM system.

I. NOTIFICATION REQUIREMENTS.

a. If requested, the EFP holder must provide departure and arrival notification to the State coordinator, West Coast Groundfish Observer Program (WCGOP), or EM provider including reasonable notice of unexpected changes in fishing plans, to allow installation and maintenance of electronic video monitoring equipment, and for deployment of at-sea observers, if any. State coordinators are:

California Department of Fish and Game: Mike Fukushima, 707- 441-5797.
Oregon Department of Fish and Wildlife: Lori Jesse, 541-867-0300
Washington Department of Fish and Wildlife: Brian Culver, 360-249-4628

EM Provider: Howard McElderry or Morgan Dyas at Archipelago Marine Research, Ltd; tel: 888-383-4535 or 250-383¬4535.

2. In addition to any notifications required in paragraph 1. of this section, for landings in California the vessel operator must notify the California Department of Fish and Game coordinator listed in paragraph 1. of this section at least 12 hours before departing port to commence fishing under this permit.

J. REPORTING REQUIREMENTS. It is unlawful to fail to report catches as required while fishing pursuant to an exempted fishing permit (50 CFR 600.725(l)). Failure to maintain the required documents may result in a vessel's inability to obtain an EFP permit in the future, may be grounds for revocation, suspension, or modification of this permit as well as civil or criminal penalties under the Magnuson-Stevens Act with respect to all persons and vessels conducting activities under the EFP (See section L.)

1. Trawl Logs. Trawl logbooks must be maintained by the vessel operator as required by the applicable state law. "Exempted Fishing Trip" (or "EFP") must be written in the log for each trip conducted under this permit.

a. Estimated weight (in pounds) of all species, including, but not limited to, whiting, other groundfish, salmon, Pacific halibut, and Dungeness crab, observed in each tow must be recorded in the logbook.

b. If discard occurs, an estimate of the total discard amount for each species, to the extent possible, location of the tow, and reason for discarding must be recorded and labeled "discard" in the logbook, on the line associated with that tow, as required by the State of landing.

c. If discard occurs as a result of gear malfunction, a description of the event must be recorded in the logbook and labeled "gear malfunction" in the logbook, on the line associated with that tow.

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2. Other Reports. This permit does not relieve any person from any other state or federal reporting requirements.

3. Public Release of Information. The fishing activities carried out under this permit, which are otherwise prohibited, are for the purpose of collecting catch information. The vessel owner, operator, and EFP holder agree to the public release of any and all information obtained as a result of activities conducted under this permit, including EM Provider access to logbooks to record information during periodic EM maintenance and service.

K. LANDINGS.

1. All landings must be at processing plants that are listed in the Designated Processor List in Appendix A to this EFP. Vessel owners with vessels that participate in both the April 1 shore-based whiting fishery opening (south of 42º N. lat.) and the June 15 fishery opening (coastwide, including north of 42º N. lat.) must ensure that they get an updated Designated Processor List from the NWR Permits Office prior to June 15, 2007 in order to participate in that coastwide fishery opening.

   a. The Designated Processor List in Appendix A may be revised, by NWR Permits Office Staff after consultation with the State observation program coordinator(s). The observation program coordinators for each state are as follows:

      California Department of Fish and Game: Mike Fukushima, 707- 441-5797.
      Oregon Department of Fish and Wildlife: Lori Jesse, 541-867-0300
      Washington Department of Fish and Wildlife: Brian Culver, 360-249-4628

2. All fish caught during an exempted fishing trip must be offloaded at only one designated processing plant (i.e. the offloading of catch from one trip cannot be split between processing plants before a fish ticket has been completed). Once offloading has begun at a designated processing plant, all fish onboard the vessel must be offloaded at that plant.

L. SANCTIONS.

1. Failure of the vessel owner, operator, EFP holder, or any person to comply with the terms and conditions of this permit, a notice issued under 50 CFR Part 660 any other applicable provision of 50 CFR Parts 600 and 660, the Magnuson-Stevens Act, or any other regulations promulgated thereunder, may be grounds for revocation, suspension, or modification of this permit as well as civil or criminal penalties under the Magnuson-Stevens Act with respect to all persons and vessels conducting activities under the EFP (50 CFR 600.745(b)(8)).

2, The following provisions at 50 CFR Parts 660 are applicable to the EFP activity:

   a. 660.306 Prohibitions. In addition to the general prohibitions specified in § 600.725 of
   this chapter, it is unlawful for any person to:

      (a) General.

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(4) Fish for groundfish in violation of any terms or conditions attached to an EFP under § 600.745 of this chapter or § 660.350.

(5) Fish for groundfish using gear not authorized in this part or in violation of any terms or conditions attached to an EFP under § 660.350 or part 600 of this chapter.

(6) Take and retain, possess, or land more groundfish than specified under '' 660.370 through 660.373 or '' 660.381 through 660.385, or under an EFP issued under § 660.350 or part 600 of this chapter.

b. 660.370 Specifications and management measures.

(f) Exempted fisheries. U.S. vessels operating under an exempted fishing permit (EFP) issued under 50 CFR part 600 are also subject to restrictions in section 660.301 through 660.394, unless otherwise provided in the permit. EFPs may include the collecting of scientific samples of groundfish species that would otherwise be prohibited for retention.

M. WAIVER.

The EFP holder on his/her own behalf, and on behalf of all persons conducting activities authorized by the permit under his/her direction, waives any and all claims against the United States or the State, and its agents and employees, for any liability whatsoever for personal injury, death, or damage to property directly or indirectly due to activities under this permit.

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# APPENDIX A

MAXIMIZED RETENTION AND CATCH MONITORING
FORVESSELS IN THE SHORE-BASED PACIFIC WHITING FISHERY

Vessel Name: **[insert vessel name]** EFP#: 07-HAK-xx

1. Designated processor(s):

*[**NWR Permits Office Staff –** Please forward a copy of contact information to SFD administrative staff and request that contact information be verified for accuracy]*

**EXAMPLE:**

Eureka Fisheries, Inc.
P.O. Box 217
Field's Landing, CA 95537
attn: Tom Devere

ph: (707) 463-1673
fx: (707) 463-7952

2. Changes to this appendix:

| Item Changed | Date Approved | Authorizing Official Name | Agency |
|---|---|---|---|