ENVIRONMENTAL ASSESSMENT FOR CONTINUATION OF ADAPTIVE MANAGEMENT PROGRAM QUOTA POUNDS PASS-THROUGH

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December 2014

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1.0 PURPOSE AND NEED

1.1 How this document is organized

This document is an Environmental Assessment and the document for compliance with the Magnuson-Stevens Fishery Conservation and Management Act (MSA) for the continued implementation of the Adaptive Management Program (AMP) quota pound pass-through.

- Section 1 provides the "Purpose and Need" for this action.
- Section 2 describes the alternatives.
- Section 3 describes the physical, biological, and socio-economic environment of the west coast groundfish shorebased trawl fishery that could be affected by the alternatives.
- Section 4 is an analysis of the potential effects of the alternatives considered on the human environment.
- Section 5 addresses the consistency of the preferred alternative with the Magnuson-Stevens Act and laws other than the National Environmental Policy Act.
- Section 6 provides the NEPA compliance documentation including the persons and agencies consulted and the FONSI.
- Section 7 provides a bibliographic reference for this document.

1.2 Description of the Proposed Action

This proposed action provides for the continuation of the Adaptive Management Program (AMP) pass-through until implementation of the regulations resulting from the first 5-year review of the trawl rationalization program (trawl program). The changes for the AMP would revise the regulations at 50 CFR §660.140 to extend the method for annual distribution of quota pounds (QP), a pass-through to quota share (QS) holders in proportion to their QS holding, until the 5-year review of the trawl rationalization program is completed. This review will help guide the design of the AMP because it will evaluate the needs of the fishery. Extending the AMP pass-through is required because the regulations allowing for the pass-through expire at the end of 2014 and without action, the AMP QP would not be distributed.

1.3 Purpose and Need

The purpose of the action is to allow NMFS to continue the AMP QP pass-through until the regulations resulting from the first review of the trawl rationalization program are complete. The proposed action is needed because the current regulations allowing the pass-through expire in 2014 and without this action, the AMP QP would not be allocated to the fleet.

1.4 Background

The Adaptive Management Program was adopted by the Council and approved by NMFS as part of the trawl rationalization program, Amendment 20 to the Pacific Coast Groundfish Fishery Management Plan (FMP). The Council viewed the trawl rationalization program as addressing many of the difficult issues and management problems it had struggled with in managing the trawl fishery. When implemented, the trawl program was expected to provide a basic management framework that would: provide the most benefits to the nation for the public resource, including assigning personal accountability for the fisheries; provide opportunities for bycatch reduction; enhance stock rebuilding through improved fishery information and full observer coverage; provide opportunities to maximize catch of targeted species while protecting species of concern; improve economic performance; help maintain community stability; improve

safety; guard against local stock depletion; and address unforeseen circumstances through an innovative adaptive management provision. In summary, NMFS and the Council viewed trawl rationalization as a program that would help address conservation concerns by changing a system that was not economically viable for many into one that would work for those who remain in the fishery after rationalization.

Under the Amendment 20 trawl rationalization program, an individual fishing quota (IFQ) system is the primary catch share tool for the shorebased trawl fishery. That catch share system includes a set-aside from issuance of pounds of 10 percent of the nonwhiting QS for the AMP that could be used in the future, depending on the needs of the fishery. Amendment 20 was established to address the following objectives:

- Community stability;
- Processor stability;
- Conservation;
- Unintended/Unforeseen consequences of IFQ management; and
- Facilitating new entrants.

For the first four years of the program, the annually issued AMP QP has been passed through to the QS holders in proportion to their holdings of QS. The catch share program originally specified that the Council would develop alternative criteria for distribution of the AMP QP beginning in year three of the program. In 2011, the Council recommended and NMFS implemented an extension of the pass-through until the end of 2014. Given other high priority actions for the trawl program, NMFS and the Council concluded that working on alternative criteria for the AMP might not be developed and implemented by 2013, and there would be no procedure in place for distribution of the AMP QP. Since then NMFS and the Council recognized that information gathered through the first 5-year review of the trawl rationalization program would help inform how best to design the AMP. To date, neither the public nor the Council have identified issues that need to be addressed immediately through the AMP. Therefore, in June 2014 the Council recommended extending the AMP QP pass-through until the regulations resulting from the 5-year review are completed. This will enable NMFS to continue the pass-through issuance so that the fish authorized for harvest through the biennial specifications process will continue to be available to benefit the fishing industry, dependent communities, and consumers.

2.0 ALTERNATIVES

In addition to the No Action Alternative, there is one action alternative. The No Action Alternative (Alternative 1) maintains current regulations allowing the AMP pass-through through 2014. The current regulations were implemented on December 1, 2011 (see 76 FR 74725), to extend the pass-through through 2014.

2.1 Alternative 1 (No Action)

This alternative represents no action. Therefore, the current pass-through of AMP QP would expire on December 31, 2014. Because of the expiration and the lack of process to allocate the 10% of non-whiting, the No Action alternative would result in no AMP QP issuance to QS holders.

2.2 Alternative 2 (Final Preferred)

This is the final preferred alternative and would extend the AMP QP pass-through until regulations resulting from the 5-year review of the trawl program are complete. During this time, AMP QP will be distributed to QS holders in proportion to their holdings of non-whiting QS, which are the same procedures used since 2011.

2.3 Alternatives considered but rejected

In addition to Alternatives 1 and 2, the Council considered but rejected an alternative that was the same as Alternative 2 but with a 2017 expiration date for the pass-through. This alternative was rejected because information vital in the design of the AMP would not be available in 2017. Therefore, the Council chose to tie the implementation of the AMP to the 5-year review instead of a certain date, which could have required further action on AMP without a completed 5-year review.

3.0 AFFECTED ENVIRONMENT

The discussion below is extracted, in large part, from: the Draft Environmental Impact Statement on the 2015-2016 Groundfish Harvest Specifications and Management Measures; Amendment 24 to the Pacific Coast Groundfish FMP; the Council's Fishery Ecosystem Plan; the Environmental Assessment on Trawl Rockfish Conservation Area Boundary Modifications; and the preliminary draft Environmental Assessment on seabird avoidance measures. Information from these documents is summarized and cited below.

3.1 Physical Environment

California Current Ecosystem (CCE)

The CCE is composed of a major eastern boundary current, the California Current, which is dominated by strong coastal upwelling, and is characterized by fluctuations in physical conditions and productivity over multiple time scales (Mann and Lazier 1996; Parrish, et al. 1981). Food webs in these types of ecosystems tend to be structured around coastal pelagic species that exhibit boom-bust cycles over decadal time scales (Bakun 1996; Checkley and Barth 2009; Fréon, et al. 2009). By contrast, the top trophic levels of such ecosystems are often dominated by highly migratory species such as salmon, tuna, billfish and marine mammals,whose dynamics may be partially or wholly driven by processes in entirely different ecosystems, and even different hemispheres. Ecosystems analogous to the CCE include other shelf and coastal systems, such as the currents off the western coasts of South America and Spain.

The CCE contains a diverse array of species, most of which make a relatively modest contribution to the energy flow within the ecosystem (Field and Francis 2006). Because the flow of energy is more of a "food web" than a "food chain," the species of the CCE do not neatly divide into clearly delineated trophic levels (for example, an organism may eat a prey item and also eat items that its prey eats), except at the highest and lowest levels. Most CCE species do not occupy a single trophic level and may occupy multiple trophic levels, particularly when considering changes that occur over the course of their life as they change both their size and feeding preferences.

Essential Fish Habitat

The MSA (sec. 303(a)(7)) requires Councils to include in each FMP a description of essential fish habitat (EFH) for all managed species and measures to minimize to the extent practicable adverse effects on such habitat caused by fishing.[1] The Council has described EFH for all species managed under its four FMPs (Coastal Pelagic Species, Highly Migratory Species, Groundfish, and Salmon). EFH is defined as "waters and substrate necessary to fish for spawning, breeding, feeding or growth to maturity" (MSA sec. 3). Regulatory guidelines (50 CFR 600, Subpart J) elaborate that the words "essential" and "necessary" mean EFH should be sufficient to "support a population adequate to maintain a sustainable fishery and the managed species' contributions to a healthy ecosystem." Groundfish EFH is described in the FMP as:

- Depths less than or equal to 3,500 m (1,914 fm) to mean higher high water level (MHHW) or the upriver extent of saltwater intrusion, defined as upstream and landward to where ocean-derived salts measure less than 0.5 ppt during the period of average annual low flow.
- Seamounts in depths greater than 3,500 m as mapped in the EFH assessment geographic information system (GIS).
- Areas designated as Habitat Areas of Particular Concern (HAPC) not already identified by the above criteria.

Groundfish EFH has been designated through the PFMC process to include: 1) all ocean and estuarine waters and substrates in depths less than or equal to 3,500 m, to the upriver extent of saltwater intrusion, which is defined based on ocean salt content during low runoff periods, and 2) areas associated with seamounts in depths greater than 3,500 m. The groundfish EFH designation describes 59.2 percent of the EEZ, which equates to 48,719,109 ha (142,042 square miles) in addition to state waters such as bays and estuaries (NMFS 2005).

EFH has also been designated for non-groundfish species, such as salmon, coastal pelagic species, and highly migratory species. For salmonids, EFH in the action area is limited to pelagic habitats. For coastal pelagic and highly migratory species, EFH is limited to pelagic (e.g. in the water column) or oceanographic (e.g. temperature) habitats.

3.2 Biological Environment

3.2.1 Groundfish Species

More than 90 species are managed under the Groundfish FMP. These species include: 60-plus rockfish, including all genera and species from the family *Scorpaenidae* (*Sebastes*, *Scorpaena*, *Sebastolobus*, and *Scorpaenodes*); 12 flatfish species; 6 roundfish species; and 6 miscellaneous fish species that include sharks, skates, grenadiers, rattails, and morids.

These species vary greatly in life history, relative abundance, and their spatial and temporal distribution. Spatial distribution of rockfish is highly linked to depth and therefore, most rockfish species are split into one of three depth-based categories; nearshore, shelf and slope. Flatfish species are most concentrated on the continental shelf, but vary in depth distribution

[1] A Federal agency authorizing, funding, or undertaking actions that may adversely affect EFH must consult with NMFS on measures to mitigate such impacts. Councils or Federal or state agencies may also advise NMFS on such actions.

depending on the species. Roundfish vary in depth distribution. Most shark and skate species are not targeted and are caught incidentally with other groundfish species. Most shark and skate species in the FMP are widely distributed across depths, except for California skates and Leopard sharks, which are most highly concentrated in the nearshore waters (NMFS 2014b).

Additional detailed information for all groundfish species can be found in Chapter 3 of the 2015-2016 Biennial harvest specifications and management measures draft EIS (NMFS 2014b).

Generally, the species managed under the groundfish FMP are managed with annual catch limits, which are established through the biennial harvest specifications and management measures. Under the Shorebased IFQ Program, all catch of IFQ species (retained or discarded, target and non-target) must be covered by quota pounds. Fishermen are individually accountable for their catch of individual species (or stock complexes) and are subject to a 100-percent monitoring requirement. Non-IFQ species are managed with trip limits.

There are prominent species that are the primary economic drivers for IFQ vessels using bottom trawl gear, and under trawl rationalization, underutilized species may have an increased opportunity for improved marketability. There have been several notable changes in attainment by species, between 2011 and 2012 (NMFS 2013a). The largest increases in attainment include the following: minor slope rockfish, south of 40°10' N. lat., up 19 percent; Pacific cod, up 13 percent; canary rockfish, up 13 percent; minor shelf rockfish, south of 40°10' N. lat., up 10 percent; and minor slope rockfish, north of 40°10' N. lat., up nine percent. The largest decreases in attainment include the following: sablefish south of 36° N. lat., down 42 percent; shortspine thornyheads south of 34°27' N. lat., down 16 percent; and yelloweye rockfish attainment was down four percent (NMFS 2014a). None of the increases present a conservation concern because the attainment is relative to the trawl allocation, which is below the ACL. Further, none of the increases have resulted in the trawl fishery exceeding the shorebased trawl allocation of these species.

Neither alternative is anticipated to change the attainment of trawl allocations because neither alternative will change fishing behavior, including gear used, areas fished, timing of fishing, landing patterns, or target species.

3.2.3 Non-Groundfish Species, Halibut, CPS, HMS

Commercially-important species—such as Pacific halibut, Dungeness crab, and salmon—are commercially valuable and have directed fisheries. Commercially valuable species are managed under other Council FMPs, other Federal authority, or by the states. Fishing mortality in the groundfish fishery is taken into account (i.e. incidental catch reductions before harvest specifications are set) when managing such directed fisheries (NMFS 2014a).

Pacific halibut (*Hippoglossus stenolepis*) is a bottom-dwelling, right-eyed flatfish species. Pacific halibut are taken with trawl, as well as commercial and recreational fixed gears as they co-occur with groundfish stocks, including canary and yelloweye rockfish. The fixed gear sablefish fishery is responsible for the most catch of Pacific halibut (NMFS 2012d). Pacific halibut catch has been restricted in the trawl fisheries through the issuance of bycatch allowances.

Coastal pelagic species, such as smelt and herring, are taken incidentally in the groundfish fishery, and are believed to be most vulnerable to midwater trawl gear, with incidental take of coastal pelagic species documented in the midwater whiting fisheries. Given that coastal pelagic species are not associated with the ocean bottom, interactions with the groundfish bottom trawl fishery are expected to be minimal (NMFS 2012d). Additional information on catch of coastal pelagic species in the midwater trawl fishery is available in Chapter 3 of the 2015-2016 Biennial harvest specifications and management measures Draft EIS (NMFS 2014b).

Highly migratory species, such as marlin, tuna, and non-FMP sharks are largely pelagic, open ocean species. These species are very infrequently caught in groundfish directed fisheries off Washington and Oregon. In California, highly migratory species are occasionally taken by fisheries targeting groundfish. In 2009, about 100 kg of albacore were taken incidentally with groundfish trolling (non-trawl gear) for sablefish and rockfish. Thresher sharks are incidentally taken in trawl gear (PFMC2010).

Most shark and skate species are caught incidentally while trawl vessels target other groundfish species. Most shark and skate species in the FMP are widely distributed across depths, except for California skates and Leopard sharks, which are most highly concentrated in the nearshore waters. Additional detailed information on non-target groundfish species can be found in Chapter 3 of the 2015-2016 Biennial harvest specifications and management measures draft EIS (NMFS 2014b).

Neither alternative will change fishing behavior, including gear used, areas fished, and timing of fishing, landing patterns, or target species.

3.2.4 Overfished Species

Overfished stocks are those with spawning biomasses that have dropped below the Minimum Stock Size Threshold (MSST) (Table 1). The Groundfish FMP requires overfished stocks to be rebuilt to sustainable levels through harvest restrictions and conservation measures. Furthermore, the MSA requires the rebuilding periods to be the shortest time possible while taking into account the status and biology of the depleted stock, the needs of fishing communities, and the interaction of the depleted stock within the marine ecosystem. A rebuilding analysis that considers alternate harvest levels and rebuilding times is prepared for each overfished species.

Table 1. Current overfished species managed under rebuilding plans.

Common name	Scientific name
Bocaccio	*Sebastes paucispinis*
Canary rockfish	*Sebastes pinniger*
Cowcod	*Sebastes levis*
Darkblotched rockfish	*Sebastes crameri*
Pacific ocean perch	*Sebastes alutus*
Petrale sole	*Eopsetta jordani*
Yelloweye rockfish	*Sebastes ruberrimus*

As described in the RCA EA (NMFS 2014a), catch of current rebuilding groundfish species has

been much lower on average during the first two years of the IFQ program, compared with the previous two years. Total annual catch of overfished species in 2011 and 2012 in the Shorebased IFQ Program decreased compared to 2009-2010 levels (WCGOP Groundfish Mortality Report 2009-2010, and the Shorebased IFQ Program, Vessel Accounts System 2011-2012):

- 60% decrease for yelloweye rockfish bycatch.
- 89.6% decrease for cowcod rockfish bycatch (South of 40°10' N. latitude).
- 37.8% decrease for canary rockfish bycatch.
- 56.7% decrease for bocaccio rockfish bycatch (South of 40°10' N).
- 68.1% decrease for Pacific ocean perch bycatch (North of 40°10' N).
- 68% decrease for Darkblotched rockfish bycatch.
- 32.8% decrease for Petrale[2] sole bycatch.

Neither alternative is anticipated to change the levels of overfished species bycatch because no changes are anticipated to fishing behavior, including gear used, areas fished, timing of fishing, landing patterns, or target species.

3.2.5 Listed Species (salmon, eulachon, sturgeon, sea turtles, marine mammals, and seabirds)

Protected species fall under four legal mandates: the Endangered Species Act of 1973 (ESA), the Marine Mammal Protection Act of 1972 (MMPA), the Migratory Bird Treaty Act (MBTA), and Executive Order 13186 (Responsibilities of Federal Agencies to Protect Migratory Birds). These laws are explained further in Chapter 5.0.

The Federal MMPA guides marine mammal species protection and conservation policy. Under the MMPA, on the West Coast NMFS is responsible for the management of cetaceans and pinnipeds, while the USFWS manages sea otters. Stock assessment reports include presentation of new information every year for strategic stocks and every three years for non-strategic stocks. (Strategic stocks are those whose human-caused mortality and injury exceeds the potential biological removal.) Marine mammals, whose abundance falls below the optimum sustainable population, are listed as "depleted" according to the MMPA. The following West Coast species are listed as depleted under the MMPA: Northern fur seal (*Callorhinus ursinus*) Eastern Pacific Stock, and Killer whale (*Orcinus orca*) Eastern North Pacific Southern Resident Stock.

Fisheries that interact with marine mammal species listed as depleted, threatened, or endangered may be subject to management restrictions under the MMPA and ESA. NMFS publishes an annual list of fisheries in the *Federal Register* separating commercial fisheries into one of three categories based on the level of serious injury and mortality of marine mammals occurring incidentally in that fishery. The categorization of a fishery in the List of Fisheries determines whether participants in that fishery are subject to certain provisions of the MMPA, such as registration, observer coverage, and take reduction plan requirements. The shorebased IFQ fishery is considered a Category III fishery under the MMPA, indicating a remote likelihood of or no known serious injuries or mortalities to marine mammals.

[2] Petrale sole harvest is close to being rebuilt (estimated 2014) and is currently managed as a target stock.

On December 7, 2012, NMFS released a biological opinion (BiOp) on the effects of the continued operation of the fishery (NMFS 2012a) on certain marine species under the ESA. On November 21, 2012, the U.S. Fish and Wildlife Service (FWS) released a BiOp covering the effects of the continued operation of the fishery on short-tailed albatross, marbled murrelet, California least tern, southern sea otter, and bull trout (USFWS 2012). The most recent consultation on the effects of the fishery on ESA-listed salmonids was completed in 2006 and remains current (NMFS 2006).[3] The information in these documents is incorporated by reference.

Based on this information, and previous interactions observed in the Pacific Coast groundfish fishery, NMFS Protected Resources Division (PRD) determined that the fishery is likely to adversely affect the following listed species and critical habitat:

- Eulachon (*Thaleichthys pacificus*)
- Green sturgeon (*Acipenser medirostris*) and their critical habitat
- Humpback whales (*Megaptera novaeangliae*)
- Steller sea lions (*Eumetopias jubatus*)[4]
- Leatherback sea turtles (*Dermochelys coriacea*) and their critical habitat

The following ESA-listed species occur in the fishery management area, but NMFS Sustainable Fisheries Division (SFD) determined that the fishery is not likely to adversely affect them or their critical habitat:

- Green sea turtles (*Chelonia mydas*)
- Olive ridley sea turtles (*Lepidochelys olivacea*)
- Loggerhead sea turtles (*Caretta caretta*)
- Sei whales (*Balaenoptera borealis*)
- North Pacific right whales (*Eubalaena japonica*)
- Blue whales (*Balaenoptera musculus*)
- Fin whales (*Balaenoptera physalus*)
- Sperm whales (*Physter macrocephalus*)
- Southern Resident killer whales (*Orcinus orca*)
- Guadalupe fur seals (*Arctocephalus townsendi*)
- Critical habitat of Steller sea lions.

[3] On January 22, 2013, NMFS requested the reinitiation of the biological opinion for listed salmonids to address changes in the fishery, including the trawl rationalization program and the emerging midwater trawl fishery. This consultation is expected to be completed in late 2014 and include the effects of the biennial management process in its scope. At this time, the biological opinion for this consultation is not available, and its conclusions cannot be described in this EA.

[4] The eastern DPS of Stellar sea lions (the population segment occurring in the action area) was removed from the list of threatened species under the ESA on November 4, 2013 (78 FR 66140). Therefore, Federal agencies will no longer need to consult with NMFS under Section 7 of the ESA regarding actions that may affect the eastern DPS of Stellar sea lions. Protections under the MMPA will continue, however.

The USFWS biological opinion determined that the fishery is not likely to adversely affect the following species or their critical habitat:

- Marbled murrelets
- California least tern
- Southern sea otter
- Bull trout or bull trout critical habitat.

Further, the FWS BiOp determined that the fishery would not jeopardize the continued existence of the short-tailed albatross.

The FWS did include terms and conditions that NMFS establish regulations requiring the use of streamer lines on commercial groundfish longline vessels 55 feet or greater. In November 2013, the Council took final action to recommend regulations to implement streamer requirements; NMFS is currently completing the rulemaking.

Listed Salmon

NMFS issued BiOps under the Endangered Species Act (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 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 BiOps have concluded that implementation of the Pacific Coast groundfish fishery is not expected to jeopardize the continued existence of any endangered or threatened salmonid species under the jurisdiction of NMFS, or result in the destruction or adverse modification of critical habitat.

NMFS issued a Supplemental Biological Opinion on March 11, 2006, concluding that neither the higher observed bycatch of Chinook in the 2005 whiting fishery nor new data regarding salmon bycatch in the groundfish bottom trawl fishery required a reconsideration of its prior ‘‘no jeopardy’’ conclusion. 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 FR37160, June 28, 2005) and Oregon Coastal coho (73 FR 7816, February 11, 2008) were relisted as threatened under the ESA. The 1999 BiOp concluded that the bycatch of salmonids in the Pacific whiting fishery were almost entirely Chinook salmon, with little or no bycatch of coho, chum, sockeye, and steelhead.

3.3 Socio-economic Environment

The socio-economic environment section is divided into sub-sections, describing the shorebased IFQ fishery, shorebased processors/buyers, and the communities in the action area. Because this action is only for the shorebased IFQ fishery, the other sectors managed under the FMP are not discussed here. For a description of the other groundfish fisheries including commercial, recreational, and tribal fisheries, see the 2015-2016 Harvest Specifications and Management measures DEIS (NMFS 2014b).

3.3.1 Shorebased IFQ Fishery

The Shorebased IFQ fishery is managed with individual fishing quotas for most groundfish species, including whiting. Annually, quota pounds (QP) are allocated from the shorebased sector allocation based on the individual quota share (QS) of each QS owner. (QP is expressed as a weight and QS is expressed as a percent of the shorebased allocation for a given species or species group). QP may be transferred from a QS account to a vessel account or from one vessel account to another vessel account. Vessel accounts are used to track how QP is harvested since QP is used to cover catch (landings and discards) by limited entry trawl vessels of all IFQ species/species groups. Shorebased IFQ catch must be landed at authorized first receiver sites. The IFQ whiting QS were allocated to a mixture of limited entry permit holders and shorebased processors. One non-profit organization received QS based on the ownership of multiple limited entry permits (NMFS 2014b).

Total catch of many species caught in the IFQ fishery has decreased under trawl rationalization while revenue has generally increased. As stated in the Annual Catch Report for the Pacific Coast Groundfish Shorebased IFQ Program in 2012 (NMFS 2013a):

> Total catch of several valuable groundfish species in 2012 was less than 50 percent of the trawl allocation. Only 8 percent of the minor shelf rockfish complex north of 40°10' N. lat. was caught, leaving over 1 million pounds unharvested. Only 27 percent of the minor slope rockfish complex north of 40°10' N. lat. was caught, leaving over 1.3 million pounds unharvested. For flatfish, excluding petrale sole, no species had attainment of over 33 percent of the trawl allocation, with Dover sole being the highest. Over 33 million pounds of Dover sole was left unharvested in 2012. Only 21 percent of the trawl allocation of lingcod was caught in 2012, leaving over 3 million pounds of the allocation unharvested. Only 35 percent of the trawl allocation of Pacific cod was caught in 2012, leaving over 2.5 million pounds unharvested. Only 32 percent of the trawl allocation of yellowtail rockfish north of 40°10' N. lat. was caught, leaving over 4.5 million pounds unharvested.

Landings in the shorebased nonwhiting fleet were up slightly in 2012, at 101 percent of 2011 levels (40,892,262 pounds versus 40,610,190 pounds, respectively). Revenue in 2012 maintained 92 percent of 2011 levels (30,452,763 dollars in 2012 versus 32,935,934 dollars in 2011), despite a 56-cent per pound drop in sablefish prices, a six percent decrease in sablefish landings and a 24 percent decrease in revenue from sablefish, or 4.2 million dollars (17,614,666 dollars in 2011 versus 13,356,592 dollars in 2012) (NMFS 2013a).

Monthly trajectories of landings and revenue, by both the nonwhiting and shorebased whiting fleets for 2012 are also very similar to the previous year, although nonwhiting landings and revenue in December of 2012 returned to levels similar to pre-IFQ. Landings and revenue during December 2011 spiked much higher than typical December levels (NMFS 2013a).

Considering the nonwhiting fleet for the two years before and the two years after trawl rationalization, revenues have been 12.5 percent higher, although annual landings have on average been 24.8 percent lower. Total monthly landings and revenue have been somewhat

more variable throughout the year in the first two years following trawl rationalization than before it.

3.3.2 Buyers and Processors

In addition to harvesters who directly fish for groundfish, shorebased processors are part of the fishery by processing and buying landed fish. A first receiver may be an entity that both buys and processes fish or a buyer or transportation company serving as a middleman between purchasing locations and processing facilities. Because of the number of jobs, Processor stability is one of the objectives of the AMP. The number of companies that reported having processed fish on the West Coast has increased slightly from 23 companies in 2009 to 25 companies in 2010, and 26 companies in 2011 (NMFS 2014b).

First Receivers

The following license data and catch monitor plans do not include landings to determine if first receivers have actually received landings (or what type of landings) while they were licensed:

2011: 51 first receivers; 5 whiting; 35 non-whiting; 11 both (whiting and non-whiting)
2012: 55 first receivers; 6 whiting; 38 non-whiting; 11 both (whiting and non-whiting)
2013: 54 first receivers; 6 whiting; 36 non-whiting; 12 both (whiting and non-whiting)* (note: this is a low estimate; many vessels come in to fish in September).

Processor stability is one of the AMP objectives.

3.3.3 Communities

Federally-managed Pacific groundfish fisheries occurring within the EEZ off the coasts of Washington, Oregon, and California establish the geographic context for the proposed action (Figure 1). West coast communities engaged in these fisheries are also part of the context. Although this is the Federal action area, the states manage the fisheries in the territorial sea to meet the goals and objectives of the Pacific Groundfish FMP. At some level, when access to healthy stocks is limited, communities are impacted (NMFS 2012c). Community characteristics have been thoroughly investigated in the FEISs for the 2007-2008, 2011-2012, and 2013-2014 groundfish Harvest Specifications and Management Measures and are therefore, not discussed here.

Figure 1: The action area, showing major coastal communities and management areas.

There is a trend towards increasing concentration of ex-vessel revenue in major fishing ports. This may indicate a general trend toward agglomeration (the concentration of firms specializing in an activity, such as fish processors and shipyards, in a geographic area). For all groundfish fisheries, the share of coastwide revenue flowing to the top-three ranked ports increased, especially after 2009. This trend seems to be driven primarily by landing patterns in the shorebased trawl/IFQ fishery (NMFS 2014a). Newport, Astoria, and the South and Central Washington Coast are in the top three of the rankings for the trawl (whiting and non-whiting) and non-nearshore fishery sectors. The nearshore fishery figures more prominently on the Oregon-California border and in the Morro Bay port group. (Note that non-nearshore fixed gear fisheries are also important in these three ports as evidenced by the primary and secondary fisheries identified in Table 2 Commercial Fishery Engagement.

Table 2. Commercial fishery engagement and dependence scores and rank, primary and secondary fisheries, for the 2003-2012 baseline period for each Port Group. Based on 2012 inflation-adjusted ex-vessel revenue.

Port Group	**Engagement**	**Engagement Rank**	**Dependence**	**Dependence Rank**	**Primary Fishery**
Puget Sound	4.8%	9	43.6%	3	Non-Nearshore Fixed Gear
North WA coast	6.6%	5	44.7%	2	Non-Nearshore Fixed Gear

South and central WA coast	14.0%	3	14.2%	11	Shoreside Whiting Trawl
Astoria	18.0%	1	37.2%	4	Shoreside Non-whiting Traw
Tillamook	0.3%	18	5.3%	15	Nearshore Fixed Gear
Newport	15.0%	2	30.1%	7	Shoreside Whiting Trawl
Coos Bay	8.4%	4	21.8%	9	Shoreside Non-whiting Traw
Brookings	5.3%	7	32.1%	6	Shoreside Non-whiting Traw
Crescent City	2.4%	13	10.0%	13	Shoreside Non-whiting Traw
Eureka	6.0%	6	26.2%	8	Shoreside Non-whiting Traw
Fort Bragg	5.1%	8	36.4%	5	Shoreside Non-whiting Traw
Bodega Bay	0.4%	17	3.7%	16	Non-Nearshore Fixed Gear
San Francisco	2.5%	12	9.2%	14	Shoreside Non-whiting Traw
Monterey	2.7%	11	16.0%	10	Non-Nearshore Fixed Gear
Morro Bay	4.5%	10	64.7%	1	Non-Nearshore Fixed Gear
Santa Barbara	1.4%	15	2.7%	18	Non-Nearshore Fixed Gear
Los Angeles	1.5%	14	3.2%	17	Non-Nearshore Fixed Gear
San Diego	1.0%	16	10.1%	12	Non-Nearshore Fixed Gear

Revenue from whiting trawl and the nearshore sector are relatively concentrated in the top-ranked ports at 94 percent and 70 percent, respectively. (Note that for nearshore the top two ports alone account for 58 percent of coastwide sector revenue) (NMFS 2014b). Overall ex-vessel revenue for the top three ranked ports has increased from 2003-2012 (Figure 2).

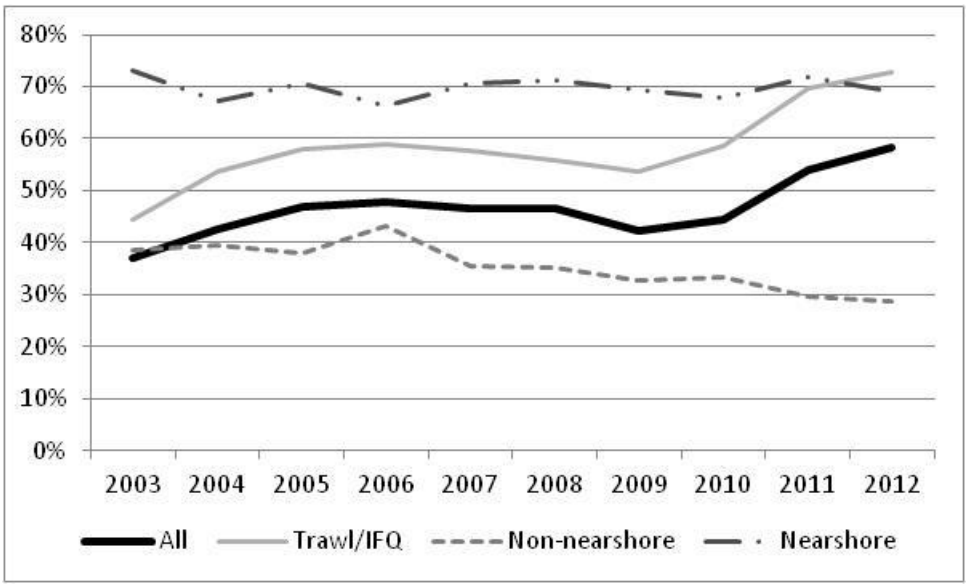

Figure 2. Share of inflation adjusted ex-vessel revenue for top three ranked ports for all sectors and selected fishery sectors, 2003-2012. (NMFS 2014b)

Community stability is one of the AMP objectives, and therefore may be addressed during development of the AMP.

4.0 ENVIRONMENTAL CONSEQUENCES OF THE ALTERNATIVES

The proposed action would continue the AMP QP pass-through while no action (Alternative 1) would allow the pass-through to expire at the end of 2014. The AMP QP represents a small portion of the QPs available to the shorebased trawl fishery. Therefore, the difference between Alternative 1 and Alternative 2 is expected to be minor and have no influence on normal fishing operations. For example, the proposed action would have little to no effect on when, where, or to what degree fishermen will fish and therefore, impacts would not be expected on the physical, biological, or socioeconomic environments.

The full range of environmental consequences associated with normal fishing operations is fully considered in the following EIS: Harvest Specifications and Management Measures for 2015-2016 and Biennial Period Thereafter (NMFS 2014b).

4.1 Physical Impacts of the Alternatives

Physical impacts generally associated with fishery management actions are effects resulting from changes in the physical structure of the benthic environment because of fishing practices (e.g. gear effects). Overall, groundfish fishing affects the physical environment because the gear contacts the bottom substrate. The physical environmental elements of the action area discussed in section 3.1 related to the action area include the California Current Ecosystem and Essential Fish Habitat.

The shorebased trawl fishery uses gear that contacts the bottom substrate. The amount of QP available to each participant in the fishery influences how many days they will fish and the areas they will fish which determines the impact the fishery has on the physical environment. Alternative 1 results in the expiration of the AMP QP pass-through, meaning no AMP QP would be issued to QS account holders. While the expiration of the pass-through would result in less QP available to QS holders the magnitude of this decrease is too small to change fishing behavior including the number of fishing days, areas fished, timing, and gear such that there would be impacts to physical oceanography, Essential Fish Habitat, or the California Current Ecosystem. Therefore, Alternative 1 would have a neutral effect on the physical environment.

There is no meaningful difference between the physical effects of the two alternatives. While Alternative 2 results in 10 percent more AMP QP per species than Alternative 1, that 10 percent is not a large enough amount of QP to change fishing behavior, including fishing area, timing, and gear, and thus, the impacts to the physical environment would be similar under both alternatives.

Relative to the AMP, conservation is one of the objectives of the program. Since the trawl program was implemented, the Council and NMFS have not prioritized modifications to the program to address conservation concerns because none have arisen. Further, as stated above the preferred action is not expected to have impacts on the physical environment because it will not change fishing behavior, including areas fished or fishing gear.

4.2 Biological Impacts of the Alternatives

The biological impacts generally associated with fishery management actions are effects resulting from: 1) harvest of fish stocks that may result in changes in food availability to predators, changes in population structure of target fish stocks, and changes in community

structure; 2) entanglement and/or entrapment of non-target organisms in active or inactive fishing gear; and 3) major shifts in the abundance and composition of the marine community as a result of fishing pressure.

In this section, the alternatives are examined for their potential effects on targeted groundfish, non-groundfish, overfished groundfish species, and listed species.

Effects of the Alternatives on targeted groundfish
The shorebased IFQ fishery issues QP for the targeted groundfish species caught in the fishery. Alternative 1 results in the expiration of the AMP QP pass-through, meaning no AMP QP would be issued to QS account holders. While the expiration of the pass-through would result in less QP available to QS holder and therefore, possibly less catch of certain species, the magnitude of this decrease is too small to have an impact on those species. Therefore, Alternative 1 is expected to have a neutral effect on targeted groundfish stocks. Further, because the AMP QP is taken from the overall shorebased trawl allocations for each species, the resulting AMP QP that is distributed to each vessel is small enough that under Alternative 1, with no AMP distributed, fishing behavior is not expected to change even though the amount of QP available will be reduced from previous years.

There is no meaningful difference between the effects of the two alternatives on targeted groundfish. Alternative 2 would allocate the AMP QP to the shorebased trawl fishery. This results in 10 percent more available QP per species than under Alternative 1, which may allow more catch of certain species. However, the magnitude of the increased QP is not expected to result in changes to fishing behavior. For example, the total catch for some species is well below the shorebased trawl allocation and therefore, having 10 percent more quota available would make little difference in how the allocation is caught as other factors already result in total catch being well below the allocation.

Effects of the Alternatives on non-groundfish (Pacific halibut, CPS, and HMS)
The shorebased-trawl fishery catches non-groundfish as bycatch while targeting groundfish species. Besides Pacific halibut, these species are not issued QP because the catch of these species is not allocated through the trawl program. Catch of Pacific halibut to the shorebased IFQ fishery is issued to QS account holders as Individual Bycatch Quota (IBQ); however, no AMP QP is issued for Pacific halibut.

Alternative 1 results in the expiration of the pass-through and less QP for groundfish and in turn could result in less bycatch of non-groundfish, because with less groundfish, QP fishermen may fish less. However, the magnitude of this decrease is too small to change groundfish fishing behavior in a manner that would change the bycatch mortality of the non-groundfish species that are incidentally caught. Also, non-groundfish species are not issued AMP QP and therefore, the pass-through expiration does not directly change the amount of catch of non-groundfish species from the shorebased IFQ fishery. Therefore, Alternative 1 is expected to have a neutral effect on non-groundfish species.

There is no meaningful difference between the effects of the two alternatives on non-groundfish species. Alternative 2 would allocate the AMP QP to the shorebased trawl fishery. This results in 10 percent more available QP per targeted species than under Alternative 1, which may allow

more catch of target and bycatch species due to increased fishing. However, the magnitude of the increased QP is not expected to result in changes to fishing behavior in the manner that would increase bycatch to a level that impact non-groundfish species.

Effects of the Alternatives on overfished groundfish
Participants in the shorebased IFQ fishery are issued QP for each of the overfished groundfish species. The expiration of the pass-through under Alternative 1 would result in less available QP for each overfished species and therefore, could result in less catch of each overfished species. However, while the expiration of the pass-through would result in less QP available to QS holders and therefore possibly less catch of overfished species, the magnitude of this decrease is too small to have an impact to those species and is unlikely to change fishing behavior. Also, the shorebased trawl allocations for some overfished species are already at such a low level that a 10 percent reduction in available QP will not change fishing behavior and therefore not change the effects of the fishery on overfished species. Overfished species will continue to be managed consistent with their respective rebuilding plans and overall harvest specifications. Therefore, Alternative 1 would have a neutral effect on overfished groundfish species.

There is no meaningful difference between the effects of the two alternatives on overfished groundfish. Alternative 2 would allocate the AMP QP to the shorebased trawl fishery. This results in 10 percent more available QP per overfished species than under Alternative 1, which may allow more catch of each species due to increased fishing. However, the magnitude of the increased QP is not expected to result in changes to fishing behavior in the manner that would increase catch to a level that would impact overfished species or rebuilding.

Effects of the Alternatives on listed species (salmon, eulachon, sturgeon, sea turtles, marine mammals, and seabirds)
Listed species are caught as bycatch in the shorebased groundfish fishery. The expiration of the pass-through under Alternative 1 would result in less available QP for target species and therefore, could result in less catch of those species, which could result in less bycatch of listed species. However, while the expiration of the pass-through would result in less QP available to QS holders and therefore possibly less catch of listed species, the magnitude of this decrease is too small to have an impact on those species and is unlikely to change fishing behavior. Therefore, Alternative 1 would have a neutral effect on listed species. Also, Alternative 1 is not expected to affect listed species beyond what has previously been analyzed in the most recent Biological Opinions (NMFS 2006, NMFS 2012a and USFWS 2013) because the magnitude of the reduced QP is too small to change fishing behavior and therefore, is not expected to change the impacts of the groundfish fishery on listed species.

There is no meaningful difference between the effects of the two alternatives on listed species. Alternative 2 would allocate the AMP QP to the shorebased trawl fishery. This results in 10 percent more available QP than under Alternative 1, which may allow more catch of groundfish and more catch of some listed species. However, the magnitude of the increased QP is not expected to result in changes to fishing behavior in the manner that would increase catch to a level that would impact any listed species.
Conservation is one of the goals of the AMP and as stated above the preferred action is not expected to have any impacts on target or non-target species because this action will not change

fishing behavior. Additionally, no issues related to conservation concerns resulting from implementation of the trawl program have been prioritized by the Council and forwarded to NMFS for action. Therefore, extending the pass-through until the 5-year review of the trawl program is complete does not represent a conservation concern nor does it prohibit NMFS from using AMP to address future conservation concerns.

4.3 Socio-economic Impacts of the Alternatives

Under Alternative 1, the AMP pass-through expires and the AMP QP is not issued. This results in less QP available for vessels to fish with and may result in a very low negative impact for some individuals. The magnitude of the reduced income, if any, is not expected to have a negative effect on communities because it is not expected to change fishing behavior including port of landing.

Under Alternative 2, the AMP pass-through is extended and the AMP QP is issued to QS holders. The amount of AMP QP issued under Alternative 2 results in a low positive impact on individual income when compared to Alternative 1. Therefore, the proposed action is expected to have a small positive socioeconomic impact on individuals or processors because the AMP QP will be distributed among all QS holders in the shorebased IFQ fishery. However, it is not anticipated that this amount of QP will result in changes to fishing behavior including time, area, or gear used, compared to Alternative 1.

Community and processor stability are two of the AMP objectives. As stated above, the preferred alternative is expected to have a low positive impact on individual income but no effect on fishing behavior. Since the implementation of the trawl program, several changes have been made to address issues other than communities and processors. No issues directly related to communities and processors have been prioritized by the Council for action. Therefore, extending the pass-through until the 5-year review of the trawl program is complete does not represent a socioeconomic concern nor does it prohibit NMFS from using AMP to address future socioeconomic concerns. Continuing the AMP pass-through maintains the current pass-through processes used in this fishery since 2011 and therefore, does not represent a change to available QP and income potential for recipients from the AMP QP. The proposed action does not contain any new management measures that would have specific economic impact on the fishery. Additionally, due to other factors such as availability of overall QP, pricing, and markets, some species are caught well under their allocations. Therefore, continuing the AMP pass-through is not likely to affect the socioeconomic environment as other factors have a larger impact such as the availability of co-occurring overfished groundfish species that limit access to target stocks.

Finally, facilitating new entrants and addressing unintended/unforeseen consequences are also objectives of the AMP. These two issues have also not been specifically prioritized by the Council in the trailing actions that have been completed to date. Similar to socioeconomic and conservation concerns, this lack of prioritization at the Council level does not prohibit NMFS from using AMP to address these issues in the future.

4.4 Summary of Physical, Biological, and Socioeconomic Impacts

Table 3 below summarizes the effects of the alternatives on the physical, biological, and socioeconomic environments.

Table 3. Summary of Effects on the Physical, Biological, and Socioeconomic Environment

	Effects on Physical Environment	**Effects on the Biological Environment**	**Effects on Socioeconomic Environment**
Alternative 1 (No Action) AMP Pass-through expires	Neutral. No Action is not expected to have a significant effect on physical environment because no changes are expected to fishing behavior including gear and areas fished that would effect the physical environment.	Neutral. No Action is not expected to have a significant effect on the biological environment because no changes are expected to fishing behavior.	No Action is expected to have a low negative effect on individual fishermen because without AMP QP they will have less QP available for fishing.
Alternative 2. Continuation of AMP Pass-through	No measureable difference from Alternative 1 because impacts from no AMP QP are not substantially different from allowing the AMP QP	No measureable difference from Alternative 1 because impacts from no AMP QP are not substantially different from allowing the AMP QP	Alternative 2 is expected to have a low positive effect on fishermen because they would have more QP available compared to Alternative 1

4.5 Cumulative Effects

A cumulative effects analysis is required by the Council on Environmental Quality (CEQ) (40 CFR part 1508.7). The purpose of a cumulative effects analysis is to consider the combined effects of many actions on the human environment over time that would be missed if each action were evaluated separately. CEQ guidelines recognize that it is not practical to analyze the cumulative effects of an action from every conceivable perspective, but rather, the intent is to focus on those effects that are truly meaningful. A formal cumulative impact assessment is not necessarily required as part of an EA under NEPA as long as the significance of cumulative impacts has been considered (U.S. EPA 1999). The following addresses the significance of the expected cumulative impacts as they relate to the federally-managed groundfish shorebased trawl fishery.

In Chapter 3 (Description of the Affected Environment), the resources potentially affected by the proposed action are identified and are carried forward here for the cumulative effects analysis. Those resources are:

- Physical Environment
- Biological Environment
  - Groundfish
  - Non-groundfish
  - Overfished species
  - Protected species
- Socioeconomic Environment
  - IFQ fishery
  - Processors
  - Communities

4.5.1 Geographical and Temporal Boundaries

The analysis of impacts focuses on actions related to the shorebased IFQ fishery. The core geographic scope for each of the resources is focused on the Eastern Pacific Ocean; and more specifically, the U.S. EEZ off the coasts of Washington, Oregon, and California. The core geographic scope for biological and physical resources is also the U.S. EEZ. For socioeconomic issues, the core geographic boundaries are defined as those U.S. fishing communities directly involved in the harvest or processing of the managed resources, which were found to occur in the coastal states of Washington, Oregon, and California.

The temporal scope of past and present actions for the potentially affected resources is primarily focused on actions that have occurred after the implementation of the Trawl Rationalization Program in 2010. The temporal scope of future actions for all affected resources extends about five years into the future. This period was chosen because this is the time within which the pass-through may be extended while the AMP is developed.

4.5.2 Actions Other than the Proposed Action

4.5.2.1 Past, Present, and Reasonably Foreseeable Future Actions

Fishery-Related Actions

The historical management practices of the Council have resulted in positive impacts on the health of the groundfish stocks and demersal rockfish complex species. Numerous actions have been taken to manage the fisheries for these species through amendment and specifications actions. In addition, the nature of the fishery management process is intended to provide the opportunity for the Council and NMFS to regularly assess the status of the fisheries and to make necessary adjustments to ensure that there is a reasonable expectation of meeting the objectives of the FMP and the targets associated with any rebuilding programs under the FMP. The statutory basis for Federal fisheries management is the Magnuson-Stevens Act. To the degree with which this regulatory regime is complied, the cumulative impacts of past, present, and reasonably foreseeable future Federal fishery management actions on the affected resources should generally be associated with positive long-term outcomes. Constraining fishing effort through regulatory actions can often have negative short-term socioeconomic impacts. These impacts are usually necessary to bring about long-term sustainability of a given resource, which should, in the long-term, promote positive effects on human communities, especially those that are economically dependent upon groundfish stocks and demersal rockfish complex species.

In addition, the Council has developed harvest specifications for 2015 and 2016 for groundfish stocks, which will be implemented in early 2015 by NMFS. It is noted that the levels of groundfish harvest are not expected to fluctuate dramatically in the near future for the short term (see 2015-2016 harvest specifications). In the long term, it is important to evaluate the impacts on shares of total harvest allocated to entities rather than the allocation poundage.

The Council and NMFS continue to work together on the trawl rationalization trailing actions. All of these actions are expected to increase benefits from the fishery and are not expected to appreciably interact with the action considered here, except as noted in the following list. Details on each action are available on the Council's website (http://www.pcouncil.org/groundfish/fishery-management-plan/trailing-actions/). Additionally,

the first review of the trawl program will be conducted in 2016. This review is anticipated to help guide further action for the trawl fishery because it will provide information on how the fishery has performed over the first five years of the program.

Starting in 2014, the Council and NMFS will be prioritizing all groundfish actions together under an Omnibus action. This procedure is intended to allow a full discussion of all groundfish actions to balance further work on each item. Previously, the trawl trailing actions were evaluated independent of other groundfish sectors. The main actions are as follows:

5-Year Review of the Trawl Rationalization Program (under preliminary development)--
The 5-year review of the trawl rationalization program is a requirement under the MSA to evaluate the components of limited access programs. It is anticipated that this review will provide information necessary for the design of the AMP because it will show the true needs of the fishery relative to the objectives of the AMP.

Trawl/Fixed gear permit stacking (final Council action taken, not yet implemented) — This action allows fixed gear and trawl permits to be registered to the same vessel at the same time.

Gear Issues (under Council consideration, deliberations delayed) -- Gear issues include multiple gears on a trip, gear modifications to increase efficiency, and restrictions on areas in which gears may be used. Consideration on this issue is included in the Omnibus action in front of the Council fall 2014.

Risk Pools (*Council action completed, not yet implemented*) — The Council has recommended a number of provisions to facilitate fishers working together in risk pools. These actions include providing a safe harbor from limits on the accumulation of control over QS.

Lender Safe Harbor from Control Rules (*Council action completed, not yet implemented*) — This action clarified who qualifies for the lender safe harbor exception and the activities for which an exception is provided.

Whiting Season and Southern Allocation (*Council action complete, not yet implemented*) – This action will set a common start date for all shoreside fisheries which matches the start date for the at-sea fishery (May 15) and eliminate the cap on early season harvest in the south. While not changing the total amount of trawling with midwater gear and total amount of the target species caught, it may alter the timing of that harvest advancing some of the harvest by one month, and subsequently have some effect on the timing of bottom-trawl fishing activities.

Pacific Whiting Surplus Carryover Implementation (*Council action completed*) - This provision, which would allow up to 10 percent of unused whiting QP to be carried from one year to the next, has not been implemented due to treaty issues with Canada. The Councils Scientific and Statistical Committee (SSC) has determined that from a scientific perspective, the surplus carryover provision does not have a biological impact.

Electronic Monitoring as a Replacement for the 100-percent Observer Coverage Requirement (*under Council consideration*) — This proposal is under preliminary study, and options have yet to be developed.

Fishery Ecosystem Plan (FEP) --- The FEP was finalized in 2013 and now serves to broaden NMFS' current authority for species and issues not currently addressed in existing FMPs, including the groundfish plan. Implementation of the FEP could have positive environmental and biological impacts associated with forage fish and unmanaged fish protection. Such protections could accrue benefits to managed species such as groundfish, which depend on forage fish and some unmanaged fish for their survival and reproduction. In the context of regulations that may impose further restrictions on harvest, alternatives which alleviate production costs may be more beneficial to stability in the industry than would be the case if harvest conditions were expected to remain stable.

Non-fishing Actions

Non-fishing activities that introduce chemical pollutants, sewage, changes in water temperature, salinity, dissolved oxygen, and suspended sediment into the marine environment pose a risk to all of the identified affected resources. Human-induced non-fishing activities tend to be localized in nearshore areas and marine project areas where they occur. Examples of these activities include, but are not limited to: agriculture, port maintenance, coastal development, marine transportation, marine mining, dredging, and the disposal of dredged material. Wherever these activities co-occur, they are likely to work additively or synergistically to decrease habitat quality and may indirectly constrain the sustainability of the managed resources, non-target species, and protected resources. Decreased habitat suitability would tend to reduce the tolerance of these species to the impacts of fishing effort. Mitigation of this outcome through regulations that would reduce fishing effort could then negatively impact human communities. The overall impact to the affected species and their habitats on a population level is unknown, but likely neutral to low negative, since a large portion of these species have a limited or minor exposure to these local non-fishing perturbations.

NMFS reviews these types of effects through the review processes required by Section 404 of the Clean Water Act and Section 10 of the Rivers and Harbors Act for certain activities that are regulated by Federal, state, and local authorities. The jurisdiction of these activities is in "waters of the U.S." and includes both river and marine habitats.

For many of the proposed non-fishing activities to be permitted under other Federal agencies (such as offshore energy facilities, etc.), those agencies would conduct examinations of potential impacts on the affected resources. The Magnuson-Stevens Act (50 CFR 600.930) imposes an obligation for other Federal agencies to consult with the Secretary of Commerce on actions that may adversely affect EFH. The Pacific Fishery Management Council is engaged in this review process by making comments and recommendations on any Federal or state action that may affect habitat, including EFH, for their managed species and by commenting on actions likely to substantially affect habitat, including EFH.

In addition, under the Fish and Wildlife Coordination Act (Section 662), "whenever the waters of any stream or other body of water are proposed or authorized to be impounded, diverted, the

channel deepened, or the stream or other body of water otherwise controlled or modified for any purpose whatever, including navigation and drainage, by any department or agency of the U.S., or by any public or private agency under Federal permit or license, such department or agency first shall consult with the U.S. Fish and Wildlife Service (USFWS), Department of the Interior, and with the head of the agency exercising administration over the wildlife resources of the particular state wherein the" activity is taking place. This act provides another avenue for review of actions by other Federal and state agencies that may impact resources that NMFS manages in the reasonably foreseeable future. In addition, NMFS and the USFWS share responsibility for implementing the ESA. ESA requires NMFS to designate "critical habitat" for any species it lists under the ESA (i.e., areas that contain physical or biological features essential to conservation, which may require special management considerations or protection) and to develop and implement recovery plans for threatened and endangered species. The ESA provides another avenue for NMFS to review actions by other entities that may impact protected resources whose management units are under NMFS' jurisdiction.

The effects of climate on the biota of the California Current Ecosystem have been recognized for some time. The El Niño/Southern Oscillation (ENSO) is widely recognized to be the dominant mode of interannual variability in the equatorial Pacific, with impacts throughout the rest of the Pacific basin and the globe. During the negative (El Niño) phase of the ENSO cycle, jet stream winds are typically diverted northward, often resulting in increased exposure of the west coast of the U.S. to subtropical weather systems. The impacts of these events to the coastal ocean generally include reduced upwelling winds, deepening of the thermocline, intrusion of offshore (subtropical) waters, dramatic declines in primary and secondary production, poor recruitment, reduced growth and survival of many resident species (such as salmon and groundfish), and northward extensions in the range of many tropical species. Concurrently, top predators such as seabirds and pinnipeds often exhibit reproductive failure. In addition to interannual variability in ocean conditions, the North Pacific seems to exhibit substantial interdecadal variability, which is referred to as the Pacific (inter) Decadal Oscillation (PDO).

Within the California Current itself, Mendelssohn, et al. (2003) described long-term warming trends in the upper 50 to 75 m of the water column. Recent paleoecological studies from marine sediments have indicated that the 20th century warming trend in the California Current has exceeded natural variability in ocean temperatures over the last 1,400 years. Statistical analyses of past climate data have improved our understanding of how climate has affected North Pacific ecosystems and associated marine species productivities. Our ability to predict future impacts on the ecosystem stemming from climate forcing events remains poor at best.

4.5.3 Summary of the Cumulative Effects of the Alternatives

This section summarizes the preceding analyses of environmental consequences.

Physical Environment

Alternative 1 would have no effect on the physical environment because it would not change fishing behavior including time and areas fished and gear used. Because the gear, areas, and timing are not anticipated to change under Alternative 2, the effects to the physical environment are anticipated to be the same as under Alternative 1.

Biological Environment (Groundfish, Non-groundfish, Overfished species, Protected species)
Alternative 1 would have no effect on the biological environment because it would not change fishing behavior including time and areas fished and gear used. While the expiration of the pass-through would result in less QP available to QS holder and therefore, possibly less catch of certain species, the magnitude of this decrease is too small to have any impacts to the biological environment. Because the gear, areas, and timing are not anticipated to change under Alternative 2, the effects to the biological environment are anticipated to be the same as under Alternative 1.

Socioeconomic Environment (Shorebased IFQ fishery, Processors, Communities)
The primary socioeconomic issue associated with the proposed action is the revenue generated from QS holders receiving the AMP QP. Alternative 1 would have a low negative impact on some individuals fishing in the shorebased IFQ fishery because no AMP QP would be distributed and therefore, these individuals would have less QP available to them. Alternative 2 has a low positive impact on the shorebased IFQ fishery, processors, and communities because they are receiving the AMP QP directly. Because the pass-through would continue under Alternative 2 but would expire under Alternative 1, Alternative 2 would have a low positive impact to the socioeconomic environment compared to Alternative 1.

Table 4. Summary of the Environmental Consequences of the Alternatives.

	Alternative 1	**Alternative 2**
Physical Environment	Negligible	Same as Alternative 1
Biological Environment	Negligible	Same as Alternative 1
Socioeconomics	Low negative	Low positive

Therefore, when this proposed action is considered in conjunction with all the other pressures placed on fisheries by past, present, and reasonably foreseeable future actions, it is not expected to result in any significant impacts, positive or negative. Based on the information and analyses presented in this document, there are no significant cumulative effects associated with the action proposed.

5.0 OTHER APPLICABLE LAW

5.1 FMP Goals and Objectives and National Standards

The proposed action should further the goals and objectives of, and be consistent with, the Pacific Coast Groundfish Fishery Management Plan (Groundfish FMP), and be consistent with the National Standards (NS) contained in the Magnuson-Stevens Act. The Groundfish FMP contains three broad goals and 17 objectives intended to achieve those goals. As briefly described below, the proposed action should:

- Maximize utilization and economic value (FMP management goals 2 and 3)

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

The groundfish harvest specifications and management measures are implemented every two years and incorporate the most recent scientific information, including new stock assessments. The most recent harvest specifications cover 2013-2014 (78 FR 580, January 3, 2013). The harvest specifications establish, in generally decreasing order, overfishing limits, acceptable biological catch limits, annual catch limits, and harvest guidelines. In addition, for some species, the harvest specifications also establish sector-specific allocations. Under the Groundfish FMP, the annual catch limits are established in a manner to prevent overfishing while achieving optimum yield (OY).

Because this action would not change the overall amount of groundfish available or constrain the fishery the proposed action would continue to prevent overfishing while achieving OY.

NATIONAL STANDARD 2

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

The EA and supporting analyses are based upon the best scientific information available. The EA used data from various sources or summaries of that data, including FEISs for the groundfish biennial harvest specifications and management measures, the EA on recent RCA changes, preliminary EA on changes to chafing gear, and reports presented to the Council on the trawl rationalization program.

NATIONAL STANDARD 3

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

The environmental impact statement for the 2015-2016 Groundfish Harvest Specifications and Management Measures described the management units for Pacific coast groundfish. This action would not modify those management units.

NATIONAL STANDARD 4

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

The proposed action does not discriminate between residents of different states and does not modify any allocations of fishing privileges.

NATIONAL STANDARD 5

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

The proposed action allows for the efficient utilization of fishery resources while promoting the sustainable use of the groundfish fishery resource.

NATIONAL STANDARD 6

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

The proposed action does not modify factors that affect variations and contingencies in fisheries, fishery resources, and catches.

NATIONAL STANDARD 7

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

Generally, by coordinating management, monitoring, and enforcement activities between NMFS, the Council, and the States, duplication, and thus cost, is minimized. The proposed action would not introduce any new measures that duplicate those already in place.

NATIONAL STANDARD 8

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

Because this action will continue to allocate the AMP QP, using the same method that has been used since 2011 the benefits to fishing communities were analyzed in the environmental impact statement for the 2015-2016 Groundfish Harvest Specifications and Management Measures. The proposed action would result in no change to those benefits.

NATIONAL STANDARD 9

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

The shorebased IFQ program was designed to improve total catch accounting (with 100% observer coverage in all sectors and 100% dockside monitoring), reduce bycatch, increase target catches, and promote greater individual responsibility. The action is not anticipated to impact the amount of fish bycatch and fishermen are expected to continue to avoid overfished species due to the limited amount of quota pounds available.

NATIONAL STANDARD 10

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

The shorebased IFQ program provides fishermen with increased flexibility in determining when, where, and how to fish. This is expected to reduce incentives to fish in unsafe conditions. Some safety benefits were also expected to the degree that the fishery is more profitable and more money is put into vessel maintenance.

5.2 Endangered Species Act

Section 7(a)(2) of the Endangered Species Act, as amended, requires that federal agencies "shall, in consultation with and with the assistance of the Secretary [of Commerce or Interior], insure that any action authorized, funded, or carried out by such agency ... is not likely to jeopardize the continued existence of any endangered species, or result in the destruction or adverse modification of habitat of such species...." Based on this section of the law (Section 7), action agencies consult with NMFS (for marine species) or FWS (for terrestrial and freshwater species) in cases where a "major construction activity" (which is considered equivalent to the "major federal action" standard under NEPA) could "jeopardize the continued existence" of an endangered species. For fishery management actions in federal waters, NMFS is both the action and consulting agency (although different divisions fulfill these two roles).

NMFS issued Biological Opinions under the Endangered Species Act (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 PCGFMP 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 PCGFMP is 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 issued a Supplemental Biological Opinion on March 11, 2006, concluding that neither the higher observed bycatch of Chinook in the 2005 whiting fishery nor new data regarding salmon bycatch in the groundfish bottom trawl fishery required a reconsideration of its prior ''no jeopardy'' conclusion. NMFS also reaffirmed its prior determination that implementation of the PCGFMP 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 Oregon Coastal coho (73 FR 7816, February 11, 2008) were recently relisted as threatened under the ESA. The 1999 biological opinion concluded that the bycatch of salmonids in the Pacific whiting fishery were almost entirely Chinook salmon, with little or no bycatch of coho, chum, sockeye, and steelhead.

On November 21, 2012, the U.S. Fish and Wildlife Service (FWS) issued a biological opinion concluding that the groundfish fishery will not jeopardize the continued existence of the short-tailed albatross. The (FWS) also concurred with NMFS that the fishery is not likely to adversely affect the marbled murrelet, California least tern, southern sea otter, bull trout, nor bull trout critical habitat.

On December 7, 2012, NMFS completed a biological opinion concluding that the groundfish fishery is not likely to jeopardize non-salmonid marine species including listed eulachon, green sturgeon, humpback whales, Steller sea lions, and leatherback sea turtles. The opinion also concludes that the fishery is not likely to adversely modify critical habitat for green sturgeon and leatherback sea turtles. An analysis included in the same document as the opinion concludes that the fishery is not likely to adversely affect green sea turtles, olive ridley sea turtles, loggerhead sea turtles, sei whales, North Pacific right whales, blue whales, fin whales, sperm whales, Southern Resident killer whales, Guadalupe fur seals, or the critical habitat for Steller sea lions.

5.3 Marine Mammal Protection Act

The MMPA of 1972 is the principal Federal legislation that guides marine mammal species protection and conservation policy in the United States. Under the MMPA, NMFS is responsible for the management and conservation of 153 stocks of whales, dolphins, porpoise, as well as seals, sea lions, and fur seals; while the U.S. Fish and Wildlife Service is responsible for walrus, sea otters, and the West Indian manatee.

Off the west coast, the Steller sea lion (*Eumetopias jubatus*) eastern stock, Guadalupe fur seal (*Arctocephalus townsendi*), and Southern sea otter (Enhydra lutris) California stock are listed as threatened under the ESA. The sperm whale (*Physeter macrocephalus*) Washington, Oregon, and California stock, humpback whale (*Megaptera novaeangliae*) Washington, Oregon, and California - Mexico Stock, blue whale (*Balaenoptera musculus*) eastern north Pacific stock, and Fin whale (*Balaenoptera physalus*) Washington, Oregon, and California stock are listed as depleted under the MMPA. Any species listed as endangered or threatened under the ESA is automatically considered depleted under the MMPA.

The west coast groundfish trawl fisheries are category III fisheries indicating a remote likelihood of or no known serious injuries or mortalities to marine mammals. The proposed action will not change the category listing because it will not affect fishing behavior including areas fished or gear.

5.4 Migratory Bird Treaty Act and EO 13186

The MBTA 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 the populations of many native bird species. The MBTA 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 MBTA prohibits the directed take of seabirds, but the incidental take of seabirds does occur. The proposed action is unlikely to affect the incidental take of seabirds protected by the MBTA.

5.5 Paperwork Reduction Act

Neither alternative contains a collection of information and are, therefore, not subject to the requirements of the Paperwork Reduction Act, 44 U.S.C. 3501 et seq.

5.6 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 would be implemented in a manner that is consistent to the maximum extent practicable with the

enforceable policies of the approved coastal zone management programs of Washington, Oregon, and California. This determination has been submitted to the responsible state agencies for review under Section 307(c)(1) of the CZMA.

5.7 EO 12898 (Environmental Justice)

EO 12898 obligates Federal agencies to identify and address "disproportionately high adverse human health or environmental effects of their programs, policies, and activities on minority and low-income populations in the United States" as part of any overall environmental impact analysis associated with an action. NOAA guidance, NAO 216-6, at Section 7.02, states that "consideration of EO 12898 should be specifically included in the NEPA documentation for decision-making purposes." Agencies should also encourage public participation, especially by affected communities during scoping, as part of a broader strategy to address environmental justice issues. The proposed action will not result in disproportionate adverse impacts to low income and minority communities.

5.8 EO 13132 (Federalism)

Executive Order 13132 enumerates eight "fundamental federalism principles." The first of these principles states "Federalism is rooted in the belief that issues that are not national in scope or significance are most appropriately addressed by the level of government closest to the people." In this spirit, the Executive Order directs agencies to consider the implications of policies that may limit the scope of or preempt states' legal authority. Preemptive action having such "federalism implications" is subject to a consultation process with the states; such actions should not create unfunded mandates for the states; and any final rule published must be accompanied by a "federalism summary impact statement."

Neither alternative would have federalism implications subject to EO 13132.

5.9 EO 13175 (Consultation and Coordination with Indian Tribal Governments)

EO 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 recognizes the sovereign status and co-manager role of Indian tribes over shared Federal and tribal fishery resources. In Section 302(b)(5), the MSA reserves a seat on the Council 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, the quantification of those rights is 50 percent of the harvestable surplus of groundfish available in the tribes' Usual and Accustomed 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 affects only the non-tribal trawl rationalization program and has no effect on the four Washington coastal tribes.

5.10 EO 12866

This action is not significant under EO 12866. This action will not have a cumulative effect on the economy of $100 million or more, not 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, investment, productivity, innovation, or competitiveness of U.S.-based enterprises.

6.0 Compliance with the National Environmental Policy Act (NEPA)

The CEQ has issued regulations specifying the requirements for NEPA documents (40 CFR 1500 – 1508), and NOAA's agency policy and procedures for NEPA can be found in NOAA Administrative Order 216-6 (NAO 216-6). The following are core elements of an EA (40 CFR § 1508.9):

1. The need for the proposal,
2. Alternatives as required by NEPA § 102(2)(E),
3. The environmental impacts of the proposed action and the alternatives, and
4. The agencies and persons consulted.

6.1 Agencies and Persons Consulted

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6.2 Finding of No Significant Impact

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