

5.0 NONGROUNDFISH SPECIES

Nongroundfish species and fisheries targeting them often need to be considered in groundfish management for two reasons. First, they may be caught incidentally in fisheries targeting groundfish. Thus, management measures that change total fishing effort in groundfish fisheries could increase or decrease fishing mortality on incidentally-caught species. Second, those fisheries targeting nongroundfish species may be affected by management measures intended to reduce or eliminate incidental catches of overfished groundfish species in these fisheries. This section describes these species and associated fisheries. See Appendix A, Chapter 3 for more information on nongroundfish species and fisheries.

5.1 *Affected Environment: Nongroundfish Species*

The principle species that either co-occur with groundfish species or have fisheries directed on them that incidentally take groundfish are summarized in the table below.

Principle Species Co-occurring with Groundfish	
California halibut (<i>Paralichthys californicus</i>)	Pacific pink shrimp (<i>Pandalus jordani</i>)
California sheephead (<i>Semicossyphus pulcher</i>)	Pacific halibut (<i>Hippoglossus stenolepis</i>)
Costal Pelagic Species (CPS)	Ridgeback prawns (<i>Sicyonia ingentis</i>)
<ul style="list-style-type: none"> • Northern anchovy (<i>Engraulis mordax</i>) • Pacific sardine (<i>Sardinops sagax</i>) • Pacific (chub) mackerel (<i>Scomber japonicus</i>) • Jack mackerel (<i>Trachurus symmetricus</i>), • Market squid (Decapoda spp.) 	Sea Cucumbers <ul style="list-style-type: none"> • California sea cucumber (<i>Parastichopus californicus</i>) • Warty sea cucumber (<i>Parastichopus parvimensis</i>)
Dungeness crab (<i>Cancer magister</i>)	Salmon
Highly Migratory Species (HMS)	<ul style="list-style-type: none"> • Chinook (<i>Oncorhynchus tshawytscha</i>) • Coho (<i>Oncorhynchus kisutch</i>) • Pink (<i>Oncorhynchus gorbuscha</i>)
<ul style="list-style-type: none"> • Tunas, Billfish, Dorado, Sharks 	Spot prawn (<i>Pandalus platyceros</i>)
Ocean whitefish (<i>Caulolatilus princeps</i>)	White seabass (<i>Atractoscion nobilis</i>)

A complete description of nongroundfish species and nongroundfish fisheries potentially affected by the alternatives is available in Appendix 1, Chapter 3.

5.2 *Criteria Used to Evaluate Impacts*

The same criteria used to evaluate impacts to nonoverfished groundfish stocks (Chapter 4) are used for those nongroundfish stocks affected by the proposed and alternative 2005-2006 actions. For nongroundfish stocks and fisheries, this may be expressed as the relative effectiveness of alternative management measures (including trip limits, seasonal closures, size and bag limits, and RCAs) to control fishing-related mortality to nongroundfish stocks in groundfish fisheries as well as mortality to groundfish stocks in fisheries targeting nongroundfish species.

5.3 Discussion of Direct and Indirect Impacts

5.3.1 Salmon

Groundfish catch is not a significant component in salmon troll fisheries, although some incidental groundfish catch is landed. None of the 2005-2006 alternatives are expected to affect salmon stocks, except in cases where diminished groundfish fishing opportunities might result in effort shifts into salmon fisheries. The result of this possible effort shift would potentially be earlier salmon quota attainment. Salmon vessels are subject to groundfish landing prohibitions when trolling within the nontrawl RCA. An exception exists under the No Action alternative for yellowtail rockfish north of 40°10' N. latitude. None of the action alternatives at this time deviate from the yellowtail rockfish incidental retention provisions specified in 2004.

Relatively low numbers of salmon are incidentally taken during trawl fishing operations for groundfish. Between September 2001 and August 2002, 9,413 pounds of salmon were incidentally taken by the limited entry groundfish trawl fleet with observer coverage during that period (about 10% of landings) off the Pacific Coast (NMFS 2003b). The incidental capture of salmon is generally a rare event with most tows containing no salmon and a few tows containing many salmon. Variation in the incidental take of salmon appears to be influenced by the time of year, area, depth of fishing, and general salmon abundance. Knowledge of these variations shared between fishers can sometimes be used to help limit the incidental take of salmon in the groundfish fishery, especially in the whiting fishery. Because of the timing and location of the whiting fishery, the salmon species predominantly taken in the fishery is chinook. Pink, chum, and coho salmon may also contribute to a significant proportion of the catch in the midwater trawl fishery, depending on the year and location of the fishery. In 2003, 2,872 individual salmon were incidentally taken in the non-tribal whiting fishery (at-sea and shore-based sectors combined).

The 1992 Biological Opinion analyzing the effects of the Pacific Coast groundfish fishery on salmon stocks listed under the ESA, requires the Pacific Council to provide for monitoring of the salmon incidentally taken in the midwater trawl whiting fishery but not in the bottom trawl fishery. Gear is fished within the water column in the midwater trawl whiting fishery and it is fished near and/or on the ocean floor in the bottom trawl fishery. Because salmon are most often present in the water column, as opposed to being associated with the ocean floor, and because there is a spatial/temporal overlap between the whiting fishery and salmon distribution, there is an opportunity to take more salmon in the whiting fishery than in the bottom trawl fishery. For the bottom trawl fishery, the Pacific Council must provide an annual summary that characterizes that fishery and which can be used to assess any changing trends in that fishery that may jeopardize a listed salmon stock. Currently, the need for monitoring in the whiting fishery is based on not jeopardizing the existence of several salmon species listed under the ESA, including the Snake River fall chinook, lower Columbia River chinook, upper Willamette River chinook, and Puget Sound chinook. For additional information on ESA-listed salmon stocks, refer to Chapter 6. Monitoring needs could change if additional salmon species are listed or additional incidental take data are needed for other management purposes.

5.3.2 Pacific Halibut

The Pacific halibut fishery is affected by RCA depth restrictions. The proposed action to rebuild canary rockfish and yelloweye rockfish are anticipated to severely limit fishing effort on the continental shelf. These actions could substantially affect opportunity for Pacific halibut because commercial halibut fishing is prohibited within the nontrawl RCA. Action Alternative 1 would have the greatest impact because the seaward boundary is specified at 150 fm coastwide; Action Alternative 2 would be intermediate with a seaward boundary at 125 fm; and least under Action Alternative 3 with a seaward boundary at 100 fm. Alternative 3 is the most similar to the No Action Alternative where the seaward boundary of the nontrawl

RCA boundary is 100 fm north of 40°10' N. latitude and 150 fm south of 40°10' N. latitude. The YRCA closure off northern Washington will also limit recreational Pacific halibut catch; however, the alternatives analyzed do not vary the size of this closed area.

5.3.3 Coastal Pelagic Species

Coastal pelagic species (CPS) are taken incidentally in the groundfish fishery. Incidental take is well documented in the at-sea and shore-based whiting fishery. Preliminary data for 2001 indicates approximately 80 mt of squid was incidentally taken in the at-sea whiting fishery through October. There is little information on the incidental take of CPS by the other segments of the fishery; however, given that CPS are not associated with the ocean bottom, the interaction is expected to be minimal.

5.3.4 Highly Migratory Species

Highly migratory species (HMS), such as tunas and billfish, are largely pelagic, open-ocean species infrequently caught in groundfish-directed fisheries. None of the alternatives analyzed should affect HMS species.

5.3.5 Dungeness Crab

Dungeness crab, which are typically harvested using traps (crab pots), ring nets, by hand (scuba divers), or dip nets, are incidentally taken or harmed unintentionally by groundfish gears. Very little bycatch of rockfish and other overfished West Coast groundfish species has been noted in pot and trap fisheries, including those targeting Dungeness crab. It is not anticipated this fishery would need to be constrained or modified to rebuild any of the overfished West Coast groundfish species of concern.

One effect of the large RCA under Action Alternative 1 is that smaller vessels forced to fish shoreward of the RCA would be limited to depths shallower than 75 fm year-round and shallower than 60 fm during the summer Periods 3 through 5 (May-October) in the north. Concentrating vessel effort in shallow water affects Dungeness crab in the north because they are less likely to survive discard during their summer molting season.

5.3.6 Greenlings, Ocean Whitefish, and California Sheephead

Greenlings of the genus *Hexagrammos* (except kelp greenling), ocean whitefish, and California sheephead are managed by the state of California. Due to their co-occurrence with groundfish and their popularity as a target species by recreational groundfish areas, California often takes state regulatory action for these species when recreational fisheries for federal groundfish fisheries are closed or limited. This occurred in 2004 and is part of the No Action Alternative for recreational groundfish fisheries in California.

5.3.7 Exempted Trawl Fisheries

Exempt trawl fisheries, such as the West Coast trawl fisheries targeting California halibut, sea cucumbers, and ridgeback prawns, are open access and exempt from the FMP gear and permit restrictions regulating most West Coast trawl efforts. However, since the advent of depth-based management of West Coast groundfish fisheries in late 2002, exempt trawl fisheries have been subject to the depth/area restrictions imposed with the establishment of the trawl RCA. Therefore, in addition to reduced incidental groundfish landing allowances, limited access to traditional fishing areas for nongroundfish species under changing trawl RCA configurations may be a significant impact.

The ridgeback prawn fishery is managed by the state of California and, similar to spot prawn and pink shrimp, is considered an exempted trawl gear in the federal open access groundfish fishery, entitling the fishery to groundfish trip limits. An exemption is proposed under the Council-preferred Alternative to allow the ridgeback prawn trawl fishery to operate within the trawl RCA to 100 fm when the shoreward boundary of the trawl RCA is at 75 fm. The ridgeback prawn fishery operates primarily between 35fm and 90 fm, with an average fishing depth of 75 fm. Trawl log data show that 99% of ridgeback prawns are caught in depths of 101 fm or less. Therefore, in Periods 2 through 5 of 2005-2006 when the shoreward boundary of the trawl RCA is at 100 fm, the fishery will be able to continue operating over traditional fishing grounds. However, the fishery may be significantly impacted when the shoreward boundary of the trawl RCA is at 75 fm in Periods 1 and 6. Trawl data evaluated from 2001 showed that 40% of the annual catch occurred in depths of 75 fm to 100 fm. An exemption to the RCA closure between 75-100 fm will allow the fishery to continue fishing operations in traditional fishing grounds in sandy habitats without impact to the overfished rockfish stocks the RCA is intended to protect.

5.3.8 Pink Shrimp

Pacific shrimp fisheries are managed by the states of Washington, Oregon, and California. The pink shrimp fishery is managed by the states of Washington, Oregon, and California. The season runs from April 1 through October 31, and pink shrimp may be taken for commercial purposes only by trawl nets or pots. Most of the pink shrimp catch is taken with trawl gear with minimum mesh size of one inch to three-eighths inch between knots. In some years, prior to finfish excluder requirements, the pink shrimp trawl fishery has accounted for a significant share of canary rockfish incidental catch. In 2002, finfish excluders in the pink shrimp fisheries were mandatory in California, Oregon, and Washington.

The pink shrimp trawl fishery is exempted from RCA boundaries because of state-required bycatch excluders that effectively reduce bycatch of rockfish. Other regulatory provisions including groundfish landing restrictions do not differ between the action alternatives, the Council-preferred Alternative, or the No Action Alternative.

5.3.9 Nongroundfish Recreational Fisheries

Nongroundfish recreational fisheries, such as those targeting salmon and HMS species, are generally not restricted by season or area closures as a result of groundfish management measures. Exceptions include closures to state managed co-occurring species discussed in Section 5.3.6 and closures to recreational fisheries targeting Pacific halibut within the YRCA. However, groundfish retention is prohibited in any recreational fishery in waters otherwise closed to groundfish fishing. There are provisions for angler trips with multiple targeting strategies but, anglers need to plan their target strategies carefully because possession of groundfish species is prohibited when fishing in areas closed to groundfish.

5.4 Discussion of Cumulative Impacts

Cumulative impacts result from the combination of past, present, and future direct and indirect impacts of management measures combined with the effects of other activities. Past, present, and likely future actions to minimize impacts to overfished groundfish stocks and reduce groundfish fleet capacity may impact nongroundfish stocks. Reduced fishery opportunities directed on groundfish stocks may create an incentive for fishery participants to shift their effort to nongroundfish species. However, the trawl capacity reduction program limited this transfer of fishing capacity by requiring participating vessels to forfeit all permits, including permits for nongroundfish species, and retire the vessel from further participation in any fishery.