

## CA Squid Purse Seine Fishery

**Fishing gear type:** Purse Seine

**Current category:** Category II\*

**Basis for current classification on the LOF:** Based on the possible significant interactions with short-finned pilot whales (CA/OR/WA) and because of impacts to the short-finned pilot whale population from interactions with other fisheries.

**Current list of marine mammal species/stocks injured/killed (a <sup>(1)</sup> indicates those stocks driving the fishery's classification):** Common dolphin, long-beaked, CA <sup>(1)</sup>; common dolphin, short-beaked (CA/OR/WA).

**Estimated number of current participants:** 64

**Take Reduction Teams/Plans that affect this fishery:** None.

**Year added to the LOF:** 1996

**Category when originally listed:** Category III

**Basis for original classification on the LOF:** Based on 1990-1992 logbook data. Mortality and serious injury of CA sea lions was less than 1% PBR.

**Estimated number of participants when originally listed:** 145

**Past names, if any:** None.

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**Gear description/method for fishing:** Ninety-eight percent of fishermen used purse (77%) or drum (21%) seine nets. Other types used were lampara, dip, and brail nets. The fishery uses lights (required to be shielded and oriented downward or submerged, with a maximum of 30,000 watts) to aggregate spawning squid. Additional effort without the use of lights occurs in this fishery targeting squid for use as live bait in other fisheries.

**Target species:** Market squid.

**Spatial/temporal distribution of effort:** The fishery operates year-round with the effort focusing north of Point Conception from April to September and south of Point Conception from October to March. El Nino events cause northern landings to increase, while La Nina events cause southern landings to increase. A variety of local area closures throughout the State apply.

**Levels of observer coverage each year<sup>†</sup>:** A pilot observer program from July 2004-January 2006 documented one mortality of an unidentified common in 135 sets. Also, there have been 96 CA sea lions and 3 harbor seals released alive. Observer coverage has been low, at less than 2% annually. The fishery was observed in 2008 at less than 1%,

**Management and regulations:** The fishery is managed by the CA Department of Fish and Game (CDFG) and is monitored under the Coastal Pelagic Species Fishery Management Plan (FMP) and the Market Squid FMP. Commercial squid purse seine fishing using lights is prohibited year-round from noon on Friday until noon on Sunday to allow a 2-day consecutive uninterrupted period of spawning. The live bait fishery is limited to no more

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\* The fishery is classified based on mortalities and serious injuries of a marine mammal stock greater than 1% and less than 50% (Category II) of the stock's Potential Biological Removal (PBR) level.

<sup>†</sup> Observer coverage levels include the latest information reported in the most current final Stock Assessment Reports (SAR).

than 2 tons of squid per trip. All vessels must be permitted and comply with a mandatory logbook program for fishing and lighting. Since 2001, a seasonal harvest guideline is set to limit further expansion of the fishery.

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## **History of Changes on the LOF**

### 2010 LOF:

- Removed short-finned pilot whale (CA/OR/WA) from the list of species/stocks killed/injured in this fishery. Based on the available information on the distribution and abundance of short-finned pilot whales, and observer and self-report data, the likelihood of interaction is extremely remote. This species was once common off the coast of CA, but have become quite rare in recent years.
- Added superscript "1" after long-beaked common dolphins (CA). In each year from 2004–2007, observer coverage in this fishery was low, under 2%. There was one mortality of a short-beaked common dolphin in 2005 and in 2006 one unidentified common dolphin was observed seriously injured. There are no available biological samples or photographs of the injured dolphin; therefore, there is insufficient information to identify the species. Both species, long-beaked common dolphins and short-beaked common dolphins, utilize much of the same habitat and overlap in areas with the squid purse seine fishery; therefore, it is possible that either species could have been taken and NMFS cannot eliminate the possibility that a long-beaked common dolphin was seriously injured during this event. Extrapolating these sightings to the entire fishery and averaging over the four years of available information, the estimated annual serious injury or mortality is 22 long-beaked common dolphins. The current PBR for long-beaked common dolphins is 95/year. Therefore, the serious injury or mortality rate is 23%, warranting a Category II classification.

### 2009 LOF:

- Renamed common dolphin (unknown) on the list of species/stocks killed/injured in this fishery to short-beaked common dolphin (CA/OR/WA) and long-beaked common dolphin (CA) to account for the uncertainty of the species observed killed/injured in this fishery.
- Estimated number of participants updated from 71 to 64.

2008 LOF: Estimated number of participants updated from 65 to 71.

### 2006 LOF:

- Added common dolphin (stock unknown) to the list of species/stocks killed/injured in this fishery based on one mortality in 2005.
- Added a superscript "1" in Table 1 after short-finned pilot whale (CA/OR/WA), indicating that takes of this stock are driving the classification of this fishery.

### 1998 LOF:

- The State of CA established a management and research program on the biology and status of market squid for this fishery to regulate it more efficiently and to collect information. As part of research, there was the potential to place observers on vessels to collect biological data. If the CDFG established an observer program, NMFS agreed to work to facilitate the collection of information on the fishery's interactions with marine mammals.
- Deleted CA sea lion (U.S.) from the list of species/stocks killed/injured in this fishery. A CA sea lion has not been observed injured or killed in this fishery since the early 1990s. The last reported injury or mortality of a CA sea lion in this fishery was reported in a 1990-1992 logbook.
- Estimated number of participants updated from 145 to 65.

### 1997 LOF:

- Elevated to Category II. The Pacific Scientific Review Group recommended that this fishery be monitored with an observer program and by looking at historical data because of the lack of information about interactions with pilot whales. Using historical evidence of takings of long-finned pilot whales in this fishery, possible significant interactions with short-finned pilot whales because of their increasing numbers in the area, increasing effort in this fishery, and impacts to the short-finned population in other fisheries, NMFS elevated this fishery to Category II.

- Added short-finned pilot whale (CA/OR/WA) added to the list of species/stocks killed/injured in this fishery based on possible significant interactions between this species and this fishery because of the species' increasing numbers in the areas covered by this fishery.