

Date of Hearing: April 5, 2022

ASSEMBLY COMMITTEE ON WATER, PARKS, AND WILDLIFE

Rebecca Bauer-Kahan, Chair

AB 2109 (Bennett) – As Introduced February 14, 2022

SUBJECT: White sharks: prohibition on use of attractants

SUMMARY: Makes it unlawful to use any bait, lure, or chum to attract any white shark, with exceptions. Specifically, **this bill:**

- 1) Makes it unlawful to:
 - a) Use any bait, lure, or chum to attract any white shark (*Carcharodon carcharias*), or
 - b) Place any bait, lure, or chum into the water when a white shark is either visible or known to be present.
- 2) Allows the use of bait, lure, or chum if the activity is authorized by a permit issued by the Department of Fish and Wildlife (DFW) for scientific, educational, or propagation purposes.
- 3) Imposes a state-mandated local program because a violation of these prohibitions would be a crime, but provides that no reimbursement is required by this act because the only costs that may be incurred by a local agency or school district will be incurred because this act creates a new crime or infraction.

EXISTING LAW:

- 1) States that the fish and wildlife resources of the state are held in trust for the people of the state by and through the DFW [Fish and Game Code (FGC) § 711.7].
- 2) Makes it unlawful to take any white shark, except under permits issued for scientific or educational purposes (FGC § 5517).
- 3) Makes it unlawful to take white sharks for recreational or commercial purposes except under a permit issued by the DFW for scientific or educational purposes or if taken incidentally by commercial fishing operations using certain types of nets (FGC § 8599).
- 4) Authorizes the issuance of a permit, subject to restrictions and regulations that the DFW determines are desirable, to take or possess, in any part of the state, for scientific, educational, or propagation purposes, mammals, birds and the nests and eggs thereof, fish, amphibians, reptiles, or any other form of plant or animal life (FGC § 1002).
- 5) Defines “take” to mean to hunt, pursue, catch, capture, or kill, or to attempt to hunt, pursue, catch, capture, or kill (FGC § 86).
- 6) Defines “chumming” to mean the placing in the water of fish, or other material upon which fish feed, for the purpose of attracting fish to a particular area in order that they may be taken (FGC § 27).
- 7) Makes any violation of the FGC, or of any rule, regulation, or order made or adopted under the FGC, a misdemeanor, unless expressly provided otherwise (FGC § 12000).

FISCAL EFFECT: Unknown. This bill is keyed fiscal.

COMMENTS:

- 1) **Purpose of the Bill.** According to the author: “People who attend our beaches should feel safe entering the water. When companies use bait or decoys to lure sharks, they are putting everyone and the shark at enormous risk. The use of attractants, which are feeding cues for white sharks, may increase their reactivity to other things in the water, such as swimmers and surfers. This bill ensures the safety of everyone, including our marine life.”
- 2) **Background.** In the U.S. Pacific, the Northeast Pacific White Shark ranges from Alaska to California and Hawaii. White sharks also live in waters off the Pacific coast of Mexico. Pups and juveniles tend to remain in warmer near-shore habitats over shallow continental shelf. As they age and their diets change, they split their time between seal and sea lion rookeries and pelagic habitats.

There are nursery areas for juvenile white sharks in the near-shore waters of southern California due to warm water temperatures and high populations of grunion, a small prey fish. The juvenile sharks are found close to shore in summer and fall, and typically migrate from the warm summer waters off Southern California to Baja California for the winter. Mature white sharks typically move into deeper water, or cooler waters near San Francisco, where they pursue full-size sea lions, seals, otters, sea turtles, and whales.

White sharks play a crucial role in the marine ecosystem by feeding on pinniped populations, such as seals and sea lions. Primary threats to white sharks are intrinsically low reproductive rates and vulnerability to direct and indirect fishing mortality, as well as predation by killer whales occasionally. There are currently multiple estimates of the Northeast Pacific White Shark population ranging from just a few hundred to greater than 3,000 individuals, with about 300 that call the Central California coast their primary home. All current population estimates involve some degree of uncertainty, as there are significant gaps in the understanding of white shark movements, reproductive biology, and mating behaviors.

On June 4, 2014, consistent with the recommendation of the DFW, the California Fish and Game Commission determined that based on the best available science, listing the Northeastern Pacific population of white shark as a threatened or endangered species under the California Endangered Species Act was not warranted. According to a National Oceanic and Atmospheric Administration (NOAA) Fisheries status review and recent research, the population appears to be increasing and is not at risk of becoming endangered in U.S. waters. Increasing population numbers (*e.g.* Kanive *et al.*, 2021) may be due to increasing pinniped populations; regulatory protections primarily enacted in the 1990s, including state and federal prohibitions on take of white sharks; and progressively restrictive regulations on gillnet gear.

Fishery management. The white shark is a prohibited species (no retention allowed) in all U.S. waters and fisheries. In the Pacific, the white shark is managed by the Pacific Fishery Management Council under the West Coast Highly Migratory Species (HMS) Fishery Management Plan. The white shark is also protected internationally under the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) Appendix II, the Convention on the Conservation of Migratory Species of Wild Animals (CMS) Appendix II, the United Nations Convention on the Law of the Sea (UNCLOS), and other international regional fisheries management organizations, primarily due to threats from the shark fin

trade.

White sharks are occasionally caught accidentally by recreational and commercial fishermen but must be released immediately. Some incidental catch in commercial fishing operations using set gill nets, drift gill nets, or roundhaul nets is allowed in California. White shark taken incidentally by the fisheries mentioned above, if landed alive, may only be sold for scientific or live display purposes.

Shark behavior changes due to wildlife tourism? Wildlife tourism is one of the fastest growing sectors of the tourism industry and has the potential to modify the natural environment and behavior of the species it targets. The ability of wildlife tourism to affect individual fitness and survival has been documented in terrestrial (*e.g.* Orams, 2002), avian (*e.g.* Steven et al., 2011), and aquatic species (*e.g.* Bejder et al., 2006; Williams et al., 2006), and is reviewed in Green and Giese (2004), but similar studies on elasmobranchs (sharks, rays, and skates) are limited (see Huveneers *et al.*, 2018).

In addition to potential impacts to white sharks at the individual and population level, using attractants in areas near other human activity (such as swimming and surfing) can also increase the likelihood of a shark incident occurring. The use of attractants may increase their reactivity to other things in the water, such as swimmers and surfers.

Incidents. A shark incident is defined as any documented case where any shark species approached and touched a person in the water, or touched a person’s surfboard, kayak, paddleboard, etc. Data compiled by the DFW shows 202 documented shark incidents in California waters from 1950 through 2017, with at least 179 of those incidents involving white sharks (see Table 1).

According to the DFW, while human beach use and ocean activities have greatly increased due to the growing population and greater popularity of surfing, swimming, and scuba diving, shark incidents have not increased proportionally. Incidents with non-fatal or fatal injuries have remained fairly constant since the 1980s. Incidents with no injuries have increased over time. Research by Ferretti *et al.* (2015) found the risk of a white shark bite in California decreased by 91 percent from 1950 to 2013.

Table 1. California Shark Incident Statistics (updated as of March 2022)

Decade	No Injury	Non-fatal Injuries	Fatalities	Total
1950s	1	7	4	12
1960s	1	9	0	10
1970s	2	17	0	19
1980s	3	14	3	20
1990s	11	18	1	30
2000s	20	17	3	40
2010s	33	20	2	55
2020s	8	6	2	15
Totals	79	108	15	202

Source: <https://wildlife.ca.gov/Conservation/Marine/White-Shark#data>

Sightings. Documented shark incidents do not include shark sightings where no contact occurred, incidents where sharks approached boats, or cases where hooked sharks caused injury or damage. Data on shark sightings is more difficult to collect, but anecdotal evidence indicates that sightings have been increasing in recent years.

Use of attractants for entertainment. Commercial shark cage-diving often uses olfactory, visual, or auditory attractants to attract sharks within close proximity of the cages and provide good viewing opportunities for divers. Under existing white shark protections, it is unclear if attracting white sharks for the purpose of entertainment is prohibited. Since it is already illegal to catch, pursue, hunt, capture or kill a white shark, the prohibitions created under this bill would primarily apply to businesses that provide experiences with sharks, such as shark watching boat trips or cage diving. The prohibitions would also apply to those fishing for other species, as baiting, luring, or chumming for other species would need to cease if white sharks were observed.

This bill does not prevent the cage diving industry from continued operations. It is estimated that there are less than 10 businesses that operate in California waters that provide shark diving experiences. It is unknown if any of those businesses currently use attractants to bring sharks closer to customers. For any businesses operating in the Greater Farallones National Marine Sanctuary, federal permits are required and sanctuary regulations already prevent the use of bait or chum to attract sharks. Some California businesses that operate out of San Diego go into Mexican waters, and would not be bound by the provisions of this bill.

- 3) **Policy Consideration.** The author may want to clarify that the provisions of the bill are not intended to impact legal fishing practices, such as chumming or baiting, used to take other shark species under a sport fishing license. However, those practices would still need to cease if a white shark were observed or known to be present.
- 4) **Arguments in Support.** Those in support argue that prohibiting the use of attractants for white shark viewing will protect both white sharks and the public, while keeping this important natural ocean predator wild.
- 5) **Related Legislation.**

AB 2191 (O'Donnell), 2017-18 Session, would have required the Ocean Protection Council to develop and implement a program to award white shark research grants and public safety grants relating to white shark sightings on California's beaches. The bill was never heard in the Senate Natural Resources and Water Committee.

SB 1017 (Allen), Chapter 844, Statutes of 2018, requires the DFW to develop a program by March 31, 2020, to voluntarily transition the holders of drift gill net (DGN) permits out of the DGN fishery.

SR 44 (Jackson) 2017-18 Session, declares that the United States' National Marine Sanctuaries are a national treasure that belong to all Americans and should be maintained for future generations.

REGISTERED SUPPORT / OPPOSITION:

Support

California Fish & Game Warden Supervisors and Managers Association (CFGWSMA)
Defenders of Wildlife
Monterey Bay Aquarium Foundation
Oceana

Opposition

None on file

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