

Superintendent Report update on: Marine Conservation Science Institute white shark research at the Farallon Islands

December 10, 2009



White Shark Related Sanctuary Regulations

(effective March 9, 2009)

- Sanctuary regulations are specific to white shark attraction and approach

"The following activities are prohibited and thus are unlawful for any person to conduct or to cause to be conducted within the Sanctuary...(13) Attracting a white shark in the Sanctuary; or approaching within 50 meters of any white shark within the line approximating 2 nmi around the Farallon Islands..." [note: this includes entire Farallon Island archipelago]

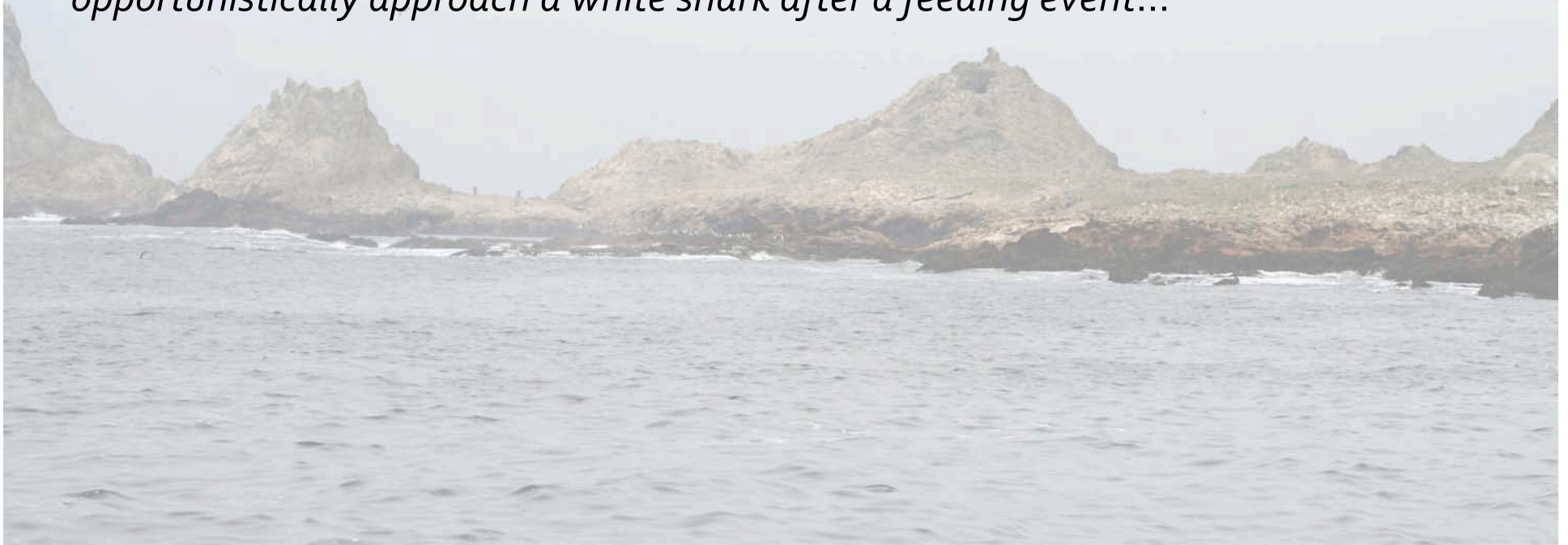
"Attract or attracting means the conduct of any activity that lures or may lure any animal in the Sanctuary by using food, bait, chum, dyes, decoys (e.g., surfboards or body boards used as decoys), acoustics or any other means, except the mere presence of human beings (e.g., swimmers, divers, boaters, kayakers, surfers)." 15 CFR Part 922.

- The sanctuary does not regulate "take" of white sharks (CA law regulates take of white sharks in state waters)

Sanctuary White Shark Related Regulations

Additionally, in the response to comments section of the Federal Register (73 FR 70528) :

"The prohibition against attracting white sharks is intended to address harassment and disturbance related to human interaction from shark diving programs known generally as adventure tourism, or from recreational visitors who may opportunistically approach a white shark after a feeding event..."



Sanctuary White Shark Related Regulations

New regulations and the reason for them were published in the *Federal Register* on Nov 20, 2008 (73 FR 70499)

“Disturbance related to human interaction is increasing as a result of controversial cage shark diving operations, also known as adventure tourism, and other wildlife watching operations. These activities may degrade the natural environment, impacting the species as a whole, and individual sharks may be negatively impacted from repeated encounters with humans and boats. Implementing these regulations will resolve user conflicts (between shark researchers and adventure tourism) and prevent interference with the seasonal feeding behavior of white sharks. Reducing human interaction and chumming would decrease the impacts on natural shark behavior....The purpose of this prohibition is to protect white sharks from intrusive activities during their critical feeding life-cycle in the GFNMS and the MBNMS.”

California Fish and Game Code Section 8599

“8599. (a) It is unlawful to take any white shark (*Carcharodon carcharias*) for commercial purposes, except under permits issued pursuant to Section 1002 for scientific or educational purposes or pursuant to subdivision (b) for scientific live display purposes.”



Research Project Overview

(Title) Fine scale, long-term tracking of adult white sharks

- Marine Conservation Science Institute (MCSI), led by Dr. Michael Domeier, has a permit to use bait and a decoy to attract white sharks to install satellite tags on up to 10 white sharks for long distance, multi-year tracking.
- MCSI hooks the white shark, lifts the shark out of the water on a platform (the gills continue to be flushed with seawater), installs a dorsal fin tag, and releases the shark.
- This technique is used by scientists on sharks and other fish species internationally. MCSI has used this technique on white sharks over the last three years along the West Coast of North America and has caught, tagged, and released 17 white sharks.

Benefits of this research project

- Sanctuary goal is to protect the population of white sharks that seasonally use these waters
- The data is anticipated to provide, for the first time, continuous, multi-year data (up to 4-6 years) on white shark life history that will be critical to understanding white shark habitat including breeding and pupping areas.
- White shark researchers hypothesize that female white sharks visit the Gulf of the Farallones every other year. This data would enable NOAA to better protect the sharks and engage in international efforts to protect the full range of white shark habitat.
- This data has not been collected by others
- Responsiveness to the American Association for the Advancement of Science recommendations

Timeline

April 2009

- Dr. Michael Domeier contacted GFNMS about conducting white shark research in the sanctuary
 - Described research objectives and methods
 - Indicated interest in collaborating with existing sanctuary white shark researchers (Dr. Barbara Block, Dr. Peter Klimley- PIs)
- GFNMS contacted Monterey Bay Aquarium white shark husbandry expert to consult regarding Domeier's research and proposed technique
- GFNMS spoke to Block and Klimley about whether they would be including Domeier in their new permit application (no decision provided)
- GFNMS emailed the 3 researchers asking them to nominate a POC and providing permit application information

Timeline continued

- May-June 2009
 - GFNMS receives permit application from MCSI
 - GFNMS contacts CA Department of Fish and Game (CDFG) for consultation;
- September 2009
 - GFNMS consultation with CDFG (CDFG also spoke with NOAA shark expert)
 - CDFG informs GFNMS that permit will be issued
 - GFNMS issues research permit for white shark attraction
 - GFNMS issues education amendment for filming the research

Permit Special Conditions

Special conditions include but are not limited to the following:

- White shark attraction methods must be limited to use of a decoy made of a soft material shaped into the silhouette of a local marine mammal and/or use of a small (less than 20 pound) piece of pinniped or cetacean blubber.
- The permittees must not interfere with any natural white shark feeding activity and must not approach within 50 meters of any white shark within the line approximating 2 nautical miles around the Farallon Islands
- White Sharks may be attracted until the cumulative number of white sharks tagged reaches 10 animals (*maximum of 5 males and 5 females*).
- Pinniped or cetacean blubber may be fed to a maximum of 10 sharks for the purpose of installing SPOT tags, as described in the permit application.
- If a shark is killed or injured during any of the activities allowed by this permit (injury other than hooking and tag installation), Dr. Michael Domeier must immediately cease tagging activities and contact the Sanctuary Superintendent. The permittees must follow any instructions given by the Sanctuary Superintendent after she has been contacted.

Timeline continued

- September 2009
 - Domeier notifies GFNMS that TOPP consortium (Block and Klimley, Pls) have been invited on his boat and MCSI/TOPP are discussing working together
- October 2009
 - GFNMS receives amendment request from TOPP for joint tagging
 - GFNMS issues amendments to both MCSI and TOPP
 - GFNMS SAC briefed during council retreat
 - MCSI begins work at the Farallones Islands
 - GFNMS puts observers on the vessel
 - First shark tagged; shark swallows hook and portion of hook is left in throat
 - Permit suspended

Timeline continued

- November 2009
 - GFNMS and MCSI staff meet to review footage and discuss methodology modifications
 - permit re-instated
 - GFNMS has observers on vessel
 - second shark tagged without problems
 - the first 'pings' from the first tagged shark are received
 - MCSI leaves the Farallones Islands
 - the first 'pings' from the second tagged shark are received

Benefits of Sanctuary Regulation

- All approach is prohibited
- Sharks may not be disturbed during natural feeding events
- Increased oversight of white shark research
- Special conditions for conducting research
- Investigation and responsiveness to community concerns