

Description of the Thresher Shark Management Measures Alternatives Adopted by the Council, September 2008

At their September 2008 meeting the Council adopted a range of alternatives proposed by the Highly Migratory Species Management Team (HMSMT) for public review. They also identified a preferred alternative, which includes a commercial fishery closure. The Council will take final action on a preferred alternative at the November 2008 meeting in San Diego.

Alternative 1: No Action

Current California state recreational regulations allow the harvest of 2 HMS sharks per species (thresher, shortfin mako, blue) per person per day (i.e., up to 6 HMS sharks per person per day) with no season, size, or area restrictions. The current harvest guideline for common thresher shark is 340 metric tons. The following table provides catch estimates (metric tons) for thresher shark harvested by HMS and non-HMS commercial and recreational fisheries for the period 2005-07.

	Large mesh DGN	Comm. Hook & Line	Recreational (All Modes)	Non-HMS gears	Total
2005	155	0.7	24	11.5	191.2
2006	99	3.4	30.2	41.6	174.2
2007	163	3.8	75	20.8	262.6
Total	417	7.9	129.2	73.9	628
Avg.	139	2.6	43.1	24.6	209.3

2005 CRFS avg. weight estimate = 41.9 kg (n=24)

2006 CRFS avg. weight estimate = 42.3 kg (n=34)

2007 CRFS avg. weight estimate = 29.7 kg (n=65)

Alternative 2: Preferred Alternative

Commercial and Recreational Thresher Shark Fishing Time/Area Closures:

- A seasonal closure for all HMS commercial shark fisheries south of 34° 27' N latitude that is generally the same as current drift gillnet (DGN) fishery. (The DGN fishery is closed 0-200 nm February 1 to April 30 and 0-75 nm May 1 to August 14 from the U.S.-Mexico border to the U.S.-Canada border.)
- A seasonal closure for the recreational HMS shark fishery for the entire state (U.S.-Mexico border to California-Oregon border) during that same time period, February 1-August 14, 0-200 miles.

Mandatory Data Reporting Requirement for all West Coast HMS Shark Fishing tournaments: Institute a mandatory data reporting requirement for all west coast HMS shark

fishing tournaments. In addition to enhancing the accuracy and reliability of the CRFS estimates, the tournament data would be reported in the annual HMS Stock Assessment and Fishery Evaluation Reports (HMS SAFE).

Alternative 3: Recreational Thresher Shark Fishing Time/Area Closures

In 1990, the California Legislature prohibited commercial DGN fishing within 75 miles of the mainland from May 1 through August 14 and continued a previously enacted prohibition from February 1 through April 30 to conserve pregnant and pupping thresher shark throughout the region. This alternative implements a parallel time/area closure for the recreational fishery. The regulatory text for any proposed closure would need to include a prohibition on fishing for and possession of thresher shark during this period to make the rule enforceable.

- **Option 1** (Spring/Summer closure): Mimic the current commercial closure which covers early spring to mid-August period. As a practical matter this option would close the west coast EEZ to recreational fishing for thresher sharks February 1-August 14.
 - February 1 to April 30 closure out to 200 nm
 - May 1 to August 14 closure out to 75 nm
- **Option 2** (Spring only closure): Implement a closure April 1-June 30; no fishing for or possession of thresher sharks south of Point Conception (out to 200 nm). Large numbers of gravid females enter the southern California Bight to pup during this period.

Alternative 4: Bag Limits

Daily limit option:

- One HMS shark per day (1 shortfin mako, *or* 1 common thresher, *or* 1 pelagic thresher, *or* 1 bigeye thresher, *or* 1 blue shark)
- One shark of each HMS shark species per day (no more than 1 shortfin mako, *and* 1 common thresher, *and* 1 pelagic thresher, *and* 1 bigeye thresher, *and* 1 blue shark)

Seasonal limit option:

- Choose within the range of 1-5 thresher sharks/angler/calendar year. A season limit could be implemented through a punch card or big game tag requirement. In a punch card program the angler receives or purchases a card that must be punched each time a thresher shark is caught and retained. The State of California currently manages punch card programs for steelhead trout, sturgeon, abalone, and beginning this fall, for spiny lobster harvest. Big-game harvest tags have been used in the management of fishing and hunting activities. Harvest tags can: (1) limiting harvest, (2) provide data to enhance management efforts, (3) promote effective monitoring and enforcement, and (4) ensure equitable distribution of harvest opportunity. Tags must be affixed to a conspicuous area on the fish as soon as it is caught and retained.

Harvest tags do not eliminate difficulties with monitoring, enforcement and compliance; however, there are aspects of tag programs which can address some of these challenges. For example, a requirement that physical tags be attached to harvested fish, together with random checks or check-points, can facilitate monitoring and enforcement during routine or random bag checks. Harvest reporting requirements associated with tags (particularly if required in order to obtain additional tags or tags in subsequent years) may lead to better compliance and more accurate harvest monitoring.

Combination of daily bag limit with seasonal limit:

- 1 thresher shark/day coupled with a 1-5 thresher shark/season limit. This could be an effective strategy to limit out-of-state or one-day permit holders from harvesting more than one individual while still effectively reducing the take of anglers that frequently target thresher sharks.

Alternative 5: Gear Modifications

Implement mandatory circle hook use when targeting HMS sharks to minimize the incidence of foul-hooking (tail-hooking). Several innovative anglers are currently using circle hooks, teaser lures, and alternative weighting systems that effectively reduce the proportion of tail-hooked sharks (Bob Osborne, UASC, personal communication). If future research suggests that these techniques are effective, this option holds promise as a management option for increasing catch-and-release survivorship.