



~California Dungeness Crab Task Force~

<http://www.opc.ca.gov/2009/04/dungeness-crab-task-force/>

REPORT

TO: Joint Committee on Fisheries and Aquaculture, Mike McGuire, Chair
California Fish and Game Commission, Eric Sklar, President
California Department of Fish and Wildlife, Charlton Bonham, Director

CC: California Ocean Protection Council, Jenn Eckerle, Executive Director
California Fish and Game Commission, Melissa Miller-Henson, Executive Director
California Fish and Game Commission, Susan Ashcraft, Marine Advisor
California Department of Fish and Wildlife, Craig Shuman, Marine Region Manager
Pacific States Marine Fisheries Commission, Caren Braby, Sr. Program Manager
Joint Committee on Fisheries and Aquaculture, Chris Nielsen, Capitol Director

FROM: California Dungeness Crab Task Force

DATE: December 13, 2023

RE: November 2023 recommendations from the California Dungeness Crab Task Force

APPENDICES: (1) [Dungeness Crab Task Force Background and Operations](#)
(2) [November 2-3, 2023 DCTF Meeting Summary](#)
(3) [DCTF Charter - Updated November 2023](#)
(4) [Draft Conservation Plan for California's Commercial Dungeness Crab Fishery, December 2021](#)
(5) [December 9, 2021 DCTF Report: October 2021 recommendations from the California Dungeness Crab Task Force](#)
(6) [December 20, 2022 DCTF Report: October 2022 recommendations from the California Dungeness Crab Task Force](#)
(7) [Marine Life Entanglement Settlement 2019- Case 3:17-cv-05685-MMC](#)
(8) [DCTF Membership List, updated August 2023](#)

This report provides recommendations from the legislatively mandated California Dungeness Crab Task Force (DCTF) to the Joint Committee on Fisheries and Aquaculture (the Legislature), the California Department of Fish and Wildlife (CDFW), and the Fish and Game Commission (the Commission). These recommendations are presented to inform Dungeness crab fisheries management, including future and existing legislation and regulations. Specifically, this report includes recommendations related to fishery openers, issues with the 2023-25 commercial buoy tags, lost gear retrieval, the potential reintroduction of sea otters, and addressing the Risk Assessment and Mitigation Program (RAMP) and marine life entanglements. Additional details on the DCTF's recommendations are available in the full November 2-3, 2023 meeting summary, which is available on the [DCTF's website](#) ([Appendix 2](#)).

The DCTF is grateful for the opportunity to advance and inform the management of the Dungeness crab fishery in partnership with the Legislature, CDFW, and the Commission. The DCTF's work was completed pursuant to Fish and Game Code (FGC) §8276.4 with financial support as directed by FGC §8276.5. For additional background details and DCTF operations, please see [Appendix 1](#).

Additional information, including previous reports and meeting summaries with details on the development of the recommendations provided in this report, is available on the DCTF webpage: <http://www.opc.ca.gov/2009/04/dungeness-crab-task-force/>.

DCTF VOTES AND ANALYSIS

The DCTF developed the following recommendations during a two-day meeting on November 2-3, 2023. The recommendations represent the agreements of DCTF Members present at the meeting (as per voting protocols defined in the DCTF Charter, [Appendix 3](#))¹. However, in some cases, the recommendations are not the *verbatim* language used when the votes were taken. Because of the iterative nature of the conversations at the DCTF meetings, the language of some recommendations has been adjusted to improve clarity. The additional context and the voting record will be included in the meeting summary, which will be posted on the DCTF’s webpage when available. Explanatory notes are provided below each recommendation when necessary.

DCTF RECOMMENDATIONS — November 2-3, 2023

General Dungeness Crab Fishery Management

FGC §8276.4 mandates that the DCTF discuss refining commercial Dungeness crab management and the need for statutory changes to accomplish DCTF objectives. The DCTF identified relevant regulatory and legislative needs; Recommendations 1-4 directly relate to resolving issues the industry has faced in recent years.

Recommendation 1, Fall Fishing Using Alternative or Non-Traditional Gear Outside the Traditional Opener: The DCTF does not support, under any circumstances, commercial Dungeness crab fishing in the fall before the legal commercial crab opener with the use of alternative or non-traditional Dungeness crab trap gear. The commercial fishery should only open once traditional fishing gear, as defined in FGC §9006 and §9011, may be used.

Vote of all DCTF Members (ex officio Members abstained):

Thumbs up	Thumbs Sideways	Thumbs Down	Abstained	Absent
15	2	0	1	3

Rationale:

The DCTF recognizes the management of the California Dungeness crab fishery is changing under the Risk Assessment and Mitigation Program (RAMP) (§132.8 to Title 14, CCR). Providing fishermen the opportunity to maximize their income while minimizing the risk of entanglements is a priority for the fleet. The RAMP allows for the use of “authorized” alternative gear available to the entire fleet when the commercial Dungeness crab fishing season is closed on or after April 1 as a result of RAMP under subsection 132.8(e)(5). In addition, the Commission is authorized to issue Experimental Fishing Permits (EFPs) to qualified applicants as a pathway to test and deploy new management approaches by obtaining limited, short-term exemptions from state fishing laws and regulations. This program can be used to test alternative gear that may be authorized in the future under RAMP. The DCTF has concerns about EFPs allowing take before the opening of a delayed

¹ As part of the DCTF’s voting procedures, thumbs up and thumbs sideways are *both* counted as affirmative votes in determining whether a recommendation has at least the $\frac{2}{3}$ affirmative vote required to be forwarded to the Joint Committee on Fisheries and Aquaculture, CDFW, and Commission.

commercial Dungeness crab season as these permits are limited to those who apply and may not be issued to the entire fleet, presenting an unfair advantage to those participating in the program (e.g., the ability to sell crab before the legal opener, additional time on the water to scope out fishing areas). The DCTF does not support the Commission or CDFW allowing commercial fishing under an EFP in the fall before a delayed commercial Dungeness crab season begins.

The DCTF acknowledges that CDFW is exploring the possibility of alternative gear (e.g., hoop nets) being used when the season is delayed in the fall and closes early in the spring due to RAMP. The DCTF supports the use of alternative/non-traditional gear in the spring. However, the DCTF opposes allowing the use of any non-traditional gear in the fall before a delayed commercial fishing season with the use of traditional gear as this could jeopardize the broader fall commercial opener if there are any marine life entanglements resulting from those gear types.

Dungeness crab is one of California’s most valuable fisheries² with approximately 80 percent of the catch landed in the first six weeks of the season, starting late fall and tapering off in the winter. A large proportion of the commercial Dungeness crab fleet participates at the start of the season and their businesses rely on it. Since the disaster of the 2015-16 fishing season, the commercial Dungeness crab fleet has continued to experience hardship, and allowing a few participants in the EFP program or those using alternative gear to fish prior to the rest of the fleet could further the economic devastation of the commercial Dungeness crab fleet.

Recommendation 2, Quality of Commercial Buoy Tags: The DCTF unanimously recommends CDFW reissue the 2023-25 biennial commercial Dungeness crab buoy tags as soon as reasonably possible. The DCTF is concerned about the poor quality (i.e., brittle, easily breakable) of the buoy tags that CDFW requires to be used during the 2023-24 and 2024-25 commercial Dungeness crab fishing seasons. To avoid extensive and widespread breakage and loss of buoy tags during 2023-24 the commercial Dungeness crab fishing season, the DCTF recommends CDFW issue replacement tags that adhere to the quality standards that are the same or better as buoy tags issued by CDFW during the 2021-23 biennial periods and prior. The costs of replacing the tags should not be the responsibility of the fleet, and CDFW may need to consider the process of issuing new tags.

The DCTF recommends that any future purchasing of buoy tags by CDFW reflect the same or better quality as the tags provided to the commercial Dungeness crab fleet prior to the 2023-25 biennial period. Buoy tags should be flexible to avoid being easily breakable and UV-resistant. The DCTF recommends CDFW purchase buoy tags made in the United States of America.

Vote of all DCTF Members (ex officio Members abstained):

Thumbs up	Thumbs Sideways	Thumbs Down	Abstained	Absent
18	0	0	0	3

Rationale:

Commercial Dungeness crab buoy tags are required by FGC §8276.5 to enforce California’s commercial Dungeness crab trap limit program. In recent years, double-sided buoy tags have been an important tool to help inform the source of marine life entanglements, including the state and fishery of origin of the gear responsible for the entanglement. The DCTF sees the importance in

² California Department of Fish and Wildlife. 2023. Dungeness Crab, *Metacarcinus magister*, Enhanced Status Report. <https://marinespecies.wildlife.ca.gov/dungeness-crab/>

these tags being durable and weather-resistant to support Law Enforcement and whale entanglement forensics.

The DCTF is concerned that the buoy tags received for the 2023-25 biennial period (to be used during the 2023-24 and 2024-25 commercial fishing seasons) are of poor quality and prone to breakage and loss. The non-flexible plastic material is very likely to break on deck, in the block, or in the ocean. The buoy tags are needed to mark the main buoy of each trap, and the destruction and loss of these tags reduces the number of traps a permitted vessel can fish within their trap allotment. Being unable to fish traps due to broken or missing buoy tags could result in unintended economic losses for the entire fleet.

The DCTF understands that CDFW License and Revenue Branch is reviewing the purchasing orders and contracts associated with buoy tag manufacturers and that new tags will not be immediately available to the fleet. The fleet will use the existing tags during the 2023-24 season and keep open lines of communication with CDFW staff and Law Enforcement Division to share any major losses and/or issues associated with the tags. The DCTF looks forward to CDFW addressing this issue in an expeditious manner while considering how to cost-effectively reissue the tags for, at minimum, the 2024-25 fishing season.

Recommendation 3, Trap Gear Retrieval Program: The DCTF unanimously reaffirms their recommendation from October 2022:

The Trap Gear Retrieval Program (§132.7, Title 14, California Code of Regulations (CCR)) has been identified as an important tool in the RAMP and CDFW's draft Conservation Plan ([Appendix 4](#)) to help reduce the risk of marine life entanglements by the commercial Dungeness crab fishery. The DCTF sees tremendous value in the continued implementation of this program and would like to see improvements made to the program to clean up the ocean and help address issues with known and unknown sources of entanglements in fishing gear.

Port coordinators and fishermen permitted under the program have flagged several challenges preventing the program's widespread, consistent application throughout the state. The DCTF recommends that CDFW work with port coordinators to amend regulations and address the identified issues to make the program more effective and less administratively burdensome.

Although regulations do not currently allow it, the DCTF supports amending the Fish and Game code and other regulations to allow anyone (e.g., commercial and recreational fishermen, Commercial Passenger Fishing Vessel operators (CPFV), whale watch boats) to remove lost Dungeness crab fishing gear outside the Dungeness crab fishing season.

Building on last year's recommendation, the DCTF recommends members of the Commercial Passenger Fishing Vessel (CPFV) fleet and CDFW work with the Commission to address this recommendation by creating pathways that allow anyone (i.e., commercial, recreational, CPFV, whale watch operators, and others) to retrieve lost fishing gear from the ocean.

Additionally, the DCTF recommends CDFW allow the commercial fishing fleet to retrieve gear when the commercial fishing season closes through October 31.

To better support the tracking of lost fishing gear in the ocean, the DCTF recommends recreational and commercial fishermen work with The Nature Conservancy to develop and implement an app

that is accessible to the entire fleet that identifies the location of lost, abandoned traps and tracks the status of their recovery to those coordinating gear recovery as part of the CDFW managed Trap Gear Retrieval Program.

Vote of all DCTF Members (ex officio Members abstained):

Thumbs up	Thumbs Sideways	Thumbs Down	Abstained	Absent
17	0	0	0	4

Rationale:

With a few exceptions, Fish and Game Code §8604 and §9002(a) contain broad prohibitions against willfully or recklessly disturbing any commercial net, trap, or other harvesting apparatus belonging to another person. Additionally, §29.80(a)(3), Title 14, CCR includes a general prohibition against disturbing or moving any trap belonging to another person. Following recommendations from the DCTF in 2015, Senate Bill 1287 (2015-2016) established the [Trap Gear Retrieval Program](#). The statute authorized a regulatory program that was added to §132.7, Title 14, CCR, and became operational in 2020.

The DCTF has continued to track the implementation of this program. The industry views the removal of all lost and derelict gear as an urgent and crucial step to reducing the number of entanglements, including entanglements of unidentified origin, that negatively impact the commercial and recreational Dungeness crab fishery as part of the RAMP. The current Trap Gear Retrieval Program is too administratively burdensome for the fleet to support the state’s implementation. Both simple solutions and regulatory revisions have been provided to CDFW to help resolve many of these known challenges. In addition to modifying the program, there must be clear pathways to remove lost and derelict gear from the ocean outside the state-run Trap Gear Retrieval Program. The DCTF recognizes the importance of making it as easy as possible to remove lost and derelict commercial and recreational Dungeness crab gear from the ocean after the season by any means possible. Members pointed to user-friendly smartphone apps, including the one from the Nature Conservancy, that could be refined³ to allow all boaters to send coordinates of lost gear to the retrieval programs. Those participating in the state’s Trap Gear Retrieval Program in a specific port (e.g., Eureka) could be the first to test the app prior to its widespread release. Other vessels (e.g., whale watch boats, CPFVs, commercial fishermen, recreational fishermen) should also be allowed to remove commercial and recreational fishing gear after the season closes. This change would require action by the Commission and the Legislature. Additionally, the retrieval of lost and derelict gear outside of the Trap Gear Retrieval Program by commercially permitted Dungeness crab vessels begins on July 16. Due to RAMP, the commercial Dungeness crab fishery has regularly closed in the spring to prevent marine life entanglements. The DCTF believes the regulations should be updated to allow the retrieval of lost and derelict gear as soon as the CDFW Director closes the commercial fishing season.

Recommendation 4, Potential Reintroduction of Sea Otters: The DCTF unanimously opposes the [US Fish and Wildlife’s efforts to reintroduce sea otters](#) in California north of Half Moon Bay. The

³ A smartphone app to log the coordinates of lost gear was piloted by the Nature Conservancy and fisherman in Half Moon Bay a few years ago.

DCTF disagrees with the US Fish and Wildlife Service’s (USFWS) finding⁴ that reintroduction will not severely impact the Dungeness crab stock and fishery. Research has shown sea otters will have adverse impacts on the commercial and recreational Dungeness crab fisheries.^{5,6} There is a high overlap between depths where Dungeness crab fishing occurs and sea otter habitat foraging. The DCTF recommends that CDFW share Dungeness crab commercial fishing data, including data from electronic monitoring units, with USFWS to clarify this overlap and better inform USFWS’s understanding of the issue.

The DCTF encourages state leaders, managers, and the recreational fishing industry to work in partnership with the California Dungeness crab fishing fleet to oppose efforts to reintroduce sea otters in California. The DCTF recommends the Legislature consult with the fishing community to inform conversations with federal agencies and others regarding this issue.

Vote of all DCTF Members (ex officio Members abstained):

Thumbs up	Thumbs Sideways	Thumbs Down	Abstained	Absent
17	0	0	0	4

Rationale:

The DCTF strongly believes that the reintroduction of sea otters will have extremely negative impacts on the commercial and recreational California Dungeness crab fisheries. The DCTF disagrees with the statement from USFWS that Dungeness crab fishing will not be impacted by the reintroduction of sea otters due to a lack of overlap between sea otters and fishing. There are recent studies from the Monterey Bay Aquarium⁷ and Oregon State University⁸ that point to the same conclusion; however, these studies all assume that Dungeness crab is being fished in deeper water where sea otters are foraging in shallow water. These assumptions are inaccurate. Dungeness crab fishing occurs from the shore to 100 fathoms, with most fishing occurring inside 30 fathoms, resulting in a high potential for overlap between sea otters and fishing effort. Since most recreational Dungeness crab fishing occurs within 30 fathoms, reintroducing sea otters would completely decimate the recreational Dungeness crab fishery. The DCTF welcomes CDFW to share data from biweekly reports and the electronic monitoring data that will be available during the 2023-24 fishing season to show USFWS and researchers where fishing is occurring to better inform research being conducted.

The DCTF agrees with the West Coast Seafood Processors Association, Pacific Coast Federation of Fishermen’s Associations, and California Sea Urchin Commission, who released a joint

⁴ U.S. Fish and Wildlife Service (USFWS). 2002. [Feasibility Assessment: Sea Otter Reintroduction to the Pacific Coast](#). Report to Congress prepared by U.S. Fish and Wildlife Service, Region 9, Portland, Oregon; and Region 10, Sacramento, California.

⁵ Alaska Department of Fish and Game. 1999. [Collapsed or Recovering Shellfish Fisheries in the State of Alaska](#).

⁶ Cates, R.J. 2022. [The Effect of Sea Otter Predation and Habitat Structure on Nearshore Crab Assemblages in Southeast Alaska](#). Thesis Paper.

⁷ Boustany, A., D. Hernandez, E. Miller, J. Fujii, T. Nicholson, J. Tomoleoni, and K. Van Houtan. 2021. [Examining the potential conflict between sea otter recovery and Dungeness crab fisheries in California](#), Biological Conservation, Volume 253, 2021.

⁸ Kone D.V., M.T. Tinker, and L.G. Torres. 2021. [Informing sea otter reintroduction through habitat and human interaction assessment](#). Endang Species Res 44:159-176.

statement⁹ last year explaining that USFWS’s efforts do not account for the net economic and cultural impacts of losing the Dungeness crab fishery. A 1999 Alaska Department of Fish and Wildlife study indicated that 1,000 sea otters can consume up to 5 million pounds of Dungeness crab annually. Using those estimates and USFWS’s proposal to reintroduce 3,000 sea otters in California, sea otters could consume a minimum of 16 million pounds of Dungeness crab annually, including sub-legal sized and female crabs. By comparison, the statewide annual landings for commercial Dungeness crab fishery ranged between 3.5 - 18.8 million pounds of crab for the years 2017-2022¹⁰.

In areas of California where overlap between the Dungeness crab fishery and the reintroduction of sea otters already exists (e.g., Morro Bay, Monterey, and other parts of the Central Management Area), fishermen have witnessed the direct impacts of sea otters as a top predator with a ravenous, indiscriminate appetite. In addition to impacts to the Dungeness crab fishery, the DCTF has strong concerns about the impacts on the recovery of red abalone populations in Northern California, the sensitive nursery habitat inside San Francisco Bay, and local aquaculture efforts. For these reasons, the DCTF strongly recommends California representatives, fisheries managers, and others oppose the reintroduction of sea otters in California.

Marine Life Entanglements in Dungeness Crab Fishing Gear

Fish and Game Code (FGC) §8276.4 mandates the DCTF to discuss refining Dungeness crab management. A huge focus of the commercial and recreational California Dungeness crab fisheries in the last few years has been addressing and reducing the incidence of marine life entanglements. During the November 2023 meeting, the DCTF’s discussion focused primarily on the RAMP (§132.8 to Title 14, CCR) and other topics that directly inform the RAMP, including the state’s efforts to apply for an Incidental Take Permit (ITP).

Recommendation 5, Trailer Line Marking: The DCTF recommends the full commercial Dungeness crab fleet mark surface lines between the main buoy and the trailer buoy(s) (as defined in §132.6 to Title 14, CCR) by the start of the 2024-25 fishing season. This action will reduce the number of unidentified sources of marine life entanglements and proactively respond to CDFW’s anticipated rulemaking to update the RAMP regulations. The DCTF recommends using new line and/or lower cost options (e.g., painting or taping existing line) with markings as defined by CDFW guidelines. The DCTF recommends the state of California identify and allocate resources to cover the cost of materials and labor to support fishermen with this transition.

Vote of all DCTF Members (ex officio Members abstained):

Thumbs up	Thumbs Sideways	Thumbs Down	Abstained	Absent
15	2	0	0	4

Rationale:

The California Dungeness crab fishery is penalized for unknown entanglements as part of the RAMP program. Over the last seven years, the fishery continues to be the target of marine life protection efforts by environmental groups, the state of California, and federal agencies. Over the last few years, the Dungeness crab fishery incorporated new methods to mark their gear (e.g.,

⁹ <https://www.pacificfishing.com/Sea-Otter-Press-Release.Final.6.2.2022.pdf>

¹⁰ California Department of Fish and Wildlife. 2023. [Dungeness Crab, *Metacarcinus magister*, Enhanced Status Report](#).

commercial buoy tags, requiring all commercial buoy tags to be marked on both sides, recreational buoy markings), which have increased the number of known sources of Dungeness crab fishery entanglements since 2014¹¹. The DCTF also made recommendations in their 2021 ([Appendix 5](#)) and 2022 ([Appendix 6](#)) reports that all California fixed-gear fisheries be required to mark their gear. The DCTF sees value in making it clearer to discern the gear type involved in an entanglement, particularly if this helps to reduce the number of unidentifiable sources of entanglements. In an effort to lead by example, the commercial Dungeness crab fishery is willing to take additional steps to improve the marking of their surface gear.

During the November 2023 DCTF meeting, CDFW explained that they anticipate including a line marking requirement in the 2024 RAMP rulemaking (i.e., RAMP 2.0). CDFW confirmed that if commercial surface lines between the main buoy and the trailer buoy(s) are marked per CDFW guidelines, the California Dungeness crab fishery will no longer be penalized under RAMP for unidentified sources of entanglement. The DCTF sees marking surface lines as a reasonable cost-benefit for the commercial Dungeness crab fleet.

Recommendation 6, Extensive Line Marking: The DCTF acknowledges CDFW is pursuing a requirement that all commercial Dungeness crab gear be marked in the top 15-20 fathoms based on guidance from the National Marine Fisheries Service (NMFS). The DCTF understands NMFS has deemed this extensive line marking as a requirement to receive an ITP. However, the DCTF strongly opposes this gear marking proposal as it is not financially and logistically feasible to implement with the current fishing practices, nor does the DCTF believe this action will reduce entanglement risk. The DCTF requires NMFS to share research identifying the cost-benefit of this type of extensive line-marking as justification for this financial burden on the fleet.

Vote of all DCTF Members (ex officio Members abstained):

Thumbs up	Thumbs Sideways	Thumbs Down	Abstained	Absent
13	2	0	0	6

Recommendation 7, Extensive Line Marking, Cont'd: If the commercial Dungeness crab fleet is required to mark the top 15-20 fathoms of all trap lines according to regulatory guidelines, the DCTF recommends funding be provided from NMFS, the Ocean Protection Council (OPC), the Legislature, and/or others to offset the financial burdens to the fleet. Full funding for this undertaking is anticipated to cost \$32M, and a minimum of five years will be needed for the commercial fleet to make this burdensome transition. The DCTF requests that during this transition period and after, the California commercial Dungeness crab fishery is no longer penalized for unknown sources of entanglement as part of their ITP.

Vote of all DCTF Members (ex officio Members abstained):

Thumbs up	Thumbs Sideways	Thumbs Down	Abstained	Absent
11	4	0	0	6

¹¹ Saez, L., D. Lawson, and M. DeAngelis. 2021. [Large whale entanglements off the U.S. West Coast, from 1982-2017](#). NOAA Tech. Memo. NMFS-OPR-63A, 50 p.

Rationale:

Since 2013, the Dungeness crab fishery has incorporated new methods to mark their gear (e.g., commercial buoy tags, requiring all commercial buoy tags to be marked on both sides, recreational buoy markings), which have increased the number of known sources of Dungeness crab fishery entanglements¹². Additionally, as a result of the RAMP, the length of the commercial fishing season has been drastically reduced, and additional financial burdens are being placed on the commercial fleet, including electronic monitoring requirements. In the DCTF's 2022 report ([Appendix 6](#)), the DCTF requested that NMFS perform a cost-benefit analysis of line marking. The DCTF appreciates that line marking has been implemented in some East Coast fisheries but wants to stress that fishing and ocean conditions are very different between the two coasts and that entanglement mitigation efforts on each coast should not be modeled after one another.

California Dungeness crab fishermen fish in a wide range of depths from the shore to 100 fathoms using a wide range of gear set-ups depending on the vessel size and preferred fishing depths. Not all fishermen fish lines longer than 15-20 fathoms, which may make their fishing practices inherently in conflict with this requirement. Those vessels that fish in multiple states will be required to use different lines in each state (i.e., due to line marking requirements), increasing implementation costs and storage fees. The DCTF believes there is no way to make this prescriptive line marking requirement work for all commercial Dungeness crab fishermen.

The Endangered Species Act (50 CFR § 402.02) states that *reasonable and prudent measures* are necessary or appropriate to minimize the impacts to endangered species. It also states that *reasonable and prudent alternative actions* should be implemented consistent with the scope of the Federal agency's legal authority and jurisdiction, that is economically and technologically feasible while also avoiding the likelihood of jeopardizing the continued existence of listed species. The DCTF believes that NMFS's line marking demand is neither *reasonable nor prudent*. Rather, it is *arbitrary and capricious* since it will do nothing to reduce the risk of marine life entanglements. There is no proof that this cost-prohibitive and extensive line marking will improve visibility enough to reduce the number of unknown entanglements.

Recommendation 8, Take Reduction Teams: The DCTF is vehemently against including Dungeness crab in any NMFS take reduction team (TRT), including the anticipated TRT in the sablefish fishery, and should be avoided at all costs. The Dungeness crab industry has invested copious amounts of time, energy, and money to mitigate entanglements originating from the California Dungeness crab fishery, resulting in significant entanglement decreases since 2016. The Dungeness Crab Fishing Gear (Working Group) and CDFW actively monitor and respond to elevated entanglement risk, and the RAMP is arguably the functional equivalent of a TRT's outcome.

The California Dungeness crab fishery remains committed to supporting thriving whale populations along the West Coast and a thriving and profitable Dungeness crab fishery. The DCTF believes a TRT would dismantle the RAMP and progress made by the industry, state, and other partners in reducing entanglements over the last seven years. There is too much uncertainty regarding how a TRT involving other fisheries would affect an ITP for Dungeness crab (i.e., allowable take, triggers for management action, etc.). This Dungeness crab fishery cannot withstand further reductions in fishing opportunities or economic hardships, which have been profound since 2016.

¹² Saez, L., D. Lawson, and M. DeAngelis. 2021. [Large whale entanglements off the U.S. West Coast, from 1982-2017](#). NOAA Tech. Memo. NMFS-OPR-63A, 50 p.

Vote of all DCTF Members (ex officio Members abstained):

Thumbs up	Thumbs Sideways	Thumbs Down	Abstained	Absent
18	0	0	0	3

Notes:

NMFS is establishing a [Marine Mammal Take Reduction Team](#) for the sablefish fishery to address the incidental mortality and serious injury to Humpback whale stocks along the West Coast. During the scoping process, NMFS is considering including other fisheries, such as the Dungeness crab fishery, in [this TRT effort](#). The DCTF profoundly believes such actions are unnecessary based on the California Dungeness crab fishery’s ongoing cooperation to mitigate marine life entanglements.

In 2015, CDFW convened the Working Group in partnership with NMFS and OPC. At the time, NMFS identified the Working Group as a more cost-effective alternative to a TRT. The Working Group is composed of commercial and recreational fishermen, environmental organization representatives, members of the disentanglement network, and state and federal agencies. The Working Group’s charge is to collaboratively inform and guide the state of California in developing and implementing innovative approaches to reducing marine life entanglement risk in Dungeness crab fishing gear. Efforts through the Working Group have resulted in the development and refinement of the RAMP and its associated management measures (i.e., electronic monitoring, enhanced gear marking, season delays, early season closures, alternative gear testing, etc.). The DCTF has made multiple statements over the past few years supporting the efforts of the Working Group. Members of the Working Group have volunteered a considerable amount of time and energy over the last seven years. These efforts have resulted in a RAMP program that is responsive and proactive to changes in entanglement risk, resulting in fewer entanglements than before its implementation, even as the west coast populations of humpback whales have increased at approximately 7% per year.¹³ If NMFS chooses to ignore this progress and the investments by Working Group volunteers and moves forward with a TRT, it would add further insult to injury toward the Dungeness crab fleet. Additionally, adding Dungeness crab to the sablefish TRT would no doubt add to the cost of the TRT. It would be more appropriate to prioritize that funding for other fisheries that have not made the progress that the Dungeness crab fishery continues to make.

The DCTF agrees that the issue of marine life entanglements in the California Dungeness crab fishery is an important priority for the fleet to address. Marine life entanglements in California Dungeness crab fishing gear have been identified as a high-priority issue by the industry, especially in the face of a settlement agreement between the Center for Biological Diversity and CDFW ([Appendix 7](#)). Marine life entanglements create a risk for marine life while also threatening the stability of the fishery and coastal fishing communities, both of which the public and industry value. DCTF members support the work of the Working Group and see value in having fishermen in the group helping to develop strategies to address this issue.

As the whale populations continue to increase, the risk of entanglements increases. The California Dungeness crab fishery understands that fishery management measures will be more frequently implemented as triggers are met. Commercial Dungeness crab fishermen have experienced season delays and early closures over the last few years due to these triggers. The DCTF is concerned that if the Dungeness crab fishery is part of a TRT, the thresholds for a trigger to be met

¹³ Calambokidis, J. and J. Barlow. 2020. [Updated abundance estimates for blue and humpback whales along the U.S. West Coast using data through 2018](https://doi.org/10.25923/zrth-8n96). <https://doi.org/10.25923/zrth-8n96>

will be shared with the sablefish fishery, thus increasing the likelihood that Dungeness crab fishery opportunities will be further restricted. The California Dungeness crab fishery has already experienced extensive financial burdens since the RAMP program's implementation and fears that a TRT would further exacerbate those economic burdens.

DCTF NEXT STEPS

The DCTF anticipates meeting again in the Fall of 2024 to continue addressing high-priority topics related to the management of the Dungeness crab fishery. The DCTF may meet before this time period should any timely issues arise that would benefit from the DCTF's perspectives. The DCTF anticipates sharing a report following each DCTF meeting to ensure that recommendations are shared in a timely fashion, and that the appropriate entities can act on those recommendations while they are relevant. The DCTF looks forward to being responsive to the needs of the Dungeness crab industry, CDFW, the Commission, and the Legislature to discuss priority issues, including those outlined in this report, and other priorities that may arise.