

# California Whale Entanglement Discussion Dungeness Crab Fishing Gear Working Group Summary of Key Themes, September 29-October 1, 2020

The California Dungeness Crab Fishing Gear Working Group (Working Group) held an annual meeting on September 29-October 1, 2020 to prepare for the upcoming 2020-2021 Dungeness crab fishing season. Discussion topics focused on confirming the Working Group's roles and responsibilities relative to its three priority areas of operation: Risk Assessment and Mitigation Program (RAMP) management recommendations, innovations work, and communications.

## Meeting Objectives

- *Confirm updated Working Group charter, including roles and responsibilities, form and function*
- *Clarify process for implementing the RAMP regulations*
  - *Clearly identify steps to carry out risk assessments, including Working Group's role/responsibilities, as defined by the RAMP regulations, Working Group Charter, and California Department of Fish and Wildlife's (CDFW) operations guidance document*
  - *Confirm the Working Group's process in providing management recommendations to mitigate any entanglement risk and inform the CDFW Director's decision-making*
- *Confirm approach and related timelines for innovations work to inform the RAMP*
- *Review 2020-21 meeting schedule and confirm external communications plan and related materials needed for 2020-21 RAMP*

The following summary captures key themes discussed by the Working Group and its Advisors during the annual meeting; it is not to be considered a transcript<sup>1</sup>. Next steps that were identified during the meeting are **highlighted in blue**. Content **highlighted in green** indicates places where Working Group participants made requests or arrived at agreements that should be tracked as part of the Working Group's ongoing work and priorities. A [key highlights document](#) was also produced as an output for this meeting. Key themes summaries and other meeting outputs are designed to provide Working Group participants with information to share and discuss with their peers, as well as inform ongoing discussions within the Working Group itself. Summaries and materials also act as a source of information for those interested in this topic.

This summary, in addition to other meeting materials and products, will also be shared publicly via the Working Group email list, the Dungeness Crab Task Force (DCTF) email list, and posted to the Working Group's webpage. Previous meeting summaries, memos, and other information about the Working Group's activities are available at <http://www.opc.ca.gov/whale-entanglement-working-group/> and <https://www.wildlife.ca.gov/Conservation/Marine/Whale-Safe-Fisheries>.

**To be added to these email lists and/or receive updates on the progress of the RAMP and the Working Group's efforts, please contact [WhaleSafeFisheries@wildlife.ca.gov](mailto:WhaleSafeFisheries@wildlife.ca.gov).**

**Feedback from fishermen, decision makers, and others on the ideas and concepts discussed during the meeting is welcome and can be shared directly with CDFW at [whalesafefisheries@wildlife.ca.gov](mailto:whalesafefisheries@wildlife.ca.gov).**

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<sup>1</sup> This summary is not intended to be a legally accurate document. All references to legally binding documents, regulations, and/or laws should be directly sourced.

## Working Group Charge, Roles and Responsibilities

The [Working Group's Charter](#) was reviewed and updated to reflect the group's evolved role and responsibilities in the RAMP process and their associated innovations work.

- Composition and Roles
  - *Working Group*: CDFW confirmed the Working Group's form would largely remain unchanged during the 2020-21 RAMP. The Working Group confirmed it will operate in three priority areas:
    - **RAMP Management Actions Work**: In cases where risk is deemed elevated by CDFW and its agency partners based on thresholds defined in the RAMP regulations, the Working Group (in the form of an Evaluation Team, as subset of the Working Group (see page 4) will provide recommendation(s) regarding the appropriate management action(s) for the CDFW Director's consideration, as required by [Fish and Game Code \(FGC\) § 8276.1](#) and *Section 132.8, Title 14, CCR*. Key steps include determining the scope of risk and developing management action recommendation(s).
    - **RAMP Innovations Work**: The Working Group will work with researchers and others to increase the understanding of marine life entanglements by prioritizing data collection, organization, and interpretation and lend expertise to advance innovations and strategies to reduce entanglement risk and improve RAMP operations.
    - **Communications Work**: Uphold open lines of communication with decision makers, peers, interest groups, and/or other outside organizations to convey Working Group recommendations, evaluations and assessments for the Working Group's activities, and other key products and outcomes of Working Group deliberations. Also, solicit ideas, strategies, and innovations from peers and outside organizations and experts to inform and advance the Working Group's charge.
  - *Advisors*: The Working Group discussed the role of Advisors (full list available here), including if they should play a direct role in recommendation making. Informed by the group's updated approach to making recommendations (i.e., no longer using majority/minority approach), the Working Group decided that Advisors should continue serving in their current role. The Working Group will look to Advisors to help evaluate and assess data and information provided by CDFW to inform a management response recommendation.
  - *Agencies*: To better reflect the evolving nature of their participation on the Working Group, National Marine Fisheries Service West Coast Region (NMFS WCR) will serve as Advisors on the Working Group moving forward. The United States Coast Guard's (USCG) role was further defined to reflect the operational support it provides CDFW in assessing risk, and disentanglement efforts more broadly.
  - *Alternates*: **The Working Group agreed to updating the role of 'observers' to alternates, which will help to ensure there is adequate participation when making management action recommendation(s).** Working Group Members agreed that Alternates should participate as observers in at least two management action recommendation meetings to better understand the process and how the Working Group operates before being allowed to serve as an Alternate. Working Group Alternates will be confirmed by the CDFW Marine Region Manager.
    - **CDFW will confirm the process for approving Alternates and follow up with the Working Group to share related process steps.**
    - **Working Group Members are invited to send the names of their Alternate to CDFW for consideration and approval.**
  - *Vacancies*: CDFW confirmed that the four absent Member seats—Monterey commercial fishing, Fort Bragg commercial fishing, Out-of-State commercial fishing, and recreational fishing—would likely not be filled by the CDFW Marine Region Manager until Spring 2021. **The Working Group**

requested information be made available by CDFW to share with potential recruits, such as a handbook or other preparation materials.

- **Strategic Earth will update the [Working Group Members and Advisors list](#) and work with OPC to post on the Working Group's webpage.**
- Management Action Operations
  - *Administration and Facilitation:* Moving forward, CDFW will be responsible for administering the Working Group, which may be modified to accommodate CDFW's available staff resources. Strategic Earth Consulting will no longer provide facilitation and administrative support to the Working Group. CDFW will prioritize convening the Working Group for management action discussions and will work to allocate resources to support innovations work when appropriate (i.e., supporting Project Teams (see page 5)).
    - The Working Group expressed concern that additional resources were not available for neutral, third-party facilitation and administrative support including note taking, behind-the-scenes support, writing recommendations, and ongoing support for innovations work. Concerns were raised about CDFW having sufficient staff capacity to carry out the Working Group's administration. CDFW emphasized that while resources to have external administrative support is no longer available, CDFW is prioritizing the carrying out the RAMP regulations and related Working Group administration.
    - **The Working Group will work in partnership with CDFW to review and evaluate the administration of the group in January-February 2021.**
  - *Chair Role:* During risk assessments conducted during the latter portion of the 2019-20 season, Sonke Mastrup, CDFW, acted as Chair. With the changes in administrative and facilitation support, the Working Group discussed the how/if the role of a Chair could support the Working Group in advancing their management action recommendations meetings in a focused and efficient manner.
    - The Working Group confirmed the role of the Chair is envisioned to support a balanced conversation where all voices are expressed without favoritism. Working Group participants emphasized the need for having a neutral third party facilitate meetings and serve as the chair. Some Members expressed concern about CDFW's ability to be neutral, acknowledging that CDFW staff will be developing an initial management recommendation. CDFW expressed their willingness to serve as Chair in alignment with their role managing the Working Group.
    - **The Working Group agreed to having CDFW staff member, Ryan Bartling, serve as the chair and will reevaluate the approach in January-February 2021.**
      - **At that time, the group will review and evaluate the management action process to date — including the quality of recommendation making, the role of the Chair (need/value of a Vice-chair), need for neutral, 3rd party facilitation support, and possible public perceptions — and make any necessary changes.**
  - *Executive Committee:* Working Group Members expressed an interest in cultivating more transparent dialogue, trust, and collaboration with the state and federal agencies. To date, planning for Working Group meetings has involved an Internal Planning Team (IPT), consisting of state and federal agency staff and the facilitation team. The primary role of the IPT is to develop meeting agendas and support internal coordination.
    - The group requested Working Group Members be included in an Executive Committee that would involve agency staff to help coordinate and plan for Working Group meetings.

- Throughout the course of the 2020-21 fishing season, CDFW will continue to coordinate with the other state and federal agencies to ensure available information is being reviewed relative to RAMP risk factor thresholds.
    - **CDFW will consider this request and develop a suggested way forward for Working Group consideration and feedback. The agreed upon approach will be reflected in the Working Group's updated Charter.**
- Management Action Recommendation Process
  - *Evaluation Team:* **The Working Group confirmed an Evaluation Team—or a subgroup of the full Working Group—will be responsible for developing a management action upon the request of CDFW under circumstances of elevated risk.** The Working Group thought an Evaluation Team would be more nimble than the full Working Group to convene on short notice. The full Working Group will notified of the meeting request and a good faith effort will be made to identify an Evaluation Team comprised of two commercial fishermen or industry representatives (including a minimum of one commercial fisherman from the zone(s) of concern), one recreational/CPFV representative, two representatives from conservation organizations, and one agency representative (CDFW). If an Evaluation Team is unable to meet within a minimum of 48-hours notice the Director will make a management determination without Working Group guidance.
  - *Recommendation Making:* The Working Group reflected on the challenges they experienced during the 2019-20 RAMP, during which a majority/minority vote was taken to advance recommendation(s) to the Director. This approach lent itself to emphasizing the positions held by the group, rather than incentivizing working together towards shared interests. Some Working Group Members and Advisors highlighted the value in the group restoring the collaborative approach to recommendation making it had held in the past.
    - **In the spirit of developing recommendations that reflect the Working Group's shared vision to minimize socioeconomic impacts while maximizing conservation goals, the Working Group agreed to strive towards consensus (no opposition) for recommendation(s) forwarded to the Director.** While all recommendation(s) developed by an Evaluation Team will be advanced to the Director, recommendations with no opposition will likely be prioritized by the Director.
    - Each recommendation presented will include its rationale, including its conservation and socioeconomic benefits/merits and any limitations or tradeoffs to consider for each option and how the option was arrived at, as well as how broadly supported a recommendation was.
  - *Informal Caucuses:* Working Group Members acknowledged the importance of connecting with fellow Members and Advisors prior to meetings to discuss strategies and identify where there are areas of shared interest. **The Working Group agreed to recognize the role of informal caucuses of two or more Members/Advisors in their Charter.** The results of caucus discussions will be conveyed at a high-level during the management action meeting and will help inform an Evaluation Team's recommendation development process.
- Innovations Operations
  - The Working Group discussed the value and importance of continuing to advance work with researchers and other experts to increase the understanding of marine life entanglements. Specifically, the group highlighted the need to:
    - Prioritize RAMP-related ecological and socioeconomic data collection, improve data organization and interpretation, inform entanglement forensic reviews, and lend expertise in the design and testing of gear innovations and other strategies to reduce entanglement risk; and

- Track the development of goals, key tasks/deliverables, evaluation metrics, funding opportunities, and associated timelines for priority projects. Where appropriate and expertise/capacity exists within Working Group Members, actively participate in grant writing and the active solicitation of funding to support innovations priorities and secure data sources, together with other Working Group recommendations.
- **The Working Group identified the need for easier access to funding support for innovations work, specifically gear innovations and vessel surveys.**
- *Project Teams:* The Working Group agreed to continue using Project Teams to carry out innovations activities. With the changes identified in available administrative and facilitation support, the group discussed the need for coordination support within and across Project Teams.
  - Concerns were raised regarding CDFW’s capacity and interest in supporting innovations work, reflecting on their stated priority of implementing the RAMP regulations. CDFW assured the Working Group that innovations work is viewed as an important component of the Working Group’s charge. There may be times, however, when CDFW staff is unable to administer or participate in Project Team activities, particularly during the Fall and Spring months when it is anticipated CDFW staff will be focused on carrying out the RAMP regulations.
  - The Working Group agreed to identify Project Team Leads who will work with CDFW to advance the administration of the Working Group’s innovations activities. This involves developing and maintaining related materials and communications to plan for, design, and/or carry out innovations priorities as identified by the Working Group and its Members.
  - **The Working Group requested CDFW stay engaged and help support the Working Group’s innovations work. They also requested OPC consider funding administrative support for the innovations work.**
    - **OPC will consider feasibility of funding additional administrative support for innovations work through assessing available resources and alignment with OPC strategic priorities, and through coordinating with CDFW.**
- Additional Administration
  - *Annual Meetings:* **The Working Group agreed to the value of meeting annually to review and evaluate the Working Group’s charge and priorities, including advancements made in making management action recommendations to the CDFW Director and their broader innovations work, including related Project Team activities.**
  - **Strategic Earth will update the Charter to reflect the Working Group’s discussion and work with CDFW and OPC staff to address a number of outstanding issues. The Working Group will have the opportunity to review a final draft prior to posting a [final updated version](#) on their webpage.**

## **2020-21 RAMP**

CDFW provided the Working Group with a presentation that outlined how the proposed RAMP regulations would be implemented during the 2020-21 season. The Working Group is no longer responsible for determining elevated risk; rather, the RAMP regulations define risk thresholds. CDFW will work with other state and federal agencies, together with the Working Group’s science advisors, to monitor available data and information to determine when/if thresholds are met. At this time, CDFW will develop an initial assessment and related management recommendation(s) and request an Evaluation Team provide recommendation(s) regarding the appropriate management action(s) for the CDFW Director’s consideration, as required by [Fish and Game Code \(FGC\) § 8276.1](#) and *Section 132.8, Title 14, CCR*. Key steps an Evaluation Team will take include:

- **Determine the Scope of Risk:** Based on CDFW’s initial assessment and recommended management action(s), informed by the best available science, including management considerations and, and other relevant information, an Evaluation Team will review and evaluate the management considerations to gain a more thorough understanding of the scope of identified risk (*Section 132.8 subsection (d)*).
- **Develop Recommended Management Action:** Based on the determined scope of risk, an Evaluation Team will review management action options (*Section 132.8 subsection (e)*) and develop a recommended management action(s) for the CDFW Director’s review and consideration.

The Working Group sought clarity on their role in the risk assessment process and reiterated concerns about aspects of the [RAMP regulations](#).

- Some Working Group Members expressed concerns that the Working Group is no longer involved in determining elevated risk, rather the RAMP regulations thresholds are designed to do this. Questions were raised about what information will be used to inform the thresholds, including what CDFW deems as ‘best available science’ seeing that the Working Group’s expert judgement will not be factored in during this first risk assessment step.
  - CDFW highlighted the RAMP risk thresholds for the entanglements and marine life concentrations factors is intended to be an indicator of elevated risk, which then prompts a meeting with an Evaluation Team. The Evaluation Team will then review the available information, including the expert judgement of the Evaluation Team and Advisors, to gain a more comprehensive understanding of the relative risk of entanglement.
  - CDFW also reflected on the 2019-20 RAMP process, including the challenges the Working Group faced with identifying the entanglement risk to be elevated during higher risk times of year. The goal of the RAMP regulations is to remove some of the subjectivity that can be involved when determining if risk is elevated and focus the Working Group’s efforts on informing the state on how to respond to circumstances of elevated risk.
- The Working Group discussed the level of flexibility built into the RAMP regulations. Concerns were expressed that closures act as the default management action are not sufficiently flexible. Proposed management measures can have severe social and economic implications for the commercial fleet and broader industry.
  - CDFW stated that the social and economic wellbeing of the commercial Dungeness fishery is extremely important and reflective of the amount of staff and resources the agency has committed to the Working Group. **CDFW confirmed it will work with the Working Group to develop data and measurements to evaluate and consider the industry’s economic health, specifically related to socioeconomic impacts due to management actions.**
    - Default closures are required to establish evidence of a regulatory mechanism to reduce entanglement risk, which is needed for CDFW to apply for an Incidental Take Permit. CDFW emphasized that default closures would only happen when risk is elevated and it can provide the best protection for the species of concern or when there is no data available.
    - CDFW also identified a level of flexibility based on the regulatory language that provides the option to recommend an alternative management action, as outlined in Subsection (e), that meets the same conservation goals.
  - **The Working Group requested CDFW present several management response options and/or the management action ‘bounds’ within which an Evaluation Team should operate for the Working Group’s consideration in Management Action Recommendation.** The options should outline which are the most protective and which have the least economic impact. CDFW indicated they would consider the request.

- With the understanding that Working Group Members continue to have fundamental questions and concerns about how the RAMP regulations will be carried out during the 2020-21 season and the socioeconomic implications of the regulations to the fleet, the group agreed that it is important for the Working Group to be actively involved in implementing the RAMP regulations.
  - CDFW acknowledged that this is the first time they are implementing the RAMP regulations, too, and look forward to working in partnership with the Working Group to carry out the regulations while learning and evolving along the way.
  - **The Working Group expressed support for developing management response recommendations and related management actions that will balance conservation needs while also minimizing negative socioeconomic impacts on the fleet.**

**Management Considerations**

The Working Group discussed its approach for reviewing and evaluating the management considerations to determine the scope of identified risk (*Section 132.8 subsection (d)*). Building on the group’s previous risk assessment framework (example available [here](#)), the Working Group developed a series of guiding questions for each management consideration to help inform and identify the appropriate management action(s) in a systematic manner (see Management Actions section below).

- CDFW encouraged the group to develop questions that would help inform a holistic view of the context/ conditions that the elevated RAMP thresholds are operating within to inform the management action. Questions related to the time of the season, location of marine life and fishing activities, seasonal migration patterns, and other events that may have occurred during the calendar year (e.g., other entanglements?) were posed to the group to help inform their discussion.

**Table 1. Preliminary Management Considerations Framework, 9/29 Working Group Discussion**

Management Consideration	Context	Draft Guiding Questions
Entanglements	<p>Current Impact Score Calculation within fishing season and calendar year</p> <p>Known historic marine life migration patterns. Entanglement risk is expected to decrease in the fall when Actionable Species are anticipated to leave the Fishing Grounds. Conversely, entanglement risk is expected to increase in the spring when Actionable Species return.</p>	<p>What gear was involved in the entanglement?</p> <p>What do we know about the origins of the entanglement (depth, geographic area)?</p> <p>Recent vs historical entanglement?</p> <p>Where are we on impact score/multi-year trigger?</p>

<p><b>Marine Life Concentrations</b></p>	<p>Marine life concentrations and their spatial distribution over the course of the current Fishing Season as an indication of marine life migration into or out of Fishing Grounds and across Fishing Zones</p> <p>Known historic marine life migration patterns. Entanglement risk is expected to decrease in the fall when Actionable Species are anticipated to leave the Fishing Grounds. Conversely, entanglement risk is expected to increase in the spring when Actionable Species return.</p>	<p>Whales: Are whales Inshore/offshore? Whales: Are whales concentrated or spread out? Whales: Are they feeding or traveling? Whales: Are these the Humpbacks whales that are migrating or hanging around year-round? Turtles: Are they North/south (turtles)? All: Migration timing?</p>
<p><b>Ocean Conditions</b></p>	<p>Including but not limited to temperature, upwelling, El Niño, La Niña, weather, currents that influence presence and aggregation of marine life (such as habitat compression) and affect vessel operations.</p>	<p>Are we in an El Nino year? Current/ Water temp? Is there a marine heatwave and if so, what is its area and intensity? What is the status of the habitat compression index? What is the status of the North Pacific High, area and intensity?</p>
<p><b>Forage Conditions</b></p>	<p>Known distribution and abundance of key forage (such as anchovy, krill or jellyfish concentrations) and their influence on Actionable Species' feeding behavior.</p>	<p>Whales: Is it a high krill year? Whales: Do we know location of krill (inshore/offshore)? Whales: Status of anchovies, distribution? Turtles: Do we know where sea nettles are? Turtles: Are Mola mola present and concentrated?</p>
<p><b>Fishing Dynamics</b></p>	<p>Including factors that impact the concentration or geographic location of fishing effort, amount of fishing gear deployed in a Fishing Zone, and season delays based on quality testing and/or public health closures or hazards</p>	<p>Location of gear, zone level? Depth level? # of traps? zone, time of season - relationship of gear concentrations throughout the season What is the point in the season? (weekly scale) Have there been fishing delays? When did the fishery open? Is gear being actively fished? within 96-hour rule</p>



<b>Socio-economic Impacts</b>	If deciding between management measures that equivalently reduce entanglement risk, total economic impact to the Fleet and fishing communities, with impacts anticipated to increase for delays in the fall and decline in the spring.	Number of boats fishing by port? Potential for gear in the water? Distribution of gear relative to depth (for example)? Where would gear likely be moved under certain actions? Other fisheries fishermen are able to access?
<b>Best Available Science</b>	Expert judgement to be considered as part of the Evaluation Team process	Consider across all above management considerations Is the data peer reviewed? Historical vs real-time data? Source of data?
<b>Information from NOAA</b>	Considers all information available from NOAA, including expert judgement	Consider across all above management considerations Most applicable to entanglement data currently
<b>Data Availability per Fishing Zone</b>	Data availability within and across Fishing Zones. Application of management measures can be limited to a Fishing Zone if data are available for that zone. If data are not available, historical data or data from an adjacent Fishing Zone may be used.	Consider across all above management considerations

- **Guiding questions may be further refined by science advisors, the Data Project Team, and/or an experiential learning an Evaluation Team may experience when developing management action recommendation(s).**
  - **The [NOAA Integrated Ecosystem Assessment webpage](#) which includes information on the habitat compression index will be shared with the Working Group via email for review and consideration to inform the ocean conditions and forage conditions management considerations.**
  - Additional socioeconomic data may be available in the future via a project from a Postdoc at UC Santa Cruz. **The Internal Planning Team will schedule a time for the Working Group to learn about that work related to socioeconomic indicators impacting the fishery.**

### Management Actions

The Working Group reviewed and discussed the management action options outlined in *Section 132.8 subsection (e)* that will be available to an Evaluation Team

- The Working Group discussed the importance of using the best available science and expert judgement to provide rationale for management actions that would minimize entanglement risk and socioeconomic impacts to the commercial Dungeness crab fishery.
  - CDFW confirmed that under circumstances where multiple management actions are being considered that would achieve similar conservation outcomes, the action that has the least economic impact on the fleet should be prioritized.

- The group reviewed the five management action options outlined in the RAMP regulations and discussed the feasibility of each of them to be implemented during the 2020-21 fishing season.
  - *Alternative Gear*: The Working Group expressed concern that alternative gear has been included in the RAMP regulations as a potential management action starting April 1, 2021, yet there is no alternative gear currently approved for use. Members highlighted the testing and approval process required to confirm alternative gear would most likely take much longer than Spring and may not be a realistic management option for the 2020-21 season.
    - CDFW highlighted that beginning November 1, 2020, individuals can submit applications for the use of alternative gear under the new RAMP regulations. Requests should be submitted to [WhaleSafeFisheries@wildlife.ca.gov](mailto:WhaleSafeFisheries@wildlife.ca.gov).
    - Also, the gear innovations project funded by the Ocean Protection Council (OPC) and administered by the National Marine Sanctuary Foundation is anticipated to begin testing in January 2020 in coordination with the Gear Innovations Project Team.
    - The Working Group expressed support to use alternative gear as a management option and is interested in tracking current and encouraging new gear testing in hopes that alternative gear options will be approved by CDFW and be made available for April 1, 2021 and beyond.
    - **Once the RAMP regulations are approved, CDFW will share information about how alternative gear will be considered and approved by creating a one-page informational sheet for distribution to the Working Group and fleet in late November at the earliest.**

### Recommendations Memo

The Working Group reviewed a draft recommendations memo template and provided some initial feedback. Similar to the 2019-20 RAMP, this document will be used to capture the rationale and recommendations submitted to the Director.

- Evaluation Team discussions will be captured in real-time and reflected in the draft memo. Following the call, CDFW staff will clean up the document to improve readability before it is circulated to the Evaluation Team for final review. The Working Group will be included in this communication to uphold transparency. The Evaluation Team will have 24 hours to review and make edits before the memo finalized by CDFW staff and submitted to the CDFW Director.
- The Working Group suggested updating the template to provide more structure and outline guiding questions at the top. Members suggested the document clearly identify management action options that are appropriate based on the data.
  - **The Working Group will continue to provide input on the recommendation memo template.**

### Data Discussion

CDFW shared a draft list of CDFW-approved data sources that will be used by CDFW to inform whether RAMP thresholds have been met, CDFW's initial management recommendation(s) for Evaluation Team review, as well as made available to an Evaluation Team to inform their deliberations. Due to limited time, the group did not have the opportunity to review the entire list, but focused on a few data sources and data topics that were high priority.

- *Data access*: The Working Group emphasized the need to review available data in advance of developing a management response recommendation and suggested CDFW share data with the Working Group as they receive it.
  - **CDFW will aim to share available data 48 hours in advance of an Evaluation Team meeting. Additionally, CDFW will aim to share their initial management recommendation(s) within 24 hours of the Evaluation Team discussion.**

- *Monterey Bay Whale Watch (MBWW)*: CDFW confirmed the MBWW data set will be used by CDFW to support survey data for marine life concentrations by gauging when whales are arriving and departing the area. It will also be used to trigger the Evaluation Team’s management action discussion in fishing Zone 4.
  - Some Members of the Working Group expressed concerns about applying MBWW dataset beyond Monterey Bay since it only indicates that whales are in Monterey Bay and has no implications outside the area. Some Members expressed support for using MBWW data to inform trends (presence/absence of whales) but not hard triggers; others supported using this dataset to inform triggers in Zone 4.
    - There was continued frustration expressed by the Working Group on the lack of veracity as well as reliability of available data to inform the marine life concentrations factor. Members highlighted this issue had been raised by the group for a number of years with limited advancements to date to acquire additional datasets.
  - Some Members questioned the rigorousness veracity and reliability of the data since it is collected by a non-observer whale watching boat that is actively looking for whales. Some members questioned the use of this data as absolute numbers that inform RAMP marine life concentration triggers.
    - A Working Group Advisor shared her expert opinion that MBWW is a valuable dataset that can be used to indicate whale trends, foraging behavior, other movement trends, as well as historical insights as compared to previous years. Data are standardized in the analyses shared with the Working Group to prevent concerns about counting the same whale multiple times. This allows the dataset to be used as an index of whale presence/absence throughout the season.
  - CDFW explained that the RAMP regulations require the use of the best available data. If no data are available, the default is to close a fishing zone until data becomes available. Using the MBWW dataset is, from CDFW’s perspective, a better alternative than implementing a default closure due to a no-data scenario. CDFW stated that they are committed to collecting additional data through a variety of methods, including aerial and vessel surveys.
    - A Working Group Member highlighted that, when there is an absence of data, MBWW data could be useful to consider outside Zone 4 beyond informing trends to avoid a default closure.
- *Socioeconomics*: Socioeconomic data were repeatedly identified by the Working Group as a crucial component of the risk assessment and management action recommendation processes that has been missing. All management actions should consider the economic impacts to the fishery and prioritize economic health of the industry in the decision-making process.
  - CDFW will be including socioeconomic data as part of their risk assessments and highlighted that more socioeconomic data are anticipated to be available before 2023. During the 2020-21 season, landings data, bi-weekly mandatory reporting by the fleet, and Working Group expertise will help inform the socioeconomic considerations of the fleet.
  - The Working Group expressed interest in identifying additional socioeconomic datasets beyond landings information and biweekly fleet reporting to inform the RAMP.
  - **The Data Project Team will advance a discussion focused on socioeconomic data and analyses in anticipation of the 2020-21 season.**
- *Citizen Science Data*: The Data Project Team has been discussing how to design vessel-based surveys that could be implemented by citizen scientists (e.g., fishermen, whale watch vessels) to fill data gaps and complement existing marine life concentrations survey work to inform the RAMP. The discussion has

focused on developing methods that would meet scientific standards while accommodating COVID-19 safety protocols.

- **The Data Project Team (or subgroup) will consider the feasibility of a Fall 2020 citizen science pilot and will follow up with the Working Group when more details are finalized.**
- *Approving data for Working Group consideration:* The Working Group stated the importance of confirming how data will be used to inform a management action recommendation. The Working Group's Data Project Team has started to develop draft criteria to evaluate and approve available data for specific uses/applications. This will help identify areas of agreement in how data will be considered and applied in a consistent and rigorous manner.
  - **The Data Project Team continues developing a Working Group review/approval process for CDFW-approved data that can be applied to current data sources as well and other data sources that become available in the future.**