

# Recreational Red Abalone Fishery Management Plan (FMP) Project Team

## Working Meeting #6: Develop & Confirm Guidance for the North Coast Recreational Red Abalone Management Strategy

Thursday, December 19, 2019

### Summary of Key Highlights - Meeting Outputs and Next Steps

The Recreational Red Abalone Fisheries Management Plan (FMP) Project Team held its sixth and final meeting<sup>1</sup> on December 19, 2019 (agenda [here](#)), completing their charge (charter [here](#)) to discuss and provide feedback on the scientific analyses of the management strategy integration process and design of a *de minimis* fishery. Information on all Project Team meetings, including access to agendas, meeting materials, presentations, and summaries, are available at the Ocean Protection Council (OPC) project webpage: <http://www.opc.ca.gov/2019/05/red-abalone-management-strategies-integration/>.

The goals of the meeting were to share updates on work completed since the last Project Team meeting ([November 21, 2019 Meeting Highlights](#)), review updated management strategy evaluation (MSE) results, confirm Project Team guidance on the management strategy and *de minimis* toolbox, and learn about next steps for the recreational red abalone FMP development process, including the anticipated timeline and opportunities for continued stakeholder input. Approximately 40 members participated in this webinar.

This document is intended to provide a high-level overview of the key meeting discussion highlights and outputs including specific feedback on MSE and *de minimis* options that will inform the Administrative Team's final report to the Fish and Game Commission (Commission).

Next steps and key references and materials, including PowerPoint presentations shared during the meeting on December 19, are available on page 3 of this document.

### Key Highlights & Outputs

#### Management Strategy Evaluation

Dr. William Harford, lead modeler, provided a [presentation](#) on the updated MSE, model assumptions, and a hypothetical sampling design for exploring a third zone in Humboldt and Del Norte counties. He addressed the additional modeling requests from the November 21 meeting including management strategies with different size limits and density reference points that explored different confidence intervals in the two-zone fishing configuration (see Management Strategy A.1-A.6). Dr. Harford also shared that his analysis exploring a third zone could not be evaluated via MSE due to lack of data, as well as the approach only testing performance of a single management strategy; however, it did yield a list of research needs and management considerations for consideration by the Commission and California Department of Fish and Wildlife (CDFW). He highlighted that determining a *de minimis* total allowable catch (TAC) is the most uncertain component of MSE that is dependent on estimates of red abalone total abundance (see discussion in technical report on "population scaling"), which is difficult to assess in a data-poor environment. There are also trade-offs in all of the management strategies and zone configurations between increased protection of the red abalone resource and time to commence fishing at either *de minimis* or open management phases. Details about the MSE results are available in the

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<sup>1</sup> Project Team meetings are hosted by the California Department of Fish & Wildlife, and The Nature Conservancy, in partnership with the Ocean Protection Council, California Fish and Game Commission, Tribes and Tribal community representatives, and members of the recreational fishing community.

[High-level Summary of Updated Management Strategy](#) and [Draft Technical Report on Management Strategy Evaluation](#).

The Project Team discussed the presentation and expressed concern about how to measure “depletion” and whether the estimate of unfished population was realistic given some level of harvest has always existed whether from divers or otters. The Project Team noted that additional management strategies requested during the November 21 and presented during the December meeting meeting did not greatly reduce the time to achieving a *de minimis* fishery but did affect the predictions for the time to an open fishery.

Clarifying questions were asked about the sampling design and assumptions of the three-zone configuration, including the impacts of density or nearest neighbor impacts and allee effects on reproductive success and recovery in red abalone.

### ***De Minimis* Fishery**

Based on the Commission’s recommendation, the Recreational Red Abalone FMP is anticipated to contain a flexible framework outlining management options for the *de minimis* fishery. Accompanying regulations advanced by CDFW will be used to implement specific components for that fishery. Based on the stakeholder proposals shared with the Project Team and Administrative Team to-date, as well as the conversations from the previous Project Team meetings and webinars, the Administrative Team developed and updated a [draft \*De Minimis\* Recreational Abalone Fishery - Strawman Proposal](#) for the Project Team’s consideration and discussion. A [presentation](#) was provided to share the updates to the proposal based on feedback received during the November 21 Project Team meeting. A reminder that all management measures would apply to each management zone independently.

The Project Team discussed the strawman proposal and identified minor changes to the tools and considerations, and that Admin Team will incorporate in its final report. With regard to size limits, a participant suggested a minimum size limit of 10” as an option for consideration to ensure more opportunities for the red abalone to reproduce before they are harvested. There was both support and hesitation expressed for a larger size limit, given the opportunity to fish was reduced, more incidental mortality may occur to abalone below 10”, and it may reduce the ability to maintain equitable harvest opportunities. Additionally, participants from the rock picking community expressed support for a 7” minimum size limit especially with a small bag limit since red abalone are often smaller inshore and it would ensure opportunities to fish across sectors. With regard to allocation, participants suggested managers consider a TAC below 5,000 animals to increase fishing opportunities (see *Guidance for the Administrative Team* below).

### **Guidance for the Administrative Team**

As the Administrative Team drafts their final report to the Commission, the Project Team developed the following guidance for consideration based on the discussions from the six Project Team discussions:

- Prior to the December 19 webinar, the Project Team identified the need for a two-part management strategy that included Exceptional Circumstances Provision (Part A) with environmental variables and a Harvest Control Rule (Part B) as outlined in the MSE technical report. The Project Team also developed a [de minimis toolbox](#) with options for management measures.
- During the December 19 webinar, the following guidance was provided:
  - Some Project Team participants suggest prioritizing management strategies that support a *de minimis* fishery in the near-term (e.g., strategies A or C) while others support more conservative and precautionary options (e.g., strategies B or D) to better protect the resource.
    - Some participants representing the fishing sector suggested the Commission maximize fishing opportunities and support responsible fishing without overharvesting in the

- near-term. These individuals highlighted how changes in reference points changed the time to open a *de minimis* fishery.
- To reduce the long timeline until the start of a *de minimis* fishery outlined in the MSE report, some participants support the Commission investigating a *de minimis* fishery with a TAC between 100 and 5,000 animals. Many of these individuals also support a bio-fishery where fishermen gather data for CDFW and are able to retain their catch.
  - Participants representing the Tribes and Tribal communities expressed that the recovery of the red abalone resource is the highest priority and supported a more precautionary approach.
- The Project Team supports improved data coordination where there can be more efficiencies across data collection efforts by the state and other organizations. Additionally, improved data coordination could help to spread out data collection efforts to other areas of the state where data is currently limited. To that end, there was broad support for the state to consider the use of citizen science data more broadly in the management of the northern California recreational red abalone fishery.
    - Should the state implement a bio-fishery, the Project Team generally believes that fishermen should receive training from CDFW and scientists before being allowed to participate.
  - There is support for either a two- or three- zone approach to management. There is currently no support for a four- zone approach. The Project Team acknowledged that management under a two-zone fishing configuration would closely resemble CDFW's current management approach. There was broad support for exploring data and sampling needs in Humboldt/Del Norte counties to learn if and how a third zone may be managed in this area. There is concern by some Project Team members that the lack of data, and/or low red abalone densities and population sizes in Humboldt/Del Norte counties will prevent the opening of a fishery if the same approaches and assumptions were used for the northern counties as for Sonoma and Mendocino counties. Some participants suggested managers start with a two-zone strategy and move to three zones when a data sampling strategy and additional information (i.e., natural mortality rates, etc.) are available.

## Next Steps

- Project Team to submit any additional comments/proposals regarding the management strategy, exceptional circumstances, and *de minimis* fishery toolbox to the Marine Resources Committee and/or Commission as appropriate (contact information [here](#)) following the final Project Team meeting on December 19, 2019.
- Project Team to submit comments and questions regarding Project Team experience to [hello@strategiearth.com](mailto:hello@strategiearth.com) and complete [experience survey](#).
- Modelers to finalize [Technical Report on Management Strategy Evaluation](#).
- Administrative Team to incorporate Project Team guidance and feedback into the final report to the Commission.
- Strategic Earth to draft a summary of meeting outputs and next steps for the core Project Team's review prior to posting on the OPC's webpage ([here](#)). Strategic Earth to keep the Project Team informed of updates and opportunities for engagement until April 2020, including a review of the draft Administrative Team's report to the Commission.

## Key References and Materials

Materials referenced during the meeting are available online at

<http://www.opc.ca.gov/2019/05/red-abalone-management-strategies-integration/> including:

- [Agenda](#)
- [Next steps for modelers from November 21, 2019 Project Team meeting](#)
- [High-level Summary of Updated Management Strategy \(December 2019 version\)](#)
- [Updated De Minimis Strawman Proposal \(December 2019 version\)](#)
- [Updated Exceptional Circumstances Strawman Proposal \(December 2019 version\)](#)
- [Draft Technical Report on Management Strategy Evaluation \(December 2019 version\)](#)
- [November 21, 2019 Meeting Highlights](#)
- [Updated Project Team Work Plan](#)
- [Data Stream Comparison Table \(August 2019 version\)](#)
- [Draft Technical Report on Management Strategy Evaluation- November 22, 2019](#)
- [Updated Glossary of Key Terms \(December 2019 version\)](#)
- [Project Team Proposals for De Minimis Fishery \(as received, listed below under "Project Team Proposals"\)](#)

PowerPoint Presentations:

- [Project Team Updates Since November 21 Meeting](#)
- [Review and Discuss Management Strategy Evaluation Results](#)
- [Updated De Minimis Strawman Proposal](#)
- [Next Steps for Red Abalone FMP Management Strategy Integration](#)

Webinar Recording: [RedAbaloneFMP\\_ProjectTeam\\_12192019.mp3](#)

Additional reference materials that provide background information on the management strategy integration process and foundational information are also available, including:

- [Project Team charter](#)
- [Administrative Team charter](#)
- [California Ocean Science Trust Recreational Red Abalone Fishery Peer Review webpage](#)
- [Final Report of the Scientific and Technical Review Panel Scientific Peer Review of Proposed Recreational Red Abalone Management Strategies](#)
- [Recommendations from December 2018 Fish and Game Commission meeting](#)
- [Abalone Recovery and Management Plan](#)

For more information about the recreational red abalone Project Team, please visit <http://www.opc.ca.gov/2019/05/red-abalone-management-strategies-integration> or contact [hello@strategiearth.com](mailto:hello@strategiearth.com). For more information on the red abalone FMP, please visit <https://www.wildlife.ca.gov/Conservation/Marine/Red-Abalone-FMP>.