

**False Killer Whale Take Reduction Team Meeting
Via Teleconference: June 20, 2017**

FINAL KEY OUTCOMES MEMORANDUM

I. OVERVIEW

The National Marine Fisheries Service (NMFS) held a False Killer Whale Take Reduction Team (FKWTRT) meeting via webinar on June 20, 2017. The primary purpose of the teleconference was to provide updates on Take Reduction Plan-related data, including abundance and mortality and serious injury, observed false killer whale interactions, effectiveness analysis, and possible team access to videos of observed false killer whale interactions.

II. PARTICIPANTS

Fourteen of 18 Team members (or their alternates) participated in the teleconference. Participants included the following: Robin Baird, Hannah Bernard, Roger Dang, Eric Gilman, Asuka Ishizaki (alternate for Paul Dalzell), Michael Jasny, John LaGrange, David Laist, Kristy Long, Alton Miyasaka, Tory O'Connell, Ann Garrett, Ryan Steen and Sharon Young. Team members Clint Funderburg, Brendan Cummings, Paul Nachtigall, Paul Dalzell and Andy Read were not able to participate.

Kevin Brindock, Susan Pultz, Jean Higgins and Krista Graham with the NMFS Pacific Islands Regional Office (PIRO) Protected Resources Division, Jamie Marchetti with the PIRO Observer Program, Erin Oleson and Amanda Bradford with the NMFS Pacific Islands Fisheries Science Center, Karin Forney with the NMFS Southwest Fisheries Science Center and Lisa White with Protected Resources Division also participated. Public participants included Aude Pacini (observing for Paul Nachtigall) and Joe Fader (observing for Andy Read). Scott McCreary with CONCUR and Bennett Brooks with the Consensus Building Institute served as neutral facilitators.

III. MEETING MATERIALS

Materials provided to the Team for the teleconference included a call agenda, summary of observed false killer whale interaction, summary of the effectiveness analysis, and the 2016 Draft Stock Assessment Report. Additionally, presentation materials were provided following the call.

IV. KEY OUTCOMES

Below is a summary of the main topics and issues discussed. This summary is not intended to be a meeting transcript. Rather, it provides an overview of the main topics covered, the primary points and options raised in the discussions, and next steps.

A. Welcome, Introductions and Updates

The teleconference began with brief welcoming remarks by Ann Garrett, as well as a review of the agenda and discussion protocols by S. McCreary and B. Brooks.

B. Abundance and Mortality & Serious Injury Updates

E. Oleson provide an overview of abundance and mortality & serious injuries, noting that the data in her presentation is drawn from the 2016 Stock Assessment Report (SAR). Her presentation highlighted the following points: (1) reviewing false killer whale stock boundaries and bycatch estimate approach (no changes in the 2016 SAR); and (2) summarizing data on fishery takes relative to PBR (the 2010-2014 five-year average shows pelagic takes exceeding PBR, though she noted that the period spans implementation of the TRP). E. Oleson also provided information on the 2017 Hawaiian Cetacean & Ecosystem Assessment Survey (HICEAS) to be conducted this summer and noted that the Draft 2017 SAR is due out later this summer.

Following the presentation, one Team member asked whether the survey data to be collected this summer, including any acoustics information, will make it possible (unlike the previous two surveys) to evaluate trends in pelagic false killer whale abundance. E. Oleson noted that the ability to evaluate trends will depend on the quality of the data collected. She did add, however, that – unlike earlier years – the Science Center will have more than two data points to draw on.

C. Abundance and Mortality & Serious Injury (M&SI) Updates

K. Brindock provided Team members with a summary of observed false killer whale interactions in the deep-set and shallow-set longline fisheries from 2013 to present. Key presentation points centered on the following:

- There were 32 observed interactions (31 in the deep-set, 1 in the shallow-set; 5 inside the EEZ, 27 outside).
- Hooks straightened in 13% of the cases, the line broke 29% of the time, and the line was cut in 32% of the interactions.
- Captains were present for 55% of the interactions; active tension was used during 78% of the cases and the line was tied off 11% of the time.
- Regarding outcomes, 75% of interactions resulted in M&SI, 19% were deemed non-serious and 6% could not be determined. K. Brindock noted that observed M&SI inside the EEZ fell from 3.8/year between 2008-2012 to 0.8/year from 2013-2016, while observed M&SI outside the EEZ increased to 4.3/year from 2013-2016, up from 1.8 year in the 2008-2012 period.

Finally, K. Brindock presented the outlines of a potential causality model but noted that low sample sizes and the complexity of factors (gear, handling, characteristics of individual animals, etc.) make it difficult to determine the key factors contributing to outcome. He noted that the Agency intends to evaluate, as appropriate, past interactions (prior to 2013) and interactions with other species to inform its understanding of the factors that affect interaction outcome. The Agency will continue to use all available data to evaluate TRP implementation and effectiveness.

Based on the presentation, Team members offered the following comments and observations:

- Seeking information on the extent to which the shift of interactions outside the EEZ correlates with increase in effort. (Answer: Data from both the Science Center and the Western Pacific Fisheries Management Council seems to suggest a distributional shift rather than in increase in effort.)
- Voicing support for the Agency's intention to include information from other species to inform evaluation of plan effectiveness, particularly since crews may not handle gear differently until they are aware of the animal's species.
- Encouraging further work on the multi-variate approach introduced by K. Brindock.
- Expressing ongoing concern with the Agency's approach to managing the pelagic species within the EEZ when there is little information on the distribution and range of the population outside the EEZ.
- Seeking information on whether there is any distinction in crew handling techniques for false killer whales relative to handling of other species.
- Asking the Agency to review effort and bycatch data with an eye towards identifying any areas of low bycatch. (K. Forney noted that Science Center has examined this question in the past, but suggested it might be worth an updated look.)
- Seeking data derived from the power cruise conducted north of the Main Hawaiian Islands.

D. Updated Plan Effectiveness Analysis

K. Forney provided an update on the analysis she conducted in 2015 to evaluate Plan effectiveness. The results – similar to the findings of the earlier analysis – suggests there is not yet a documented statistically significant difference in M&SI rates or proportion of non-serious injuries given the variability in annual take rates and the overall low number of interactions. She further noted that (1) only a large (40-50%) reductions in M&SI would be detectable within 4-5 years, and (2) if present, an increase in the proportion of non-serious injury interactions (to 25-35%, up from the pre-TRP proportion of 8.3%) should be detectable within 4-5 years.

In addition to clarifying questions, Team member comments centered on the following:

- One Team member suggested the effectiveness analysis is problematic because it does not take account of the difference in false killer whale survival rates between the circle hooks required by the Plan and the J hooks more commonly used prior to Plan implementation. He further questioned the Agency's decision (as part of a separate and earlier serious injury determination process) to consider categorizing a false killer whale hooked in the mouth as a serious injury.

K. Forney clarified that interactions involving both hook types were in fact included in the effectiveness analysis. She also noted that the NMFS process used for determining whether injuries are considered serious or non-serious was developed over many years with extensive input from veterinarians and marine mammal experts. She further noted

that, to-date, there is no evidence to suggest different survival rates in marine mammal interactions with circle hook versus J hooks.

With regard to the question on serious injury determinations, A. Bradford noted the Agency is beginning a process to review serious injury guidelines, and Team members were encouraged to raise issues for consideration in that next round of review. Another Team member recommended that the next in-person meeting include an Agency presentation on the data and methods used to establish the determination of M&SI for false killer whale given industry's ongoing interest and concerns with the validity of the current approach.

- One Team member voiced concern that the proportion of observer coverage within the EEZ might be declining as more effort shifts outside the EEZ. Such a shift, he said, would reduce the probability of detecting a rare event within the EEZ. E. Oleson noted the Center is working on an analysis, expected to be ready in the fall, to confirm that the observed sample is representative of the fleet.

E. Access to Interaction Videos

Responding to Team comments raised at its 2015 in-person meeting, K. Brindock noted that the Agency has been looking into options for releasing videos of observed interactions with false killer whales. Based on its review of several possible options (releasing redacted videos, seeking captain permission to release videos, making videos available to a subset of the Team only, etc.), the Agency intends to make redacted videos available to the Team, noting that the redaction (to eliminate any confidential information) appears to result in limited loss of relevant data. He noted that the redacted videos, covering 23 separate interactions, will be available for viewing prior to and at the in-person meeting. Videos available prior to the meeting will be provided via an online format. (K. Brindock noted that the agency can make the videos available to TRT members in a format that is non-downloadable and non-transferable.) The exact timing is to be determined.

Based on the update, team member comments centered on two following topics:

- Industry Team members voiced concerns that the release of videos showing false killer whale interactions could be disseminated widely and used in communication that would be harmful to the industry. One member questioned whether captains should allow videotaping on their vessels given these concerns. (Agency staff noted that the Agency is already required to release redacted videos if requested under the Freedom of Information Act.) Team members also briefly discussed strategies for minimizing the misuse of video (not making them download-able; providing appropriate context, etc.).
- One researcher member of the Team recommended the Agency consider releasing videos of species of similar size or interaction type to help the Team better understand interaction mechanics.

V. NEXT STEPS

Based on the Team deliberations, the following next steps were identified:

- **Team membership updates.** K. Brindock noted that Team member John Hall's request to step down from the Team has been officially processed by NMFS. He further noted that he has already received one recommendation for the seat (industry, deep-set longliner), and he invited other interested Team members to submit other candidate names. Alton Miyasaka also noted that he and his alternate will both be retiring later this year and will need to be replaced.
- **In-person meeting.** K. Brindock noted the Agency is intending to convene an in-person meeting in spring 2018 (later than originally planned), as additional time is needed to complete the observer effects analysis and develop a more comprehensive assessment of Plan effectiveness. That said, A. Garrett noted that the TRP does not appear to be meeting its stated goals and objectives, and she encouraged Team members to come to an in-person meeting prepared to develop recommendations on concrete measures to improve Plan effectiveness. K. Brindock said the Agency will be reaching out prior to the in-person meeting to sharpen timing and identify data needs.
- **Discussion summary.** S. McCreary noted that CONCUR will be preparing a draft discussion summary for review and confirmation by the Agency and Team.
- **Other.** Other next steps based on the discussion included the following:
 - Provide copies of all presentations
 - Distribute K. Forney 2011 paper, "*Patterns of cetacean bycatch and depredation in Hawaii-based pelagic longline fisheries*"
 - Distribute documents that summarize and underpin the current Serious Injury Guidelines
 - PIRO is to assess the merits and potential of redacting non-false killer whale interaction videos
 - PIRO to assess strategies for providing appropriate context for any false killer interaction videos provided to the Team and public

Questions or comments regarding this meeting summary should be directed to S. McCreary, B. Brooks or K. Brindock. Scott and Bennett can be reached at 510-649-8008 and 212-678-0078, respectively; Kevin at 808-725-5146.