

**False Killer Whale Take Reduction Team Meeting  
Wednesday, May 29 to Friday, May 31, 2013  
NOAA Fisheries Honolulu Service Center  
Honolulu, Hawaii**

**KEY OUTCOMES MEMORANDUM**

## **I. OVERVIEW**

NOAA's National Marine Fisheries Service (NMFS) convened a False Killer Whale Take Reduction Team (TRT or FKWTRT) meeting from Wednesday, May 29 to Friday, May 31, 2013. The meeting objectives were to:

- Provide updates on recent False Killer Whale Take Reduction Team related activities, including recent interactions, research initiatives, Observer Program efforts, and fisheries activities
- Take stock of the False Killer Whale Take Reduction Plan (Plan) implementation to-date
- Consider the need for any potential plan amendments and/or updates to research priorities
- Discuss possible monitoring approaches for the Plan
- Outline next steps

This summary report, prepared by CONCUR Inc., provides an overview of the meeting's key outcomes. It is presented in five main sections: (1) Overview, (2) Participants, (3) Meeting Materials, (4) Key Outcomes, and (5) Next Steps.

## **II. PARTICIPANTS**

The three-day meeting, convened by Lisa Van Atta and Nancy Young with NMFS's Pacific Islands Regional Office (PIRO), was attended in-person by 15 of the 18 current Team members. Participating Team members were: Lisa Van Atta, Eric Gilman, Sharon Young, Brendan Cummings, Robin Baird, Hannah Bernard, Ryan Steen, John Hall, Victoria (Tory) O'Connell, John LaGrange, Paul Nachtigall, Alton Miyasaka, David Laist, Paul Dalzell and Kristy Long. Paul Dalzell's alternate, Asuka Ishizaki, filled in for Paul on the afternoon of Day 3. Team members Andrew Read, Roger Dang and Clint Funderburg were unable to participate. One additional seat on the Team is currently vacant.

Additionally, the Team's deliberations were supported by Erin Oleson, Russell Ito, and Keith Bigelow with the NMFS Pacific Islands Fisheries Science Center; Karin Forney with the NMFS Southwest Fisheries Science Center; Jamie Marchetti with the NMFS Pacific Islands Regional Observer Program; Adam Bailey with the PIRO Sustainable Fisheries Division; Take Tomson with the NOAA Office of Law Enforcement, Pacific Islands Division; Fred Tucher and Kamaile Nichols with the NOAA Office of General Counsel, Pacific Islands Section; Alexa Cole with NOAA Office of General Counsel, Enforcement Section; and Eric Roberts with the U.S. Coast Guard. Karen Martien of the NMFS Southwest Fisheries Science Center and William McLellan

from the University of North Carolina Wilmington provided technical presentations. The facilitation team members included Scott McCreary and Meredith Cowart with CONCUR, Inc., and Bennett Brooks with the Consensus Building Institute. Several others – from PIRO, other federal and state agencies, and the public – sat in as observers.

### III. MEETING MATERIALS

A meeting agenda and nearly all background meeting materials were provided in advance to support the group's deliberations. Copies of meeting materials and presentations can be found on-line at:

<http://www.nmfs.noaa.gov/pr/interactions/fkwtrt/meeting6.htm>

Documents can also be obtained by contacting N. Young at 808-944-2282 or via email at [nancy.young@noaa.gov](mailto:nancy.young@noaa.gov).

### IV. KEY OUTCOMES

Below is a brief summary of the main topics and issues discussed during the meeting. 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 discussion, and areas of full or emerging consensus.

#### *A. Welcome and Introduction*

L. Van Atta opened the meeting with brief welcoming comments, thanking members for their continuing hard work and introducing new Team member Alton Miyasaka (State of Hawaii representative). Her remarks were followed by an overview of the meeting objectives and agenda. Upfront presentations also included the following updates:

- ***NMFS Operating Protocols:*** K. Long reported that NMFS is developing consistent operating protocols across Take Reduction Teams nationwide. These protocols will, among other things, provide guidance on how and when information relevant to take reductions plans is to be shared with teams.
- ***Membership changes:*** N. Young reviewed FKWTRT membership changes due to resignations, new member appointments, and switches between alternates and members. Key changes are: A. Miyasaka replaced Francis Oishi, L. Van Atta (previously alternate) replaced Lance Smith (now alternate), J. LaGrange (previously alternate) replaced Jerry Ray, E. Gilman (previously alternate) replaced Steve Beverly (now alternate), and Jo-Anne Kushima was named as State of Hawaii alternate. N. Young also noted that the Agency is in the process of identifying a new conservation member to fill the seat previously held by William Aila.

- **Status of GAMMS III:** K. Long reported that the revisions to the Guidelines for Assessing Marine Mammal Stocks (GAMMS) are still under development and the agency hopes to finalize by the end of the calendar year.

Later in the meeting Deputy Regional Administrator Lisa Croft welcomed Team members and thanked them for their ongoing contributions to the FKWTRT.

### ***B. Scientific and Technical Presentations and Updates***

The Team received a series of FKWTRP-related scientific presentations. These included the following:

- **False Killer Whale Stock Assessment Updates.** Two presentations focused on providing the Team with the latest information on stock assessments and abundance estimates. These presentations are summarized below.
  - E. Oleson reviewed the HICEAS abundance analysis and the 2012 Stock Assessment Report (SAR), which had been previously distributed to the Team. The 2012 SAR has been updated to include: an overview of new genetic, photo-identification and movement data; estimates of the Northwestern Hawaiian Islands (NWHI) stock; and updated abundance estimates for the Hawaii pelagic stock. Based on the 2012 SAR, the Hawaii pelagic, NWHI, and MHI false killer whales are estimated to number 1503 (CV = 0.66), 552 (CV = 1.09), and 151 (CV = 0.2) individuals, respectively.

E. Oleson reminded Team members that the HICEAS abundance analysis methods integrated visual and acoustics methods in real time. However, given analytic challenges, she noted that it is not currently feasible to integrate acoustics data into the abundance analysis. Team members sought to better understand the acoustics monitoring techniques and associated limitations and the effect this had on the survey results.
  - K. Forney presented an update on using HICEAS 2010 survey data to validate previous habitat-based density models developed for cetaceans in the Central North Pacific. The models are currently not validated, although some preliminary evaluations have indicated promising results: estimates were all within the confidence intervals of the line transect estimates from Barlow 2006 and the model estimate for false killer whale was similar to the later estimate from the 2010 survey in Bradford 2012 (about 1,500 animals). The model validation will be completed by plotting results against the 2010 HICEAS survey data and models will be updated based on the 2010 HICEAS survey and 2011 and 2012 Palmyra surveys within the next few months. The goal is to submit a manuscript for peer reviewed publication. Team members offered a handful of comments, including interest in future efforts to populate K. Forney's habitat model with depredation events and suggesting that NMFS consider utilizing fishery-dependent data to inform estimates of FKW population size and distribution.

- **Research-Related Updates.** The meeting included a series of presentations intended to provide Team members with recent research activities relevant to the TRP. The various presentations are summarized below.
  - **Protocol for collecting straightened hooks to support genetic sampling.** K. Martien reviewed her proposal for collecting straightened hooks on fishing vessels for genetic analysis to determine species caught and asked the TRT for suggestions on data collection protocols. Team member comments centered on the following: (1) develop sufficient incentive/rationale to encourage *voluntary* cooperation from the fishery; (2) rely on observers, rather than fishermen, to collect hooks; and (3) consider testing the mechanics of the research effort on non-depleted trips (and non-straightened hooks) first. Some Team members discussed the potential drawbacks of collecting straightened hooks for genetic sampling, including the potential for additional and what some on the Team see as unnecessary false killer whale stock delineations (and associated lower PBRs) and difficulties associated with identification of species that interact with the hooks. R. Steen also said that, by law, observers may not require collection of gear from fishermen and, consequently, HLA cannot support a study that expands observer collection protocols beyond what is authorized under the Magnuson Act. R. Steen recommended NMFS work through HLA to determine interest in supporting the research and, if warranted, consider appropriate voluntary sampling protocols.
  - **Testing hook-tissue interactions in toothed whale mouths.** B. McLellan updated Team members on his recent research efforts supporting the Atlantic Pelagic Longline Take Reduction Team to better understand the nature of the hook-tissue interaction when pilot whales get hooked in the mouth. Using heads from deceased stranded pilot whales, the research sought to understand both the force required to pull the hook through the animal's lip, as well as to assess the damage done to the marine mammal's mouth. One key finding: certain stainless steel hooks (e.g., Mustad 16/0 and 18/0 circle hooks) sliced through and exited a pilot whale's lip (typically resulting in a wound that would be expected to be deemed a "non-serious" injury). Conversely, the Korean carbon circle hooks tested bent and tore large sections through the lip. The Korean carbon circle hook was also capable of breaking the pilot whale's jaw bone. This would produce an event in which the injury would likely be determined as serious. Team members expressed interest in directly studying hooks relevant to the FKWTRP and the Hawaii longline industry. B. McLellan is to provide PIRO with study hooks investigated to-date to facilitate the Team's review of hook materials and dimensions (relative to hooks used in the Hawaii longline fleet). He also offered to test Hawaii longline fleet hooks<sup>1</sup> in future research, provided adequate funding is secured.
  - **Recent false killer whale-related research.** E. Oleson presented results on recent acoustic monitoring research on longline vessels to assess false killer whale behavior, vessel and gear sounds and false killer whale occurrence throughout fishing grounds, as well as to identify potential acoustic cues. Material and line-interaction challenges have been

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<sup>1</sup> Later in the meeting, John LaGrange provided a range of hooks meeting Hawaiian regulations for delivery to B. McLellan. NMFS is to follow up with B. McLellan to confirm study parameters and additional hook-type protocols and needs.

successfully dealt with and data has now been successfully recorded on four longline vessel trips. E. Oleson is seeking broader participation from vessel captains, and the Team expects there to be some interest from the fishery. Other ongoing related research includes whistle extraction; assessing vessel attraction using towed array detections; and evaluating false killer whale occurrence w/in High-frequency Acoustic Recording Packages (HARP) datasets.

- ***Fisheries-related data, trends and updates.*** Several presenters provided information on the latest trends in the Hawaii longline fisheries, as well as state fisheries and Western Pacific Regional Fishery Management Council (Council) activities. Below is a synthesis of their presentations.
  - ***Longline fishery trends.*** A. Bailey reviewed management actions for the Hawaii longline fisheries. A. Bailey noted that there have been no major fishery operational changes since 2011, and therefore no management decisions from NMFS have greatly affected operation of shallow and deep-set longline fisheries. Team members had a brief discussion regarding the recent efforts to authorize the territories (American Samoa, Guam, and the Northern Mariana Islands) to transfer a portion of their annual bigeye tuna catch limits to certain U.S. vessels operating under specified fishing arrangements.

R. Ito provided a brief overview of Hawaii-based longline fishery logbook data, noting the following: the number of fishing vessels and trips has remained fairly constant since 1992; fishing for tuna has increased while fishing for swordfish has decreased; closures in the MHI EEZ have a more profound effect in the fall and winter compared to the first half of the year; and the number of sets and number of hooks set by area have increased steadily during this time. There were a record number of deep sets made, total hooks set, and total bigeye tuna caught in 2012.

- ***Shortline fishery trends.*** A. Miyasaka gave an initial presentation reviewing the Hawaii shortline fishery methods and recent trends. This small fishery (currently about 10 boats and 300,000 pounds/year) targets bigeye tuna, yellowfin tuna, mahimahi and monchong. The shortline fishery uses gear similar to the long-line fishery, but with a main line shorter than 1 nautical mile. Another gear-type of interest to the TRT, the kaka line fishery, differs from shortline in that it is pursued in shallower water and targets inshore fish. Shortline fishing is permitted in Hawaii waters and not regulated by the federal government<sup>2</sup>. No false killer whale takes have been reported in this fishery, but there has never been an observer program for the fishery and only one false killer whale “interaction” (depredation event) has ever been self-reported.

Information on the shortline fishery itself comes largely from self-reporting by fishermen. It was noted that at the Council meeting in March mention was made that the shortline fleet was growing with four more boats under construction in Kona. Team members reiterated their interest in learning more about shortline and kaka line fisheries. Several

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<sup>2</sup> A shortline fishery occurs in federal waters (e.g., at Cross Seamount, which is ca. 100nm south of Oahu, outside of State waters). Though various management measures have been considered by the Council, no federal action has been taken to-date for this and other small-scale commercial fisheries that occur in the US EEZ adjacent to Hawaii.

research-related recommendations were offered later in the meeting as part of the research discussion. (See Research Priorities below.)

- ***Council Initiatives Pertaining to the False Killer Whale Take Reduction Plan.*** A. Ishizaki made a brief presentation on the work of the Council's Scientific and Statistical Committee (SSC). One track of work examines approaches for calculating potential biological removal (PBR) levels and mortality and serious injury (M&SI) to identify any issues or concerns, and recommend alternative approaches, solutions and necessary research. A second effort centers on the Council's effort to develop an age-structured population model of false killer whales.
- ***Observer data, trends and updates.*** Several speakers provided updates related to the Observer Program-collected data and trends. These presentations included the following:
  - ***Observed interactions.*** J. Marchetti provided an update on the latest marine mammal take data gathered by the PIRO Observer Program. For false killer whales, three interactions were observed in the deep-set longline fishery in 2012 and four have been observed so far in 2013. One false killer whale interaction was observed in the shallow-set longline fishery in 2012, and zero interactions have been observed so far in 2013.
  - ***Serious Injury Determinations.*** K. Forney reviewed changes to the national Serious Injury guidelines and their application to the TRP. For small cetaceans, most of the injury criteria are the same as before, but include additional consideration of capture myopathy, dependent juveniles, and constricting versus non-constricting line wraps. Based on a re-review of 2007-2011 injury determinations using the new criteria, one injury determination in the false killer whale SAR was revised from "could not be determined" to "serious." Some Team members offered comments focused on (1) better understanding how the presence of dependent calves is characterized in the new guidelines, and (2) expressing interest in obtaining and reviewing more information on capture myopathy. K. Forney is to provide the Team with background literature on capture myopathy.
  - ***Other protected species interactions.*** N. Young provided the Team with an informational handout reviewing observer data on longline interactions with other protected species, including sea turtles and sea birds.

### ***C. Plan Implementation Considerations***

The Team received a series of presentations regarding the implementation status of the Plan by the Agency, HLA, and NOAA enforcement. A synthesis of these presentations and key discussion points is provided below.

- ***Overview of plan implementation status and recent takes.*** N. Young reviewed the implementation of both regulatory and non-regulatory measures of the plan. Some highlights include: 1) expansion of the marine mammal portion of the Protected Species Workshops; 2) development and distribution of placards; 3) development and implementation of a coordination protocol for fast-tracking serious injury determinations for takes that may count

towards the SEZ trigger, and 4) maintaining a minimum 15% systematic observer coverage each quarter, which will increase the precision of the resulting bycatch estimates. N. Young and J. Marchetti also provided a detailed overview of recent false killer whale interactions, including location, gear specifications, injury, a description of the event (including handling and release actions), and preliminary injury determination. Team members were encouraged by the recent interaction that resulted in a false killer whale straightening a weaker hook. Several Team members requested that similar information be provided on all future marine mammal interactions for the purposes of evaluating and monitoring the TRP. (See Data Mining Opportunities under Key Discussion Themes below.)

- ***Industry update.*** R. Steen provided an update on fisheries-related implementation status and ramifications moving forward. HLA has distributed a gauge to the fleet to measure monofilament branch line and hook wire diameter, and assisted NMFS with the revisions to the marine mammal handling and release placard. Due to the short turnaround time between final rule publication and implementation of the new hook requirements, the transition was difficult. However, all vessels are said to have now transitioned effectively to the weaker hooks required by the TRP. R. Steen noted that outreach to the non-English-speaking sectors of the fleet continues to prove challenging. Other discussion points included: (1) anecdotal reports of increased straightened hooks; and (2) challenges in effectively training crew for infrequent events (i.e., false killer whale interactions).
- ***Enforcement & compliance updates.*** T. Tomson, A. Cole, and Eric Roberts (U.S. Coast Guard) provided an update on compliance with TRP regulatory elements and enforcement activities since Plan implementation. OLE's dockside inspections have found no boats out of compliance (hooks, branch lines, placards) since requirements went into effect. One vessel was issued a violation for fishing within the Main Hawaiian Islands Longline Fishing Prohibited Area shortly after the closure went into effect. The U.S. Coast Guard has not yet been actively inspecting hooks and branch lines for compliance, but that will be phased in during the boarding officers' fall training cycle. The Team posed a handful of questions, and discussed the role of observers in enforcement (see Key Discussion Themes below).
- ***Observer program changes.*** J. Marchetti reviewed several key changes in the PIRO Observer Program based on the Plan. As recommended by the TRT, observer forms now reflect changes in gear type and detailed prompts regarding interactions. The observer training now includes a marine mammal identification refresher course. As well, when an interaction occurs, observers now ask for voluntary retention of gear and recover any available tissue samples. The Observer Program is currently testing means to provide more sophisticated photographic equipment to better capture the captain, crew and false killer whale behavior during an interaction. Team members' comments sought clarification on the following topics:
  - The nature of depredation information recorded by observers
  - The role observers play in confirming compliance with TRP prior to a vessel's departure

- The extent to which the program can use observers to gather hooks for subsequent testing relative to expected bending strength. (Again, R. Steen said that observers may not, by law, collect gear from fishing boats.)

Further discussion on this topic is summarized in the *Key Discussion Themes* section below.

- ***Expedited Injury Determination Process.*** N. Young reviewed the Expedited Injury Determination Process, which “fast tracks” any interaction that might count toward the SEZ trigger and was developed in response to a TRT request. The Fast Track process is expected to take up to 25 business days to make a final injury determination; however, in practice after the January 29, 2013 take, the Fast Track evaluation was completed in 19 business days. Several Team members expressed ongoing concern that the elapsed time – even in the expedited process – diverges significantly from the intent of the Team’s recommendation and encouraged Agency staff to explore options for reducing the lag (particularly once the determination has been confirmed). Other comments related to this topic are summarized in the *Key Discussion Themes* section below.

#### ***D. Key Discussion Themes***

Team deliberations centered on a number of key themes, as summarized below.

- ***Plan Implementation.*** Team members discussed TRP implementation status and areas for improvement in outreach, the Observer Program and the expedited injury determination process. Implementation status and considerations of fisheries-related implementation and update of enforcement/compliance activities also were discussed. Specific plan implementation suggestions and questions included the following:
  - *Outreach:* Team members suggested that expanded outreach to the longline fleet would further the intent of the TRP and enhance Plan implementation. To foster this outreach, Team members put forward the following suggestions:
    - Provide more effective outreach to non-English speaking members of the fleet, including providing materials (beyond placards) in native languages and trainings in marine mammal handling and release in the captains’ and crews’ native languages.
    - Remind industry of past successes by the fleet in responding to sea turtle and sea bird rules intended to reduce bycatch.
    - Consider lessons learned from the Pacific Offshore Cetacean Take Reduction Team, where Team members forged a particularly effective and collaborative partnership with industry.
  - *Observer role in monitoring.* At several points the Team discussed the relationship between observers, observation data and enforcement, particularly exploring the potential for and ramifications of using Observer Program data to identify and address non-compliance. It was noted that this theme has surfaced at several other Take Reduction Teams in recent meetings. Specific comments centered on the following:



- There was considerable discussion about the relationship between Observer Program data collection and its use in enforcement. Several members urged that Observer Program data not be used for enforcement but, rather, as a measure of fleetwide compliance. However, other members felt that observer data can be used beneficially both for ongoing research and enforcement in the context of adaptive management.
  - Some members voiced concerns that observers are already subject to harassment and therefore the Agency must be careful not to ask observers to take on tasks that could feed the perception of them as enforcement agents. Furthermore, some Team members expressed their view that the Agency needs to be cautious in (1) how Observer Program data are used; and (2) the extent to which observers are involved in activities such as de-hookings.
  - Participants asked whether it is within observer discretion to report non-compliance directly. Agency clarified that observers collect data that is then used by the NOAA Office of Law Enforcement and General Counsel to identify and respond to non-compliance issues. Some Team members asked that the Agency not require observers to take on tasks that foster a perception of them as enforcement agents, as this leads to further mistrust and non-cooperation by fishing vessels, thereby undermining the effectiveness of the Observer Program.
- *Expedited Serious Injury Determinations.* While Team members acknowledged efforts the region has taken to expedite the serious injury determination process, some participants expressed frustration with the delay in the injury determination process. These Team members noted that the delays are not consistent with the intent of the TRP (which envisioned rapid closures following a triggering event), and they expressed particular frustration with the delays that follow PIRO confirmation of the serious injury determination (i.e., rule review and publishing). Other comments included the following:
- Some Team members recommended that the Agency carry out dry runs of a fast track determination on non-trigger-inducing incidents (e.g., false killer whales outside the EEZ or other species), as a way to identify any potential barriers and streamline the process even further. L. Van Atta said the Agency will consider this suggestion.
  - Some Team members suggested the Agency look at other similar processes (such as the sea turtle cap on the Hawaii longline shallow set fishery) to identify any opportunities to further truncate the time needed to determine a serious injury and then, as warranted, implement a closure.
- ***Southern Exclusion Zone potential plan amendments.*** The Team was asked to consider the implications of recent takes for the Southern Exclusion Zone (SEZ) trigger and whether current language in the Plan reflects the group's intent. Most broadly, Team members reiterated their strong interest in implementing the Plan as currently drafted and not consider amendments at this time. Specific comments included the following:

- Confirming that the Year 1 “take date” – and not the timing of a serious injury determination or closure – should remain the determining factor in implementing the SEZ trigger if there is a subsequent take in Year Two.
- Declining to consider at this time alternative trigger-consequence approaches (e.g., developing a new trigger to account for the possibility of lower PBR in the future).

NMFS also explained that takes in the NWHI/MHI/pelagic overlap zone will be assumed to be from pelagic stock unless genetic or photo-ID data show it is NWHI or MHI (as will be done for takes in the MHI/pelagic overlap zone). One Team member said the fishery did not support this approach and generally objects to the agency’s “proration” of takes among NMFS-designated false killer whale stocks and across species.

- **Research-related exemptions.** The Team spent a portion of the meeting discussing whether the Agency should consider exemptions from TRP regulations for research and other activities. In introducing the topic, N. Young encouraged the Team to consider various scenarios where the Agency might be asked to consider exemptions. These included exemptions tied to: (1) TRP-related research activities (2) other protected species-related research activities; or (3) non-research related activities, such as longline fishing associated with a Community Development Plan (CDP). N. Young also invited the Team to suggest guidance on designing an exemption process – from how exemptions would be granted to the extent to which research-related “takes” should apply to the SEZ trigger.

The Team did not generate a consensus recommendation during the meeting – Team members R. Steen and B. Cummings are to jointly develop draft language for subsequent review and discussion by the Team and submission to the Agency – but the discussion generated the following points:

- Team members broadly agreed that only research directly contributing to the goals of the Plan and on the list of the Team’s research priorities should be considered for exemption from the trigger. There was also general agreement that the Agency should consult with the Team before providing any exemptions, and a number of Team members recommended that any such research trips should have 100% observer coverage.
- A number of Team members suggested that exemptions should be granted only for those activities that deviate from non-standard fishing practices or that otherwise increase a vessel’s likelihood of encountering false killer whales, and some suggested that research should not be exempted in possible closure areas. Others voiced concerns with the idea of granting any exemptions, suggesting take reduction plans are most effective when plans are fully adopted and no exemptions are offered.
- Team members sought clarification on the extent to which research-related takes would or should count towards PBR versus the SEZ trigger. Agency staff noted that all takes count towards PBR, whereas the Agency is seeking Team input into the extent to which research-related takes within the U.S. Exclusive Economic Zone (EEZ) should count towards the SEZ trigger. A number of Team members strongly recommended that research-related takes within the EEZ not count towards the SEZ trigger as that would be

a strong disincentive towards any fishery participation and would lead HLA to advise its members not to participate. There were also suggestions that research-related takes, if observed, not be extrapolated.

- R. Steen indicated that it generally supports research, particularly research that creates the opportunity for fishery cooperation. In this light, R. Steen said HLA supports the idea of a take exemption for research activities. R. Steen explained that if the Team consensus were to not recommend an exemption or to recommend a narrow exemption, then fishery participation in research would likely be very limited or nonexistent. In HLA's view, for an exemption to be effective, R. Steen explained that it must apply to all take reduction planning parameters (i.e., the SEZ trigger, high seas takes, PBR reporting, and progress toward the ZMRG goals).

As part of the discussion, Team members spoke against providing exemptions for CDPs or other non-research-related activities. Moreover, several Team members sought to better understand the status and possible implications of the current CDP request submitted under the Council process and now being considered by the Region. Council staff agreed to keep Team members apprised on any TRP-related initiatives within the Council, and Agency staff are to keep the Team up-to-date on the status of the current CDP exemption request, including promptly notifying Team members of the Federal Register notice when a proposed permit is made available for public comment. A. Bailey, via N. Young, will distribute to Team members the regulations regarding the Western Pacific Community Development Program (50 CFR 665.20), which includes specifications for Agency review and the requirement for soliciting public input on proposed CDPs.

- **Monitoring Strategy.** N. Young provided an overview of the Agency's draft Monitoring Strategy for the TRP, emphasizing both the compliance and effectiveness monitoring elements of the approach, as well as the timeline and process to assess Plan implementation. She noted that many aspects of the draft approach had already been discussed with and developed by a Team Work Group. Team discussion generated the following points:
  - Recommending further sampling of gear to confirm it is performing as expected (particularly relative to line breaking and weak hook bending strengths, as well as impacts to targeted tuna catch).
  - Underscoring the value of using monitoring as part of an adaptive management strategy
  - Emphasizing that crew members should not feel pressured to turn over hooks to observers (to facilitate hook strength testing). Rather, as an alternative, R. Steen offered to facilitate a discussion with HLA on voluntary and regular industry collection of gear, including straightened hooks.

N. Young circulated the draft Monitoring Strategy to the Team and asked members to provide comments no later than July 1. The Agency is to review and incorporate relevant comments and follow-up with the Team regarding next steps. The Monitoring Strategy is to be finalized and implemented by the end of 2013.

- **Research priorities.** E. Oleson provided Team members with an overview of its past research recommendations, highlighting the progress made to-date and noting areas still requiring additional work. She then invited Team members to suggest research priorities moving forward. While the discussion did not result in a prioritized list – that is to be done as part of a follow-on work group – it did generate a number of ideas, all of which are summarized below. These ideas reflect topics that were discussed by some members during the meeting; these are not consensus recommendations. Candidate research priorities included the following (*not* listed in any priority order):
  - *Hook-tissue interaction research.* Pursue research collaboration with B. McLellan to better understand the relationship between type of gear and where the animal is hooked (as it relates to the Hawaii longline fishery) and the severity of the injury.
  - *Weak hook study.* Conduct a study to test the effectiveness of weaker hooks (with smaller wire diameter, such as 4.3 mm, 4.2 mm, and/or 4.0 mm or different hook properties – hook shape, metallurgy, etc.). Some Team members felt there is a strong need to continue research on weaker hooks now as a “Plan B,” in case monitoring efforts indicate the currently specified hooks (wire diameter  $\leq 4.5$  mm) are not sufficiently weak for false killer whales to straighten. Others noted that a costly change (monetarily and in human capital) has already been undertaken (as part of the TRP) and an attempt to change the hook regulation right away would not allow the effectiveness over time of current hooks to be examined.
  - *Gear.* Collect data on the existing types of gear across the Hawaii longline industry, including hook size and wire diameter, diameter and strength of branchline, among other characteristics. Evaluate gear performance over time (with a particular emphasis on confirming breaking or bending strength of gear now being used), and likely severity of injury given gear performance. There was also a suggestion to conduct a “desktop study” to assess the size of false killer whales typically caught on hooks and the associated ramifications for weak hook type needed. Finally, there is interest in looking at other factors (materials, hook opening characteristics, etc.) that could potentially affect hook strength and severity of false killer whale injuries.
  - *Stranding data.* Review stranding data to inform an evaluation of the effects of particular injuries (e.g., type of injury, frequency, severity -fatal v. non-fatal).
  - *Observer and fishery-dependent data.* Use Observer Program data (in combination with other fishery-dependent data where applicable) on false killer whale sightings, interactions, and depredation to develop abundance estimates, estimate depredation rates, and identify hot spots.
  - *Fish Aggregating Devices (FADs).* Conduct research to determine the extent to which the use of FADs attracts false killer whales. Examine the ability of FADs to be used as decoys for false killer whales (to reduce depredation of active longlines). Team members suggested placing acoustic monitors strategically to examine the impact of FADs on false killer whale distribution.
  - *Acoustic data.* Examine call types and rates by population to better understand the variability and nuances of the acoustic data, allowing for more precise and useful examination of existing and ongoing acoustic data measurements.
  - *Stress and reproductive hormone sampling.* Collect skin/blubber samples from false killer whales to examine stress hormones and various demographics including sex ratio

and pregnancy rates. At least one Team member expressed concern regarding the collection of samples to determine levels of stress hormones because there is very little information about the effects, if any, associated with certain hormone levels.

- *False killer whale behavioral and physiological response to an interaction.* Team members discussed finding means to deepen an understanding of how false killer whales respond both behaviorally and physiologically to an interaction. Where possible, observers may be able to record false killer whale behavior following an interaction; and tissue, blood or blubber samples may be able to provide data on a whale's physiological response to an interaction. At least one Team member suggested a literature search on the survival of false killer whales following fishery interactions.
- *Abundance data.* Conduct surveys on the windward side of the Hawaiian Islands to assess differential encounter rates. Cross-reference collected information with existing telemetry data.

As part of the research discussion, the Team also considered further needs related to state fisheries data. Team member individual suggestions centered on the following (both for existing data and new methods for monitoring state fisheries):

- Cross-reference and otherwise examine existing data to assess consistency and QA/QC.
- Broaden current data collection protocols to include more precise information on gear types (other than shortline and kaka line) used in the state fisheries (e.g., troll, dangler, handline, hybrid). Evaluate the mixed and hybrid gear categories to distinguish among gear types actually used.
- Explore the possibility of modeling the potential for false killer whale interactions with state fisheries by calculating a false killer whale catch-per-unit-effort in the deep-set longline fishery and then extrapolating that to the state fishery (based on rates of tuna caught).
- Consider the potential to institute observer coverage (possibly from an alternative platform) and/or video monitoring to better track state fisheries' practices and possible interactions.
- Better understand the distinctions and areas of commonality in federal and state reporting protocols.
- Urged more use of fishery datasets, including depredation events, to inform the stock assessment.

As noted earlier, a post-meeting Work Team was created to expand and refine the list of research priorities. Work Team members are to include: E. Gilman, T. O'Connell, D Laist, S. Young, P. Dalzell/A. Ishizaki, R. Baird, H. Bernard, R. Steen, J. LaGrange and P. Nachtigall. As well, though not present, A. Read was nominated to join the work team.

Team members also discussed drafting a letter to the agency and/or congressional delegates that underscores the importance of funding ongoing surveys to estimate false killer whale abundance in 2015. It was decided that any such effort would be more appropriately undertaken outside of the formal TRT process.

- ***Data mining opportunities.*** Over the course of the meeting, team members made several requests to review existing studies and data. These included the following:
  - Going forward, provide M&SI determination reports in greater detail (similar to the presentation of interaction reports during this meeting), both for false killer whales and other species, as interactions with other species may help understand potential impacts of gear or procedure changes.
  - Help Team members better understand state reporting standards, requirements and mechanics.
  - Re-analyze the proportion of serious injury to non-serious injury for circle hooks versus tuna and J-hooks now that there is more interaction data,
- ***Funding priorities.*** The Team considered how TRP-related funding should be allocated given limited budget to spend on meetings and research priorities. Participants broadly recommended that the Team be brought together for in-person deliberations when there are major issues that are likely to necessitate plan amendments. However, for routine updates and status reports, the Team felt that webinars are a workable format and limited funding is better directed at research priorities.

#### ***E. Public Comment***

Several attendees made remarks during the public comment portions of the meeting.

- Kenton Geer, a commercial fisherman out of Kona, discussed his observations of false killer whale abundance and behavior. His personal experience as a fisherman suggests that false killer whales, particularly insular stock animals, are far more plentiful than reported by NMFS and others and that private Fish Aggregating Devices (FADs) seem to impact false killer whale aggregation. He offered his vessel for potential future research trips, provided fuel is provided. He further noted that he does not favor closures in the SEZ closure, as he feels they would put smaller vessels at risk by forcing them to venture further offshore.
- Sara McDonald, a doctoral student at Duke University doing research into the national Take Reduction Program, encouraged Team members to complete the survey distributed to all current and past TRT members.

Additionally, several PIRO and PIFSC staff offered comments related to hook strength testing, the SEZ closures and other topics covered during the meeting.

## **V. NEXT STEPS**

Based on the discussion, the meeting yielded a handful of next steps. These are outlined below.

- Potential Research Exemptions
  - B. Cummings and R. Steen are to develop draft language regarding possible research exemptions for subsequent review and discussion with the Team and Agency.

- Regarding the current Community Development Plan application: (1) Agency staff will provide the Team with a link to the CDP regulations; (2) Agency staff are to keep the Team apprised on the CDP application status, including prompt notification of the Federal Register notice for the proposed permit; (3) Council staff are to update Team (more broadly) on TRP-related actions within Council.
- Monitoring Strategy
  - HLA is to explore potential for industry-led, voluntary collection of used gear to facilitate strength testing/gear degradation.
  - Team members are to provide comments on the draft Monitoring Strategy to N. Young by July 1.
  - Agency staff are to prepare and distribute a revised draft Monitoring Strategy to the Team, along with Agency approach for finalizing the approach (including, as needed, any follow-on discussion with the Team.)
- Research priorities
  - Form Research Work Team (E. Gilman, T. O’Connell, D Laist, S. Young, P. Dalzell/A. Ishizaki, R. Baird, H. Bernard, R. Steen, J. LaGrange, P. Nachtigall, [A. Read])
    - Revise and re-prioritize Research Priorities list
  - Hook-tissue interaction study:
    - Work with B. McLellan to explore potential to test Hawaii longline fleet hooks
    - Obtain wire diameter information on hooks (and maybe sample hooks) tested by B. McLellan
  - Distribute A. Bradford’s review of historic stranding data to Team
- Rule discussion
  - Agency interpretation of Team intent regarding SEZ trigger confirmed; no amendments recommended at this time
  - Team member comments invited on agency approach to handling takes in NWHI/MHI/insular overlap zone
- Other
  - CONCUR is to prepare and distribute for Team comment a Key Outcomes Memorandum summarizing Team deliberations
  - K. Forney is to provide capture myopathy literature
  - Presentations and other meeting materials are to be posted on-line at: <http://www.nmfs.noaa.gov/pr/interactions/fkwtrt/meeting6.htm>

Questions or comments regarding this meeting summary should be directed to S. McCreary, B. Brooks or N. Young. Scott and Bennett can be reached at 510-649-8008 and 212-678-0078, respectively; Nancy, at 808-944-2282.