UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION IX
75 Hawthorne Street
San Francisco, CA 94105-3901

September 26, 2008

William L. Robinson
Pacific Islands Regional Administrator
National Marine Fisheries Service
1601 Kapiolani Boulevard, Suite 1110
Honolulu, HI 96814

Subject: Draft Supplemental Environmental Impact Statement (DSEIS) for Amendment 18 to the Fishery Management Plan, Pelagic Fisheries of the Western Pacific Region, Management Modifications for the Hawaii-based Shallow-set Longline Swordfish Fishery, Proposal to Remove Effort Limits, Eliminate the Set Certificate Program and Implement New Sea Turtle Interaction Caps (CEQ # 20080320)

Dear Mr. Robinson:

The U.S. Environmental Protection Agency (EPA) has reviewed the above-referenced document pursuant to the National Environmental Policy Act (NEPA), Council on Environmental Quality (CEQ) regulations (40 CFR Parts 1500-1508), and our NEPA review authority under Section 309 of the Clean Air Act. Our detailed comments are enclosed.

The project is an amendment to the Pelagic Fisheries Fishery Management Plan (FMP) proposing regulatory changes to the Hawaii-based shallow-set fishery. This fishery primarily targets swordfish, and the proposal would expand participation in the fishery now that interactions with threatened and endangered sea turtles have been substantially reduced due to gear and bait modifications. The document evaluates alternatives related to fishing effort, fishery participation, and time-area closures. The Western Pacific Regional Fishery Management Council's proposed action and preferred alternative is to: 1) remove the existing effort set limit and increase loggerhead and leatherback sea turtle interaction hard caps to 46 and 19 respectively; 2) eliminate the set certificate program; and 3) not implement any time-area closures.

Based on our review, we have rated the DSEIS as Environmental Concerns – Insufficient Information (EC-2) (see enclosed "Summary of Rating Definitions"). We have concerns regarding the additional take of threatened and endangered sea turtles without a clear understanding of current sea turtle population trends. We request additional information regarding the impact assessment methodology and how cumulative impacts to sea turtles, including those associated with global climate change, were factored into the document's conclusions. We also recommend that the National Marine Fisheries Service (NMFS) use this opportunity to ensure the regulations clearly identify and prohibit preventable losses of fishing gear.

EPA appreciates the opportunity to review this DSEIS. When the Final SEIS is released for public review, please send one copy to the address above (mail code: CED-2). If you have any questions, please contact me at (415) 972-3521, or contact Karen Vitulano, the lead reviewer for this project, at 415-947-4178 or vitulano.karen@epa.gov.

Sincerely,

Kathleen M. Goforth, Manager
Environmental Review Office (CED-2)

Enclosure: Summary of EPA Rating Definitions
EPA's Detailed Comments

cc: Kitty M. Simonds, Executive Director, Western Pacific Regional Fishery Management Council

SUMMARY OF EPA RATING DEFINITIONS

This rating system was developed as a means to summarize EPA's level of concern with a proposed action. The ratings are a combination of alphabetical categories for evaluation of the environmental impacts of the proposal and numerical categories for evaluation of the adequacy of the EIS.

ENVIRONMENTAL IMPACT OF THE ACTION

"LO" (Lack of Objections)

The EPA review has not identified any potential environmental impacts requiring substantive changes to the proposal. The review may have disclosed opportunities for application of mitigation measures that could be accomplished with no more than minor changes to the proposal.

"EC" (Environmental Concerns)

The EPA review has identified environmental impacts that should be avoided in order to fully protect the environment. Corrective measures may require changes to the preferred alternative or application of mitigation measures that can reduce the environmental impact. EPA would like to work with the lead agency to reduce these impacts.

"EO" (Environmental Objections)

The EPA review has identified significant environmental impacts that must be avoided in order to provide adequate protection for the environment. Corrective measures may require substantial changes to the preferred alternative or consideration of some other project alternative (including the no action alternative or a new alternative). EPA intends to work with the lead agency to reduce these impacts.

"EU" (Environmentally Unsatisfactory)

The EPA review has identified adverse environmental impacts that are of sufficient magnitude that they are unsatisfactory from the standpoint of public health or welfare or environmental quality. EPA intends to work with the lead agency to reduce these impacts. If the potentially unsatisfactory impacts are not corrected at the final EIS stage, this proposal will be recommended for referral to the CEQ.

ADEQUACY OF THE IMPACT STATEMENT

Category 1" (Adequate)

EPA believes the draft EIS adequately sets forth the environmental impact(s) of the preferred alternative and those of the alternatives reasonably available to the project or action. No further analysis or data collection is necessary, but the reviewer may suggest the addition of clarifying language or information.

"Category 2" (Insufficient Information)

The draft EIS does not contain sufficient information for EPA to fully assess environmental impacts that should be avoided in order to fully protect the environment, or the EPA reviewer has identified new reasonably available alternatives that are within the spectrum of alternatives analysed in the draft EIS, which could reduce the environmental impacts of the action. The identified additional information, data, analyses, or discussion should be included in the final EIS.

"Category 3" (Inadequate)

EPA does not believe that the draft EIS adequately assesses potentially significant environmental impacts of the action, or the EPA reviewer has identified new, reasonably available alternatives that are outside of the spectrum of alternatives analysed in the draft EIS, which should be analysed in order to reduce the potentially significant environmental impacts. EPA believes that the identified additional information, data, analyses, or discussions are of such a magnitude that they should have full public review at a draft stage. EPA does not believe that the draft EIS is adequate for the purposes of the NEPA and/or Section 309 review, and thus should be formally revised and made available for public comment in a supplemental or revised draft EIS. On the basis of the potential significant impacts involved, this proposal could be a candidate for referral to the CEQ.

*From EPA Manual 1640, "Policy and Procedures for the Review of Federal Actions Impacting the Environment."

EPA DETAILED COMMENTS ON DRAFT SUPPLEMENTAL ENVIRONMENTAL IMPACT STATEMENT (DSEIS), MANAGEMENT MODIFICATIONS FOR THE HAWAII-BASED SHALLOW-SET LONGLINE SWORDFISH FISHERY, PROPOSAL TO REMOVE EFFORT LIMITS, ELIMINATE THE SET CERTIFICATE PROGRAM AND IMPLEMENT NEW SEA TURTLE INTERACTION CAPS, SEPTEMBER 26, 2008

Expanding the Fishery

The Hawaii-based shallow-set longline fishery targeting swordfish reopened in 2004, after a 3-year closure due to impacts on threatened and endangered sea turtles. The fishery opened on a limited basis (a maximum of 2,120 shallow-sets per year) under new regulations designed to test the use of gear and bait modifications to reduce interactions with sea turtles. The use of circle hooks with mackerel-type bait has since reduced sea turtle interactions significantly. As a result, the Western Pacific Regional Fishery Management Council (Council) is proposing to open the fishery to greater participation.

The existing fishery includes sea turtle interaction hard caps for loggerhead and leatherback sea turtles of 17 and 16 respectively. Once either of these is reached, the fishery is closed for the remainder of the year. The Council is proposing removal of effort limits (i.e. no maximum number of shallow-sets per year) and an increase in sea turtle interaction hard caps to 46 and 19 for loggerheads and leatherbacks respectively. The DSEIS notes that the existing hard caps were not set to represent the upper limit of allowable interactions that, if exceeded, would constitute a significant impact, but were based on interaction rates occurring in the Atlantic using circle hooks with mackerel bait. The Council chose these new cap increases based on information that these interaction levels appear not to jeopardize the continued existence and recovery of loggerheads and leatherbacks (p. 188).

Assessment methodology

The DSEIS concludes that the proposed action is not expected to result in significant adverse impacts to Pacific leatherback and loggerhead populations (p. 229-230). The impact assessment uses a methodology which measures susceptibility to quasi-extinction (SQE) to make this determination. This methodology is difficult for the lay-reader to understand; and the Final SEIS (FSEIS) would be improved with a greater discussion of this methodology, including limitations and assumptions. For example, one assumption of the methodology is that current conditions remain the same over the time period of the projection, which is 3 generations (p. 228). The FSEIS should discuss which conditions are assumed to remain the same, the probability that these conditions will remain the same over 3 generations, and how the cyclic nature of populations factors into this assumption[1]. Another factor to discuss is an evaluation of the sufficiency of data from only two full years of fishing (p. ix). Regarding the estimates of adult equivalencies, the equation considers early age at maturity for leatherbacks (p. 113), but the DSEIS identifies recent studies for Atlantic leatherbacks suggesting maturity may not be reached until 29 years of age (p. 77). The SDEIS also does not discuss this type of analysis in terms of its validation with actual conditions to assess its prediction accuracy.

In addition, it is unclear how the impact assessment methodology considers factors other than the

[1] Appendix II states that Japanese loggerhead trends have historically been cyclic with periods of increases alternating with declines (p. 17).

measure of SQE. The SQE analysis (Appendix II) acknowledges that caution needs to be applied in interpreting the results since the analysis only applies to the nesting female segment of the population, and that management decisions must be made with consideration of other threats to the populations which may not be apparent from the nesting beach trends. Indeed, the DSEIS identifies substantial exogenous threats affecting sea turtles (p. 216-227), including directed takes for human use, predation, coastal development affecting nesting and marine environments, marine debris, incidental capture in fisheries, fluctuations in the ocean environment, and climate change. It is not clear how these other impacts were factored into the impact assessment conclusions that will inform management decisions.

> *Recommendation:* EPA recommends additional information be included in the Final SEIS (FSEIS) regarding the impact assessment methodology as described above. Identify how the exogenous threats identified in the DSEIS were considered in the impact assessment methodology and conclusions.

Population health and trends

The DSEIS does not present a clear picture of the status of leatherbacks and loggerheads. The DSEIS states that there has been uncertainty over the status of leatherback turtles in the western Pacific Ocean (the population that interacts with the Hawaii-based longline fishery based on genetic analysis), due to a lack of consistent and long-term monitoring and the challenges associated with working in the region (p. 79). A recent 2007 estimate suggests a larger population than was identified in 1996, but reveals that 75% of the nesting activity of females in the western Pacific is concentrated at 4 sites along the northwest coast (Bird's Head Peninsula) of Papua, Indonesia. This dependence of leatherbacks on a relatively small geographic area is a vulnerability for the population. The DSEIS indicates that it makes no statement describing the anticipated outlook for the leatherback population since there are no trend data (p. 228).

Regarding loggerheads, census data provide composite information on longer term trends in the Japanese nesting assemblage. Using information collected on Japanese beaches, one researcher concluded that a substantial decline (50-90%) in the size of the annual loggerhead nesting populations in Japan (the population that interacts with the Hawaii-based longline fishery) has occurred in recent decades (p. 98). While there have been some substantial increases in nesting in recent years on two important beaches in Japan where almost a third of loggerhead nesting occurs, there are substantial threats to the juveniles once they migrate to Baja Mexico where gillnet fisheries represent the leading source of loggerhead mortality in the North Pacific. The Council's sea turtle conservation project in this area is helping, and has been estimated to save 700-900 loggerheads per year; however the gillnet fisheries in Baja are killing 1,000 to 2,000 turtles per year. Because of this, the SQE analysis cautions that the population could be declining at a much more rapid rate than the analyses represent (App. II, p. 17).

The DSEIS also concludes that global warming may result in significant impacts to loggerheads from changes to hatchling sex ratios from increased temperatures, loss of nesting beaches from sea level rise, nesting behavior changes, and altered foraging habitats and prey abundance (p. 97-98). Increasing storm-related erosion is also a concern and was seen to be an issue at one of the Council's conservation project sites in Papua New Guinea, where 40% of nests were lost to

erosion during the 2004-2005 season, all 28 nests were lost at one location the following season, and there were indications that many of the 181 nests were periodically inundated (p. 93).

> *Recommendation:* EPA recommends clarifying information be included in the FSEIS regarding the global status of protected sea turtles, primarily leatherbacks and loggerheads. Presenting this information with reference to the recovery criteria identified in the species' respective Recovery Plans would be helpful. We understand that the DSEIS focused on the specific populations that interact with the Hawaii-based longline fishery, but this additional information is important to help readers understand potential impacts on recovery of the species as a whole.
>
> EPA urges caution in decisions that allow for additional mortality of species with such substantial cumulative risk, including cumulative risks from climate change, the extent of which are unknown. Wherever possible, we recommend an approach that ties the economic interest of the fishers with the long-term sustainability of the resource.

Derelict Fishing Gear and Marine Debris

The National Academy of Science, National Research Council (NRC) recently compiled a report regarding the issue of marine debris[2]. This report indicates a growing concern about the contribution of fishing vessels to marine debris, and the lack of accountability measures for gear loss in current regulations. The NRC report states that ghostfishing losses to hook and line gear are poorly documented but could be substantial for longline gear (NRC report, p. 29). The report notes that fishers and fisheries management organizations have few incentives and several disincentives to take responsibility for the impacts and cleanup. It recommends that fishery regulations be revised to clearly identify and prohibit preventable losses of fishing gear and advises that fishery management councils should incorporate gear accountability measures and facilitate proper disposal of fishing gear.

The shallow-set fishery operates within ocean current convergence zones, an area known to accumulate large amounts of marine debris including derelict fishing gear (p. 205). Entanglement and ingestion of marine debris provide a potentially serious source of mortality in sea turtle populations and there are numerous reports of abandoned gear with large numbers of dead turtles and other species entangled in the gear (p. 220).

The DSEIS states that Hawaii longline fishermen make efforts to prevent gear loss as well as participate in a voluntary derelict fishing net retrieval program where retrieved derelict nets are brought back to Honolulu Harbor and placed in a receptacle. It does not appear that there are many incentives to participate in this program, aside from good stewardship. Since this fishery is operating in a convergence zone, it seems appropriate to further encourage retrieval of derelict fishing gear.

> *Recommendation:* The FSEIS should identify what measures are being taken to prevent gear loss. In addition, EPA recommends that NMFS consider incorporating regulatory revisions to clearly identify and prohibit preventable losses of fishing gear. Even if

[2] Tackling Marine Debris in the 21st Century, prepublication draft, September 2008. Available: http://www.nap.edu/catalog.php?record_id=12486

longline gear is not the most significant contributor to ghostfishing of sea turtles, the proposed regulatory update provides an appropriate opportunity to address this issue.

Additional incentives to collecting derelict fishing gear could be identified and implemented as additional mitigation measures for increased take of sea turtles. The Council's sea turtle conservation projects may want to consider a project that addresses derelict fishing net retrieval or even marine debris removal in general since turtles can consume debris, especially plastics they confuse for jellyfish, which cause death.

Sea Turtle Conservation Projects

The DSEIS describes the Council's sea turtle conservation projects and provides estimates of quantified benefits. The benefits of these programs are used as justification for expanding the fishery. The DSEIS does not describe the funding or time frame for these projects, whether or how long they will continue, nor whether additional projects are expected for the future. These are important to know in order to understand the stated benefits.

Recommendation: In the FSEIS, discuss status of conservation projects and plans for continuing involvement or development of additional projects.

Time-Area Closures

Topic 3 of the proposed action and alternatives considers time-area closures as a way to increase annual fishery profits through potential reduction in the number of sea turtle interactions in the first quarter of each year when interaction rates for loggerheads are the highest. This would reduce the risk of exceeding a turtle hard cap early in the year and would close the area with sea surface temperature band of 17.5 to 18.5 degrees C. In January, this area is generally located near 31-32 degrees N latitude. This area may be a sea turtle hotspot.

The DSEIS preferred alternative does not include this option; and the analysis simply states that no additional impacts from not having it will occur (p. xiv). However, the document does not address whether including this option might yield additional benefits to protected species. We understand there may be difficulty in administration and enforcement of time-area closures based on sea surface temperatures; but this approach appears to have some value as an area of study. Perhaps area locations and temperature data can be collected to correlate with turtle interactions. The Hawaii Longline Association recognized that there are no data documenting conservation benefits (Appendix I - Scoping Report); but it is unclear whether this can be remedied as a side study to the proposed action. The DSEIS discusses the patchy distribution of sea turtles both geographically and temporally, and indicates that, as more information on sea turtle habitat preference becomes available, it should be easier to anticipate fishery turtle interaction rates (p. 223).

Recommendation: EPA recommends the issue of time-area closures be explored as a research component of the proposed action, and that this possibility be discussed in the FSEIS.