Finding of No Significant Impact for Authorization for Fisheries Research Conducted and Funded by the Southwest Fisheries Science Center National Marine Fisheries Service

Analysis

National Oceanic and Atmospheric Administration Administrative Order 216-6 (May 20, 1999) contains criteria for determining the significance of the impacts of a proposed action. In addition, the Council on Environmental Quality (CEQ) regulations at 40 C.F.R. '1508.27 state that the significance of an action should be analyzed both in terms of "context" and "intensity." Each criterion listed below is relevant to making a finding of no significant impact and has been considered individually, as well as in combination with all other criterion. The significance of this action is analyzed based on the NAO 216-6 criteria and CEQ's context and intensity criteria. These include:

1) Can the proposed action reasonably be expected to cause substantial damage to the ocean and coastal habitats and/or essential fish habitat as defined under the Magnuson-Stevens Act and identified in FMPs?

Response: Our action of conducting proposed fisheries and ecosystem research, including a suite of mitigation and monitoring requirements, is not expected to cause substantial change to the ocean and coastal habitats and/or essential fish habitat (EFH).

The area affected by the proposed action has been identified as EFH for several Fishery Management Plans, including the Coastal Pelagic Species, Highly Migratory Species and Groundfish Fishery Management Plans. However, the proposed research is expected to result in impacts that are no more than minimal and temporary in nature to EFH. Mortality from captures in surveys is a potential impact, but past levels of catch in SWFSC research surveys are very small and considered negligible to their respective populations. For species that are targeted by commercial fisheries, mortality due to research surveys is much less than one percent of commercial harvest and is considered to have negligible adverse effects for all species. Further, these gears are deployed in almost exclusively pelagic habitats, which due to their physical characteristics, are not affected in the same way benthic habitats are when they are contacted by fishing and research gears. SWFSC consulted with the NMFS West Coast Region on its determination that proposed fisheries and ecosystem research activities have effects that are minimal and temporary in nature on any areas identified as EFH for federally managed species; the West Coast Region concurred with this finding.

2) Can the proposed action be expected to have a substantial impact on biodiversity and/or ecosystem function within the affected area (e.g., benthic productivity, predator-prey relationships, etc.)?

Response: We do not expect our action to have a substantial impact on biodiversity or ecosystem function within the affected environment. This action is limited in scope to small scale sampling of vast oceanic areas over a short period of time with only very limited removal of target species.

3) Can the proposed action reasonably be expected to have a substantial adverse impact on public health or safety?

Response: The proposed survey activities would occur throughout the California Current Ecosystem (including into the exclusive economic zones (EEZs) of Mexico and Canada), the Eastern Tropical Pacific Ocean (including into the EEZs of bordering nations) and over large parts of the Scotia Sea / Antarctic Research Area. As such, they will be conducted away from population areas. We do not expect our action to have substantial adverse impact on public health or safety as the undertaking of fisheries and ecosystem research, including the removal of small amounts of fish, in these areas would pose no threats to humans.

4) Can the proposed action reasonably be expected to adversely affect endangered or threatened species, their critical habitat, marine mammals, or other non-target species?

Response: We have determined that our fisheries and ecosystem research activities would likely impact: 18 marine mammal species in the California Current Research Area (CCRA) and 12 marine mammal species in the eastern tropical Pacific Research Area (ETPRA). The EA evaluates the affected environment and potential effects of our proposed action, including the potential for SWFSC fisheries and ecosystem research to result in marine mammal injury and mortality incidental to these research activities. We have requested and received authorization for Level A harassment (injury), serious injury and mortality for marine mammal stocks that have a history of interacting with SWFSC fisheries and ecosystem research gears (longline and mid-water trawl), as well as those determined to have similar vulnerability to these gears. The rationale behind development of these take request estimates is discussed in detail in the EA. To reduce the potential for incidental interactions from the activities, SWFSC is implementing a suite of mitigation and monitoring measures for marine mammals and other protected species; these are discussed in detail in the EA. These measures are intended to reduce the potential for protected species interactions and increase the chances of survival for animals that do interact. In addition, SWFSC is also implementing a number of data collection requirements to enable further analysis of the efficacy of these measures and to facility feedback management of its research activities as it relates to impacts to protected species. The activities and required mitigation measures would not affect physical habitat features, such as substrates and water quality. As a result of these measures impacts to these species are not considered significant.

We have determined that the proposed activity may result in some Level B harassment (in the form of short-term and localized changes in behavior and displacement) of small numbers of 28, 30 and 13 marine mammal species, including those that are listed under the Endangered Species Act, in the CCRA, ETPA and Antarctic Research Area (ARA), respectively. These behavioral responses are expected due to the use of active acoustic systems on board SWFSC research platforms. We expect these to be temporary in nature and not result in substantial impact to marine mammals or to their role in the ecosystem. These impacts are not considered significant.

An August 2015 Biological Opinion analyzed the potential impacts of the proposed research activities on marine mammals, sea turtles and fish (salmonids, eulachon and scalloped hammerhead sharks) listed under the Endangered Species Act in the study areas. It concluded that the proposed research activities are not likely to jeopardize the continued existence of any listed species and would not adversely affect designated Critical Habitat.

5) Are significant social or economic impacts interrelated with natural or physical environmental effects?

Response: There would no significant social or economic impacts. Execution of proposed research programs would not result in inequitable distributions of environmental burdens or

access to environmental goods as the action is confined SWFSC fisheries and ecosystem researchers and funded partners.

We have determined conducting the proposed research would not adversely affect low-income or minority populations –our action only affects target fish species and marine mammals and other protected species. Further, there would be no impact of the activity on the availability of any of these species for subsistence uses. SWFSC conducted a preliminary analysis of potential impacts to tribal trust resources along the US West Coast, and we reached out to potentially affected Tribes through consultation letters. We received no responses to these letters or other expressions of interest or concern from tribal representatives.

6) Are the effects on the quality of the human environment likely to be highly controversial?

Response: The effects of this action are not considered highly controversial. The process of and need for conducting fisheries research is generally viewed as a beneficial action that will contribute to improved fisheries management and opportunities for sustainable harvests of seafood products. SWFSC made available for public comment its Draft PEA, and only one comment was received from the general public. The commenter indicated opposition to the research because in his/her view it would cause "mass genocide."

7) Can the proposed action reasonably be expected to result in substantial impacts to unique areas, such as historic or cultural resources, park land, prime farmlands, wetlands, wild and scenic rivers, essential fish habitat, or ecologically critical areas?

Response: The action is not expected to result in a significant impact to these areas. A small amount (i.e. low effort) of proposed SWFSC fisheries and ecosystem research would take place in west coast National Marine Sanctuaries and in other areas where historic or cultural resources might be found. In addition, because the vast majority of SWFSC research gears do not come in contact with the bottom, the chances of coming into contact with and/or disturbing historic or cultural resources is further reduced. SWFSC submitted consultation letters to both the Office of National Marine Sanctuaries (NMS) and the California State Historic Preservation Office (SHPO), and in both cases SWFSC conclusions that impacts to these resources were supported. The SHPO did not respond to the SWFSC consultation letter within 60 days of receipt, indicating its concurrence with our determination. The Office of NMS responded only with a request that SWFSC collect and report more detailed information in carrying out the proposed activities within west coast sanctuaries.

8) Are the effects on the human environment likely to be highly uncertain or involve unique or unknown risks?

Response: The potential risks associated with conducting the proposed fisheries and ecosystem research activities are neither unique nor unknown, and there is not significant uncertainty about the impacts. These techniques have been developed over many years and are well tested and understood. These activities are not dissimilar from commercial fishing techniques that use a variety of gears for purposes of catching (sampling) species of interest. These activities also occasionally interact with non-target species through direct capture in gears and through their use of active acoustic systems that aid in navigation and finding fish species of interest. The impacts of these activities have been analyzed frequently and thoroughly. Therefore, we expect any potential effects associated with carrying out proposed fisheries and ecosystem research activities, which are much smaller in scale by comparison to commercial fishing, to be known with relative certainty and to not pose unique or unknown risks.

9) Is the proposed action related to other actions with individually insignificant, but cumulatively significant impacts?

Response: The EA analyzed the potential impacts of proposed SWFSC fisheries and ecosystem research activities, including a suite of protected species mitigation and monitoring measures. We expect the proposed action to result in no more than minor and short-term impacts to the environments in which proposed research is conducted and would not contribute to significant impacts relative to: a) commercial and recreational fisheries, b) fisheries research conducted by other NMFS science centers, c) military activities, d) oil and gas production, e) vessel traffic, f) conservation activities and g) climate change.

The proposed action of SWFSC conducting fisheries and ecosystem research activities is not expected to result in cumulatively significant impacts when considered in relation to other separate actions with individually insignificant effects.

Commercial and recreational fisheries take place in the CCRA, ETPRA and ARA. These are larger scale than SWFWC fisheries and ecosystem research activities, and in some cases they have the potential to create localized and temporary depletions in target fish stocks. However, the exploitation of target fish stocks through these fisheries is subject to close monitoring and regulation to ensure they are sustained at or rebuilt to target population reference points. Similarly, the incidental take of marine mammals and ESA-listed species is also closely monitored through observer and port sampling programs. Safeguards are in place to ensure authorizing these fisheries does not result in unsustainable removals of these species.

Other NMFS science centers conduct similar fisheries and ecosystem research activities. Like the potential impacts associated with SWFSC activities, it is expected that impacts of other NMFS fisheries research activities will be dispersed in time and have short-term impacts on target fish stocks as well as on non-target species that may be taken incidentally. This is in part because it is expected these other fisheries research programs will be subject to their own mitigation and monitoring measures. As other science centers prepare EAs to analyze the potential impacts of their fisheries research activities more in-depth understanding of their impacts will be possible; however, because they are subject to the same MMPA and ESA authorization processes safeguards are in place to provide assurance these activities will not individually or cumulatively exceed allowable thresholds.

We are unaware of any synergistic impacts to marine resources associated with reasonably foreseeable future actions that may be planned or occur within the same regions of influence. The Cumulative Effects section of the EA provide more detail regarding past, present and reasonably foreseeable future actions, but concludes that impacts of SWFSC proposed fisheries and ecosystem research activities are expected to be no more than minor and short-term with no potential to contribute to cumulatively significant impacts.

10) Is the proposed action likely to adversely affect districts, sites, highways, structures, or objects listed in or eligible for listing in the National Register of Historic Places or may cause loss or destruction of significant scientific, cultural or historical resources?

Response: SWFSC has determined that the proposed action is not an undertaking with the potential to affect historic resources. We communicated this finding to the California State Historic Preservation Office (SHPO), and request its concurrence. Because the SHPO did not respond within a 60 day period following receipt of the letter, we have concluded that the SHPO

concurs with our analysis and findings. Conducting the proposed fisheries and ecosystem research activities would not affect districts, sites, highways, structures or objects listed in or eligible for listing in the National Register of Historic Places or cause loss or destruction of significant scientific, cultural or historical resources.

11) Can the proposed action reasonably be expected to result in the introduction or spread of a nonindigenous species?

Response: Our proposed action utilizes a variety of NOAA and charter vessels to conduct regional fisheries and ecosystem research. By virtue of being operated by NOAA or being eligible to engage in contracts with the Federal Government, these vessels comply with all international and domestic ballast water requirements to prevent the spread of non-indigenous species.

12) Is the proposed action likely to establish a precedent for future actions with significant effects or represents a decision in principle about a future consideration?

Response: The proposed fisheries and ecosystem research activities would not set a precedent for future actions with significant effects or represent a decision in principle. SWFSC has undertaken a thorough analysis of its fisheries research program, needs for protected species mitigation, and determined that its proposed research program will not result in a significant impact. As our research needs and techniques change, we will continue to evaluate them in the context of their potential impacts to the physical, biological and human environments. The finding that this specific research program and its associated mitigation measures will not result in a significant impact will not set a precedent or prejudice the outcomes of future analyses of research program plans.

13) Can the proposed action reasonably be expected to threaten a violation of Federal, State, or local law or requirements imposed for the protection of the environment?

Response: Conducting the proposed fisheries research activities would not result in any violation of Federal, State or local laws for environmental protection. SWFSC has consulted with appropriate Federal, State, and local agencies as well as other entities during the development of the PEA to ensure its fisheries and ecosystem research program is compliant with applicable statutes including the Marine Mammal Protection Act, Endangered Species Act, Magnuson-Stevens Fishery Conservation and Management Act, National Marine Sanctuaries Act, National Historic Preservation Act.

14) Can the proposed action reasonably be expected to result in cumulative adverse effects that could have a substantial effect on the target species or non-target species?

Response: The proposed action would not result in any significant cumulative adverse effects on target or non-target species that are captured or incidentally taken during fisheries and ecosystem research activities. We have determined that some marine mammals may be injured, seriously injured or killed incidental to these research activities. Some ESA-listed fish species may also be injured or killed. In addition, some sea turtle species may be injured during the course of this research. In addition, some marine mammals may also experience behavioral disturbance

resulting from active acoustic systems or from visual cues in the Antarctic Research Area. However, although anticipated, these are rare events. The SWFSC has completed the required ESA consultations and MMPA permitting requirements that minimize adverse impacts to non-target species. These activities will not result in synergistic or cumulative effects that could have a significant adverse effect on any species. Further, the proposed action includes a suite of mitigation measures SWFSC believes will future reduce the potential for harms to protected species in the future.

DETERMINATION

In view of the information presented in this document and the analysis contained in the supporting Final Environmental Assessment prepared for fisheries and ecosystem research conducted and funded by the Southwest Fisheries Science Center, it is hereby determined that the proposed fisheries and ecosystem research program will not significantly impact the quality of the human environment as described above and in the Final Environmental Assessment. In addition, all beneficial and adverse impacts of the proposed action have been addressed to reach the conclusion of no significant impacts. Accordingly, preparation of an EIS for this action is not necessary.

Francisco Werner, Ph.D.
Science and Research Director
Southwest Fisheries Science Center

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Date