UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL MARINE FISHERIES SERVICE
Silver Spring, MD 20910

Finding of No Significant Impact for the Supplemental Environmental Assessment on the Effects of the Issuance an amendment of a Scientific Research Permit to the Northwest Fisheries Science (PI: Brad Hanson, Ph.D.) on the Eastern North Pacific Southern Resident Killer Whale (Orcinus orca) in the U.S. Territorial Waters, Exclusive Economic Zones, and High Seas of the Eastern North Pacific Ocean Along the Coast of The U.S. from Southeastern Alaska to Central California, and Coastal Inlets and Estuaries of these States
File No. 781-1824-02

National Marine Fisheries Service

The proposed action includes NMFS' issuance of a scientific research permit amendment to the National Marine Fisheries Service (NMFS) Northwest Fisheries Science Center (NWFSC), File No. 781-1824-02, for research on endangered southern resident killer whales (SRKWs). The purpose of the permit amendment is to investigate the fall, winter, and spring distribution of SRKWs via satellite tagging and suction cup tagging. For issuance of the NWFSC's original permit, an Environmental Assessment (EA) entitled *The Effects of the Issuance of Four National Marine Fisheries Service Scientific Research Permits and Three Permit Amendments on the Eastern North Pacific Southern Resident Killer Whale (Orcinus orca) and other Marine Mammals in the U.S. Territorial Waters, Exclusive Economic Zones, and High Seas of the Eastern North Pacific Ocean Along the Coast of The U.S. from Southeastern Alaska to Central California, and Coastal Inlets and Estuaries of these States* was prepared in 2006. That EA included an environmental analysis for issuance of six other permits, including permit amendments. The accompanying supplemental environmental assessment (SEA) is prepared specific to the proposed permit amendment request by the NWFSC and does not constitute a change to any other permits or permit amendments included in the 2006 EA.

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 the others. 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 Fishery Management Plans?

Response: The permit amendment would authorize satellite tagging six animals and an increase in the number of animals suction-cup tagged (from 10 to 20 annually). The associated vessel close approaches of SRKWs are already permitted. These activities would be conducted at the water surface. No anchoring, substrate disturbance, leaching of substantial chemicals, etc. would occur. Therefore, the authorized activities are not expected to cause substantial damage to the ocean and coastal habitats and/or essential fish habitat (EFH).

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: The proposed action may result in adverse effects on the target species, SRKWs. Specifically, six individuals would be satellite tagged, and up to 20 would be suction-cup tagged. The impacts are expected to be short-term in nature and result in only mild to moderate behavioral responses and mild to moderate injuries. No other aspects of the biological environment would be affected and it is not anticipated that the proposed action would affect biodiversity or ecosystem function. No species are being removed from the wild or re-located, and no mortalities of SRKW are anticipated from the proposed action.

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

Response: The proposed action is not expected to have a substantial adverse impact on public health or safety. The proposed action involves close approach of animals for satellite or suction-cup tagging, tag monitoring, and behavioral observation using boats. The vessel's operations and tag deployment devices would only be handled by trained researchers and all safety precautions would be employed. There are no risks to the general public from such things as excessive noise, risk of exposure to hazardous materials or wastes, risk of contracting disease, etc.

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: As determined in the accompanying Biological Opinion, the proposed action would affect individual SRKWs during the research. Researchers would closely approach by vessels, photo-identify, satellite tag, observe, track and harass individual whales. The Biological Opinion concluded that the effects of the proposed action would not likely jeopardize the continued existence of this ESA-listed species and would not likely destroy or adversely modify designated critical habitat. The impacts of the activities in the proposed amendment are expected to be short-term in nature and result in mild to moderate short-term behavioral stress responses from close approach and tagging, and mild to moderate injuries from implant tagging. No other marine mammals or threatened or endangered species would be affected by the activities specified in the proposed amendment. Other research activities associated with the proposed satellite and

suction cup tagging include aerial surveys; close vessel approach to facilitate photo-ID, passive acoustic recording; and prey collection. However, these activities are currently permitted and were analyzed in the 2006 EA and accompanying Biological Opinion for the previous permit.

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

Response: No significant social or economic impacts are interrelated with natural or physical environmental effects as such effects are considered to be minimal, if any.

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

Response: Notice of receipt of the amendment application was published in the *Federal Register* (FR) (75 FR 68758) on November 9, 2010, for a 30-day public comment period (50 CFR 216.33). A request for an extension of the comment period was received during the comment period, and a two week extension was granted (75 FR 76399).

The Marine Mammal Commission recommended approval of the application provided that the conditions contained in the current permit remain in effect; and the NMFS ensure that the researchers coordinate and integrate all proposed tagging and biopsy activities with those of Canadian researchers studying the SRKW population. The Northwest Region recommended approval of the permit and supports the activities proposed in the application. The Office of National Marine Sanctuaries (ONMS) responded for all sanctuaries commenting in favor of permit issuance.

NMFS received 55 public comments opposing and 3 in favor of the action. These comments and questions were wide-ranging, but focused primarily on the physical risks of implantable tags including tag breakage, and identifying which individual whales would be targeted. Summaries of and responses to these comments are included in the accompanying SEA and can be found in the administrative record.

In response to these comments, the NMFS Office of Protected Resources reviewed the issues related to implantable tagging and recent reports of tag breakage occurring in other killer whale stocks. In addition, in June 2011, the applicant requested a veterinary team review a temporal series of photographs of two cases of satellite tag barb retention resulting from tag breakage to determine the potential health effects. These cases occurred on two killer whales tagged in 2010. The veterinary assessment was inconclusive with respect to the level of risk for progression or resolution of the skin defects, and determined that localized infection and inflammation were likely occurring in these cases. However, long term monitoring would be required to fully determine the progression and outcome of the wound healing process.

Independent of and concurrent with the veterinary review, the tag developer, Dr.

Hanson, other scientists, and the tag manufacturer designed a new satellite tag version to reduce the chance of breakage. Because the developers determined the cause of the breakage (i.e., the weak point), they were also able to modify existing tags to reinforce the area prone to breakage. The applicant would use a combination of these new tags and older tags that have been reinforced.

NMFS Office of Protected Resources anticipates that these improvements will significantly reduce the risk of tag breakage since the developers were able to determine the underlying cause. Thus, the risk of extended dart retention and associated risk of infection from breakage would be minimized by the modified tags as well as the new tag design. Also, NMFS added a condition to the permit to address this breakage concern and will require the permit holder to cease tagging of SRKW should tag breakage be documented and submit a report of the event to NMFS for review and assessment.

In addition, the applicant addressed concerns over the proposed list of specific individuals to be targeted for tagging included in the amendment request, and revised the list to remove animals that have died since the permit modification was submitted.

NMFS is satisfied that the concerns raised during the public comment period have been adequately addressed and that dart tagging with LIMPET tags will not have a significant impact on the SRKW population. NMFS has issued several permits for dart and other forms of implantable tagging of multiple endangered species with no mortalities or serious injuries documented. Based on NMFS permitting history, this amendment is not considered likely to be highly controversial.

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 proposed research would not be expected to result in substantial impacts to any such area. Essential fish habitat and critical habitat would not be substantially impacted since all research would occur at the water's surface and thus, would not affect bottom habitat. While some research will occur in Sanctuaries along the west coast, the research activities do not include anything that would require Sanctuaries permits; and, the responsibility of obtaining any Sanctuary permits, if necessary, falls on the applicant. Further, the applicant currently works in collaboration with the Monterey Bay National Marine Sanctuary, which strongly supports the proposed research.

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

Response: The effects on the human environment are not highly uncertain nor involve unique or unknown risks. The researchers are highly skilled in operating vessels and other gear (e.g., tagging equipment) around killer whales. Tagging has become a common method of long-term tracking of cetaceans. Other killer whale stocks have been tagged with LIMPET tags; and, short and long-term reactions including tag site healing

have been thoroughly documented. While some scarring and a slight risk of infection would be possible, no other risks are thought to be associated with the proposed action.

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

Response: The proposed action is not related to other actions with individually insignificant, but cumulatively significant impacts. The short-term stress (separately and cumulatively when added to other stresses the marine mammals face in the environment) resulting from the research activities would be expected to be minimal. However, NMFS acknowledges that vessel disturbance from commercial and recreational vessels (e.g., whale watching boats) is a concern for this stock of killer whales. While research activities also involve vessel disturbance, diligent monitoring of takes during these activities have shown that animals rarely react to research vessels (less than 10% of annually authorized Level B takes actually occur). Further, tagging would take place outside of the main season for whale watching and the permit amendment would contain conditions to mitigate and minimize any impacts to the animals from research activities.

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: The action would not take place in any district, site, highway, structure, or object listed in or eligible for listing in the National Register of Historic Places, thus none would be impacted. As analyzed in the SEA, the proposed action would not cause the loss or destruction of significant scientific, cultural or historical resources. None of these resources are expected to be directly or indirectly impacted.

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

Response: The proposed action would not involve removing or introducing any species into the environment; therefore, issuance of the permit amendment would not likely result in the introduction or spread of a non-indigenous species. The small research vessel does not require ballast water and while some species could attach themselves to the hull of the vessel, such species which could do so are ubiquitous throughout the action area.

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 decision to issue the permit amendment would not be precedent setting and would not affect any future decisions about future considerations. Issuance of a permit to a specific individual or organization for a given research activity does not in any way guarantee or imply that NMFS will authorize other individuals or organizations to conduct the same research activity. Any future request received would be evaluated

upon its own merits relative to the criteria established in the MMPA, ESA, and NMFS' implementing regulations.

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: The proposed action would not result in any violation of Federal, State, or local laws for environmental protection. The proposed action has been adequately examined under the MMPA, ESA, and NEPA. An Institutional Animal Care and Use Committee review was also completed that satisfies regulations under the Animal Welfare Act. The permit amendment also would contain language stating that the applicant is required to obtain any state and local permits necessary to carry out the action.

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?

The action is not expected to result in any cumulative adverse effects to the species that are the subject of the proposed research or non-target species. The proposed action would not be expected to have more than short-term, negligible impact to individuals and the population. While southern resident killer whales face a number or anthropogenic stressors (e.g., noise, prey reduction, pollution, etc), research vessel presence and tagging are not expected to be confounded into these issues as interactions between the whales and vessels would be short-term and the researchers are well experienced in conducting research on these animals. The effects on non-target species were also considered and no substantial effects are expected as research would not be directed on these species. Therefore, no cumulative adverse effects that could have a substantial effect on any species, target or non-target, would be expected.

DETERMINATION

In view of the information presented in this document and the analysis contained in the Supplemental Environmental Assessment (SEA) prepared for Issuance of Permit No. 781-1824-02, pursuant to the ESA and MMPA, and the ESA section 7 biological opinion, it is hereby determined that the issuance of Permit No. 781-1824-02 will not significantly impact the quality of the human environment as described above and in the SEA. 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 Environment Impact Statement for this action is not necessary.

for James H. Lecky
Director, Office of Protected Resources

11/22/11
Date