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

Finding of No Significant Impact
Issuance of Scientific Research Permit No. 14400

Background

In July 2009, the National Marine Fisheries Service (NMFS) received an application for a permit (File No. 14400) from the Channel Islands National Park (Responsible Party: Daniel Richards) to conduct research on wild endangered black abalone (*Haliotis cracherodii*) in California. In accordance with the National Environmental Policy Act, the NMFS Office of Protected Resources, Permits, Conservation, and Education Division (Permits Division) has prepared an Environmental Assessment (EA) analyzing the impacts on the human environment associated with permit issuance (Title: Environmental Assessment for issuance of permit No. 14400 for takes of wild black abalone during black abalone monitoring and research activities in California). In addition, a Biological and Conference Opinion was issued under the Endangered Species Act summarizing the results of an interagency consultation. The analyses in the EA, as informed by the Biological and Conference Opinion, support the below findings and determination.

Analysis

National Oceanic and Atmospheric Administration Administrative Order 216-6 (May 20, 1999) (NAO 216-6) contains criteria for determining the significance of the impacts of a proposed action. In addition, the Council on Environmental Quality (CEQ) regulations at 40 CFR § 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?

The proposed action would allow takes of endangered black abalone in the wild during black abalone research activities, to include black abalone monitoring surveys and tagging studies conducted at rocky intertidal survey sites along the California coast from Point Arena to San Diego. Minor disturbance to rocky habitat may occur from trampling or the installation of bolts (to mark survey sites) and research equipment (i.e., temperature loggers). The expected level of disturbance would be low, however, and would not cause substantial damage to the ocean or coastal habitats or to essential fish habitat. The level of trampling would be low because surveys would only be conducted up to four times per year (and only once or twice per year at most sites), researchers would avoid walking on vulnerable species such as mussels, and researchers would wear soft-soled shoes to minimize crushing of

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invertebrates and algae. In addition, at most sites no additional installation of bolts and equipment is expected. If additional installation is required, the level of disturbance to rocky substrate would be low given the small area affected (i.e., about one square inch). The NMFS Permits Division coordinated with the NMFS Southwest Region Habitat Conservation Division to make the determination that the research activities under the proposed permit are not likely to adversely affect designated essential fish habitat.

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.)?

The proposed action would not be expected to have a substantial impact on biodiversity and/or ecosystem function within the affected area. The proposed action would result in non-lethal takes of wild black abalone that may cause minor stress to individuals, but would not be expected to affect their survival, growth, production, or behavior. Some trampling of marine invertebrates and algae at the survey sites would occur. However, researchers would minimize effects by wearing soft-soled shoes and avoiding walking on vulnerable species such as mussels. The proposed monitoring surveys may result in human disturbance to Pacific harbor seals, California sea lions, and Northern elephant seals at some of the sites. However, researchers would minimize the disturbance to these pinnipeds by approaching the sites quietly and cautiously and avoiding pupping seasons and researchers would obtain incidental take permits under the MMPA as necessary. Disturbance to these pinnipeds on San Nicolas Island are authorized separately under an Incidental Harassment Authorization (IHA) issued to Glenn VanBlaricom, U.S. Geological Survey (2008). The Channel Islands National Park is in the process of applying for an IHA to authorize the disturbance to these pinnipeds at the northern Channel Islands. Seabirds may also be exposed to human disturbance at some of the sites. Researchers would minimize disturbance by avoiding sites during nesting seasons.

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

The proposed action would not be expected to affect public health or safety. The proposed action would allow takes of wild black abalone in the course of the proposed research activities which would include surveying and measuring of individuals. A subset of these individuals would also be tagged with Passive Integrated Transponder (PIT) tags at selected sites. PIT tags would be attached to the abalone shell using Z-spar epoxy, a two-part compound that is mixed by hand into a putty-like substance. Individuals who are sensitive to epoxy or polyamide resins would wear rubber gloves when handling the epoxy. The epoxy would be handled only when outdoors at the sites and would otherwise be stored in a sealed plastic bag in their original containers. The tag unit or attachment do not have any toxic or volatile components. The action does not involve hazardous methods, toxic agents or pathogens, or other materials that would have a substantial adverse impact on public

health and safety. These tags are in use by other researchers and are considered safe. Previous work by these researchers on this species indicates that the likelihood of injury or risk is greatly reduced when conducted by trained individuals. Therefore, no negative impacts on human health or safety are anticipated during the authorized activities.

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?

The proposed action would result in non-lethal takes of wild black abalone (ESA status: Endangered) in the course of the proposed black abalone monitoring and tagging studies. These takes would be expected to result in minor stress to black abalone and would not result in injury, mortality, or substantive effects on growth, survival, or reproduction. The collection of black abalone that are obviously dying of the disease called withering syndrome would result in mortality of the individuals that are collected, but those individuals would have died of the disease whether or not they were collected. Removal of these individuals would not adversely affect the populations and may actually benefit the populations by reducing the potential spread of the disease to other individuals.

The proposed research activities may affect, but would not be expected to adversely affect, other non-target species, including marine invertebrates and algae, marine mammals, and seabirds. Marine invertebrates and algae at the monitoring sites may be affected by trampling. However, as described above, the level of trampling would be low given the low frequency of monitoring surveys. Researchers would minimize trampling effects by wearing soft-soled shores and avoiding vulnerable species.

Pacific harbor seals, California sea lions, and Northern elephant seals may be affected by human disturbance during the surveys. Researchers would minimize disturbance to marine mammals by approaching the sites quietly and cautiously and avoiding surveys during pupping seasons. Steller sea lions (ESA status: Threatened), Guadalupe fur seals (ESA status: Threatened), and Northern fur seals occur within the affected environment, but are unlikely to be encountered because the research activities are generally not conducted during times of year when these species are present. Southern sea otters (ESA status: Threatened) also occur in the affected environment, but generally occupy offshore coastal waters and would not be expected to come onshore when research activities are being conducted. If any ESA-listed marine mammals are encountered, research activities would be suspended and the area immediately vacated to avoid disturbing the animals.

Seabirds may be encountered at some of the monitoring sites. Research activities would not be conducted during nesting seasons, to minimize effects on seabird populations. Western snowy plovers (ESA status: Threatened) may be encountered by researchers when accessing a site. Their presence is usually known, however, and can be avoided by taking a different route to the site.

Finally, the affected environment includes designated critical habitat for Steller sea lions and areas proposed for designation as critical habitat for black abalone. The proposed research activities would be expected to result in a low level of habitat disturbance and would not be expected to adversely affect the conservation value of areas designated as critical habitat for Steller sea lions or proposed for designation as black abalone critical habitat.

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

The social and economic effects of the proposed action mainly involve the effects on the people involved in the research, as well as any industries that support the research, such as charter vessels and suppliers of equipment needed to accomplish the research. There are no significant social or economic impacts of the proposed action related to significant natural or physical environmental effects.

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

The proposed action and its effects are not likely to be highly controversial. The research activities that would be conducted under the proposed permit have been conducted as part of ongoing rocky intertidal monitoring programs, some of which began in the 1980s. The proposed permit is needed to ensure that the research activities are in compliance with the ESA, in light of the recent listing of black abalone as an endangered species and the associated prohibition on take of the species (74 FR 1937; 14 January 2009). No controversial issues were identified in the past regarding these research activities. In addition, a notice was published in the Federal Register soliciting public comments on the permit application (74 FR 43679, 27 August 2009), but no public comments were received. Based on this information, the proposed action and its effects are not expected to result in controversy.

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?

The proposed action is not expected to result in substantial impacts to unique areas. The proposed research activities would be conducted at rocky intertidal monitoring sites established along the coast of California from Point Arena to San Diego. Some of these sites have been monitored since the 1980s. The proposed research activities would result in a low level of habitat trampling. Researchers would minimize trampling effects by avoiding walking on vulnerable species like mussels and by wearing soft-soled shoes to minimize crushing of invertebrates and algae. Rocky substrate may be disturbed by the installation of bolts or scientific equipment, but the area disturbed would be small (about one square inch) and at most sites no new installations are expected.

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

The effects of the proposed action on the human environment are not likely to be highly uncertain or involve unique or unknown risks. Because the proposed research activities have been conducted as part of ongoing monitoring programs since the 1980s, the analysis of effects was informed by long-term monitoring data, published documents, and expert professional judgment showing that the research activities have not resulted in any injuries to or mortalities of black abalone. The proposed action would allow the research activities to continue, to inform our understanding of the biology, ecology, and status of black abalone populations.

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

Other factors that may affect black abalone, its habitat, and other aspects of the physical and biological environment include implementation of California's Abalone Recovery and Management Plan (ARMP) and Marine Life Protection Act (MLPA), the designation of critical habitat for black abalone, the continued spread of withering syndrome, abalone poaching, and activities that may affect coastal rocky intertidal habitats (e.g., coastal development and in-water construction activities). The proposed action would be expected to result in a low level of disturbance to the physical and biological environment that would not result in cumulatively significant impacts when combined with other actions. The proposed action would be expected to contribute to past, ongoing, and future efforts to manage and recover black abalone and its habitat.

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?

The proposed action would not occur in or be likely to affect entities listed in, or eligible for listing in, the National Register of Historic Places. The main purpose of the proposed action would be to monitor black abalone populations along the California coast. Researchers would take care to minimize trampling and other effects to the rocky intertidal habitat at the monitoring sites and would avoid walking on vulnerable species such as mussels. Thus, the proposed action would not cause the loss or destruction of scientific, cultural, or historic resources.

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

The proposed action would not be expected to result in the introduction or spread of a non-indigenous species. Researchers would clean all field gear thoroughly with fresh water between survey sites, to avoid introducing or spreading any non-indigenous

species between sites. Also, any dead or dying abalone collected would be handled with care to avoid the spread of disease to other sites. Researchers would place each abalone in an individual plastic bag to be immediately frozen or preserved as instructed by pathologists.

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

NMFS has issued numerous scientific research permits under the ESA, including a scientific research permit for white abalone (*Haliotis sorenseni*). The proposed action would be consistent with these previous actions by NMFS and would not establish a precedent for future actions with significant effects or represent a decision in principle about a future consideration. The proposed action would not involve any irreversible or irretrievable commitments of resources.

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?

The proposed action would not be expected to threaten a violation of Federal, State, or local laws or requirements imposed for the protection of the environment. The proposed action and its effects on ESA-listed species and areas designated or proposed for designation as critical habitat have been analyzed under section 7 of the ESA. Researchers have obtained or will obtain all necessary permits and authorizations as required to ensure that the proposed research is consistent with the MMPA, the National Marine Sanctuary Act, and other Federal and state laws and regulations.

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?

Other actions and factors that may affect black abalone and its habitat include implementation of the ARMP and MLPA in California, designation of black abalone critical habitat, continued spread of withering syndrome, continued poaching of abalone, and activities such as in-water construction and coastal development that may affect rocky intertidal habitats. The proposed action, in conjunction with other actions and factors, would not result in cumulative adverse effects on black abalone and its habitat. Although the proposed action would involve take of black abalone, the non-lethal take would result in only minor stress to individuals and would not be expected to affect the survival, growth, or reproduction of black abalone individuals or populations. Collection of dying black abalone would result in mortality of those individuals, but would not be expected to affect the populations from which they were removed, because those individuals would have died of the disease regardless of whether or not they were removed. The information gained from the proposed research activities would allow for the continued monitoring of black abalone populations in the face of continuing threats, as well as enhance past and ongoing efforts to manage and recover black abalone.

The proposed action would not be expected to result in cumulative adverse effects on non-target species. The proposed research may result in a low level of human disturbance to marine invertebrate and algal species, marine mammals, and seabirds at the monitoring sites. Researchers would minimize trampling effects by wearing soft-soled shoes and avoiding vulnerable species. Researchers would minimize human disturbance to marine mammals and seabirds by approaching sites quietly and cautiously and avoiding sites that are occupied by marine mammals during pupping seasons or by seabirds during nesting seasons. If ESA-listed species other than black abalone are encountered at the sites, researchers would maintain a safe distance and immediately suspend research activities and vacate the site to avoid take.

DETERMINATION

In view of the information presented in this document, and the analyses contained in the EA and the Biological Opinion prepared for issuance of Permit No. 14400, it is hereby determined that permit issuance will not significantly impact the quality of the human environment. 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 Environmental Impact Statement for this action is not necessary.

DEC 06 2010

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Director, Office of Protected Resources

Date