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DEPARTMENT OF COMMERCE

National Oceanic and Atmospheric Administration

50 CFR Part 226

[Docket No. 140407321-5096-02]

RIN 0648- XD233

Listing Endangered or Threatened Species; 12-Month Finding on a Petition to Revise the Critical Habitat Designation for the Southern Resident Killer Whale Distinct Population Segment

AGENCY: National Marine Fisheries Service (NMFS), National Oceanic and Atmospheric Administration (NOAA), Commerce.

ACTION: Notice of 12-month finding.

SUMMARY: We, the National Marine Fisheries Service (NMFS), announce a 12-month finding on a petition from the Center for Biological Diversity to revise the critical habitat designation for the Southern Resident killer whale (Orcinus orca) Distinct Population Segment (DPS) under the Endangered Species Act (ESA). In November 2006 we issued a final rule designating approximately 2,560 square miles (6,630 square km) of inland waters of Washington State as critical habitat for the Southern Resident killer whale DPS. The January 2014 petition requests we revise this critical habitat to include Pacific Ocean marine waters along the West Coast of the United States that constitute essential foraging and wintering areas for Southern Resident killer whales. Additionally, the petition requests that we adopt as a primary constituent element (PCE), for both currently designated critical habitat and the proposed revised critical habitat, protective in-water

sound levels. The ESA defines a process for responding to petitions to revise critical habitat. We have reviewed the public comments and best available information on Southern Resident killer whale habitat use and as the next step in the response to the petition process defined in the ESA, this 12-month determination describes how we intend to proceed with the requested revision.

DATES: The finding announced in this document was made on [*insert date of publication in the Federal Register*].

ADDRESSES: Copies of the petition, 90-day finding, and the list of references are available online at:

http://www.westcoast.fisheries.noaa.gov/protected_species/marine_mammals/killer_whale/esa_status.html

Requests for copies of this determination should be addressed to:

NMFS, West Coast Region, Protected Resources Division, 7600 Sand Point Way NE, Seattle, WA 98115. Attention—Lynne Barre, Seattle Branch Chief.

FOR FURTHER INFORMATION CONTACT: Lynne Barre, NMFS West Coast Region, (206) 526-4745; or Dwayne Meadows, NMFS Office of Protected Resources, (301) 427-8403.

SUPPLEMENTARY INFORMATION:

Background

On January 21, 2014, we received a petition from the Center for Biological Diversity requesting revisions to the critical habitat designation for the Southern Resident killer whale DPS. That requested revision sets in motion a process for agency response defined in the ESA and explained below.

The ESA defines critical habitat under section 3(5)(A) as: “(i) the specific areas within the geographical area currently occupied by the species, at the time it is listed... on which are found those physical or biological features (I) essential to the conservation of the species and (II) which may require special management considerations or protection; and (ii) specific areas outside the geographical area occupied by the species at the time it is listed upon a determination by the Secretary that such areas are essential for the conservation of the species.”

Joint NMFS-Fish and Wildlife Service (FWS) regulations for designating critical habitat at 50 CFR 424.12(b) state that the agencies “shall consider those physical and biological features that are essential to the conservation of a given species and that may require special management considerations or protection (hereafter also referred to as ‘Essential Features’ or ‘Primary Constituent Elements’/PCEs’).” Pursuant to these regulations, such features include, but are not limited to space for individual and population growth, and normal behavior; food, water, air, light, minerals, or other nutritional or physiological requirements; cover or shelter; sites for breeding, reproduction, rearing of offspring; and habitats that are protected from disturbance or are representative of the historic geographical and ecological distribution of a species. When considering the designation of critical habitat, we focus on the principal biological or physical constituent elements, known as primary constituent elements (PCEs). PCEs may include, but are not limited to: nesting grounds, feeding sites, water quality, tide, and geological formation. Our implementing regulations (50 CFR 424.02) define “special management considerations or protection” as any method or procedure useful in

protecting physical and biological features of the environment for the conservation of the species.

Section 4(b)(2) of the ESA requires us to designate and make revisions to critical habitat for listed species based on the best scientific data available and after taking into consideration the economic impact, the impact on national security, and any other relevant impact, of specifying any particular area as critical habitat. The Secretary of Commerce may exclude any particular area from critical habitat if he determines that the benefits of such exclusion outweigh the benefits of specifying such area as part of the critical habitat, unless she determines that the failure to designate such area as critical habitat will result in the extinction of the species concerned.

NMFS and FWS have recently published proposed rules to implement changes to the regulations for designating critical habitat. The proposed amendments would make minor edits to the scope and purpose, add and remove some definitions (e.g., geographic area and essential features), and clarify the criteria for designating critical habitat (79 FR 27066; May 12, 2014). We will incorporate any relevant final regulations and guidance into our process for revising critical habitat.

The ESA provides that NMFS may, from time-to-time, revise critical habitat as appropriate (section 4(a)(3)(B)). In accordance with section 4(b)(3)(D)(i) of the ESA, to the maximum extent practicable, within 90 days of receipt of a petition to revise critical habitat, the Secretary of Commerce is required to make a finding as to whether that petition presents substantial scientific or commercial information indicating that the petitioned action may be warranted, and to promptly publish such finding in the Federal Register. On April 25, 2014 (79 FR 22933), we published our 90-day finding that the

petition, viewed in the context of the information readily available in our files, presented substantial information indicating that revising critical habitat may be warranted and initiated a review of the current critical habitat designation. To ensure a comprehensive review of the current critical habitat designation and new information that is now available, we solicited scientific and commercial information regarding the petitioned action.

When we find that a petition presents substantial information indicating that a revision may be warranted, we are required to determine how we intend to proceed with the requested revision within 12 months after receiving the petition, and promptly publish notice of our intention in the Federal Register. The statute says nothing more about options or considerations regarding the 12-month determination or timelines associated with issuance of a proposed rule, (see section 4(b)(3)(D)(ii)). This notice reviews the current critical habitat designation, the petition for revision, summarizes comments on the 90-day finding, and describes how we intend to proceed with the requested revisions to critical habitat for the Southern Resident killer whale DPS.

Current Critical Habitat Designation

Following the ESA listing of the Southern Resident killer whale DPS (70 FR 69903; November 18, 2005), we finalized a designation of critical habitat in 2006 (71 FR 69054; November 29, 2006). We summarized available information on natural history, habitat use, and habitat features in a Biological Report accompanying the designation (NMFS, 2006). Based on the natural history of the Southern Resident killer whales and their habitat needs, the physical or biological features necessary for conservation were identified as: (1) water quality to support growth and development; (2) prey species of

sufficient quantity, quality and availability to support individual growth, reproduction and development, as well as overall population growth; and (3) passage conditions to allow for migration, resting, and foraging.

The final critical habitat designation identified three specific areas, within the area occupied, which contained the essential features listed above. The three specific areas designated as critical habitat were (1) the Summer Core Area in Haro Strait and waters around the San Juan Islands; (2) Puget Sound; and (3) the Strait of Juan de Fuca, which in total comprise approximately 2,560 square miles (6,630 sq km) of marine habitat. We determined that the economic benefits of exclusion of any of the areas did not outweigh the benefits of designation, and we therefore did not exclude any areas based on economic impacts. We considered the impacts to national security, and concluded the benefits of exclusion of 18 military sites, comprising approximately 112 square miles (291 sq km), outweighed the benefits of inclusion, because of national security impacts, and therefore, the sites were not included in the designation. The critical habitat designation included waters deeper than 20 feet (6.1 m) relative to the extreme high water tidal datum.

At the time of the designation, we noted that there were few data on Southern Resident killer whale distribution and habitat use of the coastal and offshore areas in the Pacific Ocean. Although we recognized that the whales occupy these waters for a portion of the year and considered them part of the geographical area occupied by the species, we declined to designate these areas as critical habitat because the data informing whale distribution, behavior and habitat use were insufficient to define "specific areas" (see Coastal and Offshore Areas section; 71 FR 69054; November 29, 2006).

Petition to Revise Critical Habitat

On January 21, 2014, we received a petition from the Center for Biological Diversity requesting revision to the critical habitat designation for the Southern Resident killer whale DPS. The petition lists recent sources of information on the whales' habitat use along the West Coast of the U.S, particularly from NMFS' Northwest Fisheries Science Center (NWFSC) programs, such as satellite tagging conducted in 2012 and 2013. The petition also reviews natural history and threats to the whales. The Center for Biological Diversity proposes that the critical habitat designation be revised and expanded to include the addition of the Pacific Ocean region between Cape Flattery, WA, and Point Reyes, CA, extending approximately 47 miles (76 km) offshore. The petition identifies that each of the three PCEs identified in the 2006 critical habitat designation (see Current Critical Habitat Designation Section above) are also essential features in the whales' Pacific Ocean habitat. In addition, the petition asks us to adopt a fourth PCE for both existing and proposed critical habitat areas providing for in-water sound levels that: “(1) do not exceed thresholds that inhibit communication or foraging activities, (2) do not result in temporary or permanent hearing loss to whales, and (3) do not result in abandonment of critical habitat areas.”

The standard for determination of whether a petition includes substantial information is whether the amount of information presented provides a basis for us to find that it would lead a reasonable person to believe that the measure proposed in the petition may be warranted. Based on the information presented and referenced in the petition, as well as all other information readily available in our files, we found that the recent information on the whales' movements through their offshore habitat and

discussion of sound as a feature of habitat met this standard and published a 90-day finding accepting the petition and requesting information to inform a review of the current critical habitat designation (79 FR 22933; April 25, 2014).

Summary of Public Comments

In the 90-day finding we solicited new information from the public, governmental agencies, tribes, the scientific community, industry, environmental entities, and any other interested parties concerning (1) the essential habitat needs and use of the whales, (2) the West Coast area proposed for inclusion, (3) the physical and biological features essential to the conservation of Southern Residents and that may require special management considerations or protection, (4) information regarding potential benefits or impacts of designating any particular area, including information on the types of Federal actions that may affect the area's physical and biological features, and (5) current or planned activities in the areas proposed as critical habitat and costs of potential modifications to those activities due to critical habitat designation. We requested that all data and information be accompanied by supporting documentation such as maps, bibliographic references, or reprints of pertinent publications.

The public comment period on the 90-day finding closed on June 24, 2014, and all of the comments received can be viewed at www.regulations.gov by searching for FDMS docket number “NOAA-NMFS-2014-0041”. We received 275 comments from a variety of individuals and organizations including researchers, concerned citizens, private, government and nonprofit organizations. The majority of comments (over 250) were brief expressions of support for expanding the Southern Resident killer whale’s critical habitat to offshore and coastal areas; two commenters were opposed to the

petition's proposed revision of critical habitat. In addition, many commenters noted sound was important to killer whales and six specifically supported including sound as a PCE for critical habitat. There were fifteen commenters that provided substantive information or comments. Thirteen of these commenters supported the petitioned action, and many referenced the data presented in the petition, which largely comes from recent NWFSC studies conducted from 2006-2013. Some commenters offered additional information, including data on ocean and Puget Sound fisheries, salmon populations along the Washington coast, and whale sightings in inland waters and off the Washington, Oregon, and California coasts. Below we provide a summary of the substantive comments and information so the public is aware of the information submitted. Where appropriate, we have combined similar comments. We will take into account the comments and information provided in our consideration of a revision to critical habitat.

Geographical Area Occupied by the Species

Comment 1: Several commenters noted that the data from satellite tracking and tagging, visual sightings, acoustic recorders, and strandings all provide evidence that the Southern Resident killer whales regularly use the coasts of Washington, Oregon, and California during part of the year. One commenter suggested that more research be conducted to help decide if the proposed southern boundary be extended even farther south. Several commenters provided evidence that suggests the whales are spending less time in inland waters, specifically in spring months, and have likely increased their use of offshore waters. They noted the coast is important to the whales, which makes the need of an expanded protected area essential.

Comment 2: Two commenters urged that we should reconsider the protection of the Hood Canal and include it in the revised critical habitat designation and one suggested expanding critical habitat into shallower waters. These commenters stressed the historical importance of Hood Canal to the whales and noted that it was used on a regular basis until the early 1980s. The last confirmed use of Hood Canal by the Southern Residents occurred in 1995, which one commenter noted was less than 4 years prior to the formal listing process. Based on the extensive use of Hood Canal by transient killer whales, they noted Hood Canal possesses the physical and biological features necessary to support the whales. Due to its proximity to the core use area in the San Juan Islands, prey resources in Hood Canal could be used, and Hood Canal would provide a safe refuge in the event of an oil spill. In addition to expanding inland critical habitat to include Hood Canal, one commenter suggested expanding critical habitat to shallower water for the pursuit of prey, socializing, grooming, and playing. The commenter argued that including the whale's active space in critical habitat (or the space around an individual that is perceived visually or auditorily) is more appropriate than creating an arbitrary border at 20 feet (6.1m) of water.

Military Exclusions

Comment 3: One commenter noted that NMFS should only exclude a subset of the military exclusion requests or completely revoke all of the exclusions. This comment was based on the large size and Southern Resident killer whale use of some military areas and suggestions that military activities could be moved to reduce overall area or mitigation for military areas could be considered elsewhere.

Sound as an Essential Feature of Critical Habitat

Comment 4: Many commenters expressed concern that underwater noise can affect Southern Resident killer whales in numerous ways, including disrupting communication, reducing the distance of detecting prey or other whales, masking echolocation, temporarily or permanently impairing hearing, causing strandings or mortality, causing other stress-related harm, and leading to habitat abandonment. Several of these commenters were concerned that ambient underwater noise levels are rapidly increasing in the whales' habitat. For example, one commenter was concerned that a proposed expansion of naval structures in the Puget Sound will add more noise to the current levels that may cause behavioral disturbance. Another commenter was concerned about an increase in Navy training and testing activities in the Pacific Ocean that could put the killer whales in more danger. One commenter was concerned that the issuance of incidental take permits does not occur for all noise sources (e.g., there is no regulation of shipping noise, recreational vessel and commercial whale watch vessel traffic noise or noise from fisheries). Another commenter argued that noise pollution is hurting the gene pool by unintentionally selecting against acute hearing, which they argue is likely to reduce the fitness of individuals in the population.

These commenters urged us to identify a sound-based PCE and identify sound levels that do not (1) exceed thresholds that inhibit communication or foraging activities, (2) result in temporary or permanent hearing loss to the whales, or (3) result in the abandonment of critical habitat areas. One commenter added that the sound-based PCE should be established so as not to cause chronic stress, including stress that is potentially sufficient to impair reproduction, or increase morbidity or the risk of mortality. They suggested that we evaluate whether a numeric standard for the sound PCE may be

appropriate to determine when adverse modification of critical habitat occurs. However, if numerical standards are not supported by available data, they suggested we adopt proxies from other species. Lastly, several commenters noted that the Canadian government has identified acoustic degradation as one of the main threats to killer whales and the acoustic quality of the Southern and Northern Resident killer whales' critical habitat in Canada is legally protected by the Critical Habitat Protection Order (see http://www.registrelep-sararegistry.gc.ca/document/default_e.cfm?documentID=1756.)

One commenter supports the petition, but cautioned that the establishment of in-water sound levels based on results from the work primarily from one researcher (Williams *et al.*, 2009; 2013; 2014), which they still considered to be a work-in-progress and, based on another population of killer whales, could result in a disproportionate and distracting regulatory action against the boat-based whale watch industry.

Another commenter asked us to reject the petition and believes revising critical habitat to include the coastal waters of Washington, Oregon, and California and/or adopting a sound PCE would compromise military readiness and national security by substantially limiting training, testing, and construction activities. Furthermore, the commenter stated the PCE criteria described in the petition are too vague for a complete assessment of potential impacts to Navy activities, and they requested we clarify the details on the sound PCE (e.g., the frequency of sounds of concern, the duration and type of sounds and sound producing activity that would likely create an adverse effect, the sound level threshold, timing, the certainty to which an animal would need to be present to trigger restrictions, and implementation and enforcement techniques), in order to adequately assess the impacts to national security.

Another commenter asked us to reject the petition and argued that sound is not a tangible feature contemplated by the ESA, but rather is an element that can be introduced into the aquatic environment that has the potential to have a direct effect on a species. They also argued the effects to a species from an action should be addressed in the section 7 jeopardy analysis, whereas the adverse modification analysis needs to address the potential impacts of the action on the habitat. With the exception of Cook Inlet beluga whales designated critical habitat that includes in-water noise below levels resulting in the abandonment of critical habitat areas (50 CFR 226.220), they note that designating sound as a PCE would be a departure from NMFS' prior practice of not including sound, even for species that can be affected by in-water sound (i.e., right whales). Lastly, they claim there is no factual basis to designate sound as a PCE and the petition does not narrowly define designated critical habitat. For example, they argue that no information in the petition shows where the specific areas containing the elements of the noise PCE are found, and the biological needs of the whales are not well known enough to determine specific marine areas with sound levels essential to their conservation.

Essential Features and Special Management Considerations

Comment 5: Several commenters argued that Southern Resident killer whales are susceptible to threats outside their current protected habitat and the proposed area for critical habitat is in need of protection. The commenters noted that the whales feed on salmon, breed, and calve while in coastal waters. They highlighted that current Southern Resident killer whale critical habitat only protects summer and fall Chinook salmon stocks. One commenter stressed that the winter and spring runs of Chinook salmon along

the outer coast represent a major food source for the whales and that these runs should also be protected. Because the whales appear to be spending less time in inland waters, specifically in spring months, commenters noted that the whales have likely increased their reliance on coastal salmon. Several of the commenters also highlighted that the whales are likely giving birth in these coastal waters in the autumn/winter months and may require more food for lactating mothers. Another commenter argued that the declining coast-wide availability of Chinook salmon reinforces the need to include this area as designated critical habitat to ensure the survival of the salmon on which the Southern Residents depend. In general, these commenters supported expanding critical habitat to encompass the whale's year-round range, which includes coastal waters of Washington, Oregon, and California, to ensure the conservation of all current foraging grounds and that expanding critical habitat will support sufficient prey to help the whales recover.

In addition to the concern over prey availability, several commenters were concerned that the Southern Residents have acquired high levels of pollutants linked to California that may affect reproduction and the population decline. They also highlighted that because the whales occupy a highly industrialized area, foraging near outflow of large rivers that carry pollutants can directly affect the whale's health and prey. Additionally, they strongly urged us to ensure that the use and disposal of chemicals do not conflict with the whale's habitat. Improving water quality in the whales' coastal winter range requires special management and protection, which they argue is provided by designating the area as critical habitat.

Nineteen commenters mentioned the general threats to Southern Resident killer whales from ships, and several of those commenters argued that special management is needed in offshore waters to address the threats from increasing ship traffic within the coastal range of the whales because traffic likely impacts killer whale foraging habits. In addition, they note an increase in port size or vessel traffic could also have a significant risk because it will increase the risk of collision. They urge us to revise critical habitat to ensure that decisions regarding the expansion of fossil fuel transportation and other maritime activities do not impact the killer whale's coastal range. Several commenters highlighted that the increase in development of alternative energy sources may also pose a possible passage risk to the killer whales, thereby requiring special management and oversight. Lastly, one commenter was concerned that migration of prey species due to ocean acidification and climate change could impose additional challenges for the whales.

12-Month Determination on Revision of Critical Habitat

Since critical habitat for Southern Resident killer whales was designated in 2006, new information on habitat use has become available. As described in the critical habitat designation in 2006, we have been directly engaged in research activities to fill data gaps about coastal habitat use. Collecting information to better understand coastal distribution was also identified as a top priority in developing the Research Plan and Recovery Plan for Southern Resident killer whales (NMFS, 2008). In 2011, NMFS completed a 5-year review of the status Southern Resident DPS under the ESA (NMFS, 2011). In the 5-year review, one of the recommendations for future actions was to increase knowledge of coastal distribution, habitat use and prey consumption to inform critical habitat

determination. As identified in the petition and the public comments, the NWFSC and our partners have employed several techniques to collect information on coastal distribution and behavior, some of which include land-based sightings, passive acoustic monitoring, coastal research cruises, and satellite tag studies. In 2014, we released a 10-year report on research and conservation for Southern Resident killer whales, which summarized some of the major findings of this ongoing research on coastal habitat use and listed almost a dozen papers and reports that have become available since 2006. The report and a full list of publications are available on our web page at:

http://www.nwfsc.noaa.gov/news/features/killer_whale_report/index.cfm.

Additional information since the 2006 critical habitat designation regarding effects of anthropogenic sound on marine mammals was also provided in the petition. The petition references new information on killer whale responses to vessel noise (Erbe *et al.*, 2012; Holt, 2008; Holt *et al.* 2009, Williams *et al.*, 2009, Williams *et al.*, 2014), as well as a review of the acoustic quality of habitats for whale populations, including killer whales (Williams *et al.*, 2013). Many of these publications are also listed in the recent 10-year report along with several other articles and reports from NWFSC projects and partnerships investigating vessel interactions and noise effects.

How We Intend to Proceed

Based on the new information above, we intend to proceed with the petitioned action to revise critical habitat for Southern Resident killer whales. Below we identify the steps we will take to ensure that we use the best available scientific and commercial data to inform any revision and meet the statutory requirements for designating or revising critical habitat.

Step 1: Complete Data Collection and Analysis

While data from new studies are available in our files and have begun to address data gaps identified in the 2006 critical habitat designation, considerable data collection and analysis needs to be conducted to refine our understanding of the whales' habitat use and needs. Additional time will increase sample sizes and provide the opportunity to conduct robust analyses. While we have been actively working on gathering and analyzing data on coastal habitat use, these data and analyses are not yet sufficiently developed to inform and propose revisions to critical habitat as requested in the petition. Additional data and analyses will contribute to identification of biological and physical features—as well as areas in the Pacific Ocean that contain these features—to inform the identification of specific areas. In the petition, the Center for Biological Diversity recognized that we are continuing to gather and analyze data describing the Southern Residents' use of coastal and offshore waters and requested we refine the proposed revisions, as necessary, to include additional inhabited zones or to focus specifically on areas of concentrated use.

There are several ongoing studies that will inform any revisions to critical habitat. The NWFSC and our partners are currently engaged in the following projects and we anticipate new data, analyses, reports and papers regarding coastal habitat use available over the next 2 years. Below are descriptions of several ongoing data analysis projects, plans for collecting additional data, and projects that bring together and analyze data from a number of sources.

Sighting networks: For many years, NMFS, the Center for Whale Research, and other partners have solicited sightings of killer whales, including the Southern Residents,

along the coast. Prior to 2003, data on the whales' winter distribution and movement patterns were limited to a handful of sightings reported by a diverse group of ocean users. We will continue to solicit coastal sightings from the public and ocean users, and will also follow up on sighting information presented in the public comments on the 90-day finding. Although this work continues, in recent years we have used a variety of new technologies described below to supplement and expand the sighting network information.

Acoustic recorders: The NWFSC has been deploying passive acoustic recorders in coastal waters to capture acoustic calls of marine mammals, and Southern Resident killer whales in particular, to better understand distribution and habitat use. Hanson et al. (2013) analyzed and reported results on coastal occurrence of Southern Residents using these recorders deployed in 2006 through 2011; however, there are additional years of data from 2012-2014 now available and undergoing analysis. In addition, this project will be expanded with new recorder deployments in 2015 to expand sample sizes with new data and a comprehensive analysis is expected in 2016.

Satellite tagging: Since 2012, the NWFSC has deployed satellite tags on five Southern Resident killer whales, including one extended deployment on K25 that lasted for 93 days. The information gathered from satellite tagging will address the data gap in winter distribution identified in the Recovery Plan, as well as provide further information on habitat use. This technique has been identified as an important approach for obtaining information on habitat use by an independent science panel that assessed the impact of salmon fisheries on Southern Resident killer whales (Hilborn et al., 2012). Analysis of

the existing data is currently underway and the program will continue with additional tag deployments planned for 2015-2016.

Research cruises: NMFS' NWFSC has located Southern Resident killer whales off the Washington and Oregon coasts on six of seven NOAA cruises to study the whales since 2004. In 2013, researchers used satellite tagging information to follow the whales along the coast for eight days, allowing nearly continuous investigations of behavior and habitat use. Scientists also collected numerous prey and fecal samples to learn more about winter diet as well as oceanographic data to improve our understanding of important features of the whales' environment along the coast. The NWFSC has a research cruise planned for February 2015 and also plans to request ship time for a cruise in 2016. In addition to further analysis of existing cruise data, cruise reports and additional analysis from 2015 and 2016 will be available in the next 2 years.

Prey mapping: The NWFSC and Southwest Fisheries Science Center (SWFSC) are working together to investigate salmon distributions along the West Coast. This project will analyze coded wire tag data and other available data sources to build prey maps of spring, summer and fall distribution of salmon. Results from this analysis are anticipated in summer of 2015 and will inform consideration of prey as a potential essential feature of the whales' coastal habitat. In addition, results from this study will inform other projects, such as the individual based bioenergetics model described below.

Individual based model: The SWFSC, NWFSC and other partners are in the process of developing a spatially-explicit individual based model (IBM) to explore the effects of variation in the abundance and distribution of salmon stocks and other coastal fishes on the net energy gain of Southern Resident killer whales during the non-summer

months. The initial purpose of the IBM is to integrate available data within a single analytical framework, and support development of a research strategy for identifying critical habitat for Southern Resident killer whales off the coasts of Washington, Oregon, and California. Ultimately, the IBM will be used to investigate whether and how modeling critical habitat and prey resource management could be effective at minimizing the risk of energy balances falling below critical thresholds. Phase I of the project will include a literature review and a model framework vetted by the project partners. Completion of this phase is anticipated in July 2015. Pending continued funding, a second phase of the project will include a second generation model to investigate one or more specific hypotheses on the relationship between habitat/prey attributes and whale vital rates, which would be available in 2016.

Step 2: Identify Areas Meeting the Definition of Critical Habitat

Pursuant to ESA section 3(5)(A), we must determine “the geographical area occupied by the species at the time of listing.” Next we identify physical or biological features essential to the conservation of the species. Agency regulations at 50 CFR 424.12(b) interpret the statutory phrase “physical or biological features essential to the conservation of the species.” The regulations state that these features include, but are not limited to, space for individual and population growth and for normal behavior; food, water, air, light, minerals, or other nutritional or physiological requirements; cover or shelter; sites for breeding, reproduction, and rearing of offspring; and habitats that are protected from disturbance or are representative of the historical geographical and ecological distribution of a species. After determining the geographical area occupied by the Southern Residents, and the physical and biological features essential to their

conservation, we would next identify the specific areas within the geographical area occupied by the species that contain the essential features. Specific areas meet the definition of critical habitat if they contain physical or biological features that “may require special management considerations or protection.” Joint NMFS and USFWS regulations at 50 CFR 424.02(j) define “special management considerations or protection” to mean “any methods or procedures useful in protecting physical and biological features of the environment for the conservation of listed species.”

For the 2006 designation we reviewed the natural history, habitat use and habitat features in a Biological Report to assist with identifying areas that meet the definition of critical habitat. We will consider the previous designation and new information that has become available to evaluate areas eligible for critical habitat designation. An additional part of this evaluation is considering military areas that are precluded from designation because they are subject to Integrated Natural Resource Management Plans under the Sikes Act and provide benefits to the listed species.

Step 3: Section 4(b)(2) Analysis

Section 4(b)(2) of the ESA requires us to use the best available data in designating critical habitat. It also requires that before we designate any particular area, we must consider the economic impact, impact on national security, and any other relevant impact. To determine the impact of designation, we can examine what the state of things would be with and without a critical habitat designation. For the 2006 designation we conducted an Economic Analysis to identify economic impacts and also coordinated with the Department of Defence to evaluate impacts of designation on national security.

Under section 4(b)(2) we also identify the conservation benefits to the species of designating particular areas. The principal benefit of designating critical habitat is that ESA section 7 requires every Federal agency to ensure that any action it authorizes, funds, or carries out is not likely to result in the destruction or adverse modification of designated critical habitat. This complements the section 7 provision that Federal agencies ensure their actions are not likely to jeopardize the continued existence of a listed species. Another possible benefit is that the designation of critical habitat can serve to educate the public regarding the potential conservation value of an area.

The next step in the 4(b)(2) analysis is to balance the benefits of designation against the benefits of exclusion and recommend any exclusions, if appropriate. We must also determine whether any exclusion will result in extinction of the species. For the 2006 designation we completed a 4(b)(2) report that considered the benefits of designation and benefits of exclusions and we did exclude military areas based on national security impacts.

Step 4: Develop Proposed Rule for Public Comment

Steps 1-3 will inform any proposal for revision of critical habitat. The underlying science of the decision would be required to undergo peer review according to the Office of Management and Budget Bulletin for Peer Review, implemented under the Information Quality Act (Public Law 106-554). Any proposed rule we develop will be published in the Federal Register and we will seek public comment. To allow for sufficient time to incorporate anticipated research results and new analysis and to conduct economic and 4(b)(2) analyses, we anticipate developing a proposed rule for publication in the Federal Register in 2017.

References Cited

The complete citations for the references used in this document can be obtained by contacting NMFS (See ADDRESSES and FOR FURTHER INFORMATION CONTACT) or on our web page at:

http://www.westcoast.fisheries.noaa.gov/protected_species/marine_mammals/killer_whale/esa_status.html

Authority: 16 U.S.C. 1531 et seq.

Dated: February 11, 2015.

Samuel D. Rauch, III,

Deputy Assistant Administrator for Regulatory Programs,

National Marine Fisheries Service.

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