



## DEPARTMENT OF COMMERCE

### National Oceanic and Atmospheric Administration

[Docket No. 201120-0310]

[RIN 0648-XH060]

### Endangered and Threatened Wildlife; 90-Day Finding on a Petition to Delist the Arctic Subspecies of Ringed Seal Under the Endangered Species Act

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

**ACTION:** Notice; 90-day petition finding.

**SUMMARY:** We (NMFS) announce a negative 90-day finding on a petition to delist the Arctic subspecies of ringed seal (*Pusa hispida hispida*) under the Endangered Species Act (ESA). We find that the petition and information readily available in our files does not present new information or analyses that had not been previously considered and therefore does not present substantial scientific or commercial information indicating that the petitioned action may be warranted. Nevertheless, we note that we are separately initiating a five-year review of the status of the Arctic ringed seal pursuant to section 4(c)(2) of the ESA, including whether the best scientific and commercial data available indicate delisting is warranted.

**ADDRESSES:** Copies of the petition and related materials are available from the NMFS website at <https://www.fisheries.noaa.gov/national/endangered-species-conservation/negative-90-day-findings> or upon request from the Assistant Regional Administrator for Protected Resources, Alaska Region, NMFS, P.O. Box 21668, Juneau, AK 99802-1668.

**FOR FURTHER INFORMATION CONTACT:** Tamara Olson, NMFS Alaska Region, (907) 271-2373; Jon Kurland, NMFS Alaska Region, (907) 586-7638; or

Heather Austin, NMFS Office of Protected Resources, (301) 427–8422.

## **SUPPLEMENTARY INFORMATION:**

### **Background**

On March 26, 2019, we received a petition from the State of Alaska, Arctic Slope Regional Corporation, Iñupiat Community of the Arctic Slope, and the North Slope Borough to delist the Arctic subspecies of ringed seal under the ESA. On April 30, 2019, we received a letter in support of this petition from the Alaska Oil and Gas Association and the American Petroleum Institute. The petition asserts that new information became available after the species was listed as threatened under the ESA (77 FR 76706; December 28, 2012) and a reanalysis of the information considered in our listing determination for this species demonstrates that our listing decision was in error. The Arctic subspecies of ringed seal is currently listed as threatened under the ESA. Copies of this petition are available from us (see ADDRESSES, above).

The Arctic ringed seal is listed with the scientific name *Phoca* (= *Pusa*) *hispida hispida*. In this 90-day finding, we use the genus name *Pusa* to reflect currently accepted use (e.g., Committee on Taxonomy, 2018; Integrated Taxonomic Information System (online database), available at <http://www.itis.gov>).

### *ESA Statutory, Regulatory, and Policy Provisions and Evaluation Framework*

Section 4(b)(3)(A) of the ESA of 1973, as amended (16 U.S.C. 1531 *et seq.*), requires, to the maximum extent practicable, that within 90 days of receipt of a petition to list a species as threatened or endangered, or to delist a species, the Secretary of Commerce make a finding on 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** (16 U.S.C. 1533(b)(3)(A)). If we find that substantial scientific or commercial information in a petition indicates the petitioned action may be warranted (a “positive 90-day finding”), we are required to

promptly commence a review of the status of the species concerned during which we will conduct a comprehensive review of the best available scientific and commercial information. In such cases, we conclude the review with a finding as to whether, in fact, the petitioned action is warranted within 12 months of receipt of the petition. Because the finding at the 12-month stage is based on a more thorough review of the available information, as compared to the narrow scope of review at the 90-day stage, a “may be warranted” finding at the 90-day stage does not prejudge the outcome of the status review.

Under the ESA, a listing determination may address a species, which is defined to also include subspecies and, for any vertebrate species, any distinct population segment (DPS) that interbreeds when mature (16 U.S.C. 1532(16)). A joint NMFS–U.S. Fish and Wildlife Service (USFWS) (jointly, “the Services”) policy clarifies the agencies’ interpretation of the phrase “distinct population segment” for the purposes of listing, delisting, and reclassifying a species under the ESA (61 FR 4722; February 7, 1996). A species, subspecies, or DPS is “endangered” if it is in danger of extinction throughout all or a significant portion of its range, and “threatened” if it is likely to become endangered within the foreseeable future throughout all or a significant portion of its range (ESA sections 3(6) and 3(20), respectively, 16 U.S.C. 1532(6) and (20)). Pursuant to the ESA and our implementing regulations, we determine whether species are threatened or endangered based on any one or a combination of the following five section 4(a)(1) factors: the present or threatened destruction, modification, or curtailment of habitat or range; overutilization for commercial, recreational, scientific, or educational purposes; disease or predation; the inadequacy of existing regulatory mechanisms to address identified threats; or any other natural or manmade factors affecting the species’ existence (16 U.S.C. 1533(a)(1), 50 CFR 424.11(c)).

ESA-implementing regulations issued jointly by the Services (50 CFR

424.14(h)(1)(i) define “substantial scientific or commercial information” in the context of reviewing a petition to list, delist, or reclassify a species as credible scientific or commercial information in support of the petition’s claims such that a reasonable person conducting an impartial scientific review would conclude that the action proposed in the petition may be warranted. Conclusions drawn in the petition without the support of credible scientific or commercial information will not be considered “substantial information.” In reaching the initial (90-day) finding on the petition, we will consider the information described in sections 50 CFR 424.14(c), (d), and (g) (if applicable).

Our determination as to whether the petition presents substantial scientific or commercial information indicating that the petitioned action may be warranted will depend in part on the degree to which the petition includes the following types of information: (1) Information on current population status and trends and estimates of current population sizes and distributions, both in captivity and the wild, if available; (2) identification of the factors under section 4(a)(1) of the ESA that may affect the species and where these factors are acting upon the species; (3) whether and to what extent any or all of the factors alone or in combination identified in section 4(a)(1) of the ESA may cause the species to be an endangered species or threatened species (*i.e.*, the species is currently in danger of extinction or is likely to become so within the foreseeable future), and, if so, how high in magnitude and how imminent the threats to the species and its habitat are; (4) information on adequacy of regulatory protections and effectiveness of conservation activities by States as well as other parties, that have been initiated or that are ongoing, that may protect the species or its habitat; and (5) a complete, balanced representation of the relevant facts, including information that may contradict claims in the petition. *See* 50 CFR 424.14(d).

If the petitioner provides supplemental information before the initial finding is made and states that it is part of the petition, the new information, along with the

previously submitted information, is treated as a new petition that supersedes the original petition, and the statutory timeframes will begin when such supplemental information is received. *See* 50 CFR 424.14(g).

We may also consider information readily available at the time the determination is made. We are not required to consider any supporting materials cited by the petitioner if the petitioner does not provide electronic or hard copies, to the extent permitted by U.S. copyright law, or appropriate excerpts or quotations from those materials (*e.g.*, publications, maps, reports, letters from authorities). *See* 50 CFR 424.14(h)(1)(ii).

The “substantial scientific or commercial information” standard must be applied in light of any prior reviews or findings we have made on the listing status of the species that is the subject of the petition. Where we have already conducted a finding on, or review of, the listing status of that species (whether in response to a petition or on our own initiative), we will evaluate any petition received thereafter seeking to list, delist, or reclassify that species to determine whether a reasonable person conducting an impartial scientific review would conclude that the action proposed in the petition may be warranted despite the previous review or finding. Where the prior review resulted in a final agency action—such as a final listing determination, 90-day not-substantial finding, or 12-month not-warranted finding—a petitioned action will generally not be considered to present substantial scientific or commercial information indicating that the action may be warranted unless the petition provides new information or analysis not previously considered. *See* 50 CFR 424.14(h)(1)(iii).

At the 90-day finding stage, we do not conduct additional research, and we do not solicit information from parties outside the agency to help us in evaluating the petition. We will accept the petitioners’ sources and characterizations of the information presented if they appear to be based on accepted scientific principles, unless we have specific information in our files that indicates the petition’s information is incorrect, unreliable,

obsolete, or otherwise irrelevant to the requested action. Information that is susceptible to more than one interpretation or that is contradicted by other available information will not be dismissed at the 90-day finding stage, so long as it is reliable and a reasonable person conducting an impartial scientific review would conclude it supports the petitioners' assertions. In other words, conclusive information indicating the species may meet the ESA's requirements for delisting is not required to make a positive 90-day finding. We will not conclude that a lack of specific information alone negates a positive 90-day finding, if a reasonable person conducting an impartial scientific review would conclude that the unknown information itself suggests the petitioned action may be warranted.

To make a 90-day finding on a petition to delist a species, we evaluate whether the petition presents substantial scientific or commercial information indicating the subject species may not be threatened or endangered, as defined by the ESA. First, we evaluate whether the information presented in the petition, in light of other information readily available in our files, indicates that the petitioned entity constitutes a "species" eligible for delisting under the ESA. Next, we evaluate whether the information indicates that the species does not face an extinction risk such that delisting may be warranted; this may be indicated in information expressly discussing the species' status and trends, or in information describing impacts and threats to the species. We evaluate any information on specific demographic factors pertinent to evaluating extinction risk for the species (*e.g.*, population abundance and trends, productivity, spatial structure, age structure, sex ratio, diversity, current and historical range, habitat integrity or fragmentation), and the potential contribution of identified demographic risks to extinction risk for the species. We then evaluate the potential links between these demographic risks and the causative impacts and threats identified in section 4(a)(1).

Many petitions identify risk classifications made by nongovernmental

organizations, such as the International Union on the Conservation of Nature (IUCN), the American Fisheries Society, or NatureServe, as evidence of extinction risk for a species. Risk classifications by such organizations or made under other Federal or state statutes may be informative, but such classification alone will not provide sufficient basis for a 90-day finding under the ESA. For example, as explained by NatureServe, their assessments “have different criteria, evidence requirements, purposes, and taxonomic coverage than official lists of endangered and threatened species,” and therefore, these two types of lists “do not necessarily coincide”

(<https://explorer.natureserve.org/AboutTheData/DataTypes/ConservationStatusCategories>). Additionally, species classifications under IUCN and the ESA are not equivalent; data standards, criteria used to evaluate species, and treatment of uncertainty are also not necessarily the same. Thus, when a petition cites such classifications, we will evaluate the source of information that the classification is based upon in light of the standards on extinction risk and impacts or threats discussed above.

Regardless of the petition process, the ESA also requires the Secretary to conduct a review of listed species at least once every five years, and to determine on the basis of such reviews whether any such species should be delisted or the listing status should be changed (16 U.S.C. 1533(c)(2)).

#### *Previous Federal Actions*

On March 28, 2008, we initiated status reviews of ringed, bearded, and spotted seals under the ESA (73 FR 16617). On May 28, 2008, we were petitioned to list these same species as threatened or endangered under the ESA. On September 4, 2008, we published a 90-day finding that the petitioned action may be warranted (73 FR 51615). On December 10, 2010, we published a 12-month petition finding and proposed to list the Arctic, Okhotsk (*Pusa hispida ochotensis*), Baltic (*Pusa hispida botnica*), and Ladoga (*Pusa hispida ladogensis*) subspecies of the ringed seal as threatened under the ESA (75

FR 77476). We published a final rule to list the Arctic, Okhotsk, and Baltic subspecies of the ringed seal as threatened and the Ladoga subspecies of the ringed seal as endangered under the ESA on December 28, 2012, primarily due to threats associated with ongoing and projected changes in sea ice and on-ice snow depths stemming from climate change within the foreseeable future (77 FR 76706; referred to hereafter as the final listing rule). On March 17, 2016, the listing was vacated by the U.S. District Court for the District of Alaska (*Alaska Oil and Gas Ass'n v. Nat'l Marine Fisheries Serv.*, 2016 WL 1125744 (D. Alaska 2016)). This decision was reversed by the U.S. Court of Appeals for the Ninth Circuit on February 12, 2018 (*Alaska Oil and Gas Ass'n v. Ross*, 722 Fed. Appx. 666 (9th Cir. 2018)) and the listing was reinstated on May 15, 2018.

Although four subspecies of the ringed seal were listed under the ESA on December 28, 2012, we have not yet conducted a review of these subspecies pursuant to 16 U.S.C. 1533(c)(2). Such reviews are required every five years and more than five years have passed since these subspecies were listed. Accordingly, concurrent with the present determination regarding this petition but in a separate action, we are initiating a review of these four subspecies of the ringed seal, including whether the best scientific and commercial data available, particularly new data that has become available since the listing decision, indicate delisting is warranted.

### **Analysis of Petition**

According to the petition, information newly available since the time the Arctic ringed seal was listed as threatened and a reanalysis of the information considered in our listing determination for this species demonstrates that our 2012 listing decision was in error. As discussed above, we evaluate any petition seeking to delist a species in light of any prior reviews or findings we have already made on the listing status of the species that is the subject of the petition. Because our previous review resulted in a final agency action listing the species as threatened, the petitioned action will generally not be



considered to present substantial scientific or commercial information indicating that the action may be warranted unless the petition provides new information or a new analysis not previously considered. *See* 50 CFR 424.14(h)(1)(iii). Therefore, unless the petition provides credible new information, or identifies errors or provides a credible new analysis that suggests the species was listed due to an error in information and delisting may be warranted, we may find that the petition does not present substantial information indicating that the petitioned action may be warranted. A synopsis of our analysis of the petition is provided below.

### *Species Description*

A review of the taxonomy, life history, and ecology of the Arctic ringed seal is presented in the “Status Review of the Ringed Seal” (Kelly *et al.*, 2010) (referred to hereafter as the “Status Review Report”), and relevant updates to this information were included in the preamble to the final listing rule. As discussed in detail in those documents, the principal threat to ringed seals identified at the time of listing was habitat loss and modification stemming from climate change. A specific habitat requirement of Arctic ringed seals is adequate snow depths on sea ice for the formation and occupation of lairs, in particular birth lairs, where pups are nursed and grow in this protected setting. Early break-up of sea ice and early snow melt have been associated with increased pup mortality from premature weaning, hypothermia, and predation. Moreover, the high fidelity to birth sites shown by Arctic ringed seals makes the seals more susceptible to localized degradation of snow cover.

Although the petition cites references related to the Arctic ringed seal’s genetic diversity, abundance, movements, habitat use, and diet that became available after the final listing rule was issued, in reviewing the supporting documents we found that these references were consistent with the information considered in our listing determination for this species. For example, the petition cites Crawford *et al.* (2015), who reported,

among other findings, that cod were the most common fish taxa identified in the stomachs of ringed seals harvested in two locations in Alaska. The Status Review Report similarly indicated that from late autumn through spring, fishes of the cod family tend to dominate the diets of ringed seals in many areas. As another example, the petition cites Lydersen *et al.* (2017), who reported that several ringed seals tagged in a fjord in Svalbard hauled out on shore during a recent summer while also using glacier ice to some extent. This was in contrast to exclusive use of glacier ice as a haul-out platform by several ringed seals tagged in the same fjord in a prior year. The Status Review Report similarly noted that Lukin *et al.* (2006) reported observation of ringed seals on offshore islands and sand bars in the White Sea during summer months. Lydersen *et al.* (2017) suggested that although the use of terrestrial sites illustrates some of the adaptive flexibility of this species, because of the vulnerability of young pups to predation and thermoregulatory stress it “is unlikely to overcome the catastrophic consequences of loss of sea-ice breeding habitats on ringed seal pup survival and population health,” consistent with the information considered in our listing determination for this species.

We identified several instances in the “Species and Habitat Description” section of the petition where the information presented, or interpretation of information was incomplete, inaccurate, or was not supported by appropriate documentation (*e.g.*, literature citations, publications, reports, letters from authorities, per 50 CFR 424.14(c)(5)–(6)). Conclusions drawn without the support of credible scientific or commercial information are not considered “substantial information.” *See* 50 CFR 424.14(h)(1)(i). For example, the petition states that ringed seals generally use sea ice, when it is available, as a platform for pupping and nursing, implying that ring seals may pup or nurse on land at other times. However, we are not aware of any documented observations of ringed seals giving birth or nursing pups on land. In addition, the petition cites the Status Review Report in stating that snow depth over birth lairs of 20–30 cm

may be sufficient to adequately protect pups from predation. However, the Status Review Report did not indicate that such snow depths would be sufficient for the formation of birth lairs. Rather, the Status Review Report indicated that snow drifts of sufficient depths to support birth lair formation typically occur only where average snow depths on sea ice are at least 20–30 cm and where drifting has taken place along pressure ridges or ice hummocks (Lydersen *et al.*, 1990; Hammill and Smith, 1991; Lydersen and Ryg, 1991; Smith and Lydersen, 1991). The Status Review Report stated that snow drifted to 45 cm or more is needed for excavation and maintenance of simple lairs, and birth lairs require depths of 50 cm (Lukin *et al.*, 2006) to 65 cm or more (Smith and Stirling, 1975; Lydersen and Gjertz, 1986; Kelly, 1988; Furgal *et al.*, 1996; Lydersen, 1998). The Status Review Report also noted that Ferguson *et al.* (2005) observed evidence that pup survival dropped sharply when snow depths were less than 32 cm, and that those authors suggested reduced recruitment in the more recent years of the study resulted from low snow fall yielding lairs excavated in drifts too shallow to protect against predators.

#### *Foreseeable Future*

As stated above, under the ESA, a “threatened species” is defined as any species which is likely to become endangered within the foreseeable future throughout all or a significant portion of its range. In the final listing rule, we stated that the foreseeability of a species’ future status is case specific and depends upon both the foreseeability of threats to the species and the foreseeability of the species’ response to those threats (77 FR 76707; December 28, 2012). Therefore, in our listing determination for the Arctic ringed seal, we used a threat-specific approach to analyze foreseeable future threats and the species’ responses to those threats, based on the best scientific and commercial data available for each respective threat. The climate projections in the Intergovernmental Panel on Climate Change’s (IPCC’s) “Fourth Assessment Report” (AR4) (IPCC, 2007) which extended through the end of the century, as well as the scientific papers used in

that report or resulting from that report, were determined to represent the best scientific and commercial data available to inform our analysis of the potential impacts to this species from climate change. As we explained in the final listing rule in response to comments received regarding the timeframe used in our analysis, we considered the projections through the end of the 21st century to analyze the threats stemming from climate change. We recognized that the farther into the future the analysis extends, the greater the inherent uncertainty, and we incorporated that consideration into our assessments of the threats and the species' responses to the threats (77 FR 76723; December 28, 2012).

The petition contends that the model projections of future climate developed for the IPCC's Fifth Assessment Report, "Climate Change 2013: The Physical Science Basis" (IPCC, 2013) (referred to hereafter as AR5), provide new information indicating that climate model projections diverge considerably after mid-century, especially in high-latitude areas. The petition also claims that in the final listing rule, NMFS based its foreseeable future on the IPCC AR4 projections of climate-related habitat decline through the end of the century, but lacked the requisite scientific data to make reliable predictions about how the Arctic ringed seal would respond to that threat. The petition cites the USFWS's October 5, 2017, 12-month "not warranted" finding on a petition to list the Pacific walrus (*Odobenus rosmarus divergens*) under the ESA (82 FR 46618) to support the assertion that new information and scientific methodologies have been developed since the final listing rule was issued that further demonstrate NMFS cannot rely upon the duration of climate projections alone to establish the foreseeable future. Based on these arguments, the petition asserts that the time period for projections about effects to habitat from climate change and the responses of the Arctic ringed seal to those potential effects does not extend beyond 2055.

The climate projections discussed in the AR5 are based on a set of scenarios that

describe several possible alternative trajectories of greenhouse gas (GHG) emissions and atmospheric concentrations, air pollutant emissions, and land use. Current trends in global annual emissions have been described as consistent with high-end emissions scenarios (U.S. Global Climate Change Research Program (USGCRP, 2017).

According to the petition, by mid-century (2036–2055) the difference between model projections in the Alaska region is about 1.0°–1.5°C, and beyond mid-century for the Alaska region the AR5 projects surface temperature increases with a spread in range from about 2°C to 5–7°C by the late 21st century. The petition asserts that these data demonstrate that there is considerable variability in future climate scenarios, and that there is greater uncertainty in any projection of high-latitude surface temperatures compared to the rest of the globe, especially for the late 21st century.

Although the climate projections discussed in the AR5 became available after the Arctic ringed seal was listed as threatened in 2012, we do not agree that the divergence in the climate model projections after about mid-century is new information not previously considered in our listing determination, which focused on climate model projections developed for the AR4. As we explained in the final listing rule in response to comments expressing similar views regarding divergence of the climate model projections beyond mid-century (77 FR 76722–76723; December 28, 2012), before mid-century, model projections of conditions such as increases in surface air temperature primarily reflect emissions of long-lived GHGs that have already occurred and those that will occur in the near-term, and are thus largely independent of the assumed emissions scenario. In contrast, the model projections become increasingly subject to the assumed emissions scenarios in the longer-term projections for the latter half the 21st century, and thus the projections diverge depending on the emissions scenario. As we explained in the final listing rule, although the magnitude of the warming depends somewhat on the assumed emissions scenario, the trend is clear and unidirectional (77 FR 76723; December 28,

2012). This is also the case for climate model projections under the scenarios considered in the AR5, aside from a scenario that assumes unprecedented global GHG emissions reductions and new technologies (and has no equivalent in the AR4 scenarios). Therefore, we conclude that the information presented in the petition about divergence beyond about mid-century in the climate model projections developed for the AR5 does not constitute new information or a new analysis not previously considered in our listing determination for the Arctic ringed seal.

Regarding the USFWS's 12-month "not warranted" finding on a petition to list the Pacific walrus under the ESA (82 FR 46618; October 5, 2017), the USFWS explained that although projections out to 2100 were included in the analysis, it considered 2060 (approximately three Pacific walrus generation lengths from the time of the analysis) to be the foreseeable future as it relates to the status of this species (82 FR 46643; October 5, 2017). USFWS explained that it had high certainty that sea ice availability will decline as a result of climate change, but it had less certainty, particularly further into the future, about the magnitude of effect that climate change will have on the full suite of environmental conditions (*e.g.*, benthic production), or how the species will respond to those changes (82 FR 46643; October 5, 2017). Assuming an Arctic ringed seal generation length of approximately 12 years, the petition contends that applying a similar three-generation-length approach to determining the foreseeable future for this species should yield a foreseeable future timeframe of 2055 (*i.e.*, 36 years beyond 2019), which the petition states also corresponds to the time period when the IPCC AR5 climate projections are most reliable, with the least amount of variability between projection scenarios.

We do not find the USFWS approach taken to analyzing the foreseeable future in the 12-month finding for the Pacific walrus to be new information not previously considered in our listing determination for the Arctic ringed seal. We considered

comments received on the proposed listing determination for Arctic ringed seals that our assessment of impacts to ringed seals from climate change through the end of this century differs from the IUCN red list process, which uses a timeframe of three generation lengths (77 FR 76722; December 28, 2012). However, we concluded in the final listing rule that the foreseeability of threats to the species and the species' response is case-specific, and takes into consideration factors such as the species' life history and habitat characteristics and threat projection timeframes. As we explained above, in our risk assessment for ringed seals, we considered the projections through the end of the 21st century to analyze the threats stemming from climate change. We recognized that the farther into the future the analysis extends, the greater the inherent uncertainty, and we incorporated that consideration into our assessments of the threats and the species' responses to the threats (77 FR 76723; December 28, 2012).

Moreover, considering the case-specific nature of evaluating the foreseeable future, it also warrants mention that the Pacific walrus has distinctly different life history and habitat characteristics as compared to the Arctic ringed seal. For example, in its "Species Assessment and Listing Priority Assignment Form" for the Pacific walrus (USFWS, 2017) the USFWS explained that, given the ability of the Pacific walrus to change its behavior and/or adapt to environmental stressors, there was much less confidence in predicting Pacific walruses' behavioral responses under increasing environmental stressors out to 2100, noting that changes in the timing of migration, amount of time spent on land, and time spent swimming to access foraging grounds are some of the changes in behavior that have already been observed. We did not cite a similar observed adaptability for Arctic ringed seals in the final listing rule, aside from the observations noted above of ringed seals on offshore islands and sand bars in the White Sea during summer months. Nor does the petition present new information to indicate such adaptability. We concluded in the final listing rule that, because ringed

seals stay with the ice as it annually advances and retreats, the southern edge of the ringed seal's range may initially shift northward. Whether ringed seals will continue to move north with retreating ice cover over the deeper, less productive Arctic Basin waters and whether the species that they prey on will also move north is uncertain (77 FR 76716; December 28, 2012). In addition, we discussed that the ability of ringed seals to adapt to earlier snow melts by advancing the timing of reproduction will be limited by snow depths, which we explained would be unlikely to be improved for birth lairs earlier in the spring, because most of the snow accumulation occurs earlier in the season. In addition we noted that the pace at which snow melts are advancing is rapid relative to the generation time of ringed seals, further challenging the potential for an adaptive response (77 FR 76710; December 28, 2012). The petition presents no new information regarding these conclusions.

Finally, we note that, in support of its assertions regarding analysis of the foreseeable future, the petition cites the 2018 proposed revision of the ESA implementing regulations at 50 CFR 424 that sets out a regulatory framework for determining the foreseeable future (83 FR 35193; July 25, 2018). This framework, which was revised in the final regulation (84 FR 45020; August 27, 2019), is part of a rulemaking that revises and clarifies requirements regarding factors for listing, delisting, or reclassifying species "to reflect agency experience and to codify current agency practices" (84 FR 45050; August 27, 2019). Our interpretation of the foreseeable future in the final listing rule is consistent with this regulatory framework. Specifically, we considered conditions only so far into the future as we could reasonably determine that both the future threats and the species' responses to those threats were likely, based on the best available data and taking into account considerations such as the species' life-history characteristics, threat-projection timeframes, and environmental variability.

In summary, we conclude that the petition does not present new information or a



new analysis not previously considered in our listing determination for the Arctic ringed seal regarding our assessment of the foreseeable future.

*ESA Section 4(a)(1) Factors*

As explained above, pursuant to the ESA and our implementing regulations, we determine whether a species is threatened or endangered based on any one or a combination of the five section 4(a)(1) factors (16 U.S.C. 1533(a)(1), 50 CFR 424.11(c)). Because the petition disagrees with some of the conclusions in the final listing rule with respect to these factors, in the following sections we summarize our evaluation of whether the petition presents substantial new information, provides credible new analysis of information previously considered, or identifies errors in the final listing rule regarding these factors that would support a conclusion that delisting may be warranted.

Factor A: The Present or Threatened Destruction, Modification, or Curtailment of the Species' Habitat or Range

As was discussed in detail in the Status Review Report and the final listing rule and noted above, a specific habitat requirement for ringed seals is adequate snow for the formation and occupation of subnivean lairs, especially in spring when pups are born and nursed. Snow depths on the sea ice were projected to decrease substantially by mid-century throughout much of the range of the Arctic ringed seal, and by the end of this century, snow depths adequate for the formation and occupation of birth lairs were projected to occur in only parts of the Canadian Arctic Archipelago, a portion of the central Arctic, and a few small isolated areas in other regions (see Kelly *et al.*, 2010; and 77 FR 76706, December 28, 2012). The petition asserts that new information demonstrates that the 2012 listing decision overestimated the magnitude of future declines in snow cover. However, none of the studies cited in the petition in support of this claim (IPCC, 2013; Nitta *et al.*, 2014; Thackeray *et al.*, 2015; Littell *et al.*, 2018) investigated the effectiveness of climate models in projecting the accumulation of snow

(snow depth) on sea ice. Instead, these studies addressed modeling of snow-related parameters (usually percent area covered by any snow) on land surfaces. Of importance to Arctic ringed seals is the available area of sea ice with average snow depths that are sufficient for the formation and maintenance of birth lairs. Therefore, in our listing determination for this species, we considered climate model projections of snow depth on Arctic sea ice during the birth lair period in April (*e.g.*, 77 FR 76708, 76710; December 28, 2012). Although winter precipitation was projected to increase in a warming Arctic, later open-water freeze-up was also projected, and this contributed to the projected decreases in snow accumulation on the ice (because snow falls into the ocean until sea ice forms) (75 FR 77483; December 10, 2010). Future snow depths on sea ice cannot be inferred from the studies discussed in the petition regarding snow on land surfaces. Thus, although the petition cites studies regarding modeling of future snow-related parameters on land that became available after the final listing rule was issued, we conclude that this information does not support the assertion in the petition that the 2012 listing decision overestimated future declines in snow depths on Arctic sea ice, and therefore does not address the concern in the final listing rule that habitat suitability for Arctic ringed seals was likely to decline. These cited studies therefore do not present substantial scientific or commercial information indicating that the petitioned action may be warranted.

The petition also asserts that the scenarios used in the climate model projections considered in our listing determination for the Arctic ringed seal assumed status quo GHG emissions, which, according to the petition, correspond to climate projections in the AR5 reflecting a scenario with a continued increase in emissions. The petition claims that the latest published research indicates that international and domestic policy commitments will result in the climate system following a trajectory more closely corresponding to the intermediate stabilization scenario considered in the AR5 (in which emissions peak around 2040 and then decline and stabilize), but the analysis cited in the

petition to support this assertion (Salawitch *et al.*, 2017) does not, in fact, reach that conclusion. Rather, Salawitch *et al.* (2017) assessed the reductions in emissions of GHGs that will be needed to achieve the goal of the United Nations Framework Convention on Climate Change (UNFCCC) Paris Agreement to limit GHG emissions such that warming in this century remains below 2°C, and to pursue efforts to limit warming to 1.5°C. The authors concluded, based on projections from an independently derived climate model (Empirical Model of Global Climate Change), that GHG emissions will remain below the intermediate stabilization scenario out to 2060 if: (1) conditional as well as unconditional pledges are met; and (2) reductions in GHG emissions needed to achieve the Paris commitments, which generally extend to 2030, are propagated forward to 2060. The authors did not, however, opine as to how likely it is that such actions would occur. The authors also stated that global climate models used in the AR5 indicate that future emissions will instead need to follow the aggressive mitigation scenario involving rapid reductions in GHGs for warming to remain below 2°C. In addition, we note that the United States subsequently announced that it intended to withdraw from the Paris Agreement (see Factor E: The Inadequacy of Existing Regulatory Mechanisms), and current global annual emissions trends have been described as consistent with high-end emissions scenarios (USGCRP, 2017). Therefore, although the publication by Salawitch *et al.* (2017) became available after the final listing rule was issued, we conclude that the cited study does not support the assertion in the petition that the latest published research indicates the climate system will follow the trajectory of the intermediate stabilization scenario.

Citing a study by Crawford *et al.* (2015), the petition also asserts that observed changes in sea ice extent and duration have not resulted in detectable corresponding reductions in ringed seal population size or effects on ringed seal population health, which the petition claims contradicts the assumptions made in the listing decision.

However, our listing of Arctic ringed seals as threatened was not based on evidence indicating that population size or health had declined, nor was it based on a presumption that a climate driven decline would be detectable at that time or shortly thereafter. Rather, as explained in the final listing rule, it was based primarily on the conclusion that continuing Arctic warming would cause substantial reductions in sea ice and on-ice snow depths, two key elements of Arctic ringed seal breeding habitat, and that these habitat changes were expected to lead to decreased survival of pups and a substantial decline in the number of Arctic ringed seals, such that they would no longer persist in substantial portions of their range within the foreseeable future (77 FR 76716, 76731; December 28, 2012).

Regarding new abundance data, the petition cites an estimate of Arctic ringed seals in the U.S. portion of the Bering Sea that was calculated by Conn *et al.* (2014) based on data obtained in 2012. We note that the petition mistakenly cites Conn *et al.* (2014) for an abundance estimate in the U.S. portions of the Chukchi and Beaufort Seas. However, this estimate was not reported by Conn *et al.* (2014). Rather, it was presented in the Status Review Report that informed our listing determination for the Arctic ringed seal. As such, the abundance estimate is not new information but is information that was actually considered in the listing decision.

The petition also extrapolates a total worldwide population estimate for this species from a worldwide estimate of mature Arctic ringed seals reported by Lowry (2016). This petition's extrapolation was based on an assumption that the proportion of pups in "a stable population" is about 54 percent. However, because a mature female produces only one pup per year, it is impossible for the pup proportion to be as high as 50 percent of the total population because such a population would consist only of pups and their mothers. Although the abundance estimate for the U.S. Bering Sea reported by Conn *et al.* (2014) (as well as the estimate reported by Lowry, 2016) became available after the

final listing rule was issued, this information is consistent with the data considered in our listing determination for the Arctic ringed seal. In the final listing rule we concluded that there are no specific estimates of worldwide population size available for the Arctic subspecies, but most experts postulate that it numbers in the millions (77 FR 76716; December 28, 2012). As we explained in withdrawing the proposed ESA section 4(d) protective regulations for ringed seals, foreseeable habitat changes in the future pose a long-term threat and the consequences for ringed seals will manifest themselves over the next several decades (77 FR 76718; December 28, 2012). Therefore, we conclude that the petition does not present new information on the worldwide or Alaska-specific abundance of this species.

As noted above regarding ringed seal population health, the petition cites a study by Crawford *et al.* (2015) that analyzed data collected from the Alaska Native subsistence harvest to support the assertions in the petition that ringed seals in the Bering and Chukchi Seas have not exhibited declines in body condition, growth, or pregnancy rate, and the age at maturity is younger than in previous decades, and that these observations are all indications of a positive response to environmental conditions. The petition also references Bryan *et al.* (2019), who analyzed data from the same harvest monitoring program collected through 2016. We considered and addressed similar assertions in the final listing rule in reference to a report by Quakenbush *et al.* (2011) that included data from the same Alaska Native subsistence harvest monitoring program collected through 2010. The authors concluded in that report that data from the most recent decade indicated ringed seals were growing faster, had average blubber thickness, were maturing at the youngest age to date, and had the second highest pregnancy rate to date. The authors stated that these factors indicated environmental conditions were currently as favorable (or better) than they were in the 1960s or 1970s (the authors did not comment on the 1980s and 1990s because they had little data for those decades). As we explained

in the final listing rule in response to comments received related to the report by Quakenbush *et al.* (2011), healthy individual animals are not inconsistent with a population facing threats that would cause it to become in danger of extinction in the foreseeable future. In the case of ringed seals, substantial losses due to predation and hypothermia associated with reduced snow cover could not be detected by assessing the health of survivors. In fact, survivors might be expected to fare well for a period of time as a consequence of reduced competition (77 FR 76720; December 28, 2012). We also noted in response to a similar comment received regarding observed Arctic sea ice changes relative to effects on ringed seals that indices of condition, such as those indices reported by Quakenbush *et al.* (2011), are available for only a limited portion of the Arctic ringed seal's range, and would not be expected to reflect certain detrimental effects, such as an increase in pup mortality by predation (77 FR 76729; December 28, 2012).

As noted above, the study by Crawford *et al.* (2015) cited in the petition is an update to the report by Quakenbush *et al.* (2011) based on data collected through 2012, and includes analyses that were not presented in the 2011 report, such as comparisons of ringed seal growth measurements with annual variations in sea ice area. Also, Bryan *et al.* (2019) updated several of the demographic parameters analyzed in those studies based on data collected through 2016. However, for the reasons discussed below, we conclude that the updates and new analyses cited in the petition do not constitute new information or new analysis that is inconsistent with the analysis in the final listing rule.

Crawford *et al.* (2015) reviewed published reports on responses of ringed seal demographic indicators (*e.g.*, age of maturation, recruitment, and proportion of pups in the harvest) to interannual variation in sea ice. Although the discussion of this information in Crawford *et al.* (2015) focused on negative effects on ringed seal demography in relatively cold years of extensive spring sea ice (which were also

discussed in the Status Review Report), the authors also indicated that their data suggested there might be an optimal amount of spring ice for ice seals, noting that while the residual growth of ringed seals increased as the area of sea ice decreased, this trend began to reverse as the area of sea ice approached zero. The authors discussed that Chambellant *et al.* (2012), a publication previously considered in our listing determination for the Arctic ringed seal, found similar patterns in the way that the proportion of ringed seal pups in the fall harvest, pup body condition, and adult female body condition varied over the observed range of maximum snow depth for February–May and the ice break-up date. These findings have been explained based on expectations that very cold years are likely to be characterized by late break-up of sea ice and short open-water periods that could result in shorter foraging seasons, lower prey productivity, and longer periods of on-ice predation by polar bears and foxes (*e.g.*, Chambellant *et al.*, 2012). Warmer years that are around the long-term average to which ringed seals have adapted would be expected to have more suitable foraging season length, productivity of prey, and predation pressure. However, the observed changes in sea ice extent and duration cited in the petition are minor compared to the changes that are projected to occur later in this century. As explained in the final listing rule and the Status Review Report, earlier warming and break-up of ice and inadequate snow for lairs are expected to lead to poor survival of young seals and cause consequent demographic impacts within the foreseeable future (77 FR 76710, 76714–76716, 76721; December 28, 2012). Thus, we conclude that the above information does not constitute new information not previously considered or new analysis concerning the Arctic ringed seal’s likely response to Arctic warming within the foreseeable future.

The petition also cites Crawford *et al.* (2015) in claiming that the proportion of pups occurring in the harvest is high, and that these studies provide an index for assessing pup survival in changing sea-ice conditions that demonstrates pups are surviving to

weaning in current ice and snow conditions. Similarly, Bryan *et al.* (2019) reported that the proportion of pups in the harvest since 2000 was high based on data from the same harvest-based sampling program collected through 2016. However, high proportions of pups in the harvest during the 2000s were also evident in the report by Quakenbush *et al.* (2011), which was considered in the final listing rule, and as explained above, included data through 2010. Thus, this information is not materially new.

The assertion that pup survival and the proportion of pups in the population is high in current snow and ice conditions is based on the comparison in Crawford *et al.* (2015) of the proportion of pups in the Alaska Native subsistence harvest sampled between two time periods: a historical period from 1975–1984 and a recent period from 2003–2012, which had fewer years with extensive May sea ice in the Bering Sea. The petition also references Bryan *et al.* (2019), who similarly reported that the proportion of pups in the harvest in the 2000s and 2010s was high based on data collected through 2016. Because Crawford *et al.* (2012) numerically summarized the proportions of pups harvested, we focus our discussion on those data. Although the overall average proportion of pups in the harvest, 27.4 percent, was within a reasonable range for the population proportion of pups in a species with the life-history characteristics of ringed seals (high adult survival and only one offspring per mature female annually), the average proportion of pups in the harvest during 2003–2012, 51.1 percent, cannot be representative of the actual proportion of pups in the population, as we explained above. Typically, for a long-lived species that produces single offspring annually, the proportion of pups in the population just after the birth season will not be greater than about 33 percent, as would occur if all mature females give birth and the number of mature females is equal to the number of males plus immature females. Pup proportions substantially higher than 33 percent would indicate substantial perturbation to the age and/or sex composition, such as very high male mortality leading to low numbers of



males in the population; values approaching 50 percent would require extreme perturbation. This indicates that the index used by Crawford *et al.* (2015) (and similarly by Bryan *et al.*, 2019) is biased in some way, perhaps differently between the two periods, and may not be a reliable measure of pup survival.

Moreover, there are problems with the petition's characterization of the historical (1975–1984), recent (2003–2012), and current periods analyzed by Crawford *et al.* (2015)—it is not clear that the recent period was significantly warmer or lower in sea ice than the historical period. In March–May, when ringed seal pupping and nursing are concentrated, there was not very much difference between these two time periods in the mean sea ice extent in the Bering Sea for May, and there was considerable overlap in the range of sea ice extents (Crawford *et al.*, 2015, Fig. 10). The recent period, which ended in 2012 with very high May ice extent in the Bering Sea (National Snow and Ice Data Center (NSIDC), 2012), was certainly not an analog for the warm conditions expected later in this century, and this is also the case with respect to the updated information reported by Bryan *et al.* (2019).

Based primarily on the study by Crawford *et al.* (2015) discussed above, the petition concludes that: (1) The 2012 listing decision was based on erroneous assumptions because there is no direct correlation between observed habitat declines and detrimental effects on the health of Arctic the ringed seal population; and (2) ringed seals have greater resilience to environmental changes than anticipated. The information reported by Crawford *et al.* (2015) and Bryan *et al.* (2019) is useful in documenting an apparent optimum range of climatic conditions for ringed seal condition and reproduction, consistent with several other studies that have made similar findings. However, as explained above, this information updates the report by Quakenbush *et al.* (2011), which was cited and considered in the final listing rule, and it does not present substantial new information or a new analysis that might alter the conclusions of our

2012 listing determination regarding the Arctic ringed seal's likely response to Arctic warming within the foreseeable future. Thus, the "observed habitat declines" discussed in the petition do not represent the magnitude of anticipated 21st century warming, loss of sea ice, and reduced on-ice snow depths that were the primary concern in listing the Arctic ringed seal. The correlation between habitat declines and detrimental effects on Arctic ringed seals was expected to manifest over a much more extreme range of conditions than was addressed in the updated information that the petition cites.

The petition also claims that, although, in some areas of the Bering Sea, snow depths are currently assumed to be insufficient for ringed seal lair formation and therefore pup survival, observations indicate ringed seals in the Kotzebue Sound region may sometimes give birth on the surface of the sea ice. But the petition does not provide any supporting documentation for these observations as required by 50 CFR 424.14(c)(5)–(6) and 424.14(h)(1)(ii) and does not present information regarding the survival of any such pups. As we explained in the final listing rule, substantial data indicate survival of prematurely exposed pups tends to be low due to hypothermia and predation (77 FR 76709–76710, 76724; December 28, 2012).

According to the petition, new information since the final listing rule was issued also indicates that the waters of the Arctic and adjacent seas remain vulnerable to ocean acidification. However, the petition asserts that there is a significant degree of uncertainty regarding the impacts of ocean acidification on Arctic ringed seals and other species, and the magnitude of any potential impacts on the species at issue—or their responses—is unknown. In support of this assertion, the petition quotes an excerpt from the "Final Species Status Assessment for the Pacific Walrus" (MacCracken *et al.*, 2017) that cites two publications (Bates and Mathis, 2009; Steinacher *et al.*, 2009) referenced in the Status Review Report, as well as three other publications (Cai *et al.*, 2010; Mathis *et al.*, 2015; Qi *et al.*, 2017), two of which became available after the Arctic ringed seal was

listed as threatened. This excerpt, which discusses factors that contribute to uncertainty regarding the potential impacts of ocean acidification on Pacific walrus prey, is largely in agreement with the information compiled in the Status Review Report and the reasoning and conclusions made in our listing determination for the Arctic ringed seal. However, we note that the Status Review Report also reviewed substantial information indicating ocean acidification's potential to disrupt marine ecosystems and food webs, including cascading effects.

We concluded in the final listing rule that Arctic ringed seals will face an increasing degree of habitat modification through the foreseeable future, primarily as a result of the direct effects of diminishing sea ice and on-ice snow, but also from changes in ocean conditions, including acidification; and we explained that the impact of ocean warming and acidification on ringed seals was expected to be primarily through changes in community composition (77 FR 76711; December 28, 2012). Citing diet information reported by Quakenbush *et al.* (2011) and Crawford *et al.* (2015) for ringed seals in Alaska, the petition also asserts that the breadth of the ringed seal's diet increases the likelihood that the species will be resilient to changing environmental conditions and potential shifts in prey populations, which will moderate any impacts associated with ocean acidification. However, the breadth of the Arctic ringed seal's diet was well documented in the Status Review Report, and the report by Quakenbush *et al.* (2011) was considered directly in the final listing rule. The study by Crawford *et al.* (2015) which reported updated results from the same harvest-based sampling program as Quakenbush *et al.* (2011), simply provides additional evidence of the wide variety of prey consumed by these seals. After reviewing the information presented in the petition, we conclude that the petition does not present substantial new information or a new analysis inconsistent with the analysis of the potential for ocean acidification to impact Arctic ringed seals contained in the final listing rule.

In summary, we conclude that the petition does not present substantial new information or new analysis of information considered in the final listing rule regarding this ESA section 4(a)(1) factor that would support a conclusion delisting may be warranted.

#### Factor B: Overutilization for Commercial, Recreational, Scientific, or Educational Purposes

According to the petition, a recent analysis by Nelson *et al.* (2019) for 55 villages in western and northern Alaska estimated that subsistence harvest is well below the sustainable harvest level for Arctic ringed seals in U.S. waters, which is consistent with our conclusion in the final listing rule that there is no evidence that overutilization of ringed seals is occurring at present (77 FR 76711; December 28, 2012). Thus, we conclude that the petition does not present substantial new information or new analysis of information considered in the final listing rule regarding this ESA section 4(a)(1) factor.

#### Factor C: Disease or Predation

According to the petition, there is no current evidence that disease is a threat to the species. In the final listing rule we similarly concluded that abiotic and biotic changes to ringed seal habitat potentially could lead to exposure to new pathogens or new levels of virulence, but concluded that the potential threats to ringed seals from disease was low (77 FR 76711; December 28, 2012). We also concluded in the final listing rule that the threat posed to ringed seals by predation was currently moderate, but predation risk was expected to increase as snow and sea ice conditions change with a warming climate (77 FR 76711; December 28, 2012). The petition asserts that there is no information indicating a future increase in the likelihood or severity of ringed seal predation, and therefore, predation does not pose a threat to the Arctic ringed seal. However, the petition does not provide any supporting documentation for these assertions as required by 50 CFR 424.14(c)(5)–(6) and 424.14(h)(1)(ii)). The Status Review Report discussed

substantial data indicating high ringed seal pup mortality as a consequence of inadequate snow depths for lairs. For example, we noted in the final listing rule that Hammill and Smith (1991) found that polar bear predation on ringed seal pups increased 4-fold in a year when average snow depths in their study area decreased from 23 cm to 10 cm. They concluded that while a high proportion of pups born each year are lost to predation, without the protection provided by the subnivean lair, pup mortality (from polar bears) would be much higher (77 FR 76711; December 28, 2012). In summary, we conclude that the petition does not present substantial new information or new analysis of information considered in the final listing rule regarding this ESA section 4(a)(1) factor.

#### Factor D: The Inadequacy of Existing Regulatory Mechanisms

Under this factor, in the final listing rule, we evaluated whether existing regulatory mechanisms may be inadequate to address threats to the species identified under the other ESA section 4(a)(1) factors. We concluded that current mechanisms do not effectively regulate GHG emissions, which are contributing to global climate change and associated modifications to ringed seal habitat (77 FR 76712; December 28, 2012). The petition asserts that since the final listing rule was published there have been significant new efforts to address GHGs and climate change at both international and domestic levels, and as a result the potential climate-based threats to the Arctic ringed seal that were identified at the time of listing have been reduced. To support these claims, the petition notes that for example, the Paris Agreement to address global GHG emissions was ratified and entered into force in November 2016. However, the petition does not provide any evidence that the goals of the Paris Agreement will be met, and on November 4, 2019, the U.S. Secretary of State submitted formal notification to the United Nations of United States' intent to withdraw from the Paris Agreement (<https://www.state.gov/on-the-u-s-withdrawal-from-the-paris-agreement/>).

In addition, according to the petition, domestically, a wide range of policies have

been adopted at the state and regional levels to reduce GHGs and, to date, twenty states and the District of Columbia have adopted GHG emissions targets. Such state and regional measures may represent policies that could be applied at a national or international level in the future, but we find that this is not substantially new information, because it does not change the overall conclusion in the final listing rule that current mechanisms do not effectively regulate GHG emissions, which are contributing to global climate change and associated modifications to ringed seal habitat (77 FR 76712; December 28, 2012). In the final listing rule, we expressly acknowledged in response to comments on our assessment of existing regulatory mechanisms in the proposed listing determination that there is some progress addressing anthropogenic GHG emissions (77 FR 76734; December 28, 2012). As such, we conclude that the petition does not present substantial new information or new analysis of the information considered in the final listing rule regarding this ESA section 4(a)(1) factor.

#### Factor E: Other Natural or Manmade Factors Affecting Its Continued Existence

We concluded in the final listing rule that the threats posed by pollutants, oil and gas activities, fisheries, and shipping do not individually or collectively place Arctic ringed seals at risk of becoming endangered in the foreseeable future. We recognized, however, that the significance of these threats would likely increase for populations diminished by the effects of climate change or other threats (77 FR 76714; December 28, 2012). The petition asserts that there is no information indicating that any of these factors constitute a threat to this species. Related to this, the petition notes that in 2017, nine countries and the European Union agreed not to conduct commercial fishing in the Central Arctic Ocean for at least the next 16 years. We are aware of this agreement, and note that the United States made a similar commitment in 2009 (prior to issuance of the final listing rule) and prohibited commercial fishing in the Arctic portion of the U.S. Exclusive Economic Zone. Thus, we do not believe this represents substantial new

information regarding this ESA section 4(a)(1) factor.

### **Petition Finding**

We thoroughly reviewed the information presented in the petition, and found that this information largely reiterates previous arguments expressed in comments received regarding the proposed listing determination for the Arctic ringed seal that were addressed in the final listing rule. The petition does not present substantial new information or new analysis indicating that the scientific and commercial data considered in our listing determination, or the analytic methodology used in the determination, were in error. Therefore, we find that the petition does not present substantial scientific or commercial information indicating that the petitioned action may be warranted. Nevertheless, as stated above, we are separately initiating a review of the status of the Arctic ringed seal pursuant to 16 U.S.C. 1533(c)(2), including whether the best scientific and commercial data available indicate delisting is warranted.

### **References Cited**

A complete list of all references is available upon request from the Protected Resources Division of the NMFS Alaska Region Office in Juneau, Alaska (see ADDRESSES).

**Authority:** The authority for this action is the Endangered Species Act of 1973, as amended (16 U.S.C. 1531 *et seq.*).

Dated: November 23, 2020.

**Samuel D. Rauch III,**

*Deputy Assistant Administrator for Regulatory Programs,  
National Marine Fisheries Service.*

