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IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF ALASKA

CENTER FOR BIOLOGICAL DIVERSITY, Plaintiff, v. DAVID BERNHARDT[1], *et al*., Defendants.	Case No. 3:18-cv-00064-SLG

MEMORANDUM IN SUPPORT OF PLAINTIFF'S MOTION FOR SUMMARY JUDGMENT

[1] David Bernhardt, Acting Secretary of the United States Department of the Interior, is automatically substituted for his predecessor in office pursuant to Federal Rule of Civil Procedure 25(d).

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INTRODUCTION

The Pacific walrus is an ice-dependent species. Walruses require sea ice as a platform for courtship, giving birth, nursing calves, and resting between foraging bouts, among other essential life functions. Sea ice also provides isolation from terrestrial predators and proximity to food resources over the continental shelf. The Pacific walrus's Arctic sea ice habitat is rapidly disappearing in the face of climate change. In recognition of this considerable threat, the U.S. Fish and Wildlife Service ("Service") found in 2011 that the species merited listing under the Endangered Species Act ("ESA").

Yet six years later, a new administration abruptly changed course, determining that listing the species was not warranted, despite a wealth of scientific information demonstrating the imperiled status of the population. The Service's decision to deny the walrus protection under the ESA is unlawful for four primary reasons.

First, the Service failed to provide the requisite explanation for its reversal. In fact, the Service's 2017 Finding does not discuss its 2011 decision at all. Such failure is especially glaring here where the case for listing the walrus has only grown stronger since 2011, with Arctic sea ice extent hitting numerous record lows; the continued disappearance of summer sea ice from the walrus's foraging grounds in the Chukchi Sea; and new studies, widely regarded as the best available climate change science, projecting the dramatic loss of the walrus's sea ice habitat through at least the end of the century.

Second, the Service arbitrarily defined the "foreseeable future" for determining the walrus's risk of extinction from climate change as 2060 by claiming impacts beyond 2060 are uncertain. The Service's approach is contrary to the best available climate

science that projects impacts through 2100, contrary to its own 2011 decision in which it analyzed threats to the walrus from climate change through 2100, and contrary to law. As the Ninth Circuit has repeatedly affirmed, the ESA requires reliance on the best *available* science, not certainty. *See* 16 U.S.C. § 1533(b)(1)(A). As such, the Service cannot simply point to uncertainty to deny the walrus protection under the ESA. *Ctr. for Biol. Div. v. Zinke*, 900 F.3d 1053, 1072–73 (9th Cir. 2018). Yet that is precisely what the Service did.

Third, the Service reached unfounded conclusions contrary to the available evidence. For example, the Service concluded that the walrus could adapt to the massive, unprecedented changes to its habitat. But the Service had no evidence to support this conclusion. Indeed, the available evidence indicates that the loss of the walrus's sea ice habitat will cause increased mortality, prey depletion, and energetic costs that will lead to a substantial population decline. It was exactly these threats that the Service determined warranted listing the walrus in 2011.

Finally, the Service treated scientific uncertainty differently with no explanation for the disparate treatment. The Service relied on information it deemed uncertain when that information supported the Service's decision not to list the walrus and dismissed other information as uncertain when that information supported listing the walrus. This unexplained, inconsistent approach is the hallmark of improper agency decisionmaking.

Each of these deficiencies is arbitrary, capricious, and in violation of the ESA and basic tenets of administrative law. Taken as a whole, these deficiencies suggest that the Service made a politically-driven determination to deny protections for the Pacific walrus and misconstrued or ignored the science and the facts to support its predetermined

outcome. The ESA expressly forbids this type of decisionmaking. *See* 16 U.S.C. § 1533(b)(1)(A) (mandating the Service make listing decisions "solely on the basis of the best scientific . . . data available"). Accordingly, this Court should vacate the Service's 2017 Finding and remand the matter to the Service for a rational determination regarding the need to protect Pacific walruses under the ESA.

FACTUAL BACKGROUND

I. The Pacific Walrus in a Warming Arctic

A. Pacific Walruses Depend on Sea Ice for their Essential Life Functions

The Pacific walrus is a subspecies of walrus that lives in the Bering and Chukchi Seas off Alaska and Russia. 76 Fed. Reg. 7634, 7635 (Feb. 10, 2011). The Pacific walrus undergoes a seasonal migration between the Bering and Chukchi Seas that is strongly coupled with the distribution of the sea ice. *Id*. at 7635; PW0010533–34, PW0010538, PW0029203.[1] The entire population spends the winter in the Bering Sea, and almost all females and young walruses, along with many males, spend the summer in the Chukchi Sea. PW0010627, PW0000409, PW0029203. Walruses require sea ice for courtship, giving birth, nursing calves, molting, for resting between foraging trips to the seafloor, and as passive transport to new foraging areas. 76 Fed. Reg. at 7637; PW0010553–54.

Sea ice provides an essential platform for the Pacific walrus's reproductive activities including courtship, birthing, and nursing. Sea ice serves to aggregate females and males on ice floes for the winter breeding season, which allow males to compete for mates and monopolize access to groups of females. 76 Fed. Reg. at 7635, 7644. Pacific

[1] Documents in the administrative record are cited with the Bates'-stamp number.

walruses typically give birth to a single calf on the sea ice in the Bering Sea in May. PW0010555. Calves feed almost exclusively on their mother's milk for the first year, and some calves may nurse for another two years. PW0002301, PW0010537.

Sea ice provides several advantages that influence calf survival. Sea ice allows walruses to avoid excessive predation on their young. 76 Fed. Reg. at 7637; PW0029476. The sea ice also provides a safe, dry platform for nursing during the long lactation period. PW0010555. And it provides a critical platform for calves to rest while their mothers feed along the long migratory route between the Bering and Chukchi Sea. PW0010560.

Pacific walruses are restricted to the shallow waters of the continental shelf where their benthic prey, primarily clams and other animals that live on the seafloor, is abundant and where they can reach the bottom while diving for food. 76 Fed. Reg. at 7636; PW0010528. Sea ice provides essential resting platforms between foraging trips. *Id*. Additionally, as walruses follow the edge of the sea ice throughout the year, the sea ice acts as a floating conveyer belt between the Bering and Chukchi Seas that keeps walruses over the shallow, productive continental shelf waters and continually transports them to new foraging grounds. PW0006783, PW0017923.

B. Climate Change Is Destroying Walruses' Arctic Sea Ice Habitat

The best available scientific data show that the walrus's sea ice habitat is disappearing. The Arctic is warming at a rate twice as fast as the global average. 76 Fed. Reg. at 7640. Arctic sea ice extent is decreasing, ice is thinning, and thick, multiyear ice is covering less of the Arctic Ocean. *Id*. In addition, sea ice is melting earlier in spring

and forming later in fall, and the Arctic is absorbing more solar energy as a result, which further accelerates sea ice loss. *Id*.

The Chukchi Sea is experiencing some of the most dramatic losses, with essentially ice-free conditions in summer. PW0019827. For example, between August and October 2012, sea ice concentration in the Chukchi Sea between 70 and 80°N fell below 20%, with a record minimum concentration of *only 5%* on September 2, 2012. *Id.*

The best available scientific data show that sea ice loss will continue, and likely accelerate, through at least the end of the century. The Intergovernmental Panel on Climate Change ("IPCC"), the foremost world authority on climate change, has developed climate change and sea ice loss projections through 2100. The models all forecast substantial losses of the Pacific walrus's sea ice habitat. Under a business-as-usual scenario, the models project *a 96% decline* in sea ice in the U.S. Chukchi Sea and *an 82% decline* in the Russian Chukchi Sea in the summer and fall by 2060. PW0000635. The models project that, under the business-as-usual emissions scenario, sea ice habitat in the entire Chukchi Sea in the summer and fall will *disappear* by 2100. *Id*.

As climate warming continues, scientists anticipate that sea ice habitat in the Bering Sea will follow a pattern of decline similar to the Chukchi Sea. Under the business-as-usual emissions scenario, the IPCC models show that spring sea ice in the U.S. Bering Sea will *decrease by 69%* by 2060 and that spring sea ice in the Russian Bering Sea will *decrease by 43%* by 2060. *Id.* By 2100, the models project that spring sea ice in the Bering Sea will be nearly non-existent, *declining by 96%* in the U.S. Bering Sea and *93%* in the Russian Bering Sea. *Id*. Also by 2100, winter sea ice in the U.S. Bering

Sea is projected to *decline by 92%* and *87%* in the Russian Bering Sea. *Id*.

II. The Center's Petition to List the Walrus and the Service's 2011 Finding that Listing the Walrus Was Warranted

In February 2008, Plaintiff Center for Biological Diversity ("Center") petitioned the Service to list the Pacific walrus as a threatened or endangered species because of the considerable threats to the species from climate change, and the loss of its sea ice habitat in particular. 76 Fed. Reg. at 7634. On February 10, 2011, the Service issued a 12-month finding determining that listing the Pacific walrus was warranted ("2011 Finding"). In reaching this decision, the Service analyzed the threats from habitat loss through 2100 because the best available science supported that timeframe. 76 Fed. Reg. at 7641–44.

The Service acknowledged that substantial declines in Bering and Chukchi sea ice extent are projected for all months by late century. *Id.* at 7643. For the Chukchi Sea, the Service noted that the models project a two-month ice free season by mid-century and a four-month ice free season by 2100, centered around the month of September; and that some models show up to five months of no sea ice in the Chukchi Sea by 2100. *Id*.

The Service then found that such losses will make walruses increasingly dependent on coastal haulouts, which will increase threats to walruses in numerous ways. For example, the Service determined that increased dependence on coastal haulouts will cause localized prey depletion; increased energetic costs to reach prey, resulting in decreased body condition; calf abandonment; increased mortality from stampedes, especially to females, juveniles, and calves; and increased exposure to predation and hunting. 76 Fed. Reg. at 7646–49. The Service concluded that these threats are of

sufficient imminence, intensity, and magnitude to cause substantial losses of walrus abundance, and consequently, that the destruction, modification, and curtailment of summer and fall sea ice habitat from climate change threatens the Pacific walrus. *Id.* at 7674. However, the Service concluded that listing the species was precluded by other listing priorities, and added the Pacific walrus to the list of candidate species. *Id.* at 7634.

III. The Service's 2017 Reversal that Listing the Walrus Was Not Warranted

In its 2017 Finding, the Service abruptly reversed its 2011 Finding, and concluded that the Pacific walrus did not warrant ESA-listing. 82 Fed. Reg. 46618, 46644 (Oct. 5, 2017). Like its 2011 Finding, the Service found that the primary threat to the Pacific walrus is the loss of sea ice caused by climate change. *Id*. But, unlike its 2011 Finding, the Service defined the foreseeable future as 2060, claiming without explanation that climate change threats to walrus are not based on reliable prediction beyond 2060. *Id*.

The Service determined that sea ice loss will expose all individuals, especially calves, juveniles, and females, to increased stress levels from depletion of prey, increased energetic costs to obtain prey, trampling injuries and mortalities, and predation. PW0000435, PW0000470. The Service further found that some of these stressors are currently acting on the population; and that such stressors will increase over time as more extensive sea-ice loss occurs, causing a decline in the Pacific walrus population for the foreseeable future. PW0000400. Yet, unlike its 2011 Finding, the Service determined that the walrus should not be listed under the ESA because the magnitude of the threat of increased use of land habitat was uncertain given walrus's ability to adapt to greater uses of land. 82 Fed. Reg. at 76644.

LEGAL BACKGROUND

The ESA is "the most comprehensive legislation for the preservation of endangered species ever enacted by any nation." *Tenn. Valley Auth. v. Hill*, 437 U.S. 153, 180 (1978). It represents a commitment "to halt and reverse the trend toward species extinction, whatever the cost." *Id.* at 184; *see also* 16 U.S.C. § 1531(a)(1).

Under the ESA, the Service is charged with determining whether particular species should be listed as "threatened" or "endangered." 16 U.S.C. § 1533.[2] An endangered species is "any species which is in danger of extinction throughout all or a significant portion of its range." *Id*. § 1532(6). A threatened species is "any species which is likely to become an endangered species within the foreseeable future throughout all or a significant portion of its range." *Id*. § 1532(20). Once a species is listed under the ESA, a number of protections kick in, including requirements for consultation to ensure federal actions do not harm the species, *id*. § 1536(a)(2), critical habitat designation to protect the species' most important habitat, *id*. § 1533(a)(3)(A), and recovery planning. *Id*. § 1533(f).

In making a listing decision, the Service must evaluate five factors: "(a) the present or threatened destruction, modification, or curtailment of [a species'] habitat or range; (b) overutilization for commercial, recreational, scientific, or educational purposes; (c) disease or predation; (d) the inadequacy of existing regulatory mechanisms; or (e) other natural or manmade factors affecting [the species'] continued existence." 16 U.S.C. § 1533(a)(1). The Service *must* list a species imperiled by one or more factors. *Id.*

[2] The Secretary of the U.S. Department of the Interior has delegated its statutory authority to implement the ESA to the Service. *See* 50 C.F.R. § 402.01(b).

The Service must base its listing decision "solely on the best scientific and commercial data available." *Id.* § 1533(b)(1)(A). To comply with this requirement, the Service "cannot ignore available biological information." *Conner v. Burford*, 848 F.2d 1441, 1454 (9th Cir. 1988). Courts have consistently held that "[t]he ESA does not require [the Service] to make listing decisions only if underlying research is ironclad and absolute." *Alaska Oil & Gas Ass'n v. Pritzker*, 840 F.3d 671, 680 (9th Cir. 2016) ("*AOGA*"). Requiring use of the best available science, as opposed to scientific certainty, "is in keeping with congressional intent" that the Service "take preventative measures *before* a species is 'conclusively' headed for extinction." *Defenders of Wildlife v. Babbitt*, 958 F. Supp. 670, 679–80 (D.D.C. 1997).

STANDARD OF REVIEW

The Service's decision not to list a species under the ESA is reviewed under the Administrative Procedure Act ("APA"). 5 U.S.C. § 706. Under the APA, a reviewing court "shall" set aside agency actions, findings, or conclusions that are "arbitrary, capricious, an abuse of discretion, or otherwise not in accordance with law." *Japanese Vill., LLC v. Fed. Transit Admin.*, 843 F.3d 445, 453 (9th Cir. 2016) (quoting 5 U.S.C. § 706(2)(A)). In conducting this review, the Court's job is to "ensure that the agency considered the relevant factors and articulated a rational connection between the facts found and the choices made." *Nw. Ecosystem All. v. U.S. Fish & Wildlife Serv.*, 475 F.3d 1136, 1140 (9th Cir. 2007)). Although this standard of review is narrow, it demands that this Court conduct a "searching and careful" review. *Japanese Vill., LLC*, 843 F.3d at 453–54 (quoting *Marsh v. Or. Nat. Res. Council*, 490 U.S. 360, 378 (1989)).

Even where an agency with "technical expertise" acts "within its area of competence," the Court "need not defer to the agency when the agency's decision is without substantial basis in fact." *Ariz. Cattle Growers' Ass'n v. Salazar*, 606 F.3d 1160, 1163 (9th Cir. 2010). Further, an agency must provide a "reasoned explanation" for its reliance on factual findings that contradict earlier findings by the agency. *FCC v. Fox Television Stations, Inc*, 556 U.S. 502, 515 (2009).

ARGUMENT

The Service's decision not to list the Pacific walrus violates the ESA and fundamental principles of administrative law. The record demonstrates that the agency committed several legal blunders. In particular, the Service failed to explain its change in position from its 2011 Finding that listing the walrus was warranted; used an arbitrarily truncated foreseeable future analysis; reached illogical, unfounded conclusions contrary to the evidence before the agency; and improperly treated scientific uncertainty differently depending on whether that uncertainty supported the agency's decision to deny the walrus ESA protections. Each of these faults renders the agency's decision fatally flawed and requires vacatur of the agency's unlawful decision and a remand for a rational determination regarding the need to protect Pacific walruses under the ESA.

I. The Service's 2017 Decision Is Arbitrary and Capricious Because it Fails to Explain the Service's Change in Position from its 2011 Finding that the Pacific Walrus Warranted Listing Under the ESA

An agency cannot abdicate a prior determination without, at the very least, providing a rationale for the about-face. *Fox Television*, 556 U.S. at 515. Here, the Service determined in 2011 that listing the Pacific walrus was warranted because climate

change would destroy the sea ice habitat the species needs to survive within the foreseeable future. 76 Fed. Reg. at 7642. Six years later a new administration reversed course without explanation, concluding that while sea ice would decline as a result of climate change, the loss of the walrus's sea ice habitat would not put the species in danger of extinction. 82 Fed. Reg. at 46642–44. As a matter of law, the Service's failure to explain its change in position renders the 2017 Finding arbitrary and capricious.

A. Agencies Must Acknowledge Changes in Position and Provide a Reasoned Explanation for the Change

It is bedrock of administrative law that when the government changes position, it must explain the reasons why. *Motor Vehicle Mfrs. Ass'n v. State Farm Mut. Auto. Ins. Co.*, 463 U.S. 29, 42 (1983) ("an agency changing its course . . .is obligated to supply a reasoned analysis for the change"); *Organized Village of Kake v. Dep't of Agric.*, 795 F.3d 956, 966 (9th Cir. 2015) (discussing APA requirements for a change of agency policy and emphasizing "that a policy change violates the APA if the agency ignores or countermands its earlier factual findings without reasoned explanation for doing so.") (internal quotation omitted). The Supreme Court has said, in considering an agency's decision to change its position, "[i]f Congress established a presumption from which judicial review should start, that presumption . . . is . . . *against* changes in current policy that are not justified by the rulemaking record." *State Farm*, 463 U.S. at 42.

Further, the Service may not silently reverse course; federal courts explicitly prohibit such conduct. "[T]he requirement that an agency provide reasoned explanation for its action would ordinarily demand that it display awareness that it *is* changing

position. An agency may not . . . depart from a prior policy *sub silentio* or simply disregard rules that are still on the books." *Fox Television*, 556 U.S. at 51; *see also Alphonsus v. Holder*, 705 F.3d 1031, 1046 (9th Cir. 2013) ("[To change course], an agency must acknowledge that it is indeed changing course, and . . . provide a reasoned explanation for its change of course.").

The Ninth Circuit recently reaffirmed this principle in the ESA listing context when it struck down the Service's conclusion that the Arctic grayling did not merit ESA protections after previously finding protections warranted. *Ctr. for Biol. Div. v. Zinke*, 900 F.3d at 1070 ("*CBD v. Zinke*") ("Because the 2010 Finding indicated that listing the arctic grayling was warranted . . . the 2014 Finding was required to provide a reasoned explanation for FWS's change in position."). The court emphasized that when an agency changes a policy based on factual findings that contradict those on which a prior policy was based, an agency must provide a "reasoned explanation . . . for disregarding facts and circumstances that underlay or were engendered by the prior policy." *Id.* (quoting *Fox Television*, 556 U.S. at 515–16). Just as the Service's failure to explain its reversal in the listing of the Arctic grayling rendered that finding invalid, *see id.*, the Service's failure to explain its change in position regarding the walrus renders the 2017 Finding unlawful.

B. The Service's Failure to Explain its Change in Position Makes the 2017 Finding Invalid

The Service found the Pacific walrus warranted ESA protections in 2011, yet reversed course six years later, determining in 2017 that listing under the ESA was not warranted. This abrupt reversal was not accompanied by any acknowledgment from the

Service that it was, in fact, changing course, nor by an explanation of how the scientific rationale that underpinned the 2011 warranted determination was no longer valid. The Service's failure to provide a reasoned explanation for its actions is arbitrary and capricious and in violation of the APA.

In its 2011 Finding, the Service concluded that climate change would destroy the sea ice habitat the species needs to survive within the foreseeable future. 76 Fed. Reg. at 7634. As an "ice dependent species," the Service found that because the Chukchi Sea is projected to be ice-free in September every year by mid-century, the Pacific walrus would experience a population decline and be "forced to rely on terrestrial haulouts to an increasingly greater extent." *Id.* at 7672. Use of coastal haulouts by Pacific walrus of both sexes and all ages would "expose all individuals, but especially calves, juveniles, and females, to increased levels of stress from depletion of prey, increased energetic costs to obtain prey, trampling injuries and mortalities, and predation." *Id.* While some of these stressors currently affect the population, the Service found that "their magnitude will increase over time as sea-ice loss over the continental shelf occurs regularly and more extensively. Given this persistent and increasing threat of sea-ice loss . . . this anticipated Pacific walrus population decline will continue into the foreseeable future." *Id.*

Apart from stating in the procedural history section that the Service made a warranted determination in 2011, the 2017 Finding does not acknowledge the 2011 warranted determination at all. Thus, it cannot possibly offer an adequate explanation for the Service's change in position. *Nat'l Cable & Telecomms. Ass'n v. Brand X Internet Servs.*, 545 U.S. 967, 981 (2005) ("Unexplained [agency] inconsistency is . . . a reason

for holding an interpretation to be an arbitrary and capricious change from agency practice under the Administrative Procedure Act."). The agency cannot ignore its prior finding and dodge its obligations to provide a reasoned analysis for its change in position.

As detailed above, an agency may not change position without explicitly acknowledging its changing position and providing a rational explanation. The Service here failed to meet this basic requirement. To the extent that the Service relies upon the 2017 Finding to *implicitly* provide the requisite justification, its explanation is inadequate and fails to rely upon the best available science.

For example, as detailed further in Section III.A, the Service states that while Arctic sea ice will disappear in the foreseeable future, walruses may adapt to coastal haulouts. 82 Fed. Reg. at 46643. This justification contradicts the Service's own conclusions in the Status Assessment, where the Service itself acknowledged that increased use of land will result in increased mortality, energetic stress, and prey depletion. *See, e.g.*, PW0000435, PW0000470. It was precisely these threats that the Service determined warranted listing the walrus in 2011; the Service points to no new scientific evidence suggesting walruses will be able to adapt to an ice-free environment.[3]

C. The Service Ignored Science Demonstrating that the Threat from Loss of Sea Ice Habitat Has Increased Since 2011

The Service's failure to explain its change in position is particularly striking considering the science supporting the walrus listing has only grown stronger since its

[3] The 2017 Finding also fails to adequately support the claim that subsistence harvest (identified as a major threat in the 2011 Finding) is no longer a concern to the species. *See infra* p. 33.

2011 Finding. The Center summarized the best available science published since 2011 in extensive comments submitted to the Service in 2016. PW0000231–58. As summarized in the letter, "[s]ince 2011, the primary threats to the Pacific walrus have only worsened, particularly the rapid loss of essential sea ice habitat and ocean acidification, putting the walrus in further jeopardy." PW0000231; *see also* PW0000232–36 (highlighting studies demonstrating the continuing rapid loss of Arctic sea ice habitat).

Numerous new studies demonstrate the damage that loss of sea ice is causing to the Pacific walrus. For example, Ray et al. 2016 documented fragmentation of ice in the Bering Sea during 2003-2013, which impedes the formation of large reproductive groups, disrupts feeding behavior, disturbs spring migration, and causes increased energetic costs, especially for mothers nursing calves. PW0017911–28.

Sea ice loss and ocean warming is putting the Pacific walrus's primary benthic prey (clams and other mollusks) at risk. PW0016107. Indeed, a recent study detected significant declines in bivalves in the Chukchi Sea. PW0016104–19.

Recent studies have also shown that increased use of coastal haulouts reduces foraging opportunities and exacts energetic costs, particularly for lactating females and young walruses. PW0011259. Scientists have concluded that sea ice loss, and resulting use of coastal haulouts, is preventing walruses from accessing the highest quality food. PW0019817. And an analysis by Udevitz et al. 2013 found that mortality of calves at coastal haulouts is likely to have large negative effects on the population growth rate and "relatively important population consequences." PW0013776. Other scientists note that due to the limited genetic diversity of the Pacific walrus, the increased use of coastal

haulouts, often with tens of thousands of animals, can result in increased exposure to disease and parasites. PW0019520–29.

Given the stark predictions regarding the decline in Arctic sea ice, and the resulting impacts to the Pacific walrus, the Service's failure to explain its change from the 2011 Finding is perhaps unsurprising; as detailed below, there *is* no rational explanation that supports its 2017 not warranted determination. Nevertheless, the Service was obligated to try, and the failure to provide the requisite explanation for its reversal on key threats to the species violates the law.

II. The Service's Decision that 2060 Constitutes the Foreseeable Future for Threats to the Walrus from Climate Change Is Arbitrary and Contrary to the ESA

The ESA requires the Service to list the Pacific walrus under the ESA if the best available science demonstrates that the species is currently endangered or "is likely to become endangered within the foreseeable future." 16 U.S.C. §§ 1532(20), 1533. In its 2011 Finding, the Service found that due to the loss of their sea ice habitat, "an anticipated population decline of Pacific walrus [] will continue into the foreseeable future," and that the species warranted listing under the ESA. 76 Fed. Reg. at 7674. In that finding, the Service analyzed threats from habitat loss through 2100 because the best available science supported that timeframe. *Id.* at 7642–43. Yet in 2017 the Service cut off its "foreseeable future" analysis at 2060, claiming that "the impacts of the effects of climate change on the Pacific walrus population are based on speculation" after that date. 82 Fed. Reg. at 46643.

The Service's definition of 2060 as the "foreseeable future" for threats from

climate change to the Pacific walrus is unreasonable for three reasons. First, it is contrary to the plain meaning of the term in light of the best available science that projects sea ice loss through 2100. Second, it runs counter to prior listing decisions, including the Service's 2011 determination that 2100 is the foreseeable future for threats from climate change to the walrus. Third, it arbitrarily raises the bar for listing decisions by demanding more conclusive evidence than the statute requires.

A. The Service's Interpretation of the Foreseeable Future Is Contrary to the Plain Meaning of the Term in Light of the Best Available Science

The Service's interpretation of the foreseeable future as 2060 is contrary to the plain meaning of "foreseeable future." An unabridged dictionary published nearly concurrently with the ESA defined "foreseeable" in the context of the "foreseeable future" as "lying within the range for which forecasts are possible." Webster's Third New International Dictionary at 890 (1971); PW0023317–18. In other words, the "foreseeable future" is directly tied to the range of time in which forecasts regarding threats to the Pacific walrus are possible.

Forecasting threats to walrus through the end of the century is not only possible, but has already been done in models widely recognized as the international scientific consensus on climate change. As the Ninth Circuit recognized in upholding the listing of the bearded seal as threatened based on the loss of its sea ice habitat, "[t]here is no debate that temperatures will continue to increase over the remainder of the century and that the effects will be particularly acute in the Arctic. The current scientific consensus is that Arctic sea ice will continue to recede through 2100." *AOGA*, 840 F.3d at 679.

This includes the areas inhabited by the Pacific walrus: the Bering and Chukchi Seas. The IPCC's models, which the Ninth Circuit has repeatedly recognized as the best available climate science, *id.*, project that sea ice habitat in the Chukchi Sea in the summer and fall will decline by 100% by 2100 under the business-as-usual emissions scenario. PW0000635. The IPCC models project a similar pattern of decline of sea ice in the Bering Sea: under the business-as-usual emissions scenario, spring sea ice habitat in the Bering Sea will be nearly non-existent, declining by 96% in the U.S. Bering Sea and 93% in the Russian Bering Sea. *Id.* Also by 2100, winter sea ice habitat in the U.S. Bering Sea will decline by 92% and by 87% in the Russian Bering Sea. *Id.*

In other words, the best available science shows climate change is destroying the sea ice walruses rely on for their essential life functions and will continue to through at least 2100. The Service's decision to truncate its analysis at 2060 ignores these forecasts.

B. The Service's Foreseeable Future Interpretation Is Contrary to Other Listing Decisions, Including its Prior Decision that Listing the Walrus Was Warranted

Consistent with the plain meaning and the available climate change science, both the National Marine Fisheries Service ("NMFS")—the Service's sister agency with ESA jurisdiction over most marine mammals—and the Service have defined the foreseeable future for threats from sea ice loss as 2100 in making other ESA listing decisions.

For example, in analyzing whether the bearded seal is a threatened species, NMFS defined the foreseeable future for threats from sea ice loss as 2100 precisely because the best available climate change science projects impacts through the end of the century. 77 Fed. Reg. 76740, 76753 (Dec. 28, 2012). NMFS also defined the foreseeable future from

threats from sea ice loss as 2100 in its listing decision for Arctic ringed seals and ribbon seals for the same reason. 77 Fed. Reg. 76706, 76722–23 (Dec. 28, 2012); 78 Fed. Reg. 41371, 41377 (July 10, 2013).

The Service itself also interpreted the foreseeable future for threats from climate change as 2100 in deciding that the walrus warranted protection under the ESA in 2011. *See generally,* 76 Fed. Reg. at 7634–79. In that decision, the Service stated that the IPCC's analysis "represents the scientific consensus view on the causes and future of climate change" and used "state-of-the-art" modeling to "project plausible outcomes globally and regionally, including projections of temperature and Arctic sea-ice conditions through the 21st century." *Id*. at 7641. The Service determined with a high level of confidence that despite some uncertainty among the models, "the projections are generally consistent and provide a reliable basis for us to conclude that sea-ice loss in the range of the Pacific walrus has a high likelihood of continuing." *Id.* at 7644.

The Service then evaluated how the projected loss of sea ice would threaten the walrus through the end of the 21st century. The Service concluded that the loss of sea ice in the summer and fall and associated impacts "are of sufficient imminence, intensity, and magnitude to cause substantial losses of abundance and an anticipated population decline of Pacific walrus that will continue into the foreseeable future." *Id.* at 7674.

Yet, in its current decision, the Service reversed-course, arbitrarily blinding itself to impacts beyond 2060 that it previously deemed foreseeable, failing to explain its change in position that 2100 constitutes the foreseeable future for threats to the walrus from climate change in the process. Like its unexplained reversal on the ultimate listing

decision, the Service's failure to explain its change in position regarding the foreseeable future is unlawful. *See Fox Television*, 556 U.S. at 515 (requiring agency to provide reasoned explanation for disregarding prior policy's factual basis); *supra* pp. 11–14.

C. The Service Cannot Rely on Uncertainty to Conclude Impacts are Unforeseeable

The Service's interpretation of the foreseeable future also runs counter to the best available science standard of the ESA by demanding more conclusive evidence than the statutes requires. In denying the Pacific walrus ESA protections, the Service claimed that while the Service has "high certainty that sea-ice availability will decline as a result of climate change, [it] has less certainty, particularly further into the future, about the magnitude of the effect that climate change" will have on the walrus. 82 Fed. Reg. at 46643. The Service therefore determined that beyond 2060 the conclusions about the impacts of climate change on the walrus "are based on speculation, rather than reliable prediction" and not foreseeable. *Id*. This was improper and contrary to the ESA.

i. The ESA Does Not Demand Absolute Certainty to List a Species

As an initial matter, even if it were true that projections regarding the impacts of climate change on the walrus are "less certain" after 2060, this does not mean such projections "are based on speculation" as the Service contends. The Service nowhere explains why that is the case. This alone renders its decision unlawful. *See CBD v. Zinke*, 900 F.3d at 1072 ("it is 'not enough for [the Service] to simply invoke 'scientific uncertainty' to justify its action'") (citing *Greater Yellowstone Coal v. Servheen*, 665 F.3d 1015, 1028 (9th Cir. 2011)).

Moreover, the ESA requires listing decisions to be based "solely on the basis of the best scientific and commercial data available." 16 U.S.C. § 1533(b)(1)(A). Under this standard, "[e]ven if the available scientific and commercial data were quite inconclusive, [the Service] may—indeed must—still rely on it." *Sw. Ctr. for Biol. Div. v. Babbitt*, 215 F.3d 58, 60 (D.C. Cir. 2000); *see also San Luis & Delta-Mendota Water Auth. v. Jewell*, 747 F.3d 581, 602 (9th Cir. 2014) ("[T]he 'best scientific . . . data available,' does not mean 'the best scientific data possible.'") (citation omitted).

The Service has repeatedly recognized this fundamental notion in other listing decisions. When listing the Canada lynx, for example, the Service explained that additional studies of lynx "are necessary" but listing was required because "the [ESA] does not allow us to defer a listing decision based on the need for more research. Most scientists would agree that there is always a need for more research." 65 Fed. Reg. 16052, 16064 (March 24, 2000). Likewise, when listing the northern spotted owl, the Service explained that "because the agency had 'used the best data available' . . . it was not 'obligated to have data on all aspects of a species' biology prior to reaching a determination on listings.'" *Defenders of Wildlife v. Babbitt*, 958 F. Supp. at 680.

Conversely, courts regularly find listing decisions unlawful where the Service used scientific uncertainty as a reason to deny a species protection under the ESA. For example, the Ninth Circuit recently overturned the Service's decision not to list the Arctic grayling (a cold-water fish that lives in the Upper Missouri River) on this basis. *CBD v. Zinke*, 900 F.3d at 1058. In that case, the plaintiffs argued that the Service irrationally disregarded the additive effects of climate change in considering the threat of low stream

flows and high water temperatures by pointing to scientific uncertainty about how future precipitation and temperature scenarios would affect water availability. *Id.* at 1072. The Ninth Circuit agreed, holding that "[b]y failing to explain why the uncertainty of climate change favors not listing the arctic grayling when the [listing decision] acknowledges the warming of water temperatures and decreasing water flow because of global warming, [the Service] acted in an arbitrary and capricious manner." *Id.* at 1073.

The court reached a similar conclusion in *Center for Biological Diversity v. U.S. Fish & Wildlife Service*, 342 F. Supp. 3d 968 (N.D. Cal. 2018). In that case, the plaintiffs challenged the Service's decision to withdraw a proposed rule to list the Pacific fisher as threatened. *Id.* at 972. The Service had proposed listing the fisher because of the lethal effects of rodenticides and other toxicants, among other threats. *Id.* at 973. The Service stated that it based its decision on the best available science regarding the level of mortality from toxicants, but that such "values likely *underrepresent* the population-level effects" considering research on sublethal impacts. *Id*. Following the proposed rule, new science emerged indicating that the threat of toxicant exposure to fishers was worse than previously thought. *Id.* at 973–74. But the Service subsequently withdrew is proposed listing, because it was "'uncertain' at what level of toxicant exposure fishers may be experiencing adverse impacts." *Id.* at 975. The court rejected the Service's decision, holding that "simply asserting the uncertainty as to the precise effects on the Pacific fisher population does not serve as a rational connection to the Service's conclusion that the Pacific fisher's increasing exposure to toxicants no longer rises to the level of a threat." *Id.* at 976.

The facts (and legal errors) here are quite similar. In 2011, the Service determined that the walrus warranted listing under the ESA because climate change would destroy its sea ice habitat, threatening the species' continued existence. 76 Fed. Reg. at 7672. In reaching this decision, the Service analyzed threats from sea ice loss through 2100 because the best available climate change science projected sea ice loss through that time frame. *Id*. at 7644. The Service also acknowledged that observed sea ice loss has been faster than the models project, indicating such projections "may be conservative." *Id.* Following the listing determination, new science emerged that not only confirmed sea ice loss would continue through the 21st century, but that such losses will likely be worse than projected in the models. PW0019125, PW0019235, PW0019158, PW0019827. Then, in 2017, despite acknowledging that sea ice loss would continue, the Service reversed course to cut off its foreseeable future analysis at 2060 and determine that the walrus is no longer threatened by habitat loss from climate change.

But, as with the arctic grayling and Pacific fisher, the Service cannot simply rely on uncertainty to conclude that impacts from sea ice loss after 2060 no longer constitute a foreseeable threat. The Service failed to explain how uncertainty regarding the walrus's biological response to the loss of its habitat "justifies not listing the [walrus] as opposed to taking another course of action" particularly in light of "the ESA's policy of 'institutionalized caution.'" *CBD v. Zinke*, 900 F.3d at 1073 (citation omitted).

ii. The ESA Requires the Service List the Pacific Walrus Before it Is Conclusively Headed Toward Extinction

The Service's treatment of scientific uncertainty as a reason to deny the walrus

protection under the ESA is contrary to law. As the Ninth Circuit has noted, the ESA's purpose is "not only to protect the last remaining members of the species but to take steps to insure that species which are likely to be *threatened* with extinction never reach the state of being presently endangered." *Defenders of Wildlife v. Norton*, 258 F.3d 1136, 1142 (9th Cir. 2001) (quoting legislative history).

Accordingly, the ESA requires the Service to protect threatened species before they are conclusively headed for extinction. "The purpose of creating a separate designation for species which are 'threatened', in addition to species which are 'endangered', was to try to 'regulate these animals before the danger becomes imminent while long-range action is begun.'" *Defenders of Wildlife v. Babbitt*, 958 F. Supp. at 680 (quoting S. Rep. No. 307, 93d Cong. 1st Sess. 3 (1973)). Congress's directive that the Service base listing decisions on the best available data—as opposed to "definitive" data—is in keeping with its intent that the Service "take preventive measures *before* a species is conclusively headed for extinction." *Id.* at 679–80.

Here, the best available science demonstrates that climate change will cause a substantial loss of the sea ice habitat the walrus depends on for many of its essential life functions. The best available science also demonstrates that such losses will threaten the walrus through increased mortality from stampedes, decreased prey, increased energetic costs, and reduced calf survival (among other impacts) leading to significant population-level impacts. Yet, despite finding that the walrus "will experience a future reduction in availability of sea ice, resulting in reduced resiliency and redundancy," the Service determined the walrus does not warrant listing because the "magnitude" of adverse

effects and behavioral response of the walrus are uncertain. 82 Fed. Reg. at 46643.

Precedent confirms this is improper. First, the Service cannot simply dismiss a threat to a species because of uncertainty. *CBD v. Zinke*, 900 F.3d at 1073; *supra* 20–23. Second, the ESA "does not require an agency to quantify population losses [or] the magnitude of risk . . . to determine whether a species is 'more likely than not' to become endangered in the foreseeable future." *AOGA*, 840 F.3d at 684. Indeed, when the available science does not allow for such specificity, the ESA *prohibits* the agency from demanding it. *See Defenders of Wildlife v. Jewell*, 176 F. Supp. 3d 975, 1003 (D. Mont. 2016) ("the Service cannot demand a greater level of scientific certainty than has been achieved in the field to date."). The Service's insistence that it could not list the walrus because it does not know the "magnitude" of climate change impacts or how precisely the species will respond to the loss of their sea ice habitat was illegal.

III. The Service Made Irrational, Unfounded Conclusions Regarding Threats to the Walrus

In determining that the walrus does not warrant listing, the Service reached conclusions that are contrary to the agency's own Status Assessment,[4] contrary to the best available science, and otherwise unfounded. Specifically, the Service arbitrarily concluded that: (1) the walrus could adapt to the massive, unprecedented changes to its habitat; and (2) the walrus population appears to be reaching stability. The Service also irrationally treated all potential habitat as equal and ignored threats from coastal erosion

[4] The Status Assessment purports to summarize and document the biological information the Service assembled, reviewed, and analyzed to inform its decision whether the Pacific walrus warrants protection under the ESA. 82 Fed. Reg. at 46643.

and sea level rise. Each of these faults render its decision unlawful.

A. The Service Irrationally Concluded that the Pacific Walrus Could Adapt to Massive Losses of its Habitat

As the Service recognized in 2011, "[t]he Pacific walrus is an ice-dependent species." 76 Fed. Reg. at 7644; PW0010553. The walrus depends on sea ice for numerous essential life functions, including courtship, giving birth, nursing and raising young, and as a resting platform while feeding. PW0010553–54; 82 Fed. Reg. at 46643.

Nevertheless, the Service dismissed the dire threat of the loss of the walrus's sea ice habitat by assuming walruses could adapt to such changes. Specifically, the Service concluded that walruses are not threatened by climate change because they have a "demonstrated ability . . . to change behavior or to adapt to greater use of land," 82 Fed. Reg. at 46643. But the Service failed to justify this conclusion.

The available evidence indicates that the walrus will *not* be able to adapt to the unprecedented loss of its sea ice habitat. As the Service recognized, Pacific walruses have never been observed breeding from coastal haulouts or giving birth in the water or on land. PW0000411. Moreover, the available science shows sea ice loss will force walruses to haul out on the coast, which will cause increased mortality, decreased prey availability, increased energetic costs, and decreased calf survival. *E.g.*, PW0029476. Indeed, the Service has stated that the use of coastal haulouts "could be considered ecological traps and a maladaptive behavior due to the potential for disturbance related mortalities, increased energetic costs, and increased predation attempts." PW0000470.

The available evidence shows that increased use of land will increase walrus

mortality. Pacific walruses are very sensitive to disturbances such as noise or predators and escape en masse into the water when disturbed. PW0000435. When distributed on ice floes, walruses can escape more easily into the water because animals are less concentrated. *Id.* In contrast, when walruses aggregate on land, they often do so in very large numbers and are densely-packed and layered several animals deep. *Id*. The probability of direct mortality due to trampling is thus greater at land-based haulouts. *Id*. Calves and young animals are especially vulnerable to being crushed to death due to their small size. 76 Fed. Reg. at 7635. These impacts have already manifested. *See, e.g.*, PW0000436 (scientists estimate that up to 10,000 animals died along the Chukotka coastline during the summer and fall of 2007, primarily from trampling).

The evidence also indicates that increased use of coastal haulouts will lead to prey depletion, increased energetic costs, and increased calf mortality. As the Service explained in 2011, as "near-shore food resources are unlikely to be able to support the current population, walruses will be required to swim farther to obtain prey, which will increase energetic costs" and "could eventually lead to reduced body condition, lower reproductive success, and potentially death" of females. 76 Fed. Reg. at 7646–47. This could also increase calf abandonment, as their mothers abandon them to search for food, causing calf mortality from drowning, starvation, or predation. *Id.* at 7646. "Accordingly, near-shore prey depletion will likely result in a population decline over time." *Id.* at 7647.

Additionally, Ray et al. 2016 concluded that the projected fragmentation and earlier break-up of Bering Sea ice during the winter–spring season are expected to be highly disruptive for Pacific walrus reproductive, feeding, and migratory activities.

PW0017911–28;[5] *see also* PW0017582 (concluding that stress on female walruses has likely increased in recent years and "the most likely cause is the decline in sea ice habitats in summer in the Chukchi Sea which has become most pronounced since 2007").

Moreover, as the Service acknowledged, walruses have not responded to sea ice loss by spreading themselves in smaller groups among a larger number of haulout sites, but continue to use a small number of haulouts with a high risk of trampling. PW0000513. Nor have Pacific walruses responded to loss of summer sea ice in the Chukchi Sea by shifting their range to ice-covered areas in the Canadian Arctic Archipelago or Siberian-Laptev Sea. *Id*. The 2017 Status Assessment notes that this suggests other factors are restricting the range expansion of the Pacific walrus in response to climate change. *Id*.; *see also* PW0026331 (study concluding that "the Pacific walrus population will be (in fact probably already is being) significantly impacted by climate warming with the impact on females being especially significant."). It was precisely these threats that the Service determined warranted listing the walrus in 2011. *See e.g.*, 76 Fed. Reg. at 7647 ("loss of sea-ice habitat, leading to dependence on coastal haulouts and localized prey depletion, will contribute to other negative impacts associated with sea-ice loss, and is a threat to the Pacific walrus in the foreseeable future").

Rather than address this information in its 2017 Finding, which represents the best

[5] The Service ignored the Ray et al. 2016 study entirely, except to cite it for a proposition it does not make. The Service cited the study to claim recent changes in ice in the Bering Sea will likely increase walrus redundancy, characterized as having multiple, resilient populations. PW0000465. But the study actually emphasizes that walrus populations will be *less resilient* as Bering Sea ice breaks up. PW0017919, PW0017923–24.

available science on threats to walrus from climate change, the Service dismissed it by claiming that the "magnitude" of the negative effects from the walrus's "increased use of land habitat . . . is uncertain." 82 Fed. Reg. at 46643. But the Service "cannot ignore available biological information." *Conner*, 848 F.2d at 1454. Moreover, as the Ninth Circuit has repeatedly made clear, it is "not enough for [the Service] to simply invoke 'scientific uncertainty' to justify its action." *CBD v. Zinke*, 900 F.3d at 1072 (citing *Greater Yellowstone Coal.*, 665 F.3d at 1028). Rather, the Service "must explain why uncertainty justifies its conclusion." *Id.* That is particularly true here, where the Service previously determined that the walrus warrants protection under the ESA because of the loss of its sea ice habitat.

In short, the Service's conclusion that the walrus does not warrant protection under the ESA because walruses could adapt by increasing their use of land ignores science in favor of speculation and runs counter to the evidence before the agency, rendering its decision unlawful. *See Greater Yellowstone Coal., Inc.*, 665 F.3d at 1023.

B. The Service Improperly Assumed All Potential Habitat Is of Equal Value to the Walrus and Ignored Threats from Coastal Erosion and Sea Level Rise

Compounding the Service's other erroneous conclusions was its illogical assumption that all potential habitat would be of equal value to walruses, i.e., that land habitat would be just as suitable as sea ice habitat. Relatedly, the Service failed to consider the destruction of land habitat due to coastal erosion and sea level rise.

As part of its 2017 Status Assessment, the Service developed an abundance model to project changes in stressors acting on the Pacific walrus population to help assess its

future viability. But the model arbitrarily fails to distinguish between land and sea ice habitat. Specifically, the Service "defined potential habitat to be marine water, sea ice, or land within the study area that could be accessed and used by Pacific walruses within a particular season." PW0000483. The Service admitted that potential habitat "does not equate to suitable habitat, nor does it take habitat quality into account." *Id.*

Yet the available evidence demonstrates that "walruses are an ice dependent species that rely on sea-ice for many aspects of their life history," including breeding, giving birth, nursing and caring for young, and resting between feeding. PW0010553–54. The available evidence also demonstrates numerous negative impacts from walruses being forced to haul out on land because of sea ice loss. As such, there is "no defensible scientific justification" for pooling the land and ice habitats. PW0029846.

Numerous peer reviewers highlighted the problem with the Service's approach to modeling future habitat. *See, e.g.*, PW0029520 ("the models are overestimating future suitable habitat by considering all habitats as of comparable quality"); PW0029736 ("There is no justification for pooling results of your land and ice habitat components into a 'total habitat' class."). As stated by one reviewer, this likely "inflate[s] what will actually be available to walruses in the future" and therefore does not properly account for what could have "resulted in a more dismal outlook for the walrus." PW0029504. Rather than pooling the habitat, the Service should have instead analyzed the ice and land outcomes results separately. PW0029846. Its failure to do so was unlawful.

The Service's decision is also arbitrary for failing to consider the loss of land available to the walrus for hauling out because of coastal erosion and sea level rise.

Coastal erosion rates in the Arctic are among highest in the world. PW0026257. The IPCC has "very high confidence" that coastal systems will increasingly experience erosion "throughout the 21st century and beyond." PW0018806. But the Service failed to consider this information at all. Indeed, its recent Status Assessment does not even mention coastal erosion, except in the Appendix when concluding that the likelihood of new Arctic villages being built along the coast is low, since existing villages might have to relocate because of "rapid erosion," and that some already have. PW0000588.

C. The Service's Arbitrary Conclusions Regarding Pacific Walrus Population Trends and Subsistence Harvest Levels Render its Decision Unlawful

In its 2017 Finding, the Service arbitrarily determined that after decades of decline, the walrus population has increased and appeared to be approaching stability. *See e.g.*, PW0000399, PW0000506 (noting the population is likely stable); 82 Fed. Reg. at 46643 (noting that reproduction and survival rates have increased). The Service then relied on such determinations in concluding that the walrus demonstrates resiliency and does not warrant protection under the ESA. 82 Fed. Reg. at 46643–44. The limited population trend data does not support these conclusions. To the contrary, the best available science indicates that it is just as probable (if not more so) that the walrus population is still declining and that survival rates have decreased.

Courts have repeatedly explained that "[i]f the science on population size and trends is underdeveloped and unclear, the [Service] cannot reasonably infer that the absence of evidence of population decline equates to evidence of persistence." *Tucson Herp. Soc'y v. Salazar*, 566 F.3d 870, 879 (9th Cir. 2009); *see also Ctr. for Biol. Div. v.*

U.S. Fish & Wildlife Serv., 342 F. Supp. 3d at 978 (rejecting reliance on inconclusive data to determine a population had "basically stabilized").

But that is just what the Service did here. The Service cited Taylor and Udevitz 2016 and Taylor 2017 to determine that the walrus population may be stabilizing and survival rates increasing. PW0000470, PW0000506. However, Taylor et al. 2017—the published version of these citations—found it is "equally plausible" that the population is still in decline. PW0020857. Specifically, the study's authors developed models of walrus population dynamics using information on population size, age structure, rates of reproduction, and harvest from 1974–2015. PW0020841. Of the three models they analyzed, *two* suggest that the population in 2015 was still declining. PW0020865.

Thus, the evidence before the Service showed inconclusive population trends at best. This case is therefore like *Tucson Herpetological Society*, where the Ninth Circuit rejected the Service's conclusion that flat-tailed horned lizard populations were persisting based on "limited and inconclusive" studies. 566 F.3d at 878. Similarly here, the Service's conclusion that the walrus population appears to be stable and survivorship is increasing simply cannot be derived from the limited studies showing unclear trends in population growth.[6] As such, "the Service failed to make a rational connection between the population trend data and its conclusion that the Pacific [walrus] population is stable (which, in turn, was used to support its conclusion [not to list the species])." *Ctr. for Biol.*

[6] It is doubtful the Service could make *any* conclusions regarding the walrus population trend given the confidence interval ranged from 93,000 to 478,975. PW0000417. *See Nat'l Wildlife Fed'n v. Nat'l Marine Fisheries Serv.*, 184 F. Supp. 2d 861, 873 (D. Or. 2016) (intervals so broad "that falling within them is essentially meaningless").

Div. v. U.S. Fish & Wildlife Serv., 342 F. Supp. 3d at 979.

The Service's treatment of subsistence hunting trends is also irrational. In its 2017 Finding, the Service concluded that subsistence hunting was no longer a threat to Pacific walruses. 82 Fed. Reg. at 46643. However, this assumption is unsupported. The Status Assessment specifically states that "[t]here is a great deal of uncertainty surrounding predictions of Pacific walrus harvest levels into the future." PW0000495. Furthermore, as the species' sea ice habitat continues to disappear, Pacific walrus will increasingly haul out on land, which will increase their susceptibility to hunting. *Id.* Hunting activity at coastal haul outs is particularly concerning, as it increases the probability of stampede caused injuries or mortalities. PW0000435. The Service's cursory dismissal of this threat, which it identified in the 2011 determination as second only to sea-ice loss, arbitrarily dismisses the Service's own findings and is unlawful.

IV. The Service Improperly Treated Scientific Uncertainty Regarding Population and Subsistence Harvest Differently than Uncertainty About Habitat Loss

The Service wrongly treated scientific uncertainty differently depending on whether that uncertainty supported its decision not to list the walrus. For example, the Service relied on information it deemed uncertain to determine that the walrus population is likely stabilizing and that future harvest levels would not negatively impact the walrus, yet dismissed information indicating that the walrus is threatened by the loss of its sea ice habitat because of uncertainty. The Service's approach violates basic tenets of administrative law. Indeed, "such unacknowledged and unexplained inconsistency is the hallmark of arbitrary and capricious decision-making." *Bauer v. DeVos*, 325 F. Supp. 3d

74, 109 (D.D.C. 2018).

Regarding the walrus population trend, the Service acknowledged population size is "uncertain" and the recent abundance estimate should be "interpreted with extreme caution due to the preliminary nature of the estimate and the low precision estimates in the model." 82 Fed. Reg. at 46643. Yet the Service then relied on the recent population abundance to determine the population demonstrated resilience, was likely stable, and that survival rates were increasing. *See e.g.*, PW0000470, PW0000506.

Likewise, the Service repeatedly recognized the uncertainty regarding future harvest levels. The Service acknowledged, for example, that it "lack[s] confidence in [its] ability to accurately predict future harvest trends and numbers;" PW0000400; that there is a "great deal of uncertainty surrounding predictions of Pacific walrus harvest levels into the future;" and "that it was not possible to predict future harvest levels." PW0000495. But the Service relied on modeling that assumed harvest levels would be "low" (i.e., 0%–2% of the population) in concluding that future harvest levels would be sustainable and not threaten the population. *Id.*; PW0000589; *cf.*, 76 Fed. Reg. at 7648 ("[a]s Pacific walruses become more dependent on coastal haulouts, they will become more susceptible to predation and hunting").

But then, in analyzing threats to the species from climate change, the agency acknowledged that the walrus "will experience a future reduction in availability of sea ice, resulting in reduced resiliency and redundancy" but summarily dismissed such threats due to uncertainty regarding "the magnitude of the effect and the behavioral response of the Pacific walrus." 82 Fed. Reg. at 46644.

Courts have rejected an agency's inconsistent treatment of scientific uncertainty in similar situations. For example, in *National Wildlife Federation v. National Marine Fisheries Service*, the court held an agency's biological opinion[7] arbitrary and capricious where the agency relied on uncertain information when it *supported* the agency's conclusion that ongoing dam operations would not jeopardize the survival and recovery of ESA-listed fish, but dismissed or discounted uncertain information where it may *not* have supported the agency's conclusion. 184 F. Supp. 3d at 928. The court held that an agency "may not, without an adequate explanation, prefer[] uncertain favorable model results and reject[] other equally uncertain model results tending to undermine [the agency's] conclusion." *Id.* at 928 (quotation marks and citation omitted).

So too here. The Service cannot rely on data it stated was uncertain to conclude that the walrus would not be threatened, but then dismiss the wealth of scientific evidence demonstrating that the loss of the walrus's sea ice habitat will continue through at least the end of the century and that such losses could threaten the species continued existence because such information contains some degree of uncertainty. Just as "'[u]nexplained inconsistency' between agency actions is 'a reason for holding an interpretation to be an arbitrary and capricious change,'" *Organized Village of Kake*, 795 F.3d at 966 (citation omitted), so is unexplained inconsistency within the same decision.

CONCLUSION

The Service's decision violates the ESA and APA and should be set aside.

[7] Like listing decisions, the ESA requires an agency's biological opinion to be based on the best available science. 16 U.S.C. § 1536(a)(2).

Respectfully submitted this 26th day of February, 2019.

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CERTIFICATE OF SERVICE

I hereby certify that on February 26, 2019, a true and correct copy of the foregoing Memorandum in Support of Plaintiff's Motion for Summary Judgment was served electronically on all counsel of record using the CM/ECF system.

/s/ *Emily Jeffers*
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