



December 18, 2018

Via Electronic and Certified Mail

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Re: Sixty-day Notice of Intent to Sue Over Violations of Section 7 of the Endangered Species Act Related to Pacific Coast Salmon Fisheries' Impacts to Endangered Southern Resident Killer Whales (*Orcinus Orca*)

Dear Secretary Ross and Mr. Thom,

Pursuant to 16 U.S.C. § 1540(g), this letter serves as the Center for Biological Diversity and Wild Fish Conservancy's 60-day notice of intent to sue the U.S. Department of Commerce, the Secretary of Commerce, the National Marine Fisheries Service (also known as NOAA Fisheries), and the Northwest Regional Administrator for the National Marine Fisheries Service (collectively "NMFS") for violations of the Endangered Species Act (ESA), 16 U.S.C. §§ 1531, *et seq.* As described in this letter, NMFS is in violation of Section 7 of the ESA by failing to reinitiate and complete consultation on the impacts of Pacific Coast salmon fisheries on critically endangered Southern Resident killer whales. Consequently, NMFS is failing to ensure that its ongoing authorization and management of the Pacific Coast salmon fisheries under the Pacific Coast Salmon Fishery Management Plan ("Pacific Salmon Plan") are not likely to jeopardize the continued existence of the endangered Southern Resident killer whales.

The iconic Southern Resident killer whales are struggling to survive, with only 74 orcas remaining. This is a 34-year low for the population of highly intelligent, social animals that are a cherished symbol of the Pacific Northwest's natural and cultural heritage. The Southern Resident killer whales have failed to successfully reproduce since 2015, with high profile losses this year elevating concerns about their future. In July, a newborn calf lived for just under an hour. Her grieving mother carried her body for seventeen days over hundreds of miles. In September, three-year old Southern Resident killer whale "Scarlet" was presumed dead by NMFS. Scarlet

had been struggling to survive for months and had become very thin. She was one of the few juvenile females remaining in the population.

The primary threats to Southern Resident killer whales are starvation from lack of adequate prey (predominately Chinook salmon), vessel noise and disturbance that interferes with key foraging and other essential behaviors, and toxic contaminants that bioaccumulate in the orcas' fat. Scientists recently concluded that of these three major threats to the Southern Resident killer whales, prey depletion has the biggest impact on reproductive success and survival. Fisheries activity along the Pacific coast reduces prey abundance, which causes the orcas to forage for longer periods, to travel to alternate locations, or to abandon foraging efforts.

As detailed below, NMFS' violations of the ESA stem from its failure to reinitiate and complete consultation on the Pacific Coast salmon fisheries despite the existence of new scientific information about the status and threats to the Southern Resident killer whales and effects of the authorized fisheries that was not previously considered. The agency continues to rely on an outdated 2009 biological opinion to authorize salmon fisheries up and down the West coast that are negatively impacting the Southern Resident killer whales.

I. Legal Background

Congress enacted the ESA, in part, to provide a “means whereby the ecosystems upon which endangered species and threatened species depend may be conserved...[and] a program for the conservation of such endangered species and threatened species.”¹

Section 2(c) of the ESA establishes that it is “the policy of Congress that all Federal departments and agencies shall seek to conserve endangered species and threatened species and shall utilize their authorities in furtherance of the purposes of this Act.”² The ESA defines “conservation” to mean “the use of all methods and procedures which are necessary to bring any endangered species or threatened species to the point at which the measures provided pursuant to this Act are no longer necessary.”³ Similarly, Section 7(a)(1) of the ESA directs that NMFS and other federal agencies shall use their programs and authorities to conserve endangered and threatened species.⁴

To fulfill the purposes of the ESA, Section 9 of the ESA prohibits any person, including any federal agency, from “taking” an endangered species without proper authorization.⁵ The term “take” is statutorily defined broadly as “to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct.”⁶ The definition of “harm” has been defined broadly by regulation as “an act which actually kills or injures wildlife. Such act may include significant habitat modification or degradation where it actually kills or injures

¹ 16 U.S.C. § 1531(b).

² *Id.* at § 1531(c)(1).

³ *Id.* at § 1532(3).

⁴ *Id.* at § 1536(a)(1).

⁵ *Id.* at § 1538(a)(1)(B).

⁶ *Id.* at § 1532(19).

wildlife by significantly impairing essential behavioral patterns, including breeding, feeding or sheltering.”⁷

Additionally, under Section 7(a)(2) of the ESA, NMFS must insure that any action it authorizes, funds or carries out is “not likely to jeopardize the continued existence of any endangered species.”⁸ When an agency determines that its proposed action “may affect listed species” it must engage in formal consultation with the expert federal wildlife agency responsible for the species at issue using “the best scientific and commercial data available.”⁹ Where, as here, NMFS is both the action agency and the expert agency, it must undertake internal consultation before authorizing any fisheries that may affect Southern Resident killer whales. This includes the agency’s authorization of the Pacific Coast Salmon Plan fisheries.

The consulting branch of NMFS must issue a biological opinion explaining how the proposed action will affect the ESA-listed species and determine whether jeopardy is likely to occur.¹⁰ If jeopardy is found, the biological opinion shall suggest “reasonable and prudent alternatives” to the proposed action that NMFS believes would avoid the likelihood of jeopardy.¹¹ If NMFS concludes the action may take listed members of the population, but the action will not jeopardize the population, the agency must produce an Incidental Take Statement (“ITS”) that specifies the impact of the action by setting a numeric limit on take or a surrogate if a numeric cap is impractical to set, and identifying “reasonable and prudent measures” that will minimize impacts.¹² In addition, when the endangered species to be taken are marine mammals, the take must generally first be authorized pursuant to the Marine Mammal Protection Act (“MMPA”) and the ITS must include any additional measures necessary to comply with the MMPA take authorization.¹³ The take of a listed species in compliance with the terms of a valid ITS is not prohibited under Section 9 of the ESA.¹⁴

ESA regulations define “[j]eopardize the continued existence of” as “to engage in an action that reasonably would be expected, either directly or indirectly, to reduce appreciably the likelihood of both the survival and recovery of a listed species in the wild by reducing the reproduction, numbers, or distribution of that species.”¹⁵ A jeopardy analysis requires the agency to consider the aggregate effect of past and ongoing human activities that affect the current status of the species and its habitat (“environmental baseline”); the indirect and direct effects of the proposed action, including the effects of interrelated and interdependent activities (“effects of the action”); and the effects of future state and private activities that are reasonably certain to occur (“cumulative effects”).¹⁶ NMFS must consider all of these factors in context of the current status

⁷ 50 C.F.R. § 222.102; *see also Babbitt v. Sweet Home Chapter of Cmty. for a Great Or.*, 515 U.S. 687 (1995) (upholding same regulatory definition of harm in 50 C.F.R. § 17.3).

⁸ 16 U.S.C. § 1536(a)(2).

⁹ *Id.*; 50 C.F.R. § 402.14(a) (2018).

¹⁰ 50 C.F.R. § 402.14(g)(3), (4).

¹¹ 16 U.S.C. § 1536(b)(3)(A); 50 C.F.R. §§ 402.14(h), 402.02.

¹² 16 U.S.C. § 1536(b)(4)(C); *Or. Nat. Res. Council v. Allen*, 476 F.3d 1031, 1033 (9th Cir. 2007).

¹³ 16 U.S.C. § 1543; 50 C.F.R. § 402.14(h)(3).

¹⁴ 16 U.S.C. §§ 1536(b)(4), (o)(2); 50 C.F.R. § 402.14(i)(5).

¹⁵ 50 C.F.R. § 402.02.

¹⁶ *Id.* at §§ 402.14(g), 402.02.

of the species and its habitat.¹⁷ Only where NMFS concludes that all of these elements added together do not threaten a species' survival and recovery can the agency issue a no-jeopardy opinion.¹⁸

After consultation is completed, if a biological opinion fails to comply with the ESA's standards, the action agency may not rely on it to satisfy its Section 7 duties.¹⁹ Furthermore, the action and consulting agencies must review the ongoing impacts of the action and reinitiate consultation if the effects on species exceed or are different than the agency's expectations. Specifically, reinitiation is required when: (a) the amount or extent of taking specified in the incidental take statement is exceeded; (b) new information reveals effects of the action that may affect listed species or critical habitat in a manner or to an extent not previously considered; (c) if the identified action is subsequently modified in a manner that causes an effect to the listed species or critical habitat that was not considered in the biological opinion; or (d) if a new species is listed or critical habitat designated that may be affected by the identified action.²⁰

When reinitiation is required, "the original opinion loses its validity, as does its accompanying incidental take statement, which then no longer shields the action agency from penalties for takings."²¹ Finally, during the consultation process and until the requirements of section 7(a)(2) are satisfied, ESA Section 7(d) provides that an agency "shall not make any irreversible or irretrievable commitment of resources" toward an action that would foreclose "the formulation or implementation of any reasonable and prudent alternative measures."²²

II. Factual Background

A. Southern Resident Killer Whales Continue to Decline at an Alarming Rate in Large Part due to Insufficient Chinook Salmon Prey

The Southern Resident killer whale is an endangered species under the ESA and a depleted stock under the Marine Mammal Protection Act (MMPA).²³ Over 2,000 species are listed as threatened or endangered under the ESA, approximately 150 of which live in the ocean.

¹⁷ *Id.* at § 402.14(g).

¹⁸ *See Pac. Coast Fed'n of Fishermen's Ass'n v. U.S. Bureau of Reclamation*, 426 F.3d 1082, 1093 (9th Cir. 2005) (the proper "analysis is not the proportional share of responsibility the federal agency bears for the decline in the species, but what jeopardy might result from the agency's proposed actions in the present and future human and natural contexts").

¹⁹ *See, e.g., Fla. Key Deer v. Paulison*, 522 F.3d 1133, 1145 (11th Cir. 2008) (action agency must independently ensure that its actions are not likely to cause jeopardy); *Pyramid Lake Paiute Tribe of Indians v. U.S. Dep't of Navy*, 898 F.2d 1410, 1415 (9th Cir. 1990) (same); *Ctr. for Biological Diversity v. BLM*, 422 F. Supp. 2d 1115, 1142 (N.D. Cal. 2006) (rejecting Forest Service's reliance on legally inadequate biological opinion).

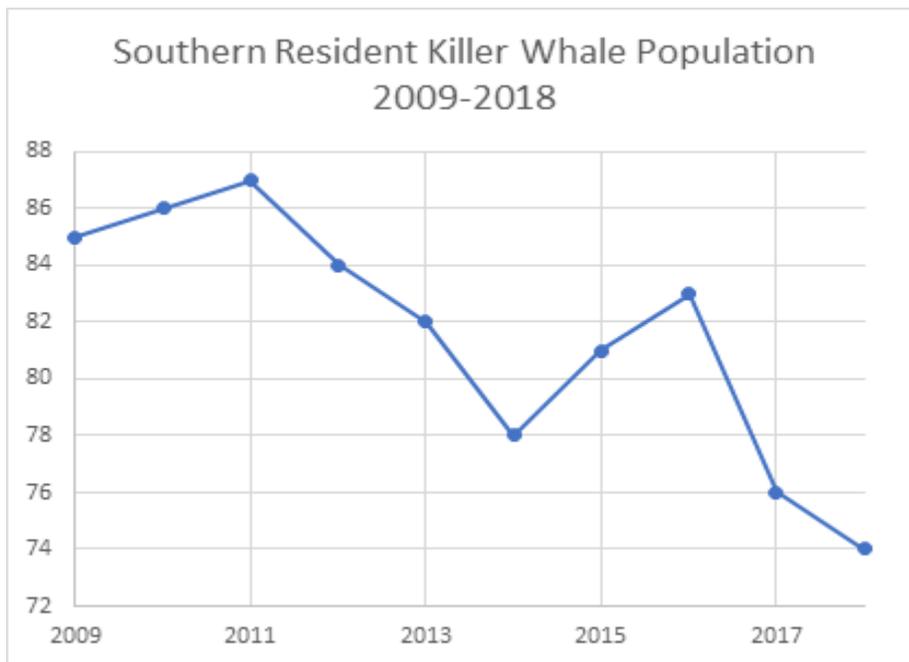
²⁰ 50 C.F.R. § 402.16 (2018).

²¹ *Ctr. for Biological Diversity v. BLM*, 698 F.3d 1101, 1108 (9th Cir. 2012).

²² 16 U.S.C. § 1536(d); 50 C.F.R. § 402.09.

²³ The Southern Resident was ESA listed as "endangered" in 2005. 70 Fed. Reg. 69,903 (Nov. 18, 2005). As an endangered species, the stock was automatically also considered a "strategic stock" under the MMPA. It was designated "depleted" under the MMPA in 2003 meaning the stock is below its Optimal Sustainable Population (OSP). 68 Fed. Reg. 31,980 (May 29, 2003).

NOAA has listed just 8 of these as “Species in the Spotlight,” because of their very high risk of extinction. The Southern Resident killer whale is one of these eight species.²⁴ Over the last three decades, the Southern Resident population has substantially declined. It has now dropped to its lowest point in 34 years and is continuing to decline. As of September 2018, the total population of the three pods (known as J, K, and L) that make up this distinct population segment stands at just 74 individuals.²⁵ In 2014, a population viability study estimated that under status quo conditions, the Southern Resident killer whales growth rate was a 0.91% annual decline, meaning it would reach an expected population size of 75 in one generation (or by 2036).²⁶ This abundance was reached in mid-2018. Another concerning statistic is that the last surviving Southern Resident killer whale calf was born in 2015.



NMFS acknowledges that the Southern Resident killer whale population is in a dangerous downward trend, that its growth rate is just half of the previous estimate described by a 2012 international panel review, and that availability of prey is a critical factor causing poor body

²⁴ See NAT’L OCEANIC AND ATMOSPHERIC ADMIN. FISHERIES, SPECIES IN THE SPOTLIGHT: PRIORITY ACTIONS: 2016-2020, SOUTHERN RESIDENT KILLER WHALE DPS, ORCINUS ORCA (2016).

²⁵ Reproductive-age females are critically important to each of the three pods and the population as a whole. Scientists recently calculated that just 26 of the Southern Resident killer whales make up the breeding adults, placing the population at high risk of inbreeding depression, continued loss of fitness, and accelerated population declines. See Ford, M.J, et al., *Inbreeding in an endangered killer whale population*. Animal Conservation, Doi:10.1111/acv.12413 (2018).

²⁶ Vélez-Espino, L.A., J.K.B. Ford, H.A. Araujo, G. Ellis, C.K. Parken, and K.C. Balcomb, *Comparative demography and viability of northeastern Pacific resident killer whale populations at risk*. Can. Tech. Rep. Fish. Aquat. Sci. 3084: v + 58 p., at iv. (2014).

condition, nutritional stress, and the decline of the population.²⁷ Southern Residents only consume fish, the majority of which is comprised of Chinook salmon.

Reduction in its Chinook prey negatively impacts the ability of the Southern Residents to maintain their dwindling pods. Recent scientific data demonstrate the increasing danger the lack of sufficient prey poses to Southern Resident killer whale fecundity and numbers. For example, Wasser et al. (2017) concluded that low availability of Chinook salmon is a key stressor and causes reproductive failure for Southern Resident killer whales.²⁸ Additionally, Lacy et al. (2017) conducted a population viability assessment that considered sub-lethal effects and the cumulative impacts of contaminants, acoustic disturbance, and prey abundance.²⁹ The scientists found that over the range of scenarios tested, the effects of prey abundance on fecundity and survival had the largest impact on the Southern Resident killer whales' population growth rate.³⁰ Matkin et al. (2017) indicated that while a variety of factors might be impacting the Southern Resident killer whales, prey limitation is the most likely cause of observed changes in body condition.³¹

These are just a few of the scientific studies conducted in the 2009-2018 period that clarify the important connections between the Southern Resident killer whales and their preferred prey (Chinook salmon) and provide other new information about the Southern Resident killer whales' range, foraging behaviors, and needs.³² They illustrate that NMFS has not considered the best available science in recent management decisions for Pacific ocean salmon fisheries.

²⁷ See, e.g., Letter from Nat'l Marine Fisheries Serv. to the Pacific Fishery Mgmt. Council (March 6, 2018); NAT'L MARINE FISHERIES SERV., F/WCR-2018-8134, MAY 2018 BIOLOGICAL OPINION AND ESSENTIAL FISH HABITAT RESPONSE FOR THE 2018-2019 PUGET SOUND CHINOOK HARVEST PLAN, SALMON FISHERIES AUTHORIZED BY THE U.S. FISH AND WILDLIFE SERVICE, AND FISHERIES AUTHORIZED BY THE U.S. FRASER PANEL IN 2018 (2018) (hereinafter "2018 BiOp") citing numerous scientific studies on the issue.

²⁸ Samuel K. Wasser et al., *Population Growth is Limited by Nutritional Impacts on Pregnancy Success in Endangered Southern Resident Killer Whales (Orcinus Orca)*, [PLoS ONE 12\(6\): e0179824 \(2017\)](#).

²⁹ Robert C. Lacy et al., *Evaluating Anthropogenic Threats to Endangered Killer Whales to Inform Effective Recovery Plans*, [Scientific Reports, 7:14119 \(2017\)](#).

³⁰ *Id.*

³¹ CRAIG O. MATKIN ET AL., DOI 10.1575/1912/8803, REVIEW OF RECENT RESEARCH ON SOUTHERN RESIDENT KILLER WHALES (SRKW) TO DETECT EVIDENCE OF POOR BODY CONDITION IN THE POPULATION, [INDEPENDENT SCIENCE PANEL REPORT TO THE SEADOC SOCIETY](#) (2017).

³² See also, Vélez-Espino, L.A., J.K.B. Ford, H.A. Araujo, G. Ellis, C.K. Parken, and R. Sharma. 2015. *Relative importance of chinook salmon abundance on resident killer whale population growth and viability*, *Aquatic Conserv: Mar. Freshw. Ecosyst.* 25: 756–780, published online in 2014; Weitkamp, L., *Marine distributions of Chinook Salmon from the West Coast of North America Determined by Coded Wire Tag Recoveries*, *Transactions of the American Fisheries Society* 139:147–170 (2010) (providing greater insight into ocean distributions of Chinook); Williams, R, M. Krkos'ek M, E. Ashe E, T.A. Branch, S. Clark, *Competing Conservation Objectives for Predators and Prey: Estimating Killer Whale Prey Requirements for Chinook Salmon*. *PLoS ONE* 6(11): e26738. doi:10.1371/journal.pone.0026738 (2011); Ayres, K.L., R.K. Booth, J.A. Hempelmann, K.L. Koski, C.K. Emmons, *Distinguishing the Impacts of Inadequate Prey and Vessel Traffic on an Endangered Killer Whale (Orcinus orca)*

B. Fisheries Affect the Southern Resident Killer Whales

Ocean fisheries that harvest Chinook salmon under the Pacific Salmon Plan remove the predominant prey for this critically endangered and depleted distinct population. Federally-managed Pacific ocean salmon fisheries harvest primarily Chinook and coho salmon. The remaining 74 Southern Resident killer whales consume on average 675,250 salmon each year,³³ spending an average of 244 days per year in coastal waters and 122 days in inland waters according to NMFS.³⁴ As shown below, the salmon fisheries catch fish from many stocks that are important to the orcas; in an abundance that is biologically significant to the whales; which depletes stocks that could otherwise feed the whales in the winter and spring, when the Southern Resident killer whales' body condition tends to decline (October through May).³⁵

First, ocean fisheries are harvesting salmon from many of the stocks that are important for Southern Resident killer whales. NMFS recently identified these stocks, in order of importance to the Southern Residents as a prey source, as:³⁶

1. Northern Puget Sound Stock, Fall Run
2. Southern Puget Sound Stock, Fall Run
3. Lower Columbia Stock, Fall Run
4. Strait of Georgia Stock, Fall Run
5. Upper Columbia & Snake Fall Stock, Fall Run
6. Fraser Stock, Spring Run
7. Lower Columbia Stock, Spring Run
8. Middle Columbia Stock, Fall Run
9. Snake River Stock, Spring-Summer Run
10. Northern Puget Sound Stock, Spring Run
11. Washington Coast Stock, Spring Run
12. Washington Coast Stock, Fall Run
13. Central Valley Stock, Spring Run
14. Middle & Upper Columbia Spring Stock, Spring Run
15. Middle & Upper Columbia Summers Stock, Summer Run
16. Fraser Stock, Summer Run
17. Central Valley Stock, Fall and Late Fall Run

Population. PLoS ONE 7(6): e36842. doi:10.1371/journal.pone.0036842 (2012); Hanson et al. 2013. Assessing the Coastal Occurrence of Endangered Killer Whales Using Autonomous Passive Acoustic Recorders,” *The Journal of the Acoustical Society of America* 134 (5): 3486–95, doi:10.1121/1.4821206
³³ See, e.g. NMFS, Recovery Plan for Southern Resident Killer Whale (2008), at II-21 (using a “rule of thumb” of about 25 salmon per day per whale, estimated over all age classes); but see NOAA Fisheries West Coast Region, *Southern Resident Killer Whales and West Coast Chinook Salmon* (2018), at 4 (placing the estimate at 190,000 to 260,000 adult Chinook salmon each year, which we assume must be an estimate for the summer months only).

³⁴ NAT'L MARINE FISHERIES SERV., BIOLOGICAL OPINION: EFFECTS OF THE PACIFIC COAST SALMON PLAN ON THE SOUTHERN RESIDENT KILLER WHALE (ORCINUS ORCA) DISTINCT POPULATION SEGMENT 2 (2009) (hereinafter “2009 BiOp”), Table 2, at 9.

³⁵ NOAA Fisheries West Coast Region, Southern Resident Killer Whale Priority Chinook Stocks Report (June 22, 2018), at 5.

³⁶ *Id.* at 7-8.

18. Klamath River Stock, Fall Run
19. Klamath River Stock, Spring Run
20. Upper Willamette Stock, Spring Run
21. Southern Puget Sound Stock, Spring Run
22. Central Valley Stock (including Sacramento River and its tributaries), Winter Run
23. North & Central Oregon Coast Stock, Fall Run
24. West Coast Vancouver Island Stock, Fall Run
25. Southern Oregon & Northern California Coastal Stock, Fall Run
26. Southern Oregon & Northern California Coastal Stock, Spring Run
27. California Coastal Stock, Fall Run
28. California Coastal Stock, Spring Run

NMFS has identified many of these stocks, some of which are ESA-listed, as fisheries managed under the Pacific Salmon Plan.³⁷ Therefore, those fisheries have potential impacts on the survival and population growth of the Southern Resident killer whales.

Second, fisheries under the Pacific Salmon Plan harvest an amount of Chinook salmon that is biologically significant to the Southern Residents. Harvest data for 2017 report that Council-managed fisheries “landed” over 200,000 Chinook in 2017 from Washington (77,434), Oregon (26,436), and California (103,877) commercial and recreational fisheries.³⁸ Estimated Chinook mortalities from bycatch are reported in Table I-7 as approximately 41,900 Chinook from commercial fisheries and 8,900 Chinook from recreational fisheries in 2017.³⁹ Scientists have recently estimated that these ocean fisheries reduce Chinook abundance by 18-25 percent.⁴⁰ This is an amount significant to the Southern Residents, as shown by Lacy et al. (2017), which projected that a “50% noise reduction plus a 15% increase in Chinook would allow the population to reach the 2.3% growth target” needed for recovery.⁴¹

³⁷ See 2009 BiOp, *supra* note 34, Table 1, at 3 (listing Evolutionarily Significant Units and DPSs affected by Pacific Fisheries Management Council Fisheries); Pacific Fishery Management Council (PFMC). 2016. *Pacific Coast Salmon Fishery Management Plan for Commercial and Recreational Salmon Fisheries off the Coasts of Washington, Oregon, and California as Amended through Amendment 19*. PFMC, Portland, OR. 91 p., Tables 1-1 and 3-3, at 6-9, 39 (“Chinook stocks and stock complexes managed under the Salmon Plan”).

³⁸ Pacific Fishery Management Council. 2018. *Review of 2017 Ocean Salmon Fisheries: Stock Assessment and Fishery Evaluation Document for the Pacific Coast Salmon Fishery Management Plan*. (Document prepared for the Council and its advisory entities.) Pacific Fishery Management Council, Table I-4, Council area commercial and recreational ocean salmon fishing effort and landings by state, at 18-20; see also *id.* at Tables I-10, I-11, at 27-28 (showing the significant number of Chinook harvested by Southeast Alaska and Canadian marine fisheries).

³⁹ *Id.* at 24.

⁴⁰ Hilborn, R., S.P. Cox, F.M.D. Gulland, D.G. Hankin, N.T. Hobbs, D.E. Schindler, and A.W. Trites. 2012. *The Effects of Salmon Fisheries on Southern Resident Killer Whales: Final Report of the Independent Science Panel*. Prepared with the assistance of D.R. Marmorek and A.W. Hall, ESSA Technologies Ltd., Vancouver, B.C. for National Marine Fisheries Service (Seattle, WA) and Fisheries and Oceans Canada (Vancouver, BC). xv + 61 pp. + Appendices, at 35.

⁴¹ Lacy et al. (2017), *supra* note 29, at 6.

Third, not only is the amount of harvest in ocean salmon fisheries significant, but the specific stocks harvested under the Pacific Salmon Plan – namely the coastal stocks off California, Oregon, and Washington – are important for successful survival and reproduction. Scientists have also remarked that “abundance of those specific Chinook salmon stocks that are present during the summer period and pass through the critical habitat of SRKW does not directly limit SRKW population growth. Instead, ... coastal abundance of Chinook salmon during non-summer months is probably more important for successful survival and reproduction of SRKW.”⁴² The best available science shows that Southern Resident killer whales are starving in the winter when they spend more time foraging off the coast of California, Washington, and Oregon and return to inland waters in poor body condition.⁴³ In a recent analysis of the relative importance of Chinook abundance to the population growth of Southern Resident killer whales, Velez-Espino et al. (2015) provided evidence that a 51% reduction in the ocean fishing harvest rate of five large fall Chinook stocks (Columbia Upriver Brights, Fraser Late, West Coast Vancouver Island Falls, Puget Sound, and Oregon Coast) may result in maximizing the fecundity of young reproductive females and the survival of old reproductive females.⁴⁴ Therefore, increasing ocean salmon abundance can improve body condition during the winter and spring.

While other actions to recover Chinook and benefit Southern Resident killer whales are needed, including breaching the Snake River dams and habitat restoration, management actions related to Chinook harvest (and vessel noise and disturbance) are available now and can immediately benefit the orcas.

Recent scientific inquiry in Canada and the U.S. has focused on identifying short-term management actions that could increase the immediate accessibility of Chinook (particularly the preferred 4-5+ year old fish) for Southern Resident killer whales. Participants in various technical workshops have begun to evaluate a menu of approaches, including fishery closures, adjusting fishing effort by time and place, establishing size limits for catch, increasing foraging success by decreasing acoustic and physical disturbance to the orcas, and establishing a salmon allocation for them.⁴⁵

Other jurisdictions like Canada and the State of Washington are explicitly considering and implementing fisheries harvest management measures to help the Southern Resident killer whales survive and recover, particularly during this precarious time for the population. To protect endangered Southern Resident killer whales for the 2018 season, the Canadian Department of Fisheries and Oceans (DFO) introduced salmon fishery measures to increase prey availability and reduce disturbance from salmon fishing in three key southern resident foraging

⁴² Hilborn, et al. *supra* note 40, at 31.

⁴³ See, e.g., MATKIN ET AL., *supra* note 31, at 2.

⁴⁴ Velez-Espino (2015), *supra* note 32, Table 3, at 769.

⁴⁵ See, e.g. Trites, AW and Rosen, DAS (eds). 2018. *Availability of Prey for Southern Resident Killer Whales. Technical Workshop Proceedings*. November 15–17, 2017. Marine Mammal Research Unit, Institute for the Oceans and Fisheries, University of British Columbia, Vancouver, B.C., 64 pages; Workshop to Assess Causes of Decreased Survival and Reproduction in Southern Resident Killer Whales: Priorities Report (December 2015); see also Williams, et al., *supra* note 32.

areas: the Strait of Juan de Fuca, the Gulf Islands, and at the mouth of the Fraser River.⁴⁶ The measures included late season openings, boundary changes, temporary closures in specified subareas, and lower recreational daily catch limits with possibilities for in-season changes if abundance permits. In its notice, DFO summarized that it was proposing these measures to achieve a 25-35% reduction in exploitation rates for Chinook stocks of concern “to support conservation and promote rebuilding.”⁴⁷

On November 16, 2018, Governor Inslee’s Southern Resident Orca Task Force issued its final report and recommendations, which included a recommendation titled “Reduce Chinook bycatch in west coast commercial fisheries.”⁴⁸ It advised that the Washington Department of Fish and Wildlife should work with the Pacific Fishery Management Council and North Pacific Fishery Management Council starting in 2019 “to implement practices and regulations in west coast fisheries that further reduce bycatch of Chinook – allowing more of these Chinook to reach Southern Residents,” taking into account “the effectiveness of existing bycatch reduction measures and provisions of existing federal agency requirements such as the Endangered Species Act.”⁴⁹ NMFS should be evaluating similar measures based on new information available on Chinook, Southern Resident killer whales, and their relationship to each other.

NMFS is aware that its fisheries management actions may affect Southern Residents. Despite having examined the impacts of the Puget Sound’s inland fisheries on Southern Resident killer whales, albeit somewhat poorly, in a 2018 Biological Opinion,⁵⁰ as discussed in section C below, NMFS has not issued a biological opinion on the impacts of the Pacific coast salmon fisheries on the Southern Resident killer whales since 2009 when the population stood at 85 individuals.

C. The Agency Continues to Rely on an Inadequate and Outdated 2009 ESA Biological Opinion for Southern Resident Killer Whales

After NMFS listed the Southern Resident killer whales as endangered under the ESA in 2005, it completed three consecutive annual consultations to evaluate the effects of ocean salmon harvests on the species. Then in 2009, NMFS completed a long-term biological opinion for the Pacific Coast Salmon Plan and Southern Resident killer whales (“2009 BiOp”) that “will remain effective until reinitiation is deemed necessary.”⁵¹ At the time of this 2009 BiOp, the Southern Resident killer whale population consisted of 85 individuals.

⁴⁶ Fisheries and Oceans Canada, FN0428, *Conservation Measures for Northern and Southern BC Chinook Salmon and Southern Resident Killer Whales* (May 30, 2018).

⁴⁷ *Ibid.*

⁴⁸ Cascadia Consulting Group, *Southern Resident Orca Task Force Report and Recommendations* (November 16, 2018), at 50.

⁴⁹ *Ibid.*

⁵⁰ NMFS, F/WCR-2018-9134, *Impacts of the Role of the BIA Under its Authority to Assist with the Development of the 2018-2019 Puget Sound Chinook Harvest Plan, Salmon Fisheries Authorized by the U.S. Fish and Wildlife Service and Fisheries Authorized by the U.S. Fraser Panel in 2018* (May 2018).

⁵¹ 2009 BiOp, *supra* note 34, at 2.

NMFS cannot and does not dispute that given the critically endangered status of Southern Resident killer whales, any actions that put the orcas at further risk are problematic. In the 2009 BiOp's "Jeopardy Analysis Framework," NMFS conveyed that:

[B]ecause the Southern Resident killer whale population is sufficiently small . . . and the probability of quasi-extinction is sufficiently likely that all individuals of the pods are important to the survival and recovery of the DPS . . . it is NMFS' opinion that any Federal action that is *likely to hinder the reproductive success or increase the risk of mortality of a single individual is likely to appreciably reduce the survival and recovery of the DPS.*⁵²

In other words, any agency action that that is likely to hinder the reproductive success or increase the risk of mortality of a single individual impermissibly "jeopardizes" the Southern Resident killer whales according to the regulatory definition of that term.⁵³ NMFS reiterated later that its section 7 analysis therefore "must scrutinize even small effects on the fitness of individuals that increase the risk of mortality or decrease the chances of successful reproduction."⁵⁴

At the time of the 2009 BiOp, NMFS stated that it was unknown whether lack of prey is limiting the ability of Southern Resident killer whales to survive and recover, and also "unknown whether their condition is a result of insufficient prey or some other cause."⁵⁵ At the time, NMFS arguably did not adopt an appropriately precautionary approach to the assessment of the risk the fisheries posed to the Southern Resident killer whales. As noted above, there is now significant new information not only about the alarming population decline of the Southern Resident killer whales, but also about the relationship between Chinook and the orcas' reproductive success and viability. NMFS' ultimate 2009 "no jeopardy" conclusion is no longer valid.

In 2009, NMFS did not place any numerical or other surrogate value on the extent of take authorized, which would have served as a trigger for reinitiation based on exceeded take.⁵⁶ Instead, the "Reinitiation of Consultation" section of the 2009 BiOp restates the regulatory standard for reinitiation of consultation, which is that reinitiation is required if: (1) the amount or extent of incidental take is exceeded; (2) new information reveals effects of the action that may affect listed species or critical habitat in a manner or to an extent not previously considered; (3) the identified action is subsequently modified in a manner that causes an effect to listed species or critical habitat that was not considered in the biological opinion; or (4) a new species is listed or critical habitat designated that may be affected by the identified action.⁵⁷

⁵² *Id.* (emphasis added).

⁵³ See 50 C.F.R. § 402.02 (defining to jeopardize as "to engage in an action that reasonably would be expected . . . to reduce appreciably the likelihood of both the survival and recovery of a listed species . . . by reducing the reproduction, numbers, or distribution.").

⁵⁴ 2009 BiOp, *supra* note 34, at 56.

⁵⁵ *Id.* at 56.

⁵⁶ *Id.* at 59.

⁵⁷ *Id.* at 63.

This 2009 BiOp is still used for annual Pacific salmon fisheries regulations. NMFS issued annual management measures for ocean salmon fisheries on May 1, 2018.⁵⁸ In its rule, the agency stated that it consulted on the effects of the ocean salmon fisheries on the Southern Resident killer whales in 2009 and that “the effects of the 2018 fisheries are consistent with the 2009 biological opinion.”⁵⁹ The Environmental Assessment (EA) and Finding of No Significant Impact prepared for the 2018 Ocean Salmon Fisheries Management Measures similarly states that “[o]f the ESA-listed marine mammals described above, Council-managed salmon fisheries only impact listed Southern Resident Killer Whales. Fisheries are managed consistent with the biological opinion for killer whales (NMFS, May 5, 2009).”⁶⁰

III. Legal Violations

NMFS’ continued reliance on the 2009 BiOp is arbitrary, capricious, and contrary to the ESA and does not insure against jeopardy to the Southern Resident killer whales. Further, new information regarding the impacts of fishing on prey availability and killer whales triggered the agency’s duty to reinitiate consultation.⁶¹

A. NMFS Is Failing to Insure Against Jeopardy to the Endangered Southern Resident Killer Whales

By failing to insure that its authorization and management of salmon fisheries is “not likely to jeopardize the continued existence” of the Southern Resident killer whales, NMFS is in violation of section 7(a)(2) of the ESA.⁶² NMFS’ authorization of the Pacific Coast salmon fisheries depletes Southern Resident killer whale prey, disrupts their foraging and other essential behaviors, and reduces the number of salmon that escape to spawn in their rivers of origin. In its 2009 BiOp, NMFS acknowledged that “hinder[ing] the reproductive success or increasing the risk of mortality of a single individual” constitutes jeopardy.⁶³ NMFS also concluded that the Chinook harvest it authorized would result in take of killer whales by reducing prey availability and impeding foraging efforts.⁶⁴ However, the agency did not set a numerical limit on the amount of take or establish any surrogate for triggering reinitiation of consultation.⁶⁵

Neither the reasonable and prudent measures, terms and conditions, nor the generic reinitiation triggers of the 2009 BiOp include measures to protect the rapidly declining Southern Resident killer whales from the impacts of prey limitation to which ocean salmon fisheries

⁵⁸ Fisheries Off West Coast States; West Coast Salmon Fisheries; 2018 Management Measures and a Temporary Rule, 83 Fed. Reg. 19,005 (May 1, 2018) (to be codified at 40 C.F.R. 660).

⁵⁹ *Id.* at 19,019.

⁶⁰ NAT’L OCEANS AND ATMOSPHERIC ADMIN., EA AND FONSI FOR 2018 OCEAN SALMON FISHERIES REGULATIONS, ENVIRONMENTAL ASSESSMENT ADDENDUM: CONSISTENCY WITH OTHER APPLICABLE LAW 2018 OCEAN SALMON FISHERIES MANAGEMENT MEASURES (RIN 0648-BH22) 4 (2018).

⁶¹ 16 U.S.C. § 1536; 50 C.F.R. §402.16.

⁶² 16 U.S.C. § 1536(a)(2).

⁶³ *Id.* at 2; 2018 BiOp, *supra* note 23 at 154.

⁶⁴ 2009 BiOp, *supra* note 34, at 59.

⁶⁵ 16 U.S.C. § 1536(b)(4)(C); *Or. Nat. Res. Council v. Allen*, 476 F.3d at 1037 (rejecting BiOp “because the Incidental Take Statement at issue contains no numerical cap on take and [the agency] fails to explain why it does not” and thus “it violates the ESA”).

contribute. Accordingly, the Pacific Coast Salmon Plan BiOp 's Incidental Take Statement is invalid. NMFS' continued reliance on that biological opinion violates its ESA Section 7 duty to insure that its actions do not jeopardize the Southern Resident killer whales.⁶⁶

B. New Information Requires NMFS to Reinitiate Consultation

NMFS must reinitiate consultation, because new information reveals effects of the ocean salmon fisheries that may affect the endangered Southern Resident killer whales "in a manner or to an extent not previously considered."⁶⁷ The 2009 BiOp stated that it "is currently uncertain whether a lack of adequate prey at particular times in particular locations is limiting the ability of the Southern Resident killer whale DPS to survive and recover. There is anecdotal evidence that some individual whales in some years may be undernourished, although it is unknown whether their condition is a result of insufficient prey or some other cause."⁶⁸ As discussed above, recent science has confirmed that lack of adequate prey is a limiting factor for the Southern Resident killer whales. Recent scientific data demonstrate that nutritional stress leads to lower fecundity and reproductive failure and that of many factors analyzed, the effects of prey abundance on fecundity and survival had the largest impact on the Southern Resident killer whales' population growth rate.⁶⁹ NMFS must therefore reinitiate and complete consultation on its authorization and management of Pacific Coast salmon fisheries. Its failure to do so violates the agency's duties under Section 7(a)(2) of the ESA.

Once NMFS has reinitiated consultation, Section 7(d) of the ESA provides that the agency "shall not make any irreversible or irretrievable commitment of resources with respect to the agency action which has the effect of foreclosing the formulation or implementation of any reasonable and prudent alternative measures which would not violate subsection (a)(2) of this section."⁷⁰ Section 7(d) prohibitions remain in effect throughout the consultation period and until NMFS has satisfied its obligations under Section 7(a)(2) that the action will not result in jeopardy to the species.

C. NMFS Is Causing Unlawful Take of Endangered Southern Resident Killer Whales

NMFS is in violation of the ESA's prohibition on "taking" endangered species. A "governmental third party pursuant to whose authority an actor directly exacts a taking . . . may be deemed to have violated the provisions of the ESA."⁷¹ By continuing to manage and annually authorize the Pacific salmon fisheries, which are causing take of Southern Resident killer whales by reducing available prey, NMFS has caused and will continue to cause the unpermitted take of Southern Resident killer whales in violation of Section 9 of the ESA. As discussed above, NMFS' Incidental Take Statement does not include a numerical take limit, establish any

⁶⁶ *Ctr. for Biological Diversity v. BLM*, 422 F. Supp. 2d at 1142; 16 U.S.C. § 1536(b); 5 U.S.C. § 706(2)(A).

⁶⁷ 50 C.F.R. § 402.16(b).

⁶⁸ 2009 BiOp, *supra* note 34, at 56.

⁶⁹ See WASSER *supra* note 28; Lacy *supra* note 29.

⁷⁰ 16 U.S.C. § 1536(d); 50 C.F.R. § 402.09.

⁷¹ *Strahan v. Cox*, 127 F.3d 155, 163 (1st Cir. 1997).

surrogate for take, or require other measures sufficient to protect the rapidly declining Southern Resident killer whales from the impacts of prey limitation caused by ocean salmon fisheries.

IV. Conclusion

For the foregoing reasons, if NMFS does not correct these violations of the ESA within 60 days, the Center for Biological Diversity and Wild Fish Conservancy intend to file suit under the ESA's citizen suit provision.⁷² We urge NMFS to contact us regarding this letter to discuss options for avoiding litigation or to provide us with any information we may not have that is relevant to your ESA consultation duties with respect to ocean salmon fisheries and Southern Resident killer whales.⁷³ Thank you for your prompt attention to this matter.

Sincerely,



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⁷² 16 U.S.C. § 1540(g).

⁷³ For legal purposes, the Center's address is: Center for Biological Diversity, 1212 Broadway, St. #800, Oakland, CA 94612. However, please direct all correspondence to the authors of this letter listed above.