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¹ Washington Trout has changed its name to Wild Fish Conservancy. *See* Notice of Name Change, which accompanies the filing of this Memorandum.

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I. INTRODUCTION

Fisheries in Puget Sound, Canada, coastal Washington, and Alaska combine to kill substantial numbers of Puget Sound Chinook salmon which have been listed as "threatened" under the Endangered Species Act ("ESA"), 16 U.S.C. §§ 1531, et seq. One in five of even the weakest stocks of native Chinook are being killed in fisheries each year, while fisheries take one in three, one in two, or even two out of three or more of the returning adults from other Puget Sound populations.

This case concerns two decisions by National Marine Fisheries Service ("NMFS") that authorize continuation of this level of harvest on threatened Puget Sound Chinook. The first is NMFS's approval of a fishery management plan prepared by the State of Washington and Puget Sound Tribes, the *Puget Sound Comprehensive* Chinook Management Plan: Harvest Management Component (the "Harvest Plan"), setting standards for the catch of Puget Sound Chinook in commercial and recreational fisheries. NMFS evaluated the Harvest Plan under regulations the agency adopted to protect threatened Puget Sound Chinook. AR² 0003 & 0005; 50 C.F.R. § 223.203. The second is the Biological Opinion, developed under § 7 of the ESA, 16 U.S.C. § 1536, in which NMFS determined that by approving the Harvest Plan, NMFS would not itself jeopardize the survival and recovery of Puget Sound Chinook. AR 0004-03.

To approve the Harvest Plan, NMFS departed from a key concept central to its regulations: what constitutes a "viable" population of salmon. Under the regulations, "viable" means a population that has a negligible risk of extinction. But for this decision, NMFS redefined it to mean the carrying capacity of current habitat conditions - which has nothing to do with extinction risk, and produces a "viable" threshold an order of magnitude smaller than that intended by the regulations. Improper use of the "viable" population concept infects all of the analysis NMFS conducted.

² "AR" citations refer to the number assigned to the Administrative Record documents in the index compiled by the Defendants.

NMFS's regulations also do not allow it to approve a harvest plan that slows progress toward recovery, or threatens the continued existence of individual populations. NMFS's own analysis shows that, even using the wrong target levels, harvest rates are still too high for Chinook from key regions of the Sound to make any progress, and several important populations remain at risk. And as detailed in this brief, the Harvest Plan failed to satisfy other requirements as well.

Section 7(a)(2) of the ESA requires agencies – including NMFS – to insure that they take no action that jeopardizes the continued existence of any listed species. 16 U.S.C. §1536(a)(2). NMFS's decision to approve the harvest plan is itself subject to this requirement. In this case NMFS was obliged to consult with itself. When NMFS's analysis showed that the Puget Sound fisheries, combined with the catch elsewhere, would prevent several populations from even achieving their current carrying capacity – levels they should be at today – let alone make progress toward recovery, NMFS should have found that its approval of the plan would jeopardize the salmon.

The ESA also requires agencies to reinitiate their ESA consultation when new information shows that listed species are being impacted in a manner not considered during the initial consultation. There have been several new developments since NMFS approved the Harvest Plan that should have caused it to reinitiate consultation.

Plaintiffs seek the Court's determination that NMFS's decision to approve the Harvest Plan was arbitrary and capricious and unlawful, in violation of the Administrative Procedures Act ("APA"), 5 U.S.C. § 701, *et seq.*, that the agency's approval of the Harvest Plan also violated ESA Section 7, 16 U.S.C. § 1536, and that NMFS is violating the ESA by failing to reinitiate consultation on the Harvest Plan.

II. BACKGROUND

A. Puget Sound Chinook Are A Threatened Species Under The ESA

Salmon populations throughout the Northwest began a precipitous decline shortly after the advent of intensive commercial fisheries. *See* AR 0236. In our own time, salmon populations up and down the West Coast have become so depleted that

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24 25 27 they warrant ESA protection. These salmon populations are grouped into what NMFS refers to as "evolutionarily significant units" or "ESUs" for listing purposes.

In 1999, NMFS formally listed Chinook salmon from Washington's Puget Sound as threatened with extinction.³ 64 Fed. Reg. 14308 (Mar. 24, 1999). The Puget Sound Chinook ESU includes all naturally spawning Chinook populations in the Puget Sound region from the North Fork Nooksack River to the Elwha River. 50 C.F.R. § 223.102(a)(16). NMFS recognizes 22 populations today. AR 0002 at 16.

The Puget Sound Chinook ESU also includes fish from 26 hatcheries. 50 C.F.R. § 223.102(a)(16). But only those hatchery salmon that have intact adipose fins are protected under the ESA. 50 C.F.R. § 223.203(a). Clipping of the adipose fin is now commonly used to readily identify hatchery-produced salmon. 70 Fed. Reg. 37160, 37194 (June 28, 2005). NMFS has determined that marked hatchery fish are not needed for conservation of threatened populations, like the Puget Sound Chinook, and so may be harvested in fisheries. *Id.*; 50 C.F.R. § 223.203(a).

В. **Consequences Of ESA Listing**

1. NMFS Has Extended To Threatened Salmon The ESA's **Prohibitions On Taking Or Selling, But With Exceptions**

The ESA prohibits actions that result in the "taking" of endangered animals. 16 U.S.C. § 1538(a)(1). It does not provide the same automatic protection for threatened animals, like Puget Sound Chinook. Id. Instead, Section 4(d) of the ESA directs the Secretary to adopt such regulations as he deems "necessary and advisable" for the conservation of any threatened species. 16 U.S.C. § 1533(d). So-called "4(d) Rules" may protect threatened species with any of the measures that automatically apply to endangered species, such as the prohibitions on "taking," buying, selling, or transporting an endangered animal. *Id.*; 16 U.S.C. § 1538(a)(1).

³ The ESA makes the Secretaries of Interior and Commerce responsible for administering the Act. See 16 U.S.C. § 1532(15). Because the Secretary of Commerce oversees marine life, responsibility for salmon resides with that agency. See 50 C.F.R. § 402.01(b). The Secretary has delegated this responsibility to NMFS.

NMFS has adopted a 4(d) Rule for threatened salmon, including Puget Sound Chinook, that extends all of the protections of Section 9 to threatened salmon ESUs. 50 C.F.R. § 223.203(a). By doing so, NMFS has prohibited the taking of Puget Sound Chinook with intact adipose fins on the high seas or in U.S. waters, and prohibited their possession, transport, sale, shipment, import, export, or introduction into interstate commerce. *Id.*; 16 U.S.C. § 1538(a)(1).

However, the 4(d) Rule also includes exceptions (referred to by NMFS as limits) that, if satisfied, strip away the Section 9 protections. § 223.203(b). Two exceptions for fishery management plans are relevant to this case: the general requirements for fishery management plans in 203(b)(4), and additional requirements a joint State and Tribal plan, referred to as a resource management plan ("RMP"), in 203(b)(6). This case focuses on the following elements of 203(b)(4), also called Limit 4:

- Treat differently populations that are at or below a "critical" threshold, below a "viable" threshold, and above a "viable" threshold;
- Not appreciably slow any population's achievement of viable function;
- Maximum exploitation (harvest) rates must not appreciably reduce the likelihood of survival and recovery of the ESU; and
- Restrict fisheries to minimize any take of listed species.

2. Agencies Must Consult With NMFS On Actions That May Adversely Impact Threatened Chinook Salmon

ESA Section 7(a)(2) requires each federal agency to "insure that any action authorized, funded, or carried out by such agency ... is not likely to jeopardize the continued existence of any endangered species or threatened species" 16 U.S.C. § 1536(a)(2). To help agencies meet this obligation, the statute requires them to consult concerning the impacts of their actions, *id.*, with NMFS for impacts on salmon. *See* 50 C.F.R. § 402.01(b). Formal consultation is required on any action that is likely to have an adverse effect on a listed salmon population. 50 C.F.R. § 402.14(a) & (b).

The product of the Section 7 consultation is a Biological Opinion, in which

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NMFS evaluates the impact of the agency action and determines whether it is likely to jeopardize the continued existence of the species. 16 U.S.C. § 1536(b)(3)(A). When NMFS itself proposes an action that may have an adverse impact on listed salmon, then the agency satisfies the requirements of Section 7 by consulting with itself. That is what occurred in this case, resulting in the Harvest Plan BiOp in question.

"Jeopardize the continued existence of" is defined by regulation to mean "an action that reasonably would be expected, directly or indirectly, to reduce appreciably the likelihood of survival and recovery of a listed species in the wild by reducing the reproduction, numbers, or distribution of that species." 50 C.F.R. § 402.02. This is commonly referred to as the "jeopardy" standard. In making a jeopardy determination on actions affecting salmon, NMFS evaluates the threat the action poses to the salmon ESU as a whole, rather than individual salmon populations. See 56 Fed. Reg. 58612 (Nov. 20, 1991). Thus, when evaluating agency actions that authorize salmon harvests, NMFS must consider whether the proposed harvest is reasonably expected to appreciably reduce the likelihood of survival and recovery of the Puget Sound Chinook ESU as a whole. See 50 C.F.R. §§ 402.02 & 402.14(g)(4).

3. Criteria For Recovery Of Puget Sound Chinook Salmon

The ESA requires NMFS to develop a recovery plan for listed species that includes, among other things, "objective, measurable criteria which, when met, would result in a determination ... that the species be removed from the list." 16 U.S.C. § 1533(f)(1)(B)(ii). The ESA also authorizes NMFS to name a recovery team to help the agency develop and implement recovery plans. 16 U.S.C. § 1533(f)(2).

NMFS has named a Technical Recovery Team ("TRT") for Puget Sound Chinook, which in April 2002 projected what will be needed to recover Puget Sound Chinook. AR 0070 & 0070-01. The TRT's document identifies criteria for the viability of individual Puget Sound salmon populations, and includes for each population a "planning range" projecting how many returning salmon will be needed for that population to be "viable." See AR 0070-01 at 6-8. The TRT took its viability

criteria from a 2000 paper, titled "Viable Salmon Populations and the Recovery of Ecologically Significant Units," AR 0241, commonly referred to as the VSP Paper. See AR 0070-01 at 1. The VSP Paper describes a "viable salmon population" as:

an independent population of any Pacific salmonid (genus *Oncorhynchus*) that has a negligible risk of extinction due to threats from demographic variation (random or directional), local environmental variation, and genetic diversity changes (random or directional) over a 100-year time frame.

AR 0241 at 2. As the VSP Paper's authors explain: "We believe the term 'viable population' ... describe[s] the population attributes necessary to ensure long-term species survival in the wild." *Id.* n.2. And as the TRT explained its use of the term: "Population viability is defined based on a specified probability (e.g., 0.95) of persistence in 100 years." AR 0070-01 at 1.

The separate Puget Sound Chinook populations are not individually listed under the ESA. Rather, they are grouped together into a single unit for ESA listing purposes. Thus, Puget Sound "recovery" requires adding up improvements made across the populations to determine whether collectively they are sufficient for delisting and recovery of the Puget Sound Chinook ESU as a whole. AR 0070-01 at 1, 12. The TRT's 2002 paper provides guidance on recovery criteria at the Puget Sound ESU level. The TRT's recommendations to NMFS include the following recovery criteria:

- At least 2 to 4 viable populations in each of 5 regions within Puget Sound. AR 0070-01 at 12 (a map of the 5 regions appears at AR 0070-01 at 13); and
- Populations across the ESU may have a range of risk levels, but the aggregate risk must be sufficiently low to assure persistence of the ESU, and non-viable populations should be sustained.

AR 0070-01 at 12, 15.

III. FACTUAL BASIS FOR PLAINTIFFS' CLAIMS CONCERNING THE CONTESTED AGENCY ACTIONS

A. NMFS' Flawed Evaluation Of The Puget Sound Harvest Management Plan

In March, 2004, the State of Washington and the Puget Sound Indian Tribes

presented NMFS with a plan for managing the harvest of Puget Sound Chinook in Puget Sound fisheries (herein the "Harvest Plan," commonly referred to by NMFS as the "RMP"). AR 0015. In evaluating the Harvest Plan under the 4(d) Rule, NMFS prepared a proposed evaluation of the Harvest Plan, AR 0001, which was put out to public comment in April 2004. It then produced a Final Evaluation and Recommended Determination ("ERD") on the Harvest Plan in January 2005. AR 0003.

As detailed in the subsections that follow, four elements of the NMFS analysis, presented in the ERD, conflict with the criteria of Limit 4 of the 4(d) Rule:

- NMFS improperly applied the concept of a "viable" population;
- NMFS failed to evaluate the impact of harvest on the ability of depressed population to recover to a truly viable level; and
- NMFS approved the Harvest Plan, even though harvest under the plan will appreciably reduce the likelihood of survival and recovery of the Puget Sound Chinook ESU.
- NMFS failed to evaluate the potential for widespread use of mark-selective fisheries to minimize the take of unmarked, threatened Chinook.

1. NMFS Used A "Current Conditions" Target Rather Than A "Recovered Population" Target In Identifying Viable Salmon Population Thresholds

The 4(d) Rule requires that any harvest management plan use the concept of "viable" and "critical" population thresholds in a way that is consistent with the VSP Paper. 50 C.F.R. § 223.203(b)(4)(i)(B). As discussed above in Section II.B., the VSP Paper makes clear that a "viable" population is one with a negligible risk of extinction over a 100 year period, AR 0241 at 2, which the Puget Sound TRT translated as a 95% probability of persisting for 100 years. AR 0070-01 at 1, 17. The TRT used this criteria to evaluate each Puget Sound Chinook population and identify viable population ranges for each population. AR 0070-01 at 7-8. A "critical" threshold, on the other hand, implies a high risk of extinction over a short time period. AR 0241 at 4.

NMFS did not use the TRT's viable population ranges to evaluate the thresholds proposed in the Harvest Plan. *See* AR 0003 at 37. Instead, NMFS developed its own

"viable" thresholds for eleven of the Puget Sound populations "under current habitat and environmental conditions." AR 0003 at 25, 28. For the other populations, NMFS relied on default values derived from the VSP paper, again without reference to the TRT's work. *See e.g.*, AR 0003 at 75.

NMFS justified its departure from the TRT's viability ranges on grounds that the larger, recovered populations cannot be sustained by current habitat conditions. AR 0003 at 37–40. Thus, the NMFS "viable" thresholds are an estimate of current carrying capacity of the habitat, and have no connection to the VSP Paper's concept of a population large enough to have a negligible risk of extinction, or the TRT's application of that concept to the Puget Sound populations.

The effect of the NMFS approach is best illustrated by some examples. In the following table, the first column is the salmon population (NMFS combined the North Fork and South Fork Nooksack populations in its analysis). The second column is the most recent figures NMFS had on average escapement (*i.e.*, the number of salmon returning to the rivers to spawn). The source of this information is Table 8 of the ERD, AR 0003 at 28. The third column is the NMFS-derived viable threshold. *Id.* The fourth column is the TRT's planning range. AR 0070-01 at 8.

Salmon	1999-2002 Average	NMFS Viable	TRT Viability
Population	Escapement	Threshold	Range
Nooksack	429	500	$25,100 - 39,000^4$
Lower Skagit	2,944	2,182	16,000 – 22,000
Skykomish	2,118	3,500	17,000 – 51,000

As in these examples, the difference between the NMFS "current conditions" thresholds and the viability ranges articulated by the TRT is generally an order of magnitude or more. *Compare* AR 0003 at 28 *with* AR 0070-01 at 8.

⁴ The TRT developed separate planning ranges for North Fork and South Fork Nooksack, which are combined here for comparison to the NMFS figures.

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2. NMFS Approved Maximum Harvest Rates That Perpetuate **Current Depressed Population Levels Rather Than Make Progress Toward Recovery**

The 4(d) Rule requires that the maximum exploitation rate (i.e., fishery-caused mortality) on a population that is above its "viable" threshold – meaning it has a negligible risk of extinction – must maintain the population at or above that level, and for a population that is below its "viable" threshold must not appreciably slow the population's progress toward viable function. 50 C.F.R. § 223.203(b)(4)(i)(B).

NMFS evaluated the impacts of fisheries carried out under the Harvest Plan on Puget Sound populations using NMFS-derived thresholds, which again are based on current conditions, not on an estimate of what is needed for a recovered population. AR 0003 at 7. NMFS developed a "rebuilding exploitation rate" or "RER" for each of nine populations. The RERs purportedly determine the highest harvest rate that could be sustained over time without slowing progress toward a viable population level. *Id.* But NMFS made this calculation using its "current conditions" thresholds, and not the TRT's viability criteria. *Id.* The ERD sets out the formula used to calculate rebuilding exploitation rates, which involves the probability that a population subjected to a given harvest rate will be larger than the "current conditions" viable threshold at the end of a 25 year simulation (and avoid dropping below its critical threshold). AR 0003 at 25.

As the table in the preceding section demonstrates, a "current conditions" threshold provides a much lower target or end point for the "RER" analysis than would the TRT's viability range for the same population. Because NMFS used its lower, "current conditions" threshold as the end point for its analysis, it allowed harvest to be managed to produce the long term result of a population no larger than could be achieved today, under current conditions. NMFS did not attempt to determine whether a lower harvest rate is needed to avoid slowing progress toward the TRT-identified viable population ranges. It also failed to consider the significance of several populations currently producing more salmon than its analysis suggested was sustainable under current conditions.

3. NMFS Approved Harvest Levels That Will Interfere With Recovery Of The Puget Sound ESU, Even Using "Current Conditions" Viable Population Thresholds

In addition to population-specific objectives, the 4(d) Rule also requires that the maximum exploitation rates under a harvest plan "must not appreciably reduce the likelihood of survival and recovery of the ESU," meaning the populations collectively. 50 C.F.R. § 223.203(b)(i)(C). Furthermore, the harvest management strategy must display a biologically-based rationale demonstrating the "survival and recovery" standard will be met. *Id.* at (b)(i)(D). This "survival and recovery" standard is the same one that is at the heart of agency consultations under ESA § 7. *See* Section II.B.2, above; 50 C.F.R. § 402.02 (defining "jeopardize the continued existence of").

Before NMFS evaluated the Harvest Plan, the Puget Sound TRT had developed and provided to the agency preliminary guidelines for recovery of the Puget Sound Chinook ESU that include, as discussed above in Section II.B., a minimum of two to four viable populations in each of five regions, and the continued existence and sustenance of the other extant populations. AR 0070-01 at 12-15. This criteria comes from the same TRT document that identifies "viable population" ranges that it believes reflect a negligible risk of population extinction. *Id.* at 8.

NMFS recognized that the TRT's preliminary criteria for ESU recovery should be used to judge whether the Harvest Plan meets the requirements of the 4(d) Rule. AR 0003 at 66-67. However, NMFS once again used its own "current conditions" viability thresholds in evaluating whether the Harvest Plan would lead to viable Chinook populations in Puget Sound. *See* AR 0003 at 66-79. It made no effort to evaluate harvest impacts against the TRT's "negligible risk" criteria for viable populations.

a. Two Of Five Puget Sound Regions Are Not On The Path To Recovery

According to NMFS' own ERD analysis, Puget Sound harvests, combined with Canadian harvests, will appreciably reduce the likelihood of recovery in two of Puget Sound's five regions. The Georgia Strait and Hood Canal regions have fewer than two

populations that will make progress toward even the current carrying capacity of the habitat, let alone the TRT's viability criteria. *See* AR 0003 at 69-70, 74-76.

The Georgia Strait region has only two populations: the North Fork and the South Fork Nooksack River populations. AR 0003 at 68. The ERD projected that Canadian and U.S. fisheries would have a combined exploitation rate of 25 percent on these populations, of which 7 percent would occur within Puget Sound. AR 0003 at 69. The NMFS rebuilding exploitation rate – the highest harvest rate supportable by current conditions – is 12 percent. *Id.* Note that the recent average abundance is 400 Chinook, while the NMFS "current conditions" threshold is only 500 Chinook. AR 0003 at 28. The TRT's viability range for the same populations is 25,100 – 39,000 Chinook. AR 0070-01 at 8. NMFS noted that the Canadian harvest rate alone exceeds NMFS's rebuilding exploitation rate, but nevertheless concluded that the Harvest Plan would adequately protect the two Georgia Strait salmon populations. AR 0003 at 68-69.

In the Hood Canal region, there are two populations, of which the mid-Hood Canal population consists of Chinook salmon from three rivers. AR 0003 at 75. Escapement of Chinook to the three mid-Hood Canal rivers averaged 404 fish from 1999 to 2002, and is expected to range between 344 and 531 Chinook under the Harvest Plan. *Id.* at 74. In recent years, two of the rivers in this population have seen fewer than 40 returning Chinook. *Id* at 75.

NMFS did not develop a rebuilding exploitation rate for the mid-Hood Canal population, but did evaluate the impact of the fisheries against a default viable threshold of 1,250 Chinook. AR 0003 at 75. The ERD projected that Canadian and U.S. fisheries would have a combined exploitation rate of 32 percent on the mid-Hood Canal population, of which 13 percent would occur in Puget Sound fisheries. *Id.* NMFS concluded that the population is likely to remain in the low 500s under the Harvest Plan, with continued risk to the salmon from two of the rivers. *Id.* at 74-75. Even though 40 percent of the harvest of this population is occurring in Puget Sound waters, NMFS concluded that it has little impact on the population's continued

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existence and that the threat is "buffered" by hatchery production. *Id.* at 76.

b. Populations Remain At Risk In Two Other Regions

As to the remaining regions, NMFS was able to conclude that 7 of 10 populations in the North Sound region and 4 of 6 populations in the South Sound region are at viable levels or will be rebuilt toward viable levels under the Harvest Plan, but only because NMFS used "current conditions" viable thresholds for its analysis. AR 0003 at 70-74. Again, NMFS did not evaluate whether there would be any populations making progress toward "negligible risk," or viability as described by the TRT.

And even using a "current conditions" definition of viability, NMFS still concluded that several important populations in both the North and South Sound regions will not improve and will remain at risk under the Harvest Plan: the lower Sauk River, lower Skagit River and Skykomish River populations in the North Sound region, and the Lake Washington populations from the Cedar and Sammamish Rivers in the South Sound region. *Id.* As these five populations are expected to at best remain steady, and potentially decline, the Harvest Plan does not meet the TRT's criteria of sustaining and improving all remaining populations in Puget Sound. *See* AR 0070-01 at 12, 15. The following comment from the ERD is representative of NMFS's view:

Despite potential risks that the Cedar River and Sammamish River populations may experience under the harvest management plan from May 1, 2005 through April 2010, the RMP is still expected to provide sufficient protection for four of the six populations in the South Puget Sound Region. The concerns for the Cedar River and Sammamish River populations do not represent much risk to the region.

AR 0003 at 74.

c. NMFS Approved A Minimum Fishing Regime Without Evaluating Its Consistency With 4(d) Rule Criteria

The 4(d) Rule requires that harvest impacts on populations functioning below their critical threshold must not "appreciably increase genetic and demographic risks facing the population and must be designed to permit the population's achievement of

viable function...." 50 C.F.R. § 223.203(b)(4)(i)(B). The Harvest Plan includes something it calls a "critical exploitation rate ceiling." This ceiling describes a minimum fishing regime for Puget Sound fisheries that is allowed even when a population is at or approaching its critical threshold, or if fishing levels in Canada make it difficult or impossible to achieve the rebuilding exploitation rate. AR 0003 at 12.

As NMFS acknowledges, the critical exploitation rate ceiling reflects policy considerations rather than biological ones. *Id.* NMFS indicates that it is the position of the State of Washington and the Tribes that "if further resource protection is necessary, it must be found by reducing exploitation rates in mixed-stock fisheries in Alaska and Canada, improving habitat conditions, and/or providing artificial supplementation where necessary and appropriate." AR 0003 at 13; *see also* AR 0171 & 0171-01.

While the ERD acknowledges the critical exploitation rate ceilings are an element of the Harvest Plan and explains the policy reasons behind them, AR 0003 at 13, and even identifies the populations likely to be managed under the minimum fishing regime, *Id.* at 17-18, the ERD offers no evaluation of the biological impact of that regime. It does not consider whether allowing harvest at the proposed ceilings will pose a threat to populations that are below critical thresholds, as required by the 4(d) Rule, let alone whether a population subject to a critical exploitation rate ceiling is likely to recover to a viable level, or whether allowing harvest at these rates will interfere with recovery of any single population or the ESU as a whole.

4. NMFS Did Not Consider Restrictions On Fishing Gear To Minimize The Take Of Threatened Puget Sound Chinook

The 4(d) Rule requires that any harvest plan include restrictions on fisheries to minimize the take of listed species, including time, size, gear, and area restrictions. 50 C.F.R. § 223.203(b)(4)(i)(H). In evaluating the Harvest Plan, NMFS stated that timing, size, gear, area, and retention restrictions may be imposed to meet the exploitation rates, thresholds, and exploitation rate ceilings of the Harvest Plan. AR 0003 at 84-85. The apparent assumption reflected in this portion of the ERD is that this 4(d) Rule

requirement is satisfied so long as fisheries are conducted in a way that satisfies requirements 223(b)(4)(i)(A) - (G). The ERD contains no analysis of whether it would be feasible for Puget Sound fisheries to further reduce ("minimize") impact on threatened Chinook, for example by adopting mark-selective fisheries and requiring release of unmarked Chinook and use of gear that facilitates Chinook survival.

B. ESA Section 7 Consultation On NMFS's Approval Of The Puget Sound Harvest Plan

In December 2004, NMFS released a Biological Opinion that evaluated the impact of three federal actions on Puget Sound Chinook (the "Harvest Plan BiOp"). AR 0002. The main action evaluated in the Harvest Plan BiOp was NMFS's proposed determination that the Harvest Plan satisfies the requirements of the 4(d) Rule. *Id.* at 1. The Harvest Plan BiOp also considers actions that the U.S. Fish & Wildlife Service ("FWS") may take that would help implement the Harvest Plan. *Id.* at 13. FWS must agree to any changes to fisheries affecting Hood Canal salmon, and under the terms of existing agreements, once the Harvest Plan is approved would be bound to agree to its implementation. *Id.*

The Harvest Plan BiOp is intimately linked to the ERD. In fact, all of the Harvest Plan BiOp's analysis of harvest impacts relevant to this case is identical, or nearly so, to the portions of the ERD discussed in the preceding sections of this brief, and cites to tables that appear in the ERD. *Compare* AR 0002 at 24-37 *with* AR 0003 at 66-79. Thus, as with ERD, in evaluating whether fisheries conducted under the Harvest plan will appreciably reduce the likelihood of recovery of the Puget Sound Chinook ESU, the Harvest Plan BiOp uses as its measuring stick the NMFS-derived "current conditions" viability thresholds, rather than the TRT's viability criteria. AR 0002 at 8, 24-37. However, the Harvest BiOp explain neither the origin of the NMFS-derived thresholds, nor their departure from the TRT's criteria.

The Harvest Plan BiOp, like the ERD, also acknowledges that "critical exploitation rate ceilings" are an element of the Harvest Plan, and when implemented

would allow the combined U.S. and Canadian harvest to exceed the Harvest Plan's rebuilding exploitation rates. AR 0002 at 11-12. The Harvest Plan BiOp contains no analysis of the impact of harvests under this regime on Puget Sound Chinook, even though NMFS acknowledges modeling by the State and the Tribes demonstrating the potential for it to be invoked in several fishery management units. AR 0002 at 12.

C. Developments Since NOAA Issued Its BiOp On The Puget Sound Harvest RMP

ESA regulations obligate agencies to re-initiate consultation with NMFS if the extent of the taking of listed species is greater than previously specified or new information indicates the action may affect listed species to an extent not previously considered. 50 C.F.R. § 402.16. In order to determine whether NMFS has an obligation under this regulation to reinitiate consultation in this case, the Court must consider events that have occurred and information that has become available since NMFS issued the ERD and the Harvest Plan BiOp.

1. Increased Impacts From Canada's Fisheries

The catch of Chinook salmon is allocated between Canada and the United States through mechanisms contained in the 1999 Pacific Salmon Treaty. NMFS and the Puget Sound fishery managers were aware, even before NMFS approved the Harvest Plan, that Canada was increasing its Chinook catch, but believed the increases were within Canada's allocation under the Treaty. *See* AR 0003 at 15. In August 2004, while NMFS was evaluating the Harvest Plan, the fishery managers reported that fisheries in Canada were approaching the full capacity allowed under the Treaty. AR 0266 at 9. They added: "Increases in Canadian catch continue to be a serious problem facing the comanagers." *Id*.

But in 2006, it was revealed that Canada had not only increased its total catch, but also had begun in 2000 to shift the timing of its fisheries to conserve its own Chinook stocks, with the West Coast Vancouver Island ("WCVI") fishery dramatically shifting out of the summer months, into spring and fall. AR 0274 at vi, 3, 9-12, 103.

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This occurred at the same time that Canada was significantly increasing its Chinook catch. See AR 0266 at 9, AR 0267 at v; AR 0274 at 7, 12. Among the resulting impacts was a significant increase in Canada's harvest of U.S. origin Chinook, including the catch of Chinook from Puget Sound – not only in numbers, but as a percentage of the Canadian catch. See id. at xi (Puget Sound comprises a larger portion of the catch in Sept. - Nov.); at 103 (stock composition in WCVI fishery by month); and at 17 (WCVI catch by month).

The Chinook catch in the major mixed-stock fisheries in Canada and the U.S., including Canada's WCVI fishery, is allocated through a complex indexing model that reflects the different harvest rates on the various populations caught in those fisheries. Due to the shift in timing of the WCVI fishery, the model no longer accurately predicts the impact of that fishery. AR 0274 at 98. Before 2000, the model's projections tracked the analysis of actual harvest results from coded wire tags – small wire markers placed in hatchery fish. *Id.* at x. However, since the change in the timing of the WCVI fishery, the model has predicted catches below the target level, but the coded wire tag data shows the actual catch has been well above the target level. *Id.* at 98.

It is difficult to evaluate the impact of Canada's timing shift on specific populations, because of limits on the available coded wire tag data. See AR 0274 at 57 (base period data not available for North Puget Sound and Puget Sound Spring stocks). However, the available data does show that Canada's harvest rates on Puget Sound populations are higher than previously expected, in some cases dramatically so. For example, when NMFS evaluated the Harvest Plan, it assumed 18 percent of the adults returning to the Nooksack rivers in the Georgia Strait would be caught in Canada – versus a "rebuilding" exploitation rate of 12 percent. AR 0003 at 68-69. But Canada's timing change pushed the harvest rate on the Nooksack indicator stock up to an average of almost 24 percent in the WCVI fishery during 2002-2004, with almost 34 percent caught in 2004. AR 0274 at 59. There is, of course, a corresponding increase in the combined U.S. and Canadian harvest rate on these populations.

2. Formal Adoption Of Puget Sound Recovery Plan, With Viable Population Criteria And Recovery Goals

A draft recovery plan for Puget Sound Chinook, focused on the habitat improvements needed to bring about recovery, was developed through a group called Shared Strategy. AR 0269. The Shared Strategy plan, released in July 2005 and amended in December 2005, addressed harvest by deferring to the Harvest Plan. AR 0269 at 16, 97-98, 421-28. NMFS released a supplement to this plan that summarizes its provisions, qualifies some of its elements, and compares the plan to ESA requirements. AR 0270. NMFS subsequently formally adopted the Shared Strategy document, along with the Harvest Plan, as the components of the recovery plan for Puget Sound Chinook. *See* 72 Fed. Reg. 2493 (Jan. 19, 2007).

The NMFS supplement contains a discussion of the recovery goals for Puget Sound, which NMFS has now formally endorsed. They include the following:

- The viability status of all populations in the ESU is improved from their current status; and
- At least two and up to four Chinook salmon populations in each of five biogeographical regions within the ESU achieve viability.

AR 0270 at 7. The NMFS supplement specifically recognized that recovery will require both Nooksack populations and the mid-Hood Canal population to improve to a viable, low risk status. AR 0270 at 8. The NMFS supplement also recognized the TRT's viable population ranges, as well as similar recovered population targets produced by the fishery managers, which were never mentioned in the ERD. AR 0270 at 9. The TRT's planning ranges and fishery manager's planning targets also are set out in a table in the NMFS supplement. *Id.* at 10. The NMFS supplement also recognized that the watershed planning groups have set a short-term goal of improving conditions for all populations and getting them on a trajectory toward recovery early in implementation, and certainly within the first ten years. AR 0270 at 10.

The NMFS supplement contains no evaluation of how the Harvest Plan meshes

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with the recovery criteria, viable population targets, or short term goals set forth in the Shared Strategy recovery plan, and now endorsed by NMFS. It states only that the recovery strategies include implementing the Harvest Plan "to ensure harvest … programs work in concert with recovery objectives." *Id.* at 11. The supplement contains no acknowledgement that the Harvest Plan is managing fisheries toward different population objectives than in the Shared Strategy plan. *Id.* at 11, 21-22.

3. Adoption Of Hatchery Policy Differentiating Marked From Unmarked Chinook.

There are substantial numbers of Chinook salmon produced in hatcheries in Puget Sound. Due to a District Court ruling in Oregon, Alsea Valley Alliance v. Evans, 161 F. Supp. 2d 1154 (D. Or. 2001), NMFS was forced to re-evaluate how it treats hatchery-origin salmon in its ESA listing decisions. In June 2005, NMFS issued a new policy that treats all hatchery-origin fish as part of salmon ESUs and issued a complete reassessment of its ESA listing decisions for all the salmon ESUs. 70 Fed. Reg. 37160 (June 28, 2005). In its final decision, NMFS divided hatchery-origin salmon into two groups. Those that contribute to the recovery of native salmon, and are therefore necessary for conservation of their salmon ESU, are protected under the ESA to the same extent as native salmon. However, those hatchery-origin salmon that are not necessary to conservation and are from an ESU listed as "threatened" under the ESA (which includes Puget Sound Chinook) are excluded from the protections of the 4(d) Rule. See 70 Fed. Reg. at 37166-67; 50 C.F.R. § 223.203(a). The criteria NMFS selected to differentiate ESA-protected hatchery-origin salmon from unprotected hatchery-origin salmon is whether or not the fish has a clipped adipose fin. *Id.* NMFS selected this distinguishing characteristic "because it provides a readily identifiable and enforceable feature for distinguishing those fish protected by the ESA take prohibitions." *Id.* at 37167.

4. Results Of Fishery Management Under The Harvest Plan

By March 2006, NMFS's staff was able to form some conclusions about how

Puget Sound Chinook populations were faring under the Harvest Plan, which by then had been in place for several years. *See* AR 0272 & 0272-01. These conclusions included the following:

of particular concern, escapement levels for several populations (SF Stillaguamish, SF Nooksack and Mid-Canal) are much lower than we anticipated and all continue to return well below their critical levels;

for these same populations, the preseason FRAM escapement estimate is consistently an overestimate from that estimated postseason, and by a pretty large margin ..."

AR 272. NMFS further commented:

Given the patterns seen for some of the stocks, a primary goal of the recovery plan that all populations must improve, and the importance of the SF Nooksack and [mid-Hood Canal] populations to the ESU in particular, it is important that we try and explain the causes for these patterns and, consistent with the [Harvest Plan] to determine whether taking any additional fishery actions would make a substantive difference in them.

Id. As noted above, in Section III.A.3.a, the fact that the Nooksack and mid-Hood Canal populations are not improving prevents the Puget Sound Chinook ESU from being on a path to recovery. While the harvest on both of these populations in Puget Sound fisheries is substantially smaller than the harvest occurring in Canada, the Puget Sound fisheries still contribute to harvest of these populations. *See* AR 0003 at 17-18.

IV. LEGAL ARGUMENT

A. Standard of Review

NMFS's approval of the Harvest Plan under the 4(d) Rule is subject to review under the APA, 5 U.S.C. §§ 701, *et seq.* Under the APA, a court must "hold unlawful and set aside agency action, findings, and conclusions" that are "arbitrary, capricious, an abuse of discretion, or otherwise not in accordance with law." 5 U.S.C. § 706(2)(A). NMFS's ESA evaluation of the impact of its action on threatened Puget Sound Chinook also is reviewed under APA standards, as judicial review of administrative decisions made under the ESA is governed by Section 706 of the APA.

See Turtle Island Restoration Network v. NMFS, 340 F.3d 969, 973 (9th Cir. 2003).

An agency decision, including the issuance of an ESA biological opinion, must be overturned if it is "arbitrary, capricious, an abuse of discretion, or otherwise not in accordance with law." 5 U.S.C. § 706(2)(a); see also Sw. Ctr. for Biological Diversity v. U.S. Bureau of Reclamation, 143 F.3d 515, 522 (9th Cir. 1988). An agency action is arbitrary and capricious if "the agency has relied on factors which Congress has not intended it to consider, entirely failed to consider an important aspect of the problem, offered an explanation for its decision that runs counter to the evidence before the agency, or is so implausible that it could not be ascribed to a difference in view or the product of agency expertise." Motor Vehicle Mfrs. Ass'n v. State Farm Mut. Auto. Ins. Co., 463 U.S. 29, 43, 103 S. Ct. 2856 (1983). Although the arbitrary and capricious standard "is narrow and presumes the agency action is valid, . . . it does not shield agency action from a 'thorough, probing, in-depth review." N. Spotted Owl v. Hodel, 716 F. Supp. 479, 481-82 (W.D. Wash. 1988) (citations omitted).

B. Because NMFS Did Not Follow The 4(d) Rule In Approving The Harvest Plan, Its Approval Is Unlawful And Must Be Set Aside

NMFS's failure to act in compliance with its own regulation, the 4(d) Rule, is fatal to its action of approving the Harvest Plan. "It is a well established proposition that an agency is bound by its regulations." *Kelly v. R.R. Ret. Bd.*, 625 F.2d 486, 491-92 (3rd Cir. 1980) (citations omitted). An agency that does not follow its own regulations engages in arbitrary and capricious conduct; the resulting actions are "not in accordance with law." *See, e.g., Ballard v. C.I.R.*, 544 U.S. 40, 59, 125 S. Ct. 1270, 1282 (2005) ("observing that an agency ... and 'rightly so,' 'must be rigorously held to the standards by which it professes its action to be judged'") (citations and quotations omitted); *Wash. Toxics Coal. v. U.S. Dept. of Interior*, 457 F. Supp. 2d 1158, 1175 (W.D. Wash. 2006) ("Most relevant to the present case is that '[a]gency actions may not, of course, be inconsistent with the governing [law (the ESA)].""); *see also Raymond Proffitt Found. v. E.P.A.*, 930 F. Supp. 1088, 1104 (E.D. Pa. 1996). This

obligation is strict, for "[a]n agency of the government must *scrupulously* observe rules, regulations, or procedures which it has established." *U.S. v. Heffner*, 420 F.2d 809, 811 (4th Cir. 1969) (emphasis added); *see also Sierra Club v. Martin*, 71 F. Supp. 2d 1268, 1326 (N.D. Ga. 1996) (citation omitted). "Failure to comply with regulations is a fatal flaw to the administrative action [and a]n action undertaken by an agency contrary to its regulations is illegal and of no effect." *Kelly*, 625 F.2d at 492 (citations omitted).

Here, NMFS failed to follow specific requirements of the 4(d) Rule, which NMFS itself issued as "necessary and advisable" for the conservation of threatened Puget Sound salmon. *See* 50 C.F.R. § 223.203(b); *see also Tennessee Valley Auth. v. Hill*, 437 U.S. 153, 172, 98 S. Ct. 2279, 2290-91 (1978) (citing 16 U.S.C. § 1533(d)) ("By § 4(d) Congress has authorized—indeed commanded—the Secretary to 'issue such regulations as he deems necessary and advisable to provide for the conservation of such species.""). NMFS's failure to "scrupulously" observe its own rules renders its approval of the Harvest Plan illegal and of no effect.

1. NMFS Acted Unlawfully In Departing From The Regulatory Meaning Of "Viable" Salmon Population

NMFS evaluated the Harvest Plan using a meaning of "viable" salmon population (current carrying capacity) that is at odds with the meaning assigned to that term in the 4(d) Rule (negligible risk of extinction). That significant change in meaning was an improper departure from the requirements of the regulation. *See Ballard*, 544 U.S. at 59, 125 S. Ct. at 1282. In so doing, NMFS impermissibly changed the standard by which the regulations mandated that its action of approving fishery management plans should be judged. *See id*. For in NMFS's assessment of the Harvest Plan, unlike the 4(d) Rule, a "viable" population of salmon has no connection to salmon recovery.

The decision of the District Court for the Northern District of Georgia in *Sierra Club v. Martin* ("*Martin*") should prove helpful to this Court in illustrating NMFS's

failure to "scrupulously" follow the law and its own regulations here. 71 F. Supp. 2d 1268. In *Martin*, the defendant Forest Service approved timber harvest plans after construing the effect of the plans under a different measure of viability than was required by the agency's regulations. *Id.* at 1273. That action violated the APA and rendered approval of the timber harvest plans unlawful. *Id.* at 1319, 1326-27.

In *Martin*, the applicable statute and regulations required the Forest Service to maintain the viability of certain "sensitive and endangered" plant and animal populations inhabiting the targeted areas. *Id.* at 1273, 1326-27. The regulations required the agency to make this "viability" determination by using population data about the species, including both inventory and quantitative data. *Id.* at 1314-15, 1327.

Despite the regulations' specific directive that population data drive the agency's viability determination, the defendant Forest Service did not follow it. *Id.* at 1315. Instead, the Forest Service measured viability using data about what it called "Management Indicator Species," which it described as a "reasonabl[e] estimat[ion] of the viability of the relevant species under the timber harvest plans." *Id.* at 1318. The court rejected the agency's derogation from the regulation's specific requirements because no agency has the authority to act "contrary" to regulation. *Id.* at 1319, 1327.

Nor can NMFS lawfully act "contrary" to the 4(d) Rule. Here, the 4(d) Rule very specifically ties the meaning of a "viable" salmon population to one source: the VSP Paper. *See* 50 C.F.R. § 223.203(b)(4)(i)(B). The regulation thus requires NMFS to make this "viability" determination by using the concept as expressed in that paper. *Id.* The VSP Paper defines a "viable" salmon population as one with enough fish to have only a negligible risk of extinction over a 100-year period. AR 0241 at 2. NMFS's "viable" salmon population, in stark contrast, has nothing to do with the number of fish necessary to avoid extinction. Instead, NMFS interpreted "viable" to mean only that population of fish that NMFS estimates is the current carrying capacity of the relevant habitat. AR 0003 at 25, 28. Avoiding extinction was not part of NMFS's equation. *Id.* The meaning assigned by NMFS to a "viable" population

violates both the plain language and, as demonstrated in the vast difference between NMFS's thresholds and the TRT's ranges, *see* Section III.A.1, above, the purpose of the 4(d) Rule's clear requirement that viability be determined according to the concept utilized in the VSP Paper.⁵ That violation of regulation is unlawful and fatal to its act. *Kelly*, 625 F.2d at 492; *Martin*, 71 F. Supp. 2d at 1319, 1327.

Nor can NMFS provide any explanation to save its violation of the 4(d) Rule. An agency simply cannot act contrary to its own regulations. *See Ballard*, 544 U.S. at 59, 125 S. Ct. at 1282. It is well settled that even if an agency believes its decision to depart from a regulation is "arguably beneficial for the protection of the environment," the departure from its own regulations is still "fatal" to its act. *Salt Pond Assocs. v. U.S. Army Corps of Eng'rs*, 815 F. Supp. 766, 779 (D. Del. 1993); *see also Martin*, 71 F. Supp. 2d at 1326 (rejecting agency's rationalizations for its departure from the regulatory requirements). Whether the meaning that NMFS attached to a "viable" population was reasonable or even purportedly better is likewise irrelevant to this Court's determination. *Id.* This is particularly true, given that the standard was set by NMFS in its own regulations. The inquiry ends at NMFS's violation of the 4(d) Rule.

Because the "viable" population concept is central to the 4(d) Rule, NMFS's error contaminated the remainder of its analysis. In *Martin*, for example, the failure of the Forest Service to make proper determinations about the viability of populations contaminated its determination of whether the timber harvest it was approving would adversely impact those species. 71 F. Supp. 2d at 1321. NMFS similarly contaminated its exploitation rate (*i.e.*, harvest rate) determinations with its faulty definition of viability. Exploitation rates under the 4(d) Rule turn on whether a population is either at or above, or below its "viable" level. As discussed above, for a population at or

⁵ As a direct result of NMFS's perversion of the 4(d) Rule's concept of a "viable" population, the Harvest Plan authorizes directed fishing of threatened Puget Sound salmon at escapement thresholds significantly (if not fatally) below the "viable" thresholds contemplated by the 4(d) Rule. *See* AR 0003 at 11. That approval, issued contrary to its own regulation, is unlawful and must be set aside. 5 U.S.C. § 706(2)(A).

above its "viable" threshold, harvest rates are acceptable so long as they maintain the population at or above that level. *See* 50 C.F.R. § 223.203(b)(4)(i)(B). For a population below its "viable" threshold, harvest rates are not acceptable if they appreciably slow the population's progress toward reaching viability. *Id*.

But because NMFS violated the 4(d) Rule's requirement regarding the meaning of a "viable" population, NMFS necessarily violated the additional requirement of setting specific exploitation rates based on the viability of a salmon population. *Id.* For populations currently below NMFS's estimate of their carrying capacity, such as the two Nooksack and the Skykomish populations, AR 0003 at 28, NMFS has approved harvest rates that, at best, will bring them – many years from now – to a level NMFS believes they could achieve today. For populations that already are above NMFS's estimate of their carrying capacity, like the Upper and Lower Skagit and Green River populations, *id.*, NMFS's action will not continue to move them steadily toward true viability, but rather, allows them to be harvested at rates that will leave them no better than they are today.

Furthermore, the fact that there are populations above what NMFS claims is the current carrying capacity of the habitat is an indictment of NMFS's methods. It proves that the habitat is more productive than NMFS has acknowledged, and suggests that the collective harvest in Puget Sound, Canada, and elsewhere is holding back growth.

In sum, NMFS's "rebuilding" exploitation rates for Puget Sound fisheries are much higher than the salmon populations can actually sustain and make any progress toward true recovery. Because this result also violates the 4(d) Rule, which prohibits rebuilding exploitation rates that appreciably slow a salmon population's progress toward viable function, NMFS's determination here perpetuates its initial error and is similarly unlawful. *See, e.g., Martin,* 71 F. Supp. 2d 1319, 1326-27.

2. NMFS Also Acted Contrary To The 4(d) Rule's Recovery Requirement, Even Using A "Current Conditions" Definition Of "Viable" Population

Even using NMFS's erroneous concept of a "viable" salmon population as the

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current carrying capacity, NMFS acted contrary to the 4(d) Rule in an additional way by approving harvest rates that will slow recovery of the Puget Sound Chinook ESU. The 4(d) Rule prohibits the approval of fishery management plans that allow exploitation rates to "appreciably reduce the likelihood of survival and recovery of the ESU." 50 C.F.R. § 223.203(b)(i)(C). NMFS explicitly recognized that the TRT's preliminary criteria for ESU recovery—developed utilizing the concepts of the VSP Paper—should govern compliance with this particular requirement of the 4(d) Rule. AR 0003 at 66-67. The TRT's preliminary recovery guidelines for the salmon ESU are quite specific: (1) a minimum of two to four populations in each of five regions must be "viable;" and, (2) the other, "non-viable" populations must sustain and improve. AR 0070-01 at 12, 15. NMFS approved the Harvest Plan, even though the agency's own analysis showed it could not meet these guidelines. *See* AR 0003 at 68-69, 70-76.

First, even under the forgiving "current conditions" viability criteria applied by NMFS, two of the five regions (Georgia Strait and Hood Canal) do not have at least two populations headed for viability. AR 0003 at 69-70, 74-76. NMFS cannot blame anything but fishing pressure for this shortfall, given that populations should be able to achieve its "current conditions" carrying capacity targets today. Shortcomings in habitat or other factors are accounted for by focusing on current conditions. Thus, the Harvest Plan cannot meet the requirements of the 4(d) Rule because harvest carried out under that plan is demonstrably contributing to a slowing of the recovery of key populations in Puget Sound—under NMFS's own "current conditions" test. As a result, the Harvest Plan does not meet the recovery criteria of the 4(d) Rule. 50 C.F.R. § 223.203(b)(i)(C).

Second, NMFS failed to meet the TRT's direction to sustain and improve non-viable populations. Even under NMFS's deficient "current conditions" thresholds, the agency concluded that several important populations in two other regions will *not improve* and will *remain at risk* under the Harvest Plan. AR 0003 at 70-74. This conclusion flatly contradicts the TRT's guidelines requiring that the Harvest Plan's

exploitation rates sustain and improve *all* "non-viable" Puget Sound populations to achieve recovery of the ESU. AR 0070-01 at 12-15. For two of these salmon populations, NMFS summarily dismissed the risk, concluding that "[t]he concerns for the Cedar River and Sammamish River populations do not represent much risk to the region." AR 0003 at 74. Contrary to this assertion, the TRT's recovery standard prohibited such disregard for individual populations; their continued existence and improvement is essential to recovery of the ESU. AR 0070-01 at 15.

NMFS's affirmative disregard for the recovery requirement of its own regulation, particularly in light of its own conclusions that recovery would not occur for certain populations, is simply unlawful and fatal to its approval of the Plan. *See U.S. v. Heffner*, 420 F.2d at 811; *Martin*, 71 F. Supp. 2d at 1326.

3. NMFS's Treatment Of Critical Exploitation Rate Ceilings And Fishing Gear Restrictions Was Arbitrary And Capricious And Contrary To Law

NMFS recognized policy reasons behind assuring that Puget Sound fisheries are allowed at least a minimum amount of impacts on native Chinook populations, but failed to evaluate the consequences for the salmon. *See* AR 0003 at 13, 17-18. The minimum fishing regime applies to both populations at or near their critical threshold, and populations with significant Canadian harvest where the combined harvest is above the rebuilding exploitation rate. AR 0003 at 12. NMFS failed to evaluate whether allowing Puget Sound fisheries to harvest at the safe harbor level, called "critical exploitation rate ceilings," would comply with 4(d) Rule requirements. AR 0003 at 13, 17-18. This was arbitrary and capricious, as NMFS entirely failed to consider an important aspect of problem in making its decision. *See Motor Vehicle Mfrs. Ass'n*, 463 U.S. at 43.

NMFS made the same error, and also departed from the lawful requirements of the 4(d) Rule, in failing to evaluate whether introducing widespread use of mark-selective fishing – at a minimum in Puget Sound's recreational fisheries – would

further minimize the take of threatened Chinook, as required by the 4(d) Rule. The regulation requires that fisheries be designed or conducted in ways that minimize the take of listed salmon. 50 C.F.R. § 203.223(b)(i)(4)(H). NMFS, by determining that this obligation is satisfied by meeting other requirements of the rule, AR 0003 at 85, effectively excised this requirement from the regulations. Because NMFS treated this section of the regulation as if it imposes no independent requirement, NMFS made its decision on the Harvest Plan without giving any consideration to an important aspect of the problem, thus rendering that decision arbitrary and capricious. *See Motor Vehicle Mfrs. Ass'n*, 463 U.S. at 43. Its action also was an unlawful departure from the regulatory requirements of the 4(d) Rule. *See Ballard*, 544 U.S. at 59.

C. The Harvest Plan BiOp Is Legally Inadequate, As It Applied The Wrong ESA Jeopardy Standard, Should Have Found Jeopardy, And Failed To Use Best Available Science, As Required By The ESA

NMFS applied the wrong ESA jeopardy standard and failed to use best available science as required by the ESA. The Harvest Plan BiOp should be overturned as arbitrary and capricious and contrary to the requirements of the ESA. "[I]n every biological opinion, the consulting agency [must] ensure that the proposed action 'is not likely to jeopardize the continued existence of' an endangered or threatened species." *See Gifford Pinchot Task Force v. U.S. Fish & Wildlife Serv.*, 378 F.3d 1059, 1069 (9th Cir. 2004). The jeopardy analysis must consider the independent goals of both the survival and the recovery of a listed species. *Id.* at 1070. In addition to ensuring recovery, the ESA requires agencies to use the best available science in making the jeopardy determination. 16 U.S.C. § 1536(a)(2). NMFS's rejection of the VSP Paper's concepts and the TRT's substantial work applying those concepts to specific Puget Sound populations violated this basic requirement. NMFS's failure to satisfy either the ESA's "recovery" or "best science" requirement both serve as independent grounds for overturning the Harvest Plan BiOp.

1. The Harvest Plan BiOp Unlawfully Applied An Incorrect Jeopardy Standard

NMFS's no-jeopardy determination in its Harvest Plan BiOp is contrary to law, because it does not address the prospects for recovery of the listed salmon, expressly and impermissibly omitting that goal from its analysis. *See Gifford Pinchot*, 378 F.3d 1059. *Gifford Pinchot* stands for the proposition that an agency *must* aim for recovery. *Id.* In that case, brought under Section 10 of the ESA, the Ninth Circuit considered the regulatory definition of jeopardy (also applicable to this case) and a related concept, the "destruction or adverse modification" of critical habitat. *Id.* at 1069 (citing 50 C.F.R. § 402.02). Both definitions turn on adverse impacts to "both the survival *and* recovery of a listed species." *Id.* (emphasis added). The Ninth Circuit rejected an agency reading of the phrase that impermissibly rendered "survival" as "the regulation's singular focus." *Id.* In contrast, "the ESA was enacted not merely to forestall the extinction of species (i.e., promote a species [(1)] *survival*), but to allow a species to [(2)] *recover* to the point where it may be delisted." *Id.* at 1070 (citing 16 U.S.C. § 1532(3) (defining conservation)). In short, it is not enough for an agency's action to enable a listed species to merely survive; the agency's action must promote recovery. ⁶

The same regulatory definition of "jeopardy" applies in the context of Section 7 consultation. Indeed, the District Court for the District of Oregon recognized that "[t]he reasoning in *Gifford Pinchot* applies to the jeopardy analysis in a biological opinion." *See Nat'l Wildlife Fed'n v. State*, CV 01-640-RE and CV 05-23-RE (May 26, 2005), at 35.⁷ A jeopardy analysis that does not address the prospects for recovery

⁶ The Ninth Circuit similarly has recognized that an agency cannot avoid jeopardy merely because it "stay[s] the course," that is, "doing so has been shown slightly less harmful to the listed species than previous operations." *See Alum. Co. of Am. v. Bonneville Power Admin.*, 175 F. 3d 1156, 1162 (9th Cir. 1999). Indeed, staying the course is inadequate under the ESA; an agency must aim for recovery.

⁷ Nat'l Wildlife Fed'n, an unpublished opinion, used the Gifford Pinchot standard to evaluate an ESA section 7 BiOp. There, Judge Redden applied Gifford (Footnote Continued)

of a listed species is therefore contrary to law. Id. at 35.

Nonetheless, NMFS did not aim for recovery in evaluating the Harvest Plan. Indeed, for the same reasons that NMFS's evaluation was contrary to the 4(d) Rule, NMFS's no jeopardy determination in the Harvest Plan BiOp was contrary to the mandates of Section 7 of the ESA. NMFS's derivation of a "viable" population does not seek recovery, but seeks only to maintain a depressed population under "current habitat carrying capacity." Nor can NMFS achieve recovery where, based on its erroneous concept of a "viable" population, it calculated exploitation rates using this erroneous concept as a target. *Compare* AR 0003 at 28 *with* AR 0070-01 at 8. Because NMFS's jeopardy analysis failed to address the prospects for true recovery of listed Puget Sound salmon populations, the Harvest Plan BiOp fails on this basis alone. *See Gifford Pinchot*, 378 F. 3d 1059.

Moreover, the ERD, which informed the Harvest Plan BiOp's jeopardy conclusions, is replete with NMFS's admissions that the Harvest Plan will appreciably reduce the likelihood of achieving the TRT's recovery criteria for the Puget Sound Chinook ESU. NMFS's conclusion that in two regions, there will not be at least two populations on a path to recovery under the Harvest Plan, AR 0003 at 68-69, 74-75, is an admission that approval of the Harvest Plan cannot meet the "recovery" element of the jeopardy standard and that NMFS should have found its approval of the Harvest Plan would jeopardize Puget Sound Chinook. *See Gifford Pinchot*, 378 F.3d at 1059.

2. Misapplication Of The TRT's Recovery Criteria Violates The ESA's Requirement To Use Best Available Science

NMFS's Harvest Plan BiOp is additionally and independently flawed because NMFS failed to use the best available scientific information – the work of the TRT, as well as the VSP Paper's concept of "viability" – in issuing its no jeopardy

Pinchot's articulation of the "jeopardy" standard to the NMFS BiOp for Columbia River hydro impacts on ESA-listed salmon. *Nat'l Wildlife Fed'n*, at 34-35. Because NMFS failed to address the prospects for the recovery of salmon populations in that case, among other reasons, Judge Redden overturned the BiOp as contrary to law. *Id.*

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determination. A biological opinion is invalid if it fails to use the best available scientific information. See 16 U.S.C. § 1536(a)(2); see also Greenpeace Action v. Franklin, 14 F.3d 1324, 1336 (9th Cir. 1992). To the extent that there is any uncertainty as to what constitutes the best available scientific information, Congress intended "to give the benefit of the doubt to the species." Conner v. Burford, 848 F.2d 1441, 1454 (9th Cir. 1988) (quoting H.R. Conf. Rep. No. 96-697, 1st Sess. 12, reprinted in 1979 U.S.C.C.A.N. 2572, 2576). Finally, deference to the reasonable decisions of an agency is "warranted only when the agency utilizes, rather than ignores, the analysis of its experts." Ctr. for Biological Diversity v. Lohn, 296 F. Supp. 2d 1223, 1239 (W.D. Wash. 2003).

Ignoring available expert scientific analysis is precisely what NMFS did here. NMFS itself named the TRT, pursuant to the ESA, as the recovery team to help NMFS develop and implement recovery criteria for Puget Sound Chinook. AR 0070 & 0070-01; see also 16 U.S.C. § 1533(f)(1)(B)(ii) and (f)(2). Applying the criteria for a "viable" salmon population from the VSP Paper, the TRT issued its April 2002 document, which projected the necessary planning ranges to achieve the desired recovery of Puget Sound Chinook at both the population and collective, ESU-wide levels. AR 0070; AR 0070-01 at 6-8. Tasked by NMFS itself to develop recovery goals specific to the very fish at issue in this case, and utilizing NMFS-approved science contained in the VSP Paper, the TRT's quantitative conclusions are the best available science with respect to the recovery of these fish.

Nonetheless, NMFS ignored that work when asked to evaluate the Harvest Plan in the BiOp at issue here. NMFS did not use the TRT's definition of a "viable" population, based on the concept as used in the VSP Paper. Nor did NMFS respect the TRT's recovery criteria. AR 0070-01 at 12, 15. NMFS either ignored the impacts on recovery, AR 0003 at 69-70, 74-76, or contradicted the TRT's criteria, stating for example that threats to specific populations "do not represent much risk to the region." AR 0003 at 74.

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An agency cannot disregard specific quantitative goals like those developed by the TRT in favor of mere assertions that an action will avoid jeopardy. See, e.g., Pacific Coast Fed'n of Fishermen's Assocs. v. U.S. Bureau of Reclamation, 426 F.3d 1082, 1094 (9th Cir. 2005) (rejecting agencies' request "to disregard their quantitative conclusions in favor of their ["no jeopardy"] assertions" as contrary to the best available science requirement). Yet NMFS rejected these quantitative conclusions summarily, dismissing them as nothing more than "a useful contrast between *current* productivity [NMFS's goal] and the level of potential productivity associated with recovery [the VSP Paper's, the TRT's, and Shared Strategy's goal]." AR 0003 at 37 (emphasis added). These mere assertions that approval of the Harvest Plan would avoid jeopardy, in the face of the TRT's quantitative targets that prove otherwise, violated the ESA's best available science requirement. The TRT's science must be used, because the ESA will not have it any other way. 16 U.S.C. § 1536(a)(2). In failing completely to actually use the recovery goals of the TRT, based on the best available science, NMFS issued a no jeopardy determination contrary to the ESA and unlawful under the APA. See 5 U.S.C. § 706(2)(a).

D. The Agencies Should Have Re-Initiated Section 7 Consultation On The Harvest RMP, As Required By Regulation

Several events have occurred since NMFS issued the Harvest Plan BiOp that should have caused the agency to reinitiate ESA Section 7 consultation. The ESA consultation regulations require federal agencies to reinitiate formal consultation "if 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." 50 C.F.R. § 402.16(b). Here, each of the events discussed in this section should have caused NMFS to reinitiate consultation on the decision to approve the Harvest Plan:

1. The Revelation Of Changed Timing Of Canadian Harvests, And Resulting Consequences For Puget Sound Chinook

NMFS was aware at the time it issued the Harvest Plan BiOp in late 2004 that the Chinook catch in Canada had been increasing for several years, and that Canadian

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fisheries caught a significant number of Puget Sound Chinook. See AR 0002 at 12; AR 0003 at 15. But it was not publicly revealed until the summer of 2006 that Canada had begun changing the timing of its fisheries, which resulted in an increase in the proportion of U.S. origin salmon, increased the catch of Puget Sound stocks, and caused the model used to allocate Chinook between Canada and the United States to under-predict the impact of the Canadian fisheries. See Section III.C.1, above. The Harvest Plan does not itself authorize the fisheries in Canada. However, NMFS's approval of harvest rates authorized by the Harvest Plan was premised on an assessment of the combined effect of fisheries in Canada as well as the U.S. See AR 0003 at 15-18, 50-58, 61-66. Because the impacts of Canadian harvest are greater than NMFS anticipated, the incremental impacts of the fisheries conducted under the Harvest Plan also are greater. When NMFS became aware of this fact, it should have reinitiated consultation on the Harvest Plan. See Sierra Club v. Marsh, 816 F.2d 1376, 1388 (9th Cr. 1987) (consultation must be reinitiated when anticipated mitigation measures have been delayed and may not occur at all, resulting in greater than anticipated effects of the agency action on listed species).

2. The Adoption Of A Puget Sound Recovery Plan, With Recovered Population Targets And Ten Year Interim Goals

The Shared Strategy plan adopts the TRT's recovery criteria, including the need for all existing populations to show improvement and for two to four populations in each region to exceed viable levels. AR 0269 at 134. The plan also describes how the VSP Paper's parameters are applied to identify viable populations, including the criteria that the population be large enough to survive environmental variations and catastrophes. *Id.* at 135. Finally, the plan adopts as recovery guidelines the TRT's viability planning ranges, as well as similar salmon abundance targets developed by the fishery managers. AR 0269 at 136-37. NMFS endorsed all of these elements of the Shared Strategy plan. AR 0270 at 7-10. The Shared Strategy plan also contains an implementation chapter that includes a number of steps to be taken between 2005 and

2015. AR 0269 at 471-72. As explained in the plan's executive summary, the authors of the plan believed it was reasonable to expect to begin seeing results over that time period. *Id.* at xviii.

The formal adoption of population recovery objectives at or near the levels endorsed by the TRT in 2002, the endorsement of the "negligible risk" version of viable population targets, and the setting of 2015 to put populations on the path to recovery all are "new information" within the meaning of 50 C.F.R. § 402.16(b) that should have caused NMFS to revisit its analysis and reinitiate consultation on the Harvest Plan. Fisheries conducted under the Harvest Plan are having a greater impact than NMFS acknowledged in the Harvest Plan BiOp: they are slowing the progress toward these recovery objectives.

3. The Decision To Base ESA Protection On The Difference Between Marked And Unmarked Salmon

In June, 2005, NMFS decided that ESA protection for salmon from threatened ESUs, like Puget Sound, would depend on whether or not their adipose fins are clipped. 70 Fed. Reg. at 37166-167; 50 C.F.R. § 223.203(a). Prior to this decision, it was possible to identify many hatchery-origin salmon by the fact that their adipose fin had been clipped. However, there were (and are) very few mark-selective fisheries in Puget Sound (fisheries in which only salmon with clipped adipose fins may be retained). Mark-selective fisheries only achieve their objective of reducing the deaths of unmarked salmon if the gear used is conducive to salmon surviving the experience of being caught. *See* AR 0218, 0245, 0249, 0261. The Harvest Plan BiOp contains no discussion of whether the impact of Puget Sound fisheries on native Chinook could be reduced by more widespread use of mark-selective fishing and associated changes in fishing gear, even in the recreational fisheries.

The legal differentiation between marked and unmarked salmon, and the express ESA protection for all unmarked Chinook from Puget Sound, is "new information" within the meaning of 50 C.F.R. § 402.16(b), and should have caused NMFS to

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reinitiate consultation on the Harvest Plan BiOp. It is now possible for fishermen in Puget Sound to tell, before they have killed the Chinook they have caught, whether the fish on their hook or in their net is protected by the ESA. The Harvest Plan does not require that fishermen do anything to protect the unmarked, threatened salmon that they catch. As a result, fisheries conducted under the Harvest Plan have a greater impact on threatened Chinook than NMFS recognized before it drew this distinction. should have reinitiated consultation to evaluate whether the Harvest Plan avoids jeopardizing Puget Sound Chinook, in light of this new information.

4. Fishery Data Collected During The First Two Years Under The Harvest Plan

A March 2006 email from a NMFS scientist presents a gloomy assessment of the data on salmon returns during the first two years under the Harvest Plan for key populations in the Hood Canal and Georgia Strait regions. AR 0272 & 0272-01. These populations not only remained at risk, but the number of adults actually returning were "much lower" than fisheries models predicted preseason, and "continue to return well below their critical levels." AR 0272. NMFS further commented: "Not surprisingly, escapements for these populations in the last two years have also been below the range of expected escapements in our 4d evaluation." *Id*.

The email also recognizes the significance for Puget Sound Chinook recovery of the continued problems for these key populations:

Given the patterns seen for some of the stocks, a primary goal of the recovery plan that all populations must improve, and the importance of the SF Nooksack and MHC populations to the ESU in particular, it is important that we try and explain the causes for these patterns and, consistent with the RMP, to determine whether taking any additional fishery actions would make a substantive difference in them.

AR 0272. However, the same email notes that Puget Sound fishery management would not have changed under the Harvest Plan even if the preseason projections had accurately predicted the low returns in the South Fork Nooksack and Mid-Hood Canal populations, id, presumably because impacts on these populations were already being

managed under a critical exploitation rate ceiling that guarantees a minimum amount of fishing in Puget Sound.

This email confirms both that the impact of fisheries on key populations is greater than predicted in the ERD and BiOp, and that the Harvest Plan's fishery management scheme is not capable of responding to that change in circumstances. Once this became clear, NMFS should have immediately reinitiated consultation to determine whether fisheries are jeopardizing the survival and recovery of Puget Sound Chinook, and to consider reasonable and prudent alternatives that would reduce fishery impacts on key Puget Sound populations.

V. CONCLUSION

For the foregoing reasons, Plaintiffs respectfully urge this Court to determine that NMFS improperly approved the Harvest Plan, the Harvest Plan BiOp is invalid, and NMFS is obligated to reinitiate ESA consultation.

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DATED: April 2, 2007 Respectfully submitted,

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CERTIFICATE OF SERVICE

I hereby certify that on April 2, 2007, I electronically filed the foregoing with the Clerk of the Court using the CM/ECF system which will send notification of such filing to the following:

Robert Lee Gulley U.S. Department of Justice Post Office Box 7369 Washington, D.C. 20044-7369 Robert.Gulley@usdoj.gov

Dated this 2nd day of April, 2007.

/s/ Svend A. Brandt-Erichsen Svend A. Brandt-Erichsen WA Bar No. 23923

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