UNITED STATES DISTRICT COURT

EASTERN DISTRICT OF CALIFORNIA

CALIFORNIA STATE GRANGE, *et al.*,

Plaintiffs,

v.

NATIONAL MARINE FISHERIES SERVICE, *et al.*,

Defendants,

and

FEDERATION OF FLY FISHERS, *et al.*,

Defendant-Intervenors.

MODESTO IRRIGATION DISTRICT, *et al.*,

Plaintiffs,

v.

CARLOS M. GUTIERREZ, Secretary of Commerce, et al.,

Defendants,

and

NORTHERN CALIFORNIA COUNCIL OF FEDERATION OF FLY FISHERS, *et al.*,

Defendant-Intervenors.

1:06-CV-00308 OWW DLB
1:06-CV-00453 OWW DLB
CONSOLIDATED FOR DECISION ON CROSS MOTIONS FOR SUMMARY JUDGMENT

ORDER RE CROSS MOTIONS FOR SUMMARY JUDGMENT (*GRANGE* DOCS. 29, 39, 43; *MID II* Docs. 79, 90, 94)

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I. INTRODUCTION

Before the court for decision are two sets of cross-motions for summary judgment filed in two separate, but similar lawsuits, *California State Grange, et al. v. National Marine Fisheries Service, et al.*, 1:06-CV-00308 OWW DLB ("*Grange*"), and *Modesto Irrigation District, et al. v. Carlos M. Gutierrez, et al.*, 1:06-

CV-453 OWW ("*MID II*"), which have been consolidated for the purposes of summary adjudication. (*Grange* Docs. 29, 39 & 43; *MID II* Docs. 79, 90 & 94.) The *Grange* lawsuit concerns the listing of five populations of West Coast steelhead (a life form of *Oncorhynchus mykiss* (*O. mykiss*)) as threatened or endangered species under the Endangered Species Act ("ESA"). A coalition of forestry interests led by California State Grange (collectively, "Grange") challenge all five listings, arguing that, in reaching the listing determinations, the federal defendants unlawfully distinguished populations of anadromous *O. mykiss* from populations of resident *O. mykiss,* and populations of naturally-spawned *O. mykiss* from hatchery-born *O. mykiss*. (*Grange* Compl. at ¶1.) Three non-profit organizations dedicated to the promotion of fly fishing and to the conservation of fishery resources have intervened in that lawsuit. (*Grange* Doc. 38.)

MID II is a more factually detailed challenge to the listing of the Central Valley Distinct Population Segment of *O. mykiss*, one of the five listings at issue in the *Grange* suit. The plaintiffs in *MID II,* a coalition of irrigation districts (collectively "MID"), similarly argue that federal defendants unlawfully distinguished between populations of anadromous and resident *O. mykiss*, and between populations of naturally-spawned and hatchery-born *O. mykiss*. Four non-profit organizations dedicated to the promotion of fly fishing and to the conservation of fishery resources have intervened in that lawsuit. (*MID II* Doc. 34.)

Although *Grange* and *MID II* share the same administrative record, a largely common factual backdrop, and many common

issues, the cases are not identical, and these differences are separately analyzed.

II. BACKGROUND

A. Relevant Endangered Species Act Provisions.

The purposes of the Endangered Species Act ("ESA"), 16 U.S.C. §§ 1531, *et seq.*, are "to provide a means whereby the ecosystems upon which endangered species and threatened species depend may be conserved, [and] to provide a program for the conservation of such endangered species and threatened species." 16 U.S.C. § 1531(b). The term "conservation" is defined 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 [the ESA] are no longer necessary. Such methods and procedures include, but are not limited to, all activities associated with scientific resources management such as research, census, law enforcement, habitat acquisition and maintenance, propagation, live trapping, and transplantation, and, in the extraordinary case where population pressures within a given ecosystem cannot be otherwise relieved, may include regulated taking

16 U.S.C. § 1532(3).

Section 4(a) of the ESA directs the Secretary of Commerce or the Secretary of the Interior to "determine whether any species is endangered or threatened." 16 U.S.C. § 1533(a)(1). The Secretary of Commerce has delegated this authority to the National Marine Fisheries Service ("NMFS"); the Secretary of the Interior to the United States Fish and Wildlife Service ("FWS").[1]

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[1] Under the ESA, the respective responsibilities of the Secretary of Commerce and the Secretary of the Interior were to be governed by the provisions of Reorganization Plan 4 of 1970.

When determining whether a species is "endangered" or "threatened," NMFS must consider:[2]

(A) the present or threatened destruction,

See 16 U.S.C. § 1533(a)(2). However, because that Plan inadequately identified and established which species of fauna and flora are under the jurisdiction of each agency, on August 29, 1974, NMFS and FWS entered into a Memorandum of Understanding ("1974 MOU") to (a) establish procedures for the implementation of the ESA, and (b) define their respective jurisdictions under the ESA. AR 2380 at 2-3.

In the 1974 MOU, FWS is granted jurisdiction, including the responsibility for determining whether a species shall be added to the lists of threatened or endangered species, over fish species which either (1) spend the major portion of their life in fresh water, or (2) spend part of their lives in estuarine waters, if the remaining time is spent in fresh water. *Id.* at ¶2. NMFS is granted jurisdiction over fish species which (1) spend the major portion of their life in ocean water, or (2) spend part of their lives in estuarine waters, if the remaining portion is spent in ocean water. *Id.* at ¶1(a).

In addition to dividing jurisdiction between them, FWS and NMFS agreed in the 1974 MOU on the process for making decisions regarding species that were not specifically assigned in the 1974 MOU to either FWS or NMFS. In those cases, the directors of FWS and NMFS "shall have joint jurisdiction over, and shall jointly determine whether species ... shall be added to or removed from the lists of endangered and threatened species...." *Id.* at ¶3(a).

This exercise of joint jurisdiction required that any decision to list could only be done with the concurrence of both FWS and NMFS, and that all notices, proposed determinations, consultations and other processes, including publication in the Federal Register, were to be done jointly by both FWS and NMFS. *Id.* at ¶3(a)-(b).

[2] An "endangered species" is "any species which is in danger of extinction throughout all or a significant portion of its range." 16 U.S.C. § 1532(6). A "threatened species" is "any species which is likely to become an endangered species within the foreseeable future throughout all or a significant portion of its range." § 1532(20).

> modification, or curtailment of its habitat or range;
>
> (B) overutilization for commercial, recreational, scientific, or educational purposes;
>
> (C) disease or predation;
>
> (D) the inadequacy of existing regulatory mechanisms; or
>
> (E) other natural or manmade factors affecting its continued existence.

16 U.S.C. § 1533(a)(1). More generally,

> The Secretary shall make [listing] determinations ...solely on the basis of the best scientific and commercial data available to him after conducting a review of the status of the species and after taking into account those efforts, if any, being made by any State or foreign nation, or any political subdivision of a State or foreign nation, to protect such species, whether by predator control, protection of habitat and food supply, or other conservation practices, within any area under its jurisdiction, or on the high seas.

16 U.S.C. § 1533(b)(1)(A).

The ESA defines "species" to include "any subspecies of fish or wildlife or plants, and any distinct population segment of any species of vertebrate fish or wildlife which interbreeds when mature." 16 U.S.C. § 1532(16). The ESA does not define the term "distinct population segment" ("DPS") or provide further direct guidance as to the scope and meaning of the term. *Alsea Valley Alliance v. Evans*, 161 F. Supp. 2d 1154, 1157 (D. Or. 2001).

To the maximum extent possible, "concurrently with making a determination ... that a species is an endangered species or a threatened species," NMFS is directed to "designate any habitat of such species which is then considered to be critical habitat...." 16 U.S.C. § 1533 (a)(3).

Once a species is listed as threatened or endangered under

the ESA, it is unlawful for any person to "take"[3] members of the species without a permit. 16 U.S.C. § 1538(a)(1)(B)-(C) [ESA § 9(a)(1)(B)-(C)]. NMFS "shall issue such regulations as [it] deems necessary and advisable to provide for the conservation of [threatened] species." 16 U.S.C. § 1533(d) [§ 4(d)]. In the case of threatened fish or wildlife, NMFS "may by regulation prohibit ... any act prohibited under section 1538(a)(1) [§ 9's take provisions]...." *Id.*

Pursuant to § 4(f) NMFS must "develop and implement plans... for the conservation and survival of endangered species and threatened species listed pursuant to this section, unless [the Secretary] finds that such a plan will not promote the conservation of the species." 16 U.S.C. § 1533(f). "[T]he Secretary must not merely avoid elimination of that species, but is required to bring the species back from the brink sufficiently to obviate the need for protected status." *Fed'n of Fly Fishers v. Daley*, 131 F. Supp. 2d 1158, 1163 (N.D. Cal. 2000).

B. Biological Background on West Coast *O. mykiss*.

O. mykiss exhibit a highly complex life cycle. All *O. mykiss* are born and rear in fresh water. After spending anywhere from a few hours to several years in freshwater areas, some *O. mykiss,* commonly known as "steelhead," migrate downstream to the ocean. In order to do so, they undergo a physiological change, known as smolting, which enables them to live in saltwater. Juvenile and subadult steelhead spend one to five years foraging

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[3] The term "take" means to "harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct." 16 U.S.C. § 1532 (19).

in the Pacific Ocean before returning to fresh water to spawn. For the most part, steelhead return to spawn in the fresh water stream where they were born, although some stray to "non-natal" streams.[4] 69 Fed. Reg. 33,102, 33,108 (June 14, 2004).[5] The present distribution of steelhead extends from Kamchatka in northeast Asia, across to Alaska, and down the length of the west coast of the United States to the border between the United States and Mexico *Id.* at 33,109 For reasons that are not well-understood, some *O. mykiss* never smolt, remaining in fresh water throughout their lives. These freshwater "resident" *O. mykiss* are known as "rainbow" (or "redband") trout. *Id.* at 33,106.

The steelhead life form is considered to be important to the health and continued viability of *O. mykiss* populations. According to the Northwest Fisheries Science Center ("NWFSC"), an arm of NMFS, steelhead "represent[s] a critical component of the species' evolutionary 'bet-hedging' strategy for coping with environmental and ecological challenges." AR 1460 at 3. For example, even if a particular resident *O. mykiss* population is decimated by a disturbance event in a particular river, such as a disease outbreak or low water year, the anadromous steelhead that return to the area in subsequent years can repopulate the river. The Recovery Science Review Panel ("RSRP"), a panel of scientists

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[4] Unlike Pacific salmon, which die after spawning, *O. mykiss* can return to the ocean. 69 Fed. Reg. at 33,109.

[5] The parties rely heavily on various Federal Register Notices, sometimes citing to the Federal Register, other times to the Document Number corresponding to the place in which the particular Notice was inserted into the Administrative Record. This decision utilizes the Federal Register citations.

that meets once a quarter to, among other things, review NMFS recovery plans,[6] concluded that "[t]he anadromous component of a salmonid ESU, by maintaining the population's access to ocean habitat and food resources, can affect productivity over the short term and the probability that the ESU can persist in the long term.... [E]stimates suggest that eliminating the anadromous component of steelhead eliminates fish from 99.97% of their potential natural habitat." AR 1471 at 9.

Under some circumstances, either life form (steelhead or rainbow trout) can yield offspring that follow the alternative life form. However, NMFS's Pacific Salmonid Biological Review Team ("BRT"), an expert panel of scientists from several federal agencies, concluded that the frequency of such occurrences are "relatively rare, and there is even less empirical evidence that, once lost, a self-sustaining anadromous run can be regenerated from a resident salmonid population." AR 2185 at 211.[7] A separate panel of scientific experts, led by Dr. Jody Hey, (the "Hey Panel") found that while "[r]esident populations of *O.*

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[6] "An Introduction to the Recovery Science Review Panel," available at http://www.nwfsc.noaa.gov/trt/rsrp.cfm#tasks (last visited Oct. 4 2008).

[7] This administrative record was presented to the court as a set of compact disks containing numerous .pdf files. Each .pdf file was given a document number, which is referenced in this decision as "AR" followed by a number and then, if applicable, a page number. Confusingly, the parties' citations to the record sometimes reference the internal pagination of the document, while other times referencing the pagination of the .pdf file. The two are not always identical. This decision endeavors to uniformly use the pagination of the .pdf file to reference pages within the record documents.

mykiss **have often been established from resident, steelhead, and mixed sources ... the reverse process has been documented to have occurred just once." AR 793 at 14. Because the prospect of regeneration of steelhead from resident populations is speculative, the Hey Panel concluded that "it is important to conserve the evolutionary potential of the anadromous component of the conservation unit." AR 793 at 14. The RSRP reached similar conclusions, finding "only one published report of anadromy developing from a resident population ... that of the Santa Cruz River [in] Patagonia," AR 1471 at 6, as did the Independent Scientific Advisory Board ("ISAB"), which noted that there is no reliable method to predict where and when resident populations are possible of reestablishing anadromy at all, "much less within a timeframe important to recovery," AR 581 at 25. Moreover, even if it were possible to conclude with more certainty that resident populations could reestablish anadromous runs, there would still be a scientific basis for addressing the reasons for the decline of anadromous populations. The BRT found that "if the conditions that promote and support the anadromous life history continue to deteriorate ... the expectation would be that natural selection would gradually eliminate the migratory or anadromous trait from the population, as individuals inheriting a tendency for anadromy migrate out of the population but do not survive to return as adults and pass on their genes to subsequent generations." AR 2185 at 211.**

C. Administrative History.

1. The ESU Policy.

In 1991, NMFS promulgated its "Policy on Applying the

Definition of Species Under the Endangered Species Act to Pacific Salmon," referred to as the "Evolutionarily Significant Unit"[8] Policy or the "ESU Policy". 56 Fed. Reg. 58,612 (Nov. 20, 1991). The ESU Policy provides that a population of Pacific salmonids is considered to be an ESU, and therefore may be considered for listing under the ESA, if it meets the following two criteria:

> (1) It must be substantially reproductively isolated from other nonspecific population units; and
>
> (2) it must represent an important component in the evolutionary legacy of the species.

Id. The ESU Policy is an interpretation by NMFS of what constitutes a "distinct population segment." This interpretation has been found to be a "permissible agency construction of the ESA." *Alsea*, 1612 F. Supp. 2d at 1161. Until recently, NMFS applied this policy to all salmonid species, including *O. mykiss*, for the purposes of defining ESUs.

2. The DPS Policy.

Concurrent with the development of the ESU Policy, NMFS and FWS developed a joint policy to "clarify their interpretation of the phrase 'distinct population segment of any species of vertebrate fish or wildlife' for the purpose of listing, delisting, and reclassifying species under the [ESA}..." ("Joint DPS Policy"). 59 Fed. Reg. 65,884 (Dec. 21, 1994). A draft Joint DPS Policy was published in 1994, *id.*, public comment was solicited on it, and a final Joint DPS Policy was published in 1996, 61 Fed. Reg. 4,722 (Feb. 7, 1996).

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[8] ESUs are the functional equivalent of DPSs under the ESU Policy.

The Joint DPS Policy relies on three factors to determine whether a population may be considered a DPS:

> 1. Discreteness of the population segment in relation to the remainder of the species to which it belongs;
>
> 2. The significance of the population segment to the species to which it belongs; and
>
> 3. The population segment's conservation status in relation to the Act's standards for listing (i.e., is the population segment, when treated as if it were a species, endangered or threatened?).

Id. at 4,725 (emphasis added).

A population segment of a species is considered "discrete" if it satisfies either one of the following conditions:

> 1. It is markedly separated from other populations of the same taxon as a consequence of physical, physiological, ecological, or behavioral factors. Quantitative measures of genetic or morphological discontinuity may provide evidence of this separation.
>
> 2. It is delimited by international governmental boundaries within which differences in control of exploitation, management of habitat, conservation status, or regulatory mechanisms exist that are significant in light of section 4(a)(1)(D) of the Act.

Id. (emphasis added).

If a population segment is found to be discrete, its biological and ecological "significance" is evaluated, "in light of Congressional guidance ... that the authority to list [DPSs] is to be used '...sparingly' while encouraging the conservation of genetic diversity." *Id.* The significance analysis may include, but is not limited to, an evaluation of:

> (1) persistence of the DPS in an ecological setting unusual or unique for the taxon;
>
> (2) evidence that loss of the DPS would result in a significant gap in the range of the taxon;

> (3) evidence that the DPS represents the only surviving natural occurrence of a taxon that may be more abundant elsewhere as an introduced population outside its historic range; or
>
> (4) evidence that the DPS differs markedly from other populations of the species in its genetic characteristics.

Id. The Joint DPS Policy recognizes that "[b]ecause precise circumstances are likely to vary considerably from case to case, it is not possible to describe prospectively all the classes of information that might bear on the biological and ecological importance of a discrete population segment." *Id.*

If a population is found to be both "discrete" and "significant," it is evaluated against the five factors set forth in ESA § 4(a) in order to determine whether listing the population as endangered or threatened is warranted. *Id.*

The Joint DPS Policy finds that the ESU Policy is "consistent with" and is a "detailed extension of" the Joint DPS policy. *Id.* At the time the Joint DPS Policy was first promulgated, NMFS indicated that it would "continue to exercise [its alternative ESU Policy] with respect to Pacific salmonids." *Id.* (NMFS recently determined that it is more appropriate to apply the DPS policy to *O. mykiss*, a policy shift that is discussed in greater detail below.)

3. <u>The Interim Hatchery Listing Policy</u>.

In 1993, NMFS published an "Interim Policy on Artificial Propagation of Pacific Salmon Under the Endangered Species Act," 58 Fed. Reg. 17,573 (April 5, 1993) ("Interim Hatchery Listing Policy" or "Interim Policy"). In this Interim Policy, NMFS indicated that "[g]enetic resources important to the species'

evolutionary legacy may reside in hatchery fish as well as in natural fish, in which case the hatchery fish can be considered part of the biological ESU in question." *Id.* at 17,574. The policy also provided that "[h]atchery fish considered to be part of the ESU could also be included as part of the listed species and protected under the ESA." *Id.*

Determinations about existing hatchery fish were conducted by first determining whether "available information" indicates that either:

> (1) the hatchery population in question is of a different genetic lineage than the listed natural populations, (2) artificial propagation has produced appreciable changes in the hatchery population in characteristics that are believed to have a genetic basis, or (3) there is substantial uncertainty about the relationship between existing hatchery fish and the natural population....

Id. at 17,574-17,575.

If any of the above characteristics were present, "the existing hatchery fish will not be considered part of the biological ESU and will not be included as part of the listed species." *Id.* If, however, available information "indicates that existing hatchery fish can be considered part of the biological ESU, a decision must be made whether to include them as part of the listed species." *Id.* In general, "such fish will not be included as part of the listed species...[although] [a]n exception may be made for existing hatchery fish if they are considered to be essential for recovery...." *Id.*

The policy also explained that "[u]nder any scenario, progeny of fish from the listed species that are propagated artificially are considered part of the listed species and are

protected under the ESA." *Id.*

The Interim Policy provided that "a listing determination for an ESU depended solely upon the relative health of the natural populations in an ESU, and that most hatchery stocks determined to be part of an ESU were excluded from any listing of the ESU." 70 Fed. Reg. 37,204, 37,205 (June 28, 2005).[9]

4. Initial Listings for the Populations at Issue.

In 1996, NMFS completed a comprehensive status review of *O. mykiss* populations in Washington, Oregon, Idaho, and California and published a proposed rule identifying 15 ESUs within that broad geographic area. Five of the ESUs were proposed to be listed as threatened, five as endangered. 61 Fed. Reg. 41,541 (Aug. 9, 1996). (Four of the remaining five proposed ESUs were ultimately found not warranted for listing, while one was identified as a candidate for listing. *Id.*)

Following this proposal, FWS became concerned that NMFS would expand its proposed listing to include the resident form of *O. mykiss*. As a result, staff from FWS met twice with staff from NMFS to discuss the treatment of resident *O. mykiss* in the proposed listing. AR 2314-05 at 1. FWS then wrote to NMFS on July 29, 1997, and stated that FWS had sole jurisdiction over the resident form of *O. mykiss* and therefore "any listing decision

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[9] The term "natural population" refers to the population whose members originate from spawning in the wild, "recognizing that these fish may be the progeny of naturally-spawned and hatchery-origin fish in varying proportions." 70 Fed. Reg. at 37,214. The term "hatchery stocks" refers to "genetic lineage of hatchery fish propagated at one or more hatchery facilities, recognizing that a hatchery stock can have a wide range of gene flow with populations of natural-origin fish...." *Id.*

regarding rainbow [trout] rests with [FWS]." *Id.* FWS also indicated its belief that the two "behavioral forms can be regarded as separate DPSs" and therefore would not support any listing which included the resident form of *O. mykiss* "absent evidence suggesting that the resident rainbow trout needed the [ESA's] protection." *Id.*

Subsequently, NMFS revised the proposed listing to apply to only five ESUs of steelhead, two as endangered, including the Southern California ESU, and three as threatened, including the Central California Coast and South-Central California Coast ESUs. 62 Fed. Reg. 43,937 (Aug. 18, 1997). On March 19, 1998, NMFS listed two additional ESUs as threatened, including the California Central Valley ESU, but determined that the other three proposed ESUs, including the Northern California ESU, did not warrant listing at that time. 63 Fed. Reg. 13,347 (March 19, 1998). After further review, NMFS determined that the Northern California ESU warranted listing as threatened. 65 Fed. Reg. 36,074 (June 7, 2000).

5. The *Alsea* Decision and the 2004 Status Review.

Over approximately the same time period and applying the same policies and procedures used during the above-described *O. mykiss* listing process, NMFS completed a status review of west coast salmon, and issued a proposed rule to list six ESUs of coho salmon as threatened. One of the proposed listings was for the "Oregon Coast ESU." NMFS subsequently revoked this proposed listing based in part on conservation measures being undertaken as part of the Oregon Coastal Salmon Restoration Initiative. *See Alsea*, 161 F. Supp. 2d at 1159. Subsequently, in *Oregon Natural*

Resources Council v. Daley, 6 F. Supp. 2d 1139 (D. Or. 1998), NMFS was found to have acted unlawfully in considering the conservation measures and was ordered to reconsider its decision. On August 10, 1998, NMFS issued a final rule listing the Oregon Coast coho ESU as threatened. ***See Alsea***, 161 F. Supp. 2d at 1159.

Despite the fact that the ESU included nine hatchery populations, "NMFS only listed all 'naturally-spawned' coho inhabiting streams between Cape Blanco and the Columbia River." *Id.*

> In reaching this listing decision, NMFS applied its April 5, 1993 Hatchery Policy to the coho salmon. 63 Fed. Reg. 42,589. NMFS concluded that nine Oregon hatchery populations were part of the same Oregon Coast ESU as the natural populations. However, the hatchery populations were not included in the listing decision because the hatchery populations were not "deemed 'essential' to recovery." *Id.* Although excluded from the listing decision, NMFS stated that it might consider using these hatchery populations for future recovery but that "in this context, an 'essential' hatchery population is one that is vital for full incorporation into recovery efforts." *Id.*

Id.

The *Alsea* plaintiffs argued that the listing was invalid, arguing the distinction NMFS drew "between hatchery spawned and naturally-spawned coho is untenable under the ESA because the ESA does not allow the Secretary to make listing distinctions below that of species, subspecies or a distinct population segment of a species." *Id.* at 1161.

The *Alsea* court began its analysis by examining NMFS's ESU policy, pursuant to which "a species is considered an ESU, and hence a DPS, if it is 'substantially reproductively isolated from other conspecific population units' and 'represent[s] an

important component in the evolutionary legacy of the species.'" *Id.* (citing 56 Fed. Reg. at 58,618). This policy, the court concluded, is a "permissible agency construction of the ESA" and the "factors used to define it, geography and genetics, are within permissible limits under the ESA." *Id.* (citing *PanAmSat Corp. v. FCC*, 198 F.3d 890, 894 (D.C. Cir. 1999)) & 1162 n. 5 (genetics and geography are permissible considerations during the listing process).

Alsea found that the listing had a fundamental flaw.

> The central problem with the NMFS listing decision of August 10, 1998, is that it makes improper distinctions, below that of a DPS, by excluding hatchery coho populations from listing protection even though they are determined to be part of the same DPS as natural coho populations.
>
> The ESA "specifically states in the definition of 'species' that a 'species' may include any subspecies...and any distinct population segment (DPS) of any species...which interbreeds when mature." 16 U.S.C. § 1532(16); *Southwest Center for Biological Diversity v. Babbitt*, 980 F. Supp. 1080, 1085 (D. Ariz. 1997). Listing distinctions below that of subspecies or a DPS of a species are not allowed under the ESA. *Southwest Center*, 980 F. Supp. at 1085. Yet, this is precisely what the NMFS did in its final listing decision of August 10, 1998. NMFS concluded that nine hatchery stocks were part of the same Oregon Coast ESU/DPS as the "natural" populations but none of the hatchery stocks were included in the listing decision because NMFS did not consider them "essential for recovery." 63 Fed. Reg. 42,589.
>
> The distinction between members of the same ESU/DPS is arbitrary and capricious because NMFS may consider listing only an entire species, subspecies or distinct population segment ("DPS") of any species. 16 U.S.C. § 1532(16). Once NMFS determined that hatchery spawned coho and naturally-spawned coho were part of the same DPS/ESU, the listing decision should have been made without further distinctions between members of the same DPS/ESU.

Id. at 1162 (emphasis added).

The *Alsea* court next noted, in dicta, that the listing of

only the naturally-spawned population "could arguably be proper under the ESA if the NMFS had defined 'hatchery spawned' coho as a separate DPS...." *Id.* at 1162. However, under the facts and circumstances of that case, the *Alsea* court surmised that such a definition was not reasonable:

> Here, hatchery spawned coho are likely not "substantially reproductively isolated" from naturally-spawned coho because, once released from the hatchery, it is undisputed that 'hatchery spawned' coho and "naturally-spawned" coho within the Oregon Coast ESU share the same rivers, habitat and seasonal runs," among other factors. It is undisputed that "hatchery spawned" coho may account for as much as 87% of the naturally spawning coho in the Oregon coast ESU. In addition, hatchery spawned and natural coho are the same species, and interbreed when mature (*Id.* at ¶ 4). Finally, the NMFS considers progeny of hatchery fish that are born in the wild as "naturally-spawned" coho that deserve listing protection.

Id. at 1162-63 (citations omitted).

The court concluded NMFS's listing decision was arbitrary because it "creates the unusual circumstance of two genetically identical coho salmon swimming side-by-side in the same stream, but only one receives ESA protection while the other does not." *Id.*

Finally, *Alsea* rejected NMFS's argument "that its listing decision does not contradict the terms of the ESA because the listing decision, and relevant polices, are in accordance with ESA goals that prioritize 'natural' salmon populations and 'genetic diversity' within those populations." *Id.*

> Although I agree with the general concept that "genetic diversity" is one factor in the long term success of a threatened species, and thus is one of many underlying goals of the ESA, genetics cannot, by itself, justify a listing distinction that runs contrary to the definition of a DPS.
>
> The term "distinct population segment" was amended in

> the ESA in 1978 so that it "would exclude taxonomic [biological] categories below subspecies [smaller taxa] from the definition." H.R. Conf. Rep. No. 95-1804, at 17 (1978), reprinted in 1978 U.S.C.C.A.N. 9485, 14855.
>
> Congress adopted the DPS language stating:
>
> > The committee agrees that there may be instances in which [the Fish and Wildlife Service] should provide for different levels of protection for populations of the same species. For instance, the U.S. population of an animal should not necessarily be permitted to become extinct simply because the animal is more abundant elsewhere in the world. Similarly, listing populations may be necessary when the preponderance of evidence indicates that a species faces a widespread threat, but conclusive data is available with regard to only certain populations.
>
> S. Rep. No. 96-151.
>
> Thus, Congress expressly limited the Secretary's ability to make listing distinctions among species below that of subspecies or a DPS of a species. Here, the NMFS listing decision was based on distinctions below that of subspecies or distinct population segment of a species.
>
> Therefore, the NMFS's listing decision is arbitrary and capricious, because the Oregon Coast ESU includes both "hatchery spawned" and "naturally-spawned" coho salmon, but the agency's listing decision arbitrarily excludes "hatchery spawned" coho....

Id. at 1163.

Following the *Alsea* decision, in 2002, NMFS began a review of the 27 West Coast salmonid listings. AR 12; AR 807; AR 808. One of the purposes of this review was to further consider the relationship between the resident and anadromous forms of *O. mykiss*. *See Modesto Irrig'n Dist. v. Evans*, 1:02-CV-6553 OWW DLB ("*MID I*"), Doc. 79 at 55.)

6. The *Modesto Irrigation District v. Evans* Decision.

On December 11, 2002, the *MID I* plaintiffs filed suit against NMFS regarding its 1998 decision to list the California

Central Valley *O. mykiss* ESU as threatened. The *MID I* Plaintiffs alleged that NMFS violated the ESA and the Administrative Procedura Act ("APA") by: (1) listing naturally-spawning, but not hatchery, populations of *O. mykiss;* and, (2) listing anadromous, but not resident, members of *O. mykiss* in certain rivers within the Central Valley of California. (*Id.* at 3.)

On May 12, 2004, this Court issued a decision on plaintiffs' motion for summary judgment in *MID I*. (*MID I*, Doc. 79.) With respect to the first allegation, as in *Alsea*, NMFS's final rule pertaining to the listing of the Central Valley steelhead, issued March 19, 1998, included hatchery populations as part of the ESU, but listed as endangered only naturally-spawning steelhead. The federal defendants conceded this claim, acknowledging, that, under *Alsea*, "distinctions below that of a distinct population segment when making listing determinations are improper." (*Id.* at 28.) Federal defendants also admitted that the 1998 listing of the Central Valley California steelhead was "legally flawed" in light of *Alsea,* and did not oppose plaintiffs' motion for summary judgment on that claim. (*Id.*) However, intervenors, a coalition of fisheries resource advocacy groups, did oppose plaintiffs' motion for summary judgment, arguing that hatchery-spawned steelhead are not only not eligible for <u>listing</u> under the ESA, but that they should not have been included as part of any ESU in the first place. (*Id.* at 29.) The district court first rejected intervenors' argument that NMFS's decision to <u>include</u> hatchery populations in the ESU should be declared unlawful.

> Intervenors allege [federal defendants'] determination that "hatchery populations...[were] part of the same ESU as the naturally-spawned populations" is unlawful.

> Intervenors' conclusion is predicated on their contention that, given the nature of hatchery fish, "[p]rotecting [them] cannot be reconciled with the ESA's purpose and provisions. Intervenors admit, however, that "NMFS added some of the hatchery populations to the ESU based on its conclusion that the stocks had not diverged from wild steelhead to such a degree that they could never be used for recovery."
>
> Intervenors provide selected passages from the AR and Federal Register to support their claims that hatchery fish threaten wild populations. The AR cited, however, does not contain sufficient evidence to invalidate NMFS' classification of the hatchery population. Assuming that the hatchery fish do pose a threat of harm to the naturally-spawned population, there is insufficient evidence to decide whether this threat rises to such a level as to preclude classification of hatchery spawned population in the same ESU or DPS with naturally-spawned steelhead. Even assuming that hatchery fish "can pose serious threats" as Intervenors claim, no studies indicate that they do so in this case. Where a significant scientific dispute exists over an issue within the agency's expertise, deference is ordinarily required.
>
> [Federal defendants'] classification does not require that fish hatcheries replace natural ecosystems. Intervenors do not explain why the use of hatchery fish as a conservation tool precludes their ESA listing. Although excluding hatchery populations from the listing may be "[c]onsistent" with the ESA, there is no evidence indicating that the ESA requires or necessitates such exclusion. NMFS's studies also indicate that hatchery populations could be useful in the recovery of wild steelhead and that when interbred, the two form a distinct genetic group. Intervenors do not provide their own scientific evidence to prove that Defendants' classification was arbitrary, capricious, and unlawful.

(*Id.* at 35-36 (internal citations omitted).)

The district court next considered intervenors' argument, based *on National Association of Home Builders v. Norton*, 340 F.3d 835 (9th Cir. 2003), that it was unlawful for NMFS to include hatchery-born *O. mykiss* in the ESU/DPS, but only list naturally-spawned fish. In *Home Builders*, the Ninth Circuit suggested that FWS could have subdivided a particular owl population into smaller DPSs. Intervenors argued that this

indicates NMFS could have listed a unit smaller than an ESU under the ESA. The district court found *Home Builders* to be inapplicable, reasoning:

> Intervenors...confuse two separate issues. The issue in *Home Builders* was whether FWS properly applied the DPS Policy when it classified the Arizona pygmy-owl population as a DPS. The issue here is whether the NMFS could list under the ESA a unit smaller than a DPS. As a result, the holding in *Home Builders* does not conflict with that in *Alsea* and is not binding on this case.

(*Id.* at 38 (emphasis added).)

The district court next addressed plaintiffs' allegation that NMFS violated the ESA by listing only anadromous *O. mykiss*, while excluding resident fish from the listing. Plaintiffs maintained that the resident fish had been made part of the ESU and therefore, under *Alsea*, the listing of only anadromous fish was unlawful. The issue was factual: "whether resident and anadromous populations are groups within the same DPS or are separate DPS[s], distinguished by their behavior." (*Id.* at 41-42.) After reviewing the evidence, the district court recognized NFMS's conclusion: "resident *O. mykiss* should be included in the listed steelhead ESU 'in certain cases,' such as '(1) where resident *O. mykiss* have the opportunity to interbreed with anadromous fish below manmade barriers or (2) where resident fish of native lineage once had the ability to interbreed with anadromous fish but no longer do so because they are currently above human-made barriers and are considered essential for recovery of the ESU.'" *Id.* at 43. Plaintiffs did not allege that this two-part test was insufficient or that NMFS failed to apply it properly. The court concluded:

> Given that [federal defendants] did not classify resident steelhead as part of the DPS, [federal defendants] did not err in the same way as they did in failing to account for hatchery-bred populations in the listing decisions. Whether [federal defendants] erred in failing to classify resident *O. mykiss* as part of the DPS is a separate question, and Plaintiffs do not provide enough evidence from the AR or otherwise to support a finding that the agency's ruling here was unlawful. The issue remains "unclear." Plaintiffs motion for summary judgment that NMFS's failure to list resident populations under the ESA [is] impermissible is DENIED.

Id. at 43-44.

7. Revised Hatchery Listing Policy.

In light of the *Alsea* decision, NMFS announced it would reconsider its Interim Hatchery Listing Policy. 67 Fed. Reg. 6,215, 6,217 (Feb. 11, 2002). NMFS published a proposed revised hatchery listing policy on June 3, 2004, 69 Fed. Reg. 31,354, followed by a final revised Hatchery Listing Policy ("HLP") on June 28, 2005, 70 Fed. Reg. 37,204. In the HLP, NMFS first emphasized that "[a] key feature of the ESU concept is the recognition of genetic resources that represent the ecological and genetic diversity of the species. These genetic resources can reside in a fish spawned in a hatchery (hatchery fish) as well as in a fish spawned in the wild (natural fish)." *Id.* at 37,215. In delineating an ESU for listing consideration "NMFS will identify all components of the ESU, including populations of natural fish (natural populations) and hatchery stocks that are part of the ESU." *Id.* Those hatchery stocks "with a level of genetic divergence relative to the local natural population(s) that is no more than what occurs within the ESU: (a) are considered part of the ESU; (b) will be considered in determining whether an ESU should be listed under the ESA; and (c) will be

included in any listing of the ESU." *Id.* (emphasis added).

Status determinations (i.e., determinations as to whether the ESU should be listed as threatened, endangered, or neither) for steelhead ESUs "will be based on the status of the entire ESU." *Id.* However, "NMFS will apply this policy in support of the conservation of naturally-spawning salmon and the ecosystems upon which they depend, consistent with section 2 (b) of the ESA (16 U.S.C. 1531(b))." *Id.* (emphasis added). Accordingly, "[h]atchery fish will be included in assessing an ESU's status in the context of their contributions to conserving natural self-sustaining populations." *Id.* (emphasis added). Specifically, the effects of hatchery fish on the status of an ESU will depend on which of four key attributes -- abundance, productivity, genetic diversity, and spatial distribution -- are currently limiting the ESU, and "how the hatchery fish within the ESU affect each of the attributes." *Id.* (emphasis added).

> The presence of hatchery fish within the ESU can positively affect the overall status of the ESU, and thereby affect a listing determination, by contributing to increasing abundance and productivity of the natural populations in the ESU, by improving spatial distribution, by serving as a source population for repopulating unoccupied habitat, and by conserving genetic resources of depressed natural populations in the ESU. Conversely, a hatchery program managed without adequate consideration of its conservation effects can affect a listing determination by reducing adaptive genetic diversity of the ESU, and by reducing the reproductive fitness and productivity of the ESU. In evaluating the effect of hatchery fish on the status of an ESU, the presence of a long-term hatchery monitoring and evaluation program is an important consideration.

Id.

NMFS concluded that "[m]any hatchery programs are capable of producing more fish than are immediately useful in the

conservation and recovery of an ESU and can play an important role in fulfilling trust and treaty obligations with regard to harvest of some Pacific salmon and steelhead populations." *Id.* Accordingly, NMFS determined that, where appropriate, it will "exercise its authority under section 4(d) of the ESA to allow the harvest of listed hatchery fish that are surplus to the conservation and recovery needs of the ESU, in accordance with approved harvest plans." *Id.* at 37,215-37,216.

D. The Challenged Listing Process.

On June 14, 2004, NMFS issued new proposed listings for 27 ESUs of West Coast salmonids. 69 Fed. Reg. 33,102. NMFS first applied its ESU policy to define the 27 ESUs, noting that the *Alsea* court had approved of the ESU Policy as an interpretation of the statutory term "distinct population segment." 69 Fed. Reg. 33,111. Five California *O. mykiss* ESUs were defined: Southern California, South-Central California Coast, Central California Coast, California Central valley, and Northern California.

Neither the Southern California nor the South-Central California Coast proposed *O. mykiss* ESUs included hatchery stocks, but the other three (Central California Coast, California Central Valley, and Northern California *O. mykiss* ESUs) were proposed to include two hatchery programs each. 69 Fed. Reg. at 33,117-33,118.

With respect to the inclusion of resident (versus anadromous) *O. mykiss,* NMFS found that "no suite of morphological or genetic characteristics has been found that consistently distinguishes between the two life-history forms." *Id.* at

33,113. Consistent with the ESU Policy, NMFS evaluated the "extent of reproductive isolation and biological divergence from other populations within the ESU." *Id.* NMFS found, overall, that populations of *O. mykiss* from the same life history form that were geographically separated were more genetically divergent from one another than were resident and anadromous forms found in the same geographical area. *Id.*

In previous listings, NMFS carefully examined the relationship between nearby resident and anadromous populations to determine whether the resident population belonged in the ESU. *Id.* As a general rule, given that the available data suggested that "resident rainbow trout and steelhead in the same area generally share a common gene pool (at least over evolutionary time periods)," both resident and anadromous populations were included in the same ESU. *Id.* However, resident populations above long-standing natural barriers and those populations that resulted from the introduction of non-native rainbow trout, were excluded from ESU. *Id.* In the case of resident populations upstream of impassable human-caused migration barriers (e.g., large mainstem hydroelectric dams), NMFS found "insufficient information to merit their inclusion in steelhead ESUs," but recommended these populations be "evaluated on a case-by-case basis as more information becomes available on their relationships to below-barrier populations, or on the role these above-barrier resident populations might play in conserving below-barrier populations of O. mykiss." *Id.*

After *Alsea*, the BRT adopted a similar framework for determining the ESU/DPS membership of resident *O. mykiss*

populations geographically associated with anadromous populations:

> These evaluations were guided by the same biological principles used to define ESUs of natural fish and determine ESU membership of hatchery fish: the extent of reproductive isolation and biological divergence from other populations within the ESU. Ideally, each resident population would be evaluated individually on a case-by-case basis, using all available biological information. In practice, little or no information is available for most resident O. mykiss populations. To facilitate determinations of the ESU/DPS membership of resident O. mykiss, the BRT identified three different cases, reflecting the range of geographic relationships between resident and anadromous forms within different watersheds: (1) No obvious physical barriers to interbreeding between resident and anadromous forms; (2) long-standing natural barriers (e.g., a waterfall) between resident and anadromous forms; and (3) relatively recent (e.g., within the last 100 years) human-imposed barriers (e.g., a dam without a fish ladder) between resident and anadromous forms.
>
> The BRT adopted the following working assumptions about ESU membership of resident fish falling in each of these three cases. Where there was no obvious physical barrier to interbreeding between the two life-history forms, resident fish were considered part of the ESU. Empirical studies show that resident and anadromous O. mykiss are typically very similar genetically when they co-occur with no physical barriers to migration or interbreeding. Where long-standing natural barriers separate resident and anadromous forms, resident populations were not regarded as part of the ESU. Many populations in this category have been isolated from contact with anadromous populations for thousands of years. Empirical studies show that in these cases the resident fish typically show substantial genetic and life-history divergence from the nearest downstream anadromous populations. In cases where the resident fish were separated from the anadromous form by relatively recent human actions (e.g., impassable dams and culverts), the BRT was unable to justify any particular default assumption. The two life-history forms most likely coexisted without any barriers to interbreeding prior to the establishment of the manmade barrier(s). However, as a result of rapid divergence in a novel environment, or displacement by or genetic introgression from non-native hatchery rainbow trout, these resident populations may no longer represent the evolutionary legacy of the O. mykiss ESU. Given these uncertainties, the BRT left unresolved the ESU

> membership of O. mykiss above recent (usually man-made) impassable barriers. In the absence of information indicating that they are part of a common ESU, NMFS does not find such above-barrier populations to be part of the O. mykiss ESUs under review.

Id. at 33,113-114. (These working assumptions are referenced by the parties and the administrative record as the "null hypothesis.")

Based in part on these conclusions, NMFS proposed that all five *O. Mykiss* ESUs include resident rainbow trout below impassable barriers that co-occur with anadromous populations. *Id.* Resident rainbow trout located above one particular impassible barrier were considered part of the Central California Coast proposed ESU because genetic data indicated they were more similar to each other and to other populations within the ESU than they were to outside populations. *Id.* at 33,118.

Once the ESUs were defined, NMFS assessed the extinction risk faced by each ESU. NMFS relied in part upon conclusions reached by the BRT, which evaluated the risk of extinction to the various ESUs based upon the "performance of the naturally spawning populations in each of the ESUs...." *Id.* at 33,110. To perform this evaluation, the BRT employed the "Viable Salmonid Populations" ("VSP") criteria, developed "to provide a consistent and logical reference for making viability determinations and are based on a review and synthesis of the conservation biology and salmon literature." *Id.* Specifically, "the viability of salmon and steelhead ESUs is characterized by the health, abundance, productivity, spatial structure, and genetic/behavioral diversity of the individual populations within the ESU." *Id.*

> ESUs with fewer populations are more likely to become

> extinct due to catastrophic events, and have a lower likelihood that the necessary phenotypic and genotypic diversity will exist to maintain future viability. ESUs with limited geographic range are similarly at increased extinction risk due to catastrophic events. ESUs with populations that are geographically distant from each other, or are separated by severely degraded habitat, may lack the connectivity to function as metapopulations (i.e., a group of interconnected subpopulations) and are more likely to become extinct. ESUs with limited diversity are more likely to go extinct as the result of correlated environmental catastrophes or environmental change that occurs too rapidly for an evolutionary response. ESUs comprised of a small proportion of populations meeting or exceeding VSP criteria may lack the source populations to sustain the non-viable declining populations during environmental down-turns. ESUs consisting of a single population are especially vulnerable in this regard.

Id. at 33,110-33,111.

NMFS acknowledged that the BRT's work was hampered by limited data:

> As noted above, little or no population data areavailable for most resident O. mykiss populations, greatly complicating assessments of ESU-level extinction risk.... As was often the case, no data on the abundance, productivity, spatial structure, or diversity were available for resident populations in an ESU.

Id. at 33,113. Nevertheless, based on available data, the BRT concluded that, even with the presence of large resident populations, the complete elimination of the anadromous populaiton might be irreversible.

> The BRT noted that the presence of relatively numerous resident populations can significantly reduce risks to ESU abundance. However, there is considerable scientific uncertainty as to how the resident form affects extinction risk through its influence on ESU productivity, spatial structure, and diversity. The threats to O. mykiss ESUs extend beyond low population size and include declining productivity, reduced resilience of productivity to environmental variation, curtailed range of distribution, impediments to population connectivity and reproductive exchange, depleted diversity stemming from loss or blockage of habitat and associated erosion of local adaptation, and

> erosion of the diversity of expressed migratory behaviors. Thus, the BRT concluded that, despite the reduced risk to abundance for certain O. mykiss ESUs due to numerically abundant residents, the collective contribution of the resident life-history form to the viability of an ESU in-total is unknown and may not substantially reduce extinction risks to an ESU in-total (NMFS, 2004). Based on present scientific understanding, the BRT could not exclude the possibility that complete loss of anadromous forms from within an ESU may be irreversible.

Id. at 33,113-114.

After analyzing each ESU under the VSP criteria, the BRT assessed the ESU's extinction risk based on the performance of the naturally spawning populations. *Id.* at 33,111.

> The BRT's assessment of ESU-level extinction risk uses categories that correspond to the definitions of endangered species and threatened species, respectively, in the ESA: in danger of extinction throughout all or a significant portion of its range, likely to become endangered within the foreseeable future throughout all or a significant portion of its range, or neither. As discussed above, these evaluations do not include consideration of hatchery stocks included in ESUs, and do not evaluate efforts being made to protect the species. Therefore, the BRT's findings are not to be considered recommendations regarding listing. The BRT's ESU-level extinction risk assessment reflects the BRT's professional scientific judgment, guided by the analysis of the VSP criteria, as well as by expectations about the likely interactions among the individual VSP criteria. For example, a single VSP criterion with a "High Risk" score might be sufficient to result in an overall extinction risk assessment of "in danger of extinction," but a combination of several VSP criteria with more moderate risk scores could also lead to the same assessment, or a finding that the ESU is "likely to become endangered."

Id. at 33,111.

NMFS treated the BRT's recommendations as "a partial assessment of the ESU's extinction risk," but not as a final determination as to whether listing was warranted. NMFS then incorporated an assessment of the "contributions of within-ESU

hatchery programs to the viability of an ESU in-total." *Id.* at 33,112. The result is NMFS's Salmonid Hatchery Inventory and Effects Evaluation Report ("SHIEE Report"), an assessment of the contributions of ESU hatchery programs on ESU viability and extinction risk. *See id.*; AR 1459. NMFS proposed to list the Southern California ESU as endangered, and the other four California ESUs as threatened. *Id.* at 33,162-33,163.

Following the publication of the proposed listing, NMFS commissioned three separate, independent scientific evaluations, in part to examine the use of the null hypothesis as a means of identifying members of a DPS using the ESU Policy. First, the Salmon Recovery Science Review Panel ("RSRP"), comprised of seven scientists from U.S. and Canadian universities, was convened to provide guidance on the scientific and technical aspects of recovery planning for West Coast populations of salmon and steelhead. AR 1471 at 1. The RSRP concurred with the BRT's "null hypothesis" that separation of anadromous from resident forms by the existence of longstanding natural barriers justified the decision that the two forms not be considered part of the same DPS under the ESU Policy. AR 1471 at 6.

In April 2005, the second panel, the ISAB, concluded that "the presence of both resident and anadromous life-history forms is critical for conserving the diversity of steelhead/rainbow trout populations and, therefore, the overall variability fo ESUs." AR 1443 at 39.

Finally, on June 13, 2005, the Hey Panel issued a written report responding to four questions posed by NMFS. Pertinently, NMFS asked the Hey Panel: "Is there a reasonable biological

justification for excluding from a conservation unit resident populations that are similar to anadromous populations in that unit?" AR 1442 at 13. Beginning with the three scenarios developed by the BRT in the null hypothesis, the Hey Panel found that where anadromous and resident *O. mykiss* co-occur and are located below impassible barriers, the null hypothesis' conclusion that both members belonged in the same ESU was correct. *Id.* at 13-15. The Hey Panel stated: "In those cases where the two populations co-occur and the lifestyle variation is present as a polymorphism, then it would be biologically justified for the conservation unit to include both the resident and anadromous fish." *Id.* at 15.

NMFS staff concluded that these three studies "strongly confirm" and are consistent with its recommended final listing determinations that included both resident and anadrmous forms of *O. mykiss* in the same ESU. AR 2215R (email from Scott Rumsey to others within the National Oceanographic and Atmospheric Administration, of which NMFS is a part).

Following an initial public comment period of 90 days, NMFS extended the public comment period two times. 69 Fed. Reg. 53,031 (Aug. 31, 2004); 69 Fed. Reg. 61,348 (Oct. 18, 2004). NMFS received comments disagreeing with the proposal to include rainbow trout in the ESUs and criticism on how it considered resident rainbow trout in evaluating the risk to the continued existence of the entire ESU. 70 Fed. Reg. 37,219, 37,220 (June 28, 2005); 71 Fed. Reg. 834, 836-7 (Jan. 5, 2006) ("[C]ommenters felt that rainbow trout and steelhead should be considered separate ESUs for biological reasons (differences in behavior,

morphology, and ecology); or for policy or legal reasons (such as implementing the purposes of the ESA).").

In June 2005, FWS wrote to NMFS, raising concerns about NMFS's proposed listings of *O. mykiss*, stating, in pertinent part:

> [FWS] understands...that you must reconsider the listing of the Pacific coast steelhead (*O. mykiss*) per several court actions...and that NMFS has conducted assessments of both life forms of *O. mykiss* (resident rainbow trout and anadromous steelhead). As you know, pursuant to [the 1974 MOU], the NMFS exercises [ESA] jurisdiction over the anadromous form and the FWS exercises jurisdiction over the resident form of *O. mykiss*.
>
> Based on informal discussions with NMFS regarding their assessment of both life forms of *O. mykiss*, the FWS requested copies of all underlying information and data NMFS is using to develop its potential listing determinations for both life forms, and particularly all underlying information related to the species of jurisdiction to the FWS, the resident form. To date, we have not received the bulk of the requested information.
>
> It is our understanding that [the BRT] did not have specific biological information on many facets of the relationship between resident and anadromous forms of *O. mykiss* as they made their determinations to list or not to list the various ESUs. Instead, great weight was put on the fact the two forms are the same species, so where they occurred in sympatry, listing decisions were primarily if not wholly based on the status of the anadromous form and the fact the forms are genetically the same species. It is not clear to the FWS the extent that non-genetic information on these two forms of *O. mykiss* were considered in the deliberations to list the species. If not included in your record of scientific review, we would recommend that additional information be solicited to define the relationship between resident and anadromous forms, particularly in regards to frequency and significance of genetic interchange (spawning) between the two forms, the frequency, significance, and triggers for reversion to anadromy of the resident form and vice versa, and risk assessments to the entire ESU that analyzes the relative contributions to population status and stability of both resident and anadromous forms. In addition, we would need information regarding your determination of the ESU itself to ensure that it

> complies with the joint FWS/NMFS policy on distinct population segments. Until we receive information from you that demonstrates this analysis, the FWS is not persuaded that the conservation status of the rainbow trout form warrants Section 4 listing action. If such a determination is warranted, the Secretary of Commerce does not have legal jurisdiction to undertake a listing action for this freshwater fish and the Secretary of the Interior would have to make such a determination.
>
> Of course, we stand ready to examine carefully all scientific data in your custody....To accomplish this cooperative review, we recommend that you consider invoking section 4(b)(6)(B)(I) of the ESA to allow for further scientific evaluation, data gathering, and debate among the scientific experts within FWS and NMFS before any final decision is made as to whether to list the species under section 4.
>
> ***

AR 1439.

In light of FWS's concerns and those of other commentators, and to provide NMFS additional time to assimilate the new scientific information, NMFS announced that it was invoking the six month statutory extension of the deadline for a final determination on the ten proposed listings, pursuant to 16 U.S.C. § 1533(b)(6)(B)(I). 70 Fed. Reg. at 37,220. According to NMFS's Federal Register Notice announcing the invocation of the six month extension, the FWS letter raised concerns about "the factual and legal bases for the proposed *O. mykiss* listings," and indicated that there was substantial disagreement regarding the relationship between resident rainbow trout and steelhead populations and the best way to assess extinction risk to populations containing both resident and anadromous fish. *Id.* According to NMFS, FWS identified in its letter three specific areas of "substantial disagreement" with regard to the sufficiency and/or accuracy of the available scientific data

underlying NMFS's proposed listing decision: (1) the determination that resident and anadromous forms comprise a single ESU; (2) the relatedness of co-occurring resident and anadromous forms; and (3) the assessment of the risk of extinction for ESUs comprised of both resident and anadromous members. *Id.* In addition, NMFS noted that it had received the three reports from the independent scientific panels containing information bearing on the relationship between resident rainbow trout and steelhead. *Id.*

NMFS again solicited public comment on the issues relating to the scientific disagreement and uncertainty surrounding the relationship between resident and anadromous populations. *Id.*

Notably, in its June 2005 letter, FWS suggested that NMFS "ensure that [its] delineation of *O. mykiss* ESUs complies with the [joint] DPS policy." AR 1439. NMFS indicated it its request for comment on a proposal to switch from the ESU to the DPS Policy, that it "agreed that the facts before it made it appropriate to consider departing from the past practice of applying the ESU policy to *O. mykiss* and instead applying the DPS policy when determining what 'species' of *O. mykiss* warranted listing." 70 Fed. Reg. 67,131 (Nov. 4, 2005). NMFS noted that applying the DPS policy would be consistent with the past application, by both agencies, in defining DPSs of Atlantic Salmon, another species over which the two agencies share jurisdiction. *Id.* NMFS explained that the primary difference between the two policies was that the ESU policy focuses on "substantial reproductive isolation" to define an ESU, while the DPS policy relies on "marked separation," which accounts for

physical, physiological, ecological, and behavioral factors, in addition to genetics. *Id.*

NMFS further opined that unlike the ESU Policy, which relies on reproductive isolation, the DPS Policy's first criteria of discreteness focuses on whether there is "marked separation of population groups as a consequence of biological factors." *Id.* at 67,132. Applying the discreteness factor to *O. mykiss*, NMFS found that despite apparent reproductive exchange between rainbow trout and steelhead, the two life forms "remain markedly separated physically, physiologically, ecologically, and behaviorally," so that a steelhead-only grouping would satisfy the discreteness criterion of the DPS policy. *Id.* NMFS reasoned:

> Steelhead differ from resident rainbow trout physically in adult size and fecundity, physiologically by undergoing smoltification, ecologically in their preferred prey and principal predators, and behaviorally in their migratory strategy. Where the two life forms co-occur, adult steelhead typically range in size from 40-72 cm in length and 2-5 kg body mass, while adult rainbow trout typically range in size from 25-46 cm in length and 0.5-2 kg body mass (Shapovalov and Taft, 1954; Wydoski and Whitney, 1979; Jones, 1984). Steelhead females produce approximately 2,500 to 10,000 eggs, and rainbow trout fecundity ranges from 700 to 4,000 eggs per female (Shapovalov and Taft, 1954; Buckley, 1967; Moyle, 1976; McGregor, 1986; Pauley et al., 1986), with steelhead eggs being approximately twice the diameter of rainbow trout eggs or larger (Scott and Crossman, 1973; Wang, 1986; Tyler et al., 1996). Steelhead undergo a complex physiological change that enables them to make the transition from freshwater to saltwater (smoltification), while rainbow trout reside in freshwater throughout their entire life cycle. While juvenile and adult steelhead prey on euphausiid crustaceans, squid, herring, and other small fishes in the marine environment, the diet of adult rainbow trout is primarily aquatic and terrestrial insects and their larvae, mollusks, amphipod crustaceans, fish eggs, and minnows (LeBrasseur, 1966; Scott and Crossman, 1973; Wydoski and Whitney, 1979). Finally, steelhead migrate

> several to hundreds of miles from their natal streams to the ocean, and spend up to 3 years in the ocean migrating thousands of miles before returning to freshwater to spawn (Busby et al., 1996). Rainbow trout, in contrast, may exhibit seasonal migrations of tens of kilometers but generally remain associated with their natal drainages (Meka et al., 1999).

Id. at 67,132.

As to significance, NMFS referenced to prior status reviews which that concluded the steelhead represent an important component in the evolutionary legacy of the species, which met the significance criterion. *Id.* NMFS then reopened the comment period a final time to take comment on whether it should apply the joint DPS policy to delineate ten steelhead-only DPSs. 70 Fed. Reg. at 67,131.

On August 1, 2005, representatives of NMFS and FWS met to discuss the proposed listings. At the meeting, the two agencies and their staffs preliminarily agreed that there was no scientific dispute concerning NMFS's identification of the ESUs, nor with NMFS's decision to include both resident and anadromous members in certain ESUs. Specifically, NMFS and FWS agreed: (1) that "[t]he *O. mykiss* ESUs delineated relative to taxonomic subspecies appear to be well supported by the best available scientific information and are consistent with the statutory provision of the Endangered Species Act (ESA)...."; (2) the "best available scientific information supports the inclusion of co-occurring resident and anadromous forms in the same *O. mykiss* ESU. Although there is often a lack of site-specific information, the scientific literature strongly indicates that where resident and anadromous *O. mykiss* co-occur they share a common gene pool, interbreed, produce progeny of the alternative

life form, and collectively exhibit adaptive life history traits composing an important component of the evolutionary legacy of the species." AR 2238-01 at 1.

In September 2005, Dr Scott Rumsey of NMFS conducted a review of the available literature on the relationship between the anadromous and resident forms of *O. mykiss*. Dr. Rumsey noted that of the 27 articles he reviewed, 25 provided evidence that co-occurring residents interbreed with the anadromous form. AR 2241R. Dr. Rumsey noted that the "notion that 'co-occurring resident and anadromous *O. mykiss* interbreed and produce the alternative life-history form' is regarded as established fact in the scientific literature, by our co-managers, and by 10 years of BRT reviews (although the frequency and magnitude is unknown)." *Id*.

At the end of September 2005, NMFS continued to assert that, pursuant to the ESU Policy, the best available scientific evidence supported the inclusion of both resident and anadromous forms in the same ESUs where they co-occur below impassible barriers. In a document entitled "Approach for Resolving Shared NOAA Fisheries and U.S. Fish and Wildlife Jurisdiction under the Endangered Species Act for Steelhead and Rainbow Trout (*Oncorhynchus mykiss*)" NMFS explained:

> It is well established in the scientific literature that resident (rainbow trout) and anadromous (steelhead) *O. mykiss* are very similar genetically where they co-occur with no physical barriers to migration or interbreeding. It is also well established that the resident form occasionally produces anadromous migrants, and vice versa. Accordingly, in past NMFS' steelhead status reviews, co-occurring resident and anadromous *O. mykiss* were regarded as a polymorphism within an interbreeding population and the two life-history forms were considered as part of the same

> ESU...
>
> In response to several petitions, pending litigation, and in an effort to comply with the Alsea ruling, NMFS conducted a comprehensive status review of 27 West Coast salmonid ESUs, including all ten ESA-listed steelhead ESUs. This recent review included an updated assessment of the best available scientific information concerning the relationship between resident and anadromous *O. mykiss*, and their relative contributions to the viability of delineated *O. mykiss* ESU...Consistent with previous reviews, our recent review concluded that where resident and anadromous *O. mykiss* co-occur they are not substantially reproductively isolated, they collectively represent an important component in the evolutionary legacy of the species, and they are part of the same ESU.

AR 2245-01 at 3 (emphasis added).

On January 5, 2006, NMFS published a final rule regarding the proposed listings, adopting the reasoning presented in the notice, announcing the shift from the ESU to the DPS policy, and addressing numerous comments. 71 Fed. Reg. 834. The boundaries of the previously defined *O. mykiss* ESUs were unchanged, but, applying the Joint DPS Policy, all resident *O. mykiss* were excluded and the groupings were referred to as "DPSs" rather than "ESUs." The hatchery programs included in the final steelhead DPS listings were unchanged from those included in the 2004 proposed listing. *Id.* at 848. The Southern California steelhead DPS is listed as endangered and the other four California steelhead DPSs are listed as threatened. *Id.* at 857.

E. Challenged Prohibitions and Protective Regulations.

The final NMFS listing promulgated certain protective measures. Although ESA § 9(a), 16 U.S.C. § 1538(a)(1)(B), take provisions apply to all species listed as endangered, for threatened species, ESA § 4(d) grants NMFS discretion whether and to what extent to extend § 9(a) "take" protections. Section 4(d)

also directs the agency to issue regulations it considers necessary and advisable for the conservation of the species.[10]

On June 28, 2005, as part of the final listing determinations for 16 West Coast salmon ESUs, NMFS amended the previously promulgated 4(d) protective regulations for threatened salmon and steelhead. 70 Fed. Reg. 37,160. The amendment was designed to "provide the necessary flexibility to ensure that fisheries and artificial propagation programs are managed consistently with the conservation needs of threatened salmon and steelhead." 71 Fed. Reg. 857. Under the amended regulation, section 4(d) protections were extended only to natural and hatchery fish with an intact adipose fin, but not to listed hatchery fish that have had their adipose fin removed prior to release into the wild. The regulation applied to steelhead being listed as threatened in the South-Central California, Central California Coast, California Central Valley, Northern California,

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[10] Section 4(d) provides in its entirety:

> Whenever any species is listed as a threatened species pursuant to subsection (c) of this section, the Secretary shall issue such regulations as he deems necessary and advisable to provide for the conservation of such species. The Secretary may by regulation prohibit with respect to any threatened species any act prohibited under section 1538(a)(1) of this title, in the case of fish or wildlife, or section 1538(a)(2) of this title, in the case of plants, with respect to endangered species; except that with respect to the taking of resident species of fish or wildlife, such regulations shall apply in any State which has entered into a cooperative agreement pursuant to section 1535(c) of this title only to the extent that such regulations have also been adopted by such State.

16 U.S.C. § 1533.

DPSs, among others.

III. SUMMARY OF PLAINTIFFS' MOTIONS

A. *Grange* Motions.

Grange filed this lawsuit on March 20, 2006, alleging generally that, in listing the five California *O. mykiss* DPSs, NMFS failed to comply with the ESA and the APA. (*Grange* Doc. 1.) Grange now moves for summary judgment on the following grounds:

First, the Grange argues these NMFS listings unlawfully distinguished between hatchery and naturally-spawned *O. mykiss* by first defining some of the DPSs to include hatchery fish, but then distinguished between hatchery and naturally-spawned fish during the listing process. Grange relies heavily on the holding from *Alsea* that "[l]isting distinctions below that of subspecies or a DPS of a species are not allowed under the ESA." 161 F. Supp. 2d at 1163. Grange asserts that the phrase "listing distinctions" should apply not only to "listing decisions" (i.e., the final determination whether to place a species or DPS on the threatened or endangered list) but to any distinctions made at any point of the listing process once the members of a DPS are defined.[11] (*Id.* at ¶¶ 84-91.)

Next, Grange challenges NMFS's decision to apply the Joint DPS policy to *O. mykiss*, which resulted in the exclusion of all

[11] With respect to this argument, is not entirely clear whether Grange is (a) challenging just the listing decision, or (b) alleging an as-applied challenge to the HLP, which provides the framework for the process used by NMFS in its listing decision.

resident *O. mykiss* from the five challenged DPSs, leaving only steelhead in those DPSs. Grange first argues that NMFS had insufficient justification for applying the Joint DPS policy to *O. mykiss*, which was a departure from its prior practice of applying the ESU Policy. (*Id.* at ¶¶ 99-102.) Second, Grange argues that drawing any distinction between migratory and resident *O. mykiss* "results in an inconsistent and artificial species definition that is not supported by the ESA and is contrary to the ESA's intent." (Doc. 1 at ¶ 82.) (*Grange* Doc. 1 at ¶¶ 79-83.)

Finally, Grange challenges the ESA § 4(d) protective regulations for the four challenged DPSs designated as threatened. The regulation applies the anti-take protections of ESA § 9 to only the "naturally-spawned" portion of the listed populations and those members of the hatchery-born population with an intact adipose fin, while those hatchery-born fish whose adipose fins have been clipped are deemed "surplus to the conservation needs of the species."

Grange maintains that allowing the take of fish which have been deemed "surplus to the conservation needs of the species" violates the ESA. Specifically, for threatened species, the ESA requires NMFS to "issue such regulations as [NMFS] deems necessary and advisable to provide for the conservation of such species." 16 U.S.C. § 1533(d)(emphasis added). The ESA defines "conservation," as "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 chapter are no longer necessary." § 1532(3). The

definition of conservation provides: "[s]uch methods and procedures include, but are not limited to, all activities associated with scientific resources management such as research, census, law enforcement, habitat acquisition and maintenance, propagation, live trapping, and transplantation, and, in the extraordinary case where population pressures within a given ecosystem cannot be otherwise relieved, may include regulated taking." *Id.* (emphasis added). The Grange asserts that this language operates as a prohibition against permitting the take of any listed species except in extraordinary cases, making NMFS's protective regulation unlawful. (*Grange* Doc. 1 at ¶¶ 103-108.)

The *Grange* advances one additional claim, premised on the ESA's definition of a "species" to include "any subspecies of fish or wildlife or plants, and any distinct population segment of any species of vertebrate fish or wildlife which interbreeds when mature." 16 U.S.C. § 1532(16)(emphasis added). Grange alleges that each of the challenged DPSs consist of numerous sub-populations spread across large areas and that, for example, "[s]ome *O. mykiss* return to spawn in Redwood Creek in Humboldt County, in the far north portion of the DPS, while others return to spawn in the Gualala River in Mendocino County, in the far south portion of the DPS – over 200 miles away." (*Grange* Doc. 1 at ¶95.) This allegedly conflicts with the ESA's plain language requiring DPSs to "interbreed when mature." However, as Federal Defendants point out in their cross-motion, this claim was not raised in Grange's motion for summary judgment. Rather, the claim was raised for the first time in the reply brief. To mask this untimeliness, the argument is characterized as a response to

a different argument made in Defendants' cross motion. Specifically, Grange's opening brief (in the context of a separate claim) argued that all DPSs of *O. mykiss* must include both resident and anadromous fish because they "interbreed when mature." NMFS responded, *inter alia*, that "[t]he ESA requirement that a group of organisms defined as a DPS must 'interbreed when mature' is a necessary but not exclusive condition." (*Grange* Doc. 45 at 25.) Defendants discussed this statutory language in the context of Grange's Fourth and First Claims for relief (which challenge the distinction between resident and migratory *O. mykiss*). Grange's reply reintroduces their entire Third claim as a response to Defendants' reference to the "interbreed[ing] when mature" language. This procedure deprives Defendants of a fair opportunity to respond.

B. *MID II* Motions.

MID advances five arguments why NMFS's listing of the Central Valley Steelhead DPS is arbitrary, capricious, and unlawful, some of which overlap with the Grange's claims. First, MID claims that NMFS's interpretation of the term "distinct population segment" is arbitrary because it contradicts the plain language of the ESA. Second, NMFS's decision to separate anadromous and resident forms of *O. mykiss* is arbitrary because it is inconsistent with its own and FWS's treatment of other fish species with anadromous and resident life histories. Third, NMFS's switch from the ESU to the DPS policy is arbitrary and capricious because the reasons for the switch are unsupported by the administrative record. Fourth, the best available science

does not support NMFS's determination that anadromous *O. mykiss* are discrete from resident *O. mykiss*. Finally, NMFS provided no rational basis to justify including some genetically divergent *O. mykiss* and excluding other genetically divergent *O. mykiss* from the defined DPS.

IV. STANDARD OF REVIEW

Plaintiffs seek summary judgment setting aside NMFS's listing determinations for the five DPSs of California steelhead. It is not disputed that the listings are final agency actions. Review of an agency's final action is governed by APA section 706(2) of the APA, which provides:

> To the extent necessary to decision and when presented, the reviewing court shall decide all relevant questions of law, interpret constitutional and statutory provisions, and determine the meaning or applicability of the terms of an agency action. The reviewing court shall–
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> ***
>
> (2) hold unlawful and set aside agency action, findings, and conclusions found to be –
>
> (A) arbitrary, capricious, an abuse of discretion, or otherwise not in accordance with law;
>
> ***
>
> In making the foregoing determinations, the court shall review the whole record or those parts of it cited by a party, and due account shall be taken of the rule of prejudicial error.

5 U.S.C. § 706.

Courts will award summary judgment in an APA case if they determine, after reviewing the administrative record, that the

agency's action was arbitrary and capricious, an abuse of discretion, not in accordance with law, or unsupported by substantial evidence on the record taken as a whole. *Morongo Band of Mission Indians v. FAA*, 161 F.3d 569, 573 (9th Cir. 1998); 5 U.S.C. § 706(2)(A). According to the Ninth Circuit, a decision is arbitrary and capricious if the agency

> (1) has relied on factors which Congress has not intended it to consider,
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> (2) entirely failed to consider an important aspect of the problem,
>
> (3) offered an explanation for its decision that runs counter to the evidence before the agency, or
>
> (4) is so implausible that it could not be ascribed to a difference in view or product of agency expertise.

United States v. Snoring Relief Labs., Inc., 210 F.3d 1081, 1085 (9th Cir. 2000).

"Review under the arbitrary and capricious standard is narrow, and the reviewing court may not substitute its judgment for that of the agency." *Morongo Band*, 161 F.3d at 573; *see also Citizens to Preserve Overton Park, Inc. v. Volpe*, 401 U.S. 402, 414-16 (1971), *overruled on other grounds by Califano v. Sanders*, 430 U.S. 99, 105 (1977). Despite this "narrow" scope of review, the court is still expected to make a "thorough, probing, in-depth review" of the administrative record to ensure the validity of the agency action, and "must consider whether the decision was based on a consideration of the relevant factors and whether there has been a clear error of judgment." *Id.* at 415-16.

Whenever scientific experts express conflicting views, "an agency must have discretion to rely on the reasonable opinions of its own qualified experts even if, as an original matter, a court might find contrary views more persuasive." *Marsh v. Oregon Natural Res. Council*, 490 U.S. 360, 378 (1989). A court must be "at its most deferential" when an agency is "making predictions within its area of expertise, at the frontiers of science." *Baltimore Gas & Elec. Co. v. Natural Res. Def. Council*, 462 U.S. 87, 103 (1983).

V. ANALYSIS[12]

A. Standing.

To establish constitutional standing, a plaintiff first must "have suffered an injury in fact -- an invasion of a legally protected interest which is (a) concrete and particularized and (b) actual or imminent, not conjectural or hypothetical." *Lujan v. Defenders of Wildlife*, 504 U.S. 555, 560 (1992)(internal quotations and citations omitted). Second, "there must be a causal connection between the injury and the conduct complained of -- the injury has to be fairly traceable to the challenged action of the defendant and not the result of some independent action of some third party not before the court." *Id.* Finally, "it must be likely, as opposed to merely speculative, that the injury will be redressed by a favorable decision." *Id.* at 561.

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[12] Defendant-Intervenors in *Grange* raised evidentiary objections which have been resolved in a separate memorandum decision. (*Grange* Doc. 82; *MID II* Doc. 115.)

Plaintiffs bear the burden of establishing these elements. *Id.*

At the summary judgment stage, Plaintiffs "can no longer rest on ... mere allegations, but must set forth by affidavit or other evidence specific facts, which for the purposes of [a] summary judgment motion will be taken to be true." *Id.*

> When the suit is one challenging the legality of government action or inaction, the nature and extent of facts that must be averred (at the summary judgment stage) or proved (at the trial stage) in order to establish standing depends considerably upon whether the plaintiff is himself an object of the action (or forgone action) at issue. If he is, there is ordinarily little question that the action or inaction has caused him injury, and that a judgment preventing or requiring the action will redress it. When, however, as in this case, a plaintiff's asserted injury arises from the government's allegedly unlawful regulation (or lack of regulation) of someone else, much more is needed. In that circumstance, causation and redressability ordinarily hinge on the response of the regulated (or regulable) third party to the government action or inaction-and perhaps on the response of others as well. The existence of one or more of the essential elements of standing depends on the unfettered choices made by independent actors not before the courts and whose exercise of broad and legitimate discretion the courts cannot presume either to control or to predict; and it becomes the burden of the plaintiff to adduce facts showing that those choices have been or will be made in such manner as to produce causation and permit redressability of injury. Thus, when the plaintiff is not himself the object of the government action or inaction he challenges, standing is not precluded, but it is ordinarily substantially more difficult to establish.

Id. at 561-62 (internal citations and quotations omitted). Plaintiffs must "demonstrate standing for each claim [they] seek to press." *DaimlerChrystler Corp v. Cuno*, 547 U.S. 332, 335 (2006).

1. Standing of the Grange Plaintiffs.

Federal Defendants assert that the Grange Plaintiffs' have

failed to meet their burden of establishing standing. (*Grange* Doc. 45 at 14.) The Grange Plaintiffs do not directly address the issue of standing in either their motion for summary judgment or their reply brief. Nor have the Grange Plaintiffs submitted declarations (or any other evidence) from any individuals associated with either California State Grange or Greenhorn Grange. The Complaint does contain some basic allegations regarding the purpose of California State Grange and Greenhorn Grange, as well as the general interests they might have in the *O. mykiss* listing. However, at the summary judgment stage, mere allegations are insufficient. As neither California State Grange nor Greenhorn Grange have submitted any evidence regarding standing, they have totally failed to meet their burden under *Lujan* and their claims must be dismissed from the case for lack of standing.

Other Plaintiffs remain. Standing declarations have been submitted by (1) David Bischel, the President of the California Forestry Association ("CFA") (*Grange* Doc. 54); (2) Robert Briggs, the Director of the Central Coast Forest Association ("CCFA")(*Grange* Doc. 56); and (3) James Kentosh, the Manager of Resource Planning for United Water Conservation District ("UWCD") (*Grange* Doc. 55).

David Bishel states that as a result of the listing of several populations of salmonids, including the steelhead, the California Forest Practice Rules were amended to "increase the prescriptive measures already in place for the protection of watershed resources." (*Grange* Doc. 54 at ¶2.) Specifically, the

added protections "include requiring landowners to retain trees which would have previously been harvested and impose additional requirements for erosion control, watercourse crossings, restoration, monitoring, and selection of alternatives. These measures dramatically increased the costs of harvesting and reduce the numbers of trees removed near streams." (*Id.* at ¶4.) Bishel estimates that "[p]rivate timber harvests in California dropped by 380 million board feet due to the imposition of the [new] pr[e]scriptive measures." (*Id.* at ¶6.) However, Bischel does not provide any evidence pertaining to the membership of the CFA, or how its members have been harmed by the new regulations. The Complaint explains that the CFA consists of "forestry professionals, companies, and individuals," who are "committed to staying abreast of issues facing the forest products industry." (*Grange* Compl. at ¶9A.) However, nothing in Bischel's declaration provides evidence to support basis for these allegations, nor does he provide any affidavits from individual CFA members or timber owners who have been impacted by the new regulations.

An organization may sue on behalf of its members (i) where at least one member would have standing to sue in his or her own right, (ii) where the interests the association seeks to protect are germane to its purpose, and (iii) where neither the claim nor the remedy requires the members to participate individually. *Hunt v. Wash. State Apple Adver. Comm'n*, 432 U.S. 333, 342-43 (1977). Although the third element is not reasonably in dispute here, Bishel's declaration fails to establish either the first or

second element, as it contains absolutely no evidence regarding the organization's purpose or whether any of its members have individualized injury to confer standing.

Robert Briggs' declaration, made on behalf of CCFA, also fails to provide evidence regarding the organizational goals of CCFA. Although the Complaint alleges that CCFA is "a California nonprofit alliance of small forestland owners, forestry professionals, and forest oriented businesses with close affinity to the woods, mountains, streams, and wildlife of the Central Coast of California," Briggs' declaration contains no evidence to support these allegations. Briggs' does provide some information as to the harm caused to CCFA members by the listing of the steelhead. He states unequivocally, that "the listing of the steelhead has justified federal and state interference in the lives and livelihoods of people in the Santa Cruz Mountains area in numerous ways." (*Grange* Doc. 56 at ¶2.) Briggs describes several specific impacts of the listing and resulting logging restrictions upon CCFA members. For example, Briggs explains that CCFA member Charles Burton harvested a 55 acre plot of redwood on his lands in Santa Cruz County in 1999. As a result of a stream buffer requirement enacted by the California Board of Forestry "at the instigation of NMFS to protect the steelhead," Mr. Burton was required to leave a 150 foot uncut strip of timber approximately 1,000 feet long, resulting in $72,000 in lost harvest revenue. (*Id.* at ¶3Bi.) Briggs offers several other specific examples of harm caused to CCFA members as a result of the stream buffer requirement. (*Id.*) Briggs also explains how

other steelhead protection measures have harmed CCFA members. For example, CCFA member Big Creek Lumber Company is now required to haul water 40 miles roundtrip to a logging site because drafting water from an on-site stream is restricted to protect steelhead. (*Id.* at 3ii.)

James Kentosh, the Manager of Resource Planning for United Water Conservation District ("UWCD"), states in his declaration that UWCD "manages groundwater and delivers water to cities and agricultural water users within a large part of Ventura County, in Southern California. UWCD is a public agency with an elected board of directors, created under the Water Conservation District Law of 1931." (*Grange* Doc. 55 at ¶2.) Kentosh explains that NMFS's recommendations for the protection of the steelhead include reducing the amount of water that may be diverted out of the Santa Clara River at UWCD's Freeman Diversion by approximately 10,000 acre feet per year. UWCD estimates that it would cost approximately $7.25 million per year to acquire replacement water in that region, although Kentosh does not indicate that it is necessary for UWCD to replace this water or that it has paid for replacement water. (*Id.* at ¶¶ 8-9.) In addition to the water diversion restrictions, NMFS has also concluded that a fish ladder installed at the Freeman diversion does not work and recommends replacing it with a "rock ramp." UWCD estimates that such a rock ramp would cost around $100 million to construct. UWCD also has incurred and continues to incur costs related to studying impacts of its operations on listed steelhead. UWCD estimates these costs related to the

relicensing of its operations at Lake Piru to be over $100,000 to date. (*Id.* at ¶16.) In addition, partly because of the listing of the steelhead, UWCD is being required to upgrade fish screens and build a natural fishway at Piru Creek, at an estimated cost of $600,000. (*Id.* at ¶17.)

There is no question that UWCD has been harmed by the listing of the steelhead. UWCD also claims to be harmed by NMFS's promulgation of a protective regulation that allows the harvest of hatchery-born *O. mykiss* because, as a regulated party, any decision that permits the take of some listed individuals may impact the overall capacity of the listed species (or DPS) to survive and recover. Accordingly, UWCD has standing to challenge the listing determinations, the policies and practices that led to the listings, and NMFS's promulgation of a protective regulation that allows the harvest of hatchery-born *O. mykiss* who have had their adipose fin clipped.

The California State Grange and Greenhorn Grange have totally failed to demonstrate they have standing. The CFA has not provided evidence as to its organizational purpose and has not demonstrated that any of its members have been harmed by Defendants' conduct. CCFA has also failed to provide evidence as to its organizational purpose. UWCD, however, has demonstrated that it has been harmed by the listing of the steelhead.

2. Standing of the *MID II* Plaintiffs.

No standing challenge is raised in *MID II*. A brief review of the MID II Plaintiffs' interests reveals that they have standing to pursue their claims.

Plaintiffs Modesto Irrigation District ("Modesto ID"), Turlock Irrigation District ("Turlock ID"), Merced Irrigation District ("Merced ID"), Oakdale Irrigation District ("Oakdale ID"), and South San Joaquin Irrigation District ("South San Joaquin ID"), are all irrigation districts and public agencies organized and operating pursuant to California Law. Cal Water Code §§ 20500, *et seq*. Modesto ID and Turlock ID own and operate the Don Pedro Project, which is subject to a license issued by the Federal Energy Regulatory Commission ("FERC"), making Modesto ID's and Turlock ID's operations subject to consultation between NMFS and FERC under Section 7 of the ESA. Merced ID owns and operates facilities that divert water from the Merced River. These facilities are also subject to licenses issued by FERC, and are similarly subject to Section 7 consultation. Oakdale ID and South San Joaquin ID own and operate facilities that divert water from the Stanislaus River. Some of these facilities are the subject of permits issued by FERC. (*See generally MID II* Doc. 1 at 5-6.)

Stockton East Water District ("Stockton East WD") is a special district formed by special action of the California Legislature, and is generally governed as a water conservation district pursuant to California Water Code §§ 74000-76501. Stockton East WD owns and operates facilities that divert water from the Stanislaus River, Calaveras River, and Mormon Slough in Calaveras, Tuolumne, Stanislaus, and San Joaquin Counties. Some of Stockton East WD's facilities are the subject of permits issued by the United States Army Corps of Engineers ("USACOE")

pursuant to section 404 of the Clean Water Act (13 U.S.C. § 1344), and are subject to Section 7 consultation between NMFS and the USACOE. (*Id.* at 6.)

Each *MID II* Plaintiff depends upon or operates facilities on rivers allegedly occupied by Central Valley Steelhead. (*Id.* at ¶9.) Not only are the *MID II* Plaintiffs' operations on these rivers subject to ESA Section 7, their operations are subject to Section 4(d) "take" prohibitions and penalties if a listed fish is taken as a result of these operations. Plaintiffs have a concrete interest in ensuring that the ESA listing decisions that will form the subject of further regulation of their activities are proper. They are and will continue to be injured by listing decisions that affect the timing and volume of water that they can divert and deliver. It is undisputed that the listing decision is the cause of Plaintiffs' injury and that the invalidation of the listing decision would redress the alleged harm. In addition, as regulated parties, the MID II Plaintiffs fall within the zone of interest of the ESA. The MID II Plaintiffs have standing to bring this suit.

B. Hatchery-Born v. Naturally-Spawned: Challenges to the Manner by Which NMFS Treated Hatchery *O. mykiss* During the Listing Process.

1. Grange's Claim That NMFS Acted Unlawfully by Defining Some of the DPSs to Include Hatchery Fish but Then Distinguished Between Hatchery and Naturally-Spawned Fish During the Listing Process.

Grange argues generally that NMFS unlawfully distinguished between hatchery and naturally-spawned *O. mykiss* by first defining some of the DPSs to include hatchery fish but then

distinguished between hatchery and naturally-spawned fish during the listing process. Grange insists that (1) "[u]nder the ESA's clear terms, NMFS must treat equally, without distinction, all members of a species it includes in a species population," (*Grange* Doc. 29 at 13), and (2) NMFS acted unlawfully when it (a) reviewed the status of only the naturally-spawned portion of the population to determine if that portion warranted listing, and (b) only evaluated hatchery *O. mykiss* to determine how hatchery *O. mykiss* impacted the natural population. (*Id.*) The *Grange* relies upon language from *Alsea*, the plain language of the ESA, and portions of the ESA's legislative history.

Federal Defendants and Defendant-Intervenors cross-move for summary judgment on this claim, contending that they lawfully drew distinctions between hatchery-born and naturally-spawning *O. mykiss* during the listing process.

a. Two of the Five Challenged DPSs Do Not Include Hatchery Fish.

It is undisputed that two of the five challenged California Steelhead DPSs, the Southern California and South-Central California DPSs, do not include hatchery fish. Grange's Second Claim for Relief is based on the argument that NMFS cannot include hatchery fish in a DPS and then treat them differently from naturally-spawned fish during the listing process. This claim cannot possibly apply to the two California DPSs that do not include hatchery fish. Accordingly, Federal Defendants and Defendant-Intervenors' cross-motion for summary judgment on the Second Claim for Relief is GRANTED with respect to these two DPSs.

b. *Alsea* does not Control the Outcome of this Claim.

Plaintiffs rely heavily on *Alsea*, maintaining it controls the outcome of this case. *Alsea* addressed NMFS's listing of the Oregon Coast Coho ESU as threatened. 161 F. Supp. 2d at 1159. Under its ESU Policy, NMFS concluded that nine hatchery populations were part of the disputed ESUs, but nonetheless listed only the naturally-spawned fish as threatened. The hatchery populations were not included in the listing because the hatchery populations were not deemed "essential to recovery." *Id*.

The *Alsea* listing was invalid because NMFS's distinction "between hatchery spawned and naturally-spawned coho is untenable under the ESA because the ESA does not allow the Secretary to make listing distinctions below that of species, subspecies or a distinct population segment of a species." *Id*. at 1161. *Alsea* concluded that NMFS's ESU Policy is a "permissible agency construction of the ESA" and the "factors used to define [an ESU during the listing process], geography and genetics, are within permissible limits under the ESA," *id*. & 1162 n.5, but found NMFS's approach to be fundamentally flawed:

> **The central problem with the NMFS listing decision of August 10, 1998, is that it makes improper distinctions, below that of a DPS, by excluding hatchery coho populations from listing protection even though they are determined to be part of the same DPS as natural coho populations.**
>
> **The ESA "specifically states in the definition of 'species' that a 'species' may include any subspecies ... and any distinct population segment (DPS) of any species ... which interbreeds when mature." 16 U.S.C. § 1532(16); *Southwest Center for Biological Diversity v. Babbitt*, 980 F. Supp. 1080, 1085 (D. Ariz. 1997).**

> Listing distinctions below that of subspecies or a DPS of a species are not allowed under the ESA. *Southwest Center*, 980 F. Supp. at 1085. Yet, this is precisely what the NMFS did in its final listing decision of August 10, 1998. NMFS concluded that nine hatchery stocks were part of the same Oregon Coast ESU/DPS as the "natural" populations but none of the hatchery stocks were included in the listing decision because NMFS did not consider them "essential for recovery." 63 Fed.Reg. 42,589.
>
> The distinction between members of the same ESU/DPS is arbitrary and capricious because NMFS may consider listing only an entire species, subspecies or distinct population segment ("DPS") of any species. 16 U.S.C. § 1532(16). Once NMFS determined that hatchery spawned coho and naturally-spawned coho were part of the same DPS/ESU, the listing decision should have been made without further distinctions between members of the same DPS/ESU.

Id. at 1162 (emphasis added).

Plaintiffs assert here that the phrase "listing distinctions" should be read broadly to apply not only to "listing decisions" (i.e., the final determination whether to place a species or DPS on the threatened or endangered list) but to any distinctions made in any point of the ESA listing process as applied to the members of a DPS. (*Grange* Doc. 1 at ¶¶ 84-91.) In support, Plaintiffs point to *Alsea's* analysis of the ESA's text and legislative history, which rejects NMFS's argument "that its listing decision does not contradict the terms of the ESA because the listing decision, and relevant policies, are in accordance with ESA goals that prioritize 'natural' salmon populations and 'genetic diversity' within those populations." *Id.*

> Although I agree with the general concept that "genetic diversity" is one factor in the long term success of a threatened species, and thus is one of many underlying goals of the ESA, genetics cannot, by itself, justify a listing distinction that runs contrary to the

> definition of a DPS.
>
> The term "distinct population segment" was amended in the ESA in 1978 so that it "would exclude taxonomic [biological] categories below subspecies [smaller taxa] from the definition." H.R. Conf. Rep. No. 95-1804, at 17 (1978), reprinted in 1978 U.S.C.C.A.N. 9485, 14855.
>
> Congress adopted the DPS language stating:
>
> > The committee agrees that there may be instances in which [the Fish and Wildlife Service] should provide for different levels of protection for populations of the same species. For instance, the U.S. population of an animal should not necessarily be permitted to become extinct simply because the animal is more abundant elsewhere in the world. Similarly, listing populations may be necessary when the preponderance of evidence indicates that a species faces a widespread threat, but conclusive data is available with regard to only certain populations.
>
> S. Rep. No. 96-151.
>
> Thus, Congress expressly limited the Secretary's ability to make listing distinctions among species below that of subspecies or a DPS of a species. Here, the NMFS listing decision was based on distinctions below that of subspecies or distinct population segment of a species.
>
> Therefore, the NMFS's listing decision is arbitrary and capricious, because the Oregon Coast ESU includes both "hatchery spawned" and "naturally-spawned" coho salmon, but the agency's listing decision arbitrarily excludes "hatchery spawned" coho....

Id. at 1163. Plaintiffs claim this suggests it is appropriate to bar NMFS from drawing any distinctions between naturally-spawned and hatchery-born fish at any stage during the listing process. Neither *Alsea's* holding nor its analysis of the ESA suggests such a limitation. Rather, *Alsea* emphasizes that Congress limited NMFS's ability to list a population that is taxonomically smaller than a subspecies or distinct population segment. It is undisputed that NMFS listed the entire DPSs in dispute here.

Alsea **does not address whether it is proper for NMFS to emphasize the health of the natural components of the DPSs during its analysis of the extinction risks faced by the DPSs.[13] Defendants and Defendant-Intervenors are correct that *Alsea* "does not require a particular approach to assessing extinction risk." *Alsea* does not resolve Plaintiffs' claims as a matter of law.**

c. Parsing Grange's Naturally-Spawned v. Hatchery-Born Challenge to Determine the Appropriate Standard of Review.

Grange also argues that, under the relevant statutory text and legislative history, the listing decision is contrary to the ESA's intent. Grange does not directly challenge the lawfulness of NMFS's HLP. Rather, Grange attacks the listing determinations alone. A challenge to a policy is reviewable under *Chevron;* a challenge to the application of a policy is reviewed under the arbitrary and capricious standard. *See Nat'l Ass'n of Home Builders v. Norton*, 340 F.3d 835, 841 (9th Cir. 2003). The parties have analyzed this case under the "arbitrary and capricious" standard, however the nature of the Grange's challenge and its relationship to the HLP makes less clear the appropriate standard of review.

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[13] **The decision in *MID I,* 1:02-cv-06553, is equally unhelpful. There, as in in *Alsea*, NMFS's final rule concerning listing of the Central Valley steelhead included hatchery populations as part of the ESU, but listed as endangered only naturally-spawning steelhead. The federal defendants agreed that, under *Alsea*, "distinctions below that of a distinct population segment when making listing determinations are improper," and did not oppose plaintiffs' motion for summary judgment. (*Id.* at 28.) The *MID I* case was not directly premised on *Alsea,* as the point was conceded by the federal government.**

The HLP provides that, when delineating an ESU for listing consideration, "NMFS will identify all components of the ESU, including populations of natural fish (natural populations) and hatchery stocks that are part of the ESU." 70 Fed. Reg. at 37,215. However, when making status determinations (i.e., as to whether the ESU should be listed as threatened, endangered, or neither), "NMFS will apply this policy in support of the conservation of naturally-spawning salmon and the ecosystems upon which they depend, consistent with section 2(b) of the ESA (16 U.S.C. 1531(b))." *Id.* (emphasis added). Accordingly, "[h]atchery fish will be included in assessing an ESU's status in the context of their contributions to conserving natural self-sustaining populations." *Id.*

NMFS used the HLP process to reach the challenged listing determinations and cited the HLP in the final listing. 71 Fed. Reg. 834, 836, 848. Grange does not assert that the HLP was applied improperly or that the agency's conclusions under the HLP (or any other policy) were unsupported by the record. (Either of these contentions would be reviewed under an arbitrary and capricious standard.) Rather, it asserts that the process NMFS utilized -- a process explicitly set forth in the HLP -- is contrary to law. Most, if not all, of the agency's justifications for applying this process are set forth in the HLP, not within the listing determinations. Although neither party has characterized this claim as a challenge to the HLP,[14]

[14] For example, the Federal defendants assert that Grange's challenge "does not encompass a direct challenge to the

Plaintiffs' claim implies that the HLP is unlawful.

The parties extensively debate whether *Chevron* deference should apply to the HLP. For *Chevron* to apply to review of agency policy, Congress must delegate rule-making authority to the agency, and the agency's interpretation of its rules, having the force of law, must have been promulgated in the exercise of that authority. *United States v. Mead Corp.*, 533 U.S. 218, 226-27 (2001). The Ninth Circuit interprets *Mead* to require *Chevron* deference "when it appears that Congress delegated authority to the agency generally to make rules carrying the force of law." *Alaska Dept. of Health and Human Servs. v. Ctrs. for Medicare and Medicaid Servs.*, 424 F.3d 931 (9th Cir. 2005)(quoting *Mead*, 533 U.S. at 226-27).

Grange argues the HLP is owed no *Chevron* deference because "[a]lthough the ESA authorizes NMFS to make rules carrying the force of law, NMFS did not exercise that authority by issuing its [HLP]." (*Grange* Doc. 53 at 3.) Grange correctly points out that the policy explicates that it is a general policy statement not subject to APA notice and comment procedures. *See* 70 Fed. Reg. at 37,215. This language is taken out of context. This statement was part of a section of the final rule in which NMFS determined that the Regulatory Flexibility Act[15] ("RFA") did not

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[HLP]." (Doc. 64 at 2.)

[15] The Regulatory Flexibility Act requires that whenever an agency is required to publish notice of a proposed rule under 5 U.S.C. 553 (formal rule making procedure, which exempts interpretive rules and general statements of policy from its coverage), that agency must analyze how the proposed rule would

apply to the promulgation of the HLP:

> Required Determinations
>
> This Policy on the Consideration of Hatchery-Origin Fish in Endangered Species Act Listing Determinations for Pacific Salmon and Steelhead is a general statement of policy, to which the requirement of notice and comment procedures under the Administrative Procedure Act does not apply, pursuant to 5 U.S.C. 553(b)(A). Because prior notice and opportunity for public comment are not required under 5 U.S.C. 553(b)(A) or any other law, the analytical requirements of the Regulatory Flexibility Act are not applicable to this action.

Id. NMFS correctly concluded that the RFA does not apply to interpretive rules or general statements of policy. The RFA's non-applicability is not dispositive of whether an interpretive rule or general statement of policy should be afforded *Chevron* deference.

Although not technically a "rule" subject to notice and comment rulemaking procedures, the HLP is a "policy" intended to fill a statutory gap and was established after public notice and opportunity for public comment. The Joint DPS Policy is similarly a "policy" rather than a "rule" that was published in draft form providing an opportunity for public comment. The Joint DPS Policy has repeatedly been afforded *Chevron* Deference. *See Nw. Ecosystem Alliance v. U.S. Fish and Wildlife Serv.*, 475 F.3d 1136, 1141-42 (9th Cir. 2007); *Maine v. Norton*, 257 F. Supp. 2d 357, 385 (D. Me. 2003) ("The Joint DPS Policy was issued as an official position of the agencies after both the proposed and final versions of the policy were published in the Federal Register and the policy was subject to public notice and

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impact small businesses. *See* 5 U.S.C. § 603.

comment.").

In this case, as with the Joint DPS policy, NMFS promulgated the HLP with sufficient public notice and opportunity for comment to qualify the HLP *for Chevron* deference. Despite the parties arguments to the contrary, this claim is most appropriately characterized and analyzed as a challenge to the HLP's legality. *Chevron* deference applies to this as-applied challenge to the HLP's application.

d. *Chevron* Deference.

Under *Chevron's* two-part test, a court "must decide (1) whether the statute unambiguously forbids the Agency's interpretation, and, if not, (2) whether the interpretation, for other reasons, exceeds the bounds of the permissible." *Hemp Indus. v. Drug. Enf. Admin.*, 357 F.3d 1012, 1015 (9th Cir. 2004) (*citing Barnhart v. Walton*, 535 U.S. 212, 218 (2002)). At step one, a court "must give effect to the unambiguously expressed intent of Congress." *Id.* However, if "the statute is silent or ambiguous with respect to the specific issue," at step two a court will "sustain the Agency's interpretation if it is based on a permissible construction" of a statute. *Id.*

e. Does the ESA Unambiguously Preclude Drawing Distinctions Between Naturally-Spawned and Hatchery-Born Fish During Any Stage of the Listing Process?

Grange's central complaint is that once NMFS had already defined its DPSs to include hatchery-born *O. mykiss*, it was unlawful for the agency to thereafter focus on the conservation of naturally-spawning *O. mykiss* by considering hatchery-born fishes' contributions the DPSs status only "in the context of

their contributions to conserving natural self-sustaining populations." This approach was set out in the HLP and expressly referenced by NMFS in its listing decisions. Under the first *Chevron* step, does the ESA unambiguously preclude drawing any distinctions between naturally-spawned and hatchery-born fish during the listing process?

The Ninth Circuit has prescribed implementation of the first step of the *Chevron* analysis.

> **To determine whether Congress has directly spoken to the issue, we employ the traditional tools of statutory construction. These tools of construction require us first to engage in a textual analysis of the relevant statutory provisions and to read the words of a statute in their context and with a view to their place in the overall statutory scheme. If the proper interpretation is not clear from this textual analysis, the legislative history offers valuable guidance and insight into congressional intent. However, it is well established that legislative history which does not demonstrate a clear and certain congressional intent cannot form the basis for enjoining regulations.**
>
> **In conducting this analysis, we are not vested with the power to rewrite the statutes, but rather must construe what Congress has written. It is for us to ascertain-neither to add nor to subtract, neither to delete nor to distort.**

***Arizona State Bd. For Charter Schools v. U.S. Dept. of Educ.*, 464 F.3d 1003, 1007 (9th Cir. 2006)(internal quotations and citations omitted).**

Grange contends the ESA requires NMFS to treat hatchery and naturally-spawned *O. mykiss* equally throughout the entire listing process, relying almost exclusively on the ESA's definition of species and relevant legislative history. The ESA defines species to include "any subspecies of fish or wildlife or plants, and any distinct population segment of any species of vertebrate fish or wildlife which interbreeds when mature." 16 U.S.C. §

1532(16). The ESA does not define the term "distinct population segment," and provides no direct guidance as to the scope and meaning of the term. *Alsea*, 161 F. Supp. 2d at 1157.

Grange points out that Congress originally defined "species" in the 1973 version of the ESA to include "any subspecies of fish or wildlife of the same species or smaller taxa in common spatial arrangement that interbreed when mature." The ESA was amended in 1978 by changing the definition of "species" so it "would exclude taxonomic categories below subspecies from the definition as well as distinct populations of invertebrates." H.R. Conf. Rep. No. 95-1804 at 17 (1978), reprinted in 1978 U.S.C.C.A.N. 9485, 14,855. Grange correctly asserts that this was an expression of Congressional intent that the term "DPS of a species" apply only to "species" not to "smaller taxa." However, this does not resolve the issue: Whether Congress expressed an intent to bar the agency from considering any distinctions below the species or DPS level when determining whether a properly defined DPS should be listed as threatened or endangered? Grange identifies no language in the statute, the legislative history (or any relevant case[16]) that

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[16] Grange cites *Defenders of Wildlife v. Norton*, 258 F.3d 1136, 1144 (9th Cir. 2001), for the narrow proposition that, while it is permissible to list portions of a species based on geographic considerations, other considerations, such as the form of land ownership exercised over the species habitat, may not be taken into account.

Defenders of Wildlife concerned a challenge to FWS's decision not to list the flat-tailed horned lizard as a threatened species. Although the plaintiffs in that case maintained that the lizard faced significant threats in those parts of its habitat held in private ownership, the agency based

its decision, in part, on the fact that, regardless of the threats to the lizard on private land, large areas of habitat with few anticipated threats existed on public land. The agency did not consider the specific question of whether the lizard "is or will become extinct in 'a significant portion of its range,' as that term is used in the [ESA]." *Id.* at 1140. Contrary to Grange's assertion, the Ninth Circuit did not expressly reject drawing distinctions between habitat on private and public lands. Rather, the court focused on whether the agency's conclusion that the "lizard's potential survival in its public land habitat is sufficient to preclude ESA protection." *Id.* This, the court concluded, turned "largely on the meaning of the phrase "in danger of extinction throughout ... a significant portion of its range," which is contained in the definitions of both "endangered species" and "threatened species." The *Defenders of Wildlife* plaintiffs complained that, even though the record clearly indicated that the area in which the lizard was expected to survive is much smaller than its historical range, FWS failed to explain why the area in which the species can no longer live is not a "significant portion of its range," thereby warranting listing. The Ninth Circuit agreed, and reversed the listing determination for further consideration. *Id.* at 1146.

Grange also asserts that *Defenders of Wildlife* recognizes that "although congress eliminated NMFS's ability to list portions of a species based on genetics, Congress preserved the ability to list species according to geographical range." (*Grange* Doc. 29 at 17.) Although *Defenders of Wildlife* confirms that a species may be listed according to its geographical range, the case says absolutely nothing about the propriety of listing on the basis of genetics.

Finally, Plaintiffs correctly note that *Defenders of Wildlife* cites Senator Tunney's explanation of why Congress placed such importance upon geographical distinctions within the ESA:

> An animal might be "endangered" in most States but overpopulated in some. In a State in which a species is overpopulated, the Secretary would have the discretion to list that animal as merely threatened or to remove it from the endangered species list entirely while still providing protection in areas where it was threatened with extinction.

Id. at 1144 (quoting H.R. Rep. No. 412, 93rd Cong., 1 Sess.

illuminates Congress' intent regarding whether distinctions among members of a DPS may be considered during the listing process. Congress has not spoken on the issue. This is the type of gap which agencies commonly fill by way of regulation or policy that is due *Chevron* deference. *See also Am. Rivers v. FERC*, 201 F.3d 1186, 1197 (9th Cir. 2000) ("When relevant statutes are silent on the salient question, we assume that Congress has implicitly left a void for an agency to fill. We must therefore defer to the agency's construction of its governing statutes, unless that construction is unreasonable.").

By not addressing the question of whether an agency may use distinctions below the DPS to evaluate whether a properly defined DPS should be listed as threatened or endangered, the legislature cedes the authority to do so to the agency. The analysis turns to the second *Chevron* step.

f. Was the Approach Used by NMFS During the Listing Process -- Emphasizing the Health of Natural Populations and Considering Hatchery-born Fish Only Insofar as They Contribute to the Health of Natural Populations -- a "Permissible Construction" of the ESA?

In the second *Chevron* step, a reviewing court must ask "whether the agency's [interpretation] is based on a permissible construction of the statute." *New Edge Network, Inc. v. F.C.C.*, 461 F.3d 1105, 1009 (9th Cir. 2006). "If a statute is ambiguous,

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(1973)). The fact that the legislative history discusses geographic distinctions does not necessarily preclude all other types of distinctions from being made. In fact, the court in *Alsea* notes that genetics is a factor that may be considered in delineating a DPS. 161 F. Supp. 2d at 1162.

In sum, *Defenders of Wildlife* adds nothing to Grange's case.

and if the implementing agency's construction is reasonable, *Chevron* requires a federal court to accept the agency's construction of the statute, even if the agency's reading differs from what the court believes is the best statutory interpretation." *Id.; see also Earth Island Institute v. Ruthenbeck*, 459 F.3d 954, 965 (9th Cir. 2006)("'[R]easonableness is the standard [by which] courts review regulations under *Chevron's* second step").

Defendants and Defendant-Intervenors maintain that the ESA permits, if not requires, as part of the listing decision, the agency to pay attention to the differences between hatchery and wild steelhead. They argue that focusing on the health of naturally-spawned *O. mykiss* (part of which focus considers hatchery-born fish within a DPS only to the extent that those hatchery-born fish contribute to the viability of natural populations) is, at least impliedly, called for by ESA language that emphasizes protecting ecosystems. (*Grange* Doc. 45 at 2.) Second, Federal Defendants and Defendant-Intervenors argue that because (a) the statute requires the agencies to rely upon the best available science during the listing process, and (b) the best available science regarding *O. mykiss* indicates that natural populations should be given priority in order to best ensure the long term viability of DPSs, the ESA requires that NMFS take account of the differences between natural and hatchery-born fish.

(1) Statutory Language Regarding Protection of Ecosystems and Implying That Natural Populations Should Be Protected.

Although Grange correctly points out that "nowhere in the

ESA does Congress refer to 'natural populations' or 'naturally-spawned species,'" (*Grange* Doc. 53 at 5), Defendants and Defendant-Intervenors point to a number of provisions in the ESA which emphasize ecosystem protection.

First, the stated purpose of the ESA is "to provide a means whereby the ecosystems upon which endangered species and threatened species depend may be conserved, [and] to provide a program for the conservation of such endangered species and threatened species." 16 U.S.C. § 1531(b). Effectively conceding that the ESA recognizes ecosystem protection as one of its goals, Grange argues that this is of no consequence because hatchery-born fish depend on the same ecosystems as naturally-spawned fish. 69 Fed. Reg. 33,102, 33,113; 70 Fed. Reg. at 37,212, 37,215 (noting, among other things, that hatchery fish coexist with "naturally-spawned" fish in the wild and interbreed with naturally-spawned fish). (Doc. 53 at 5.) Grange's argument implies that it is permissible for NMFS to allow wild steelhead to become extinct so long as its habitat was preserved and hatchery programs were maintained in perpetuity. But, this argument ignores express provisions of the ESA which suggest that the long-term goal of the ESA is to get species off the life support of human intervention.[17] For example, the term

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[17] Grange also maintains that hatchery *O. mykiss* are not dependent on human intervention for survival, because they "swim side-by-side with 'naturally-spawned' *O. mykiss*, and return to their native streams in which they were released, where they often spawn naturally with so-called 'naturally-spawned' *O. mykiss*." (*Grange* Doc. 29 at 16.) Specifically, Grange notes that NMFS determined that "[m]any hatchery stocks are reproductively integrated with natural populations in an ESU and

"conservation" is defined 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 [the ESA] are no longer necessary. Such methods and procedures include, but are not limited to, all activities associated with scientific resources management such as research, census, law enforcement, habitat acquisition and maintenance, propagation, live trapping, and transplantation, and, in the extraordinary case where population pressures within a given ecosystem cannot be otherwise relieved, may include regulated taking

16 U.S.C. § 1532(3) (emphasis added).

Concurrent with listing, a species' "critical habitat" must be designated. § 1533(a)(3). "Critical habitat" is defined as:

> (i) the specific areas within the geographical area occupied by the species, at the time it is listed in accordance with the provisions of section 1533 of this title, [in] which are found those physical or biological features (I) essential to the conservation of the species and (II) which may require special management considerations or protection; and
>
> (ii) specific areas outside the geographical area occupied by the species at the time it is listed in accordance with the provisions of section 1533 of this title, upon a determination by the Secretary that such areas are essential for the conservation of the

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exhibit the local adaptations composing ecological and genetic diversity." 70 Fed. Reg. at 37,209. But, they ignore the very nature of a hatchery -- that it is built, maintained, and operated by *H. sapiens*. If hatchery supplementation were to cease, the hatchery input into the system would vanish. Although some previously released hatchery fish would return to spawn naturally, the overall effect would be a decline. *See* AR 581 at 20; *see also* AR 51 at 6 ("there is no biological justification for believing that populations dependent on artificial propagation can be considered viable in the long term"); *id.* at 16 ("hatcheries are resource intensive operations that require substantial and unbroken commitment of capital as well as human expenditures ... [I]t is impossible to conclude with any certainty that our society will be committed to perpetuating salmon in hatcheries into the indefinite future.").

species. § 1532(5)(A). Once a species is listed as endangered or threatened, the ESA prohibits actions that would "jeopardize" a listed species or "adversely modify" its critical habitat. § 1536(a)(2). Jeopardy has been defined as any act that will "reduce appreciably the likelihood of both the survival and recovery of a listed species in the wild." 50 C.F.R. § 402.02 (emphasis added). This definition of jeopardy, including the "in the wild" language, was expressly endorsed by Congress when it was incorporated into the criteria the NMFS and FWS must use when approving habitat conservation plans and issuing incidental take permits. 16 U.S.C. § 1539(a)(2)(B)(iv).

Defendant-Intervenors identify the Senate Report accompanying the 1973 version of the ESA, which explained that "many [imperiled species] perform vital biological services to maintain a 'balance of nature' within their environments." S. Rep. No. 307, 93rd Cong., 1st Sess. 2 (1973). The House Report which accompanied the 1978 amendments to the ESA explained that "[t]he primary purpose of the [ESA] is to prevent animal and plant species endangerment and extinction caused by man's influence on ecosystems, and to return the species to the point where they are viable components of their ecosystems." H.R. Rep. No. 1625, 95th Cong., 2d Sess. 5 (1978). Senator Tunney expressed concern that humans have altered natural habitats so significantly that "they are unsuitable environments for natural populations of fish and wildlife." 119 Cong. Rec. 25,669 (1973). Senator Domenici acknowledged that "programs of captive propagation would be beneficial for rare and endangered species

in order that progeny raised in captivity could be used to replenish the wildlife population." 119 Cong. Rec. 25,693 (1973) (emphasis added). Senator Annunzio expressed concern that "[o]ur powerful technologies and our blind desire for 'progress' [have] enabled us to interrupt the rhythm of nature." 119 Cong. Rec. 30,166 (1973) (emphasis added).

The agencies charged with implementing the listing provisions of the ESA for terrestrial and freshwater species have historically taken approaches consistent with the interpretation NMFS now advances. For example, FWS's recovery plan for the California Condor requires that the condor population be "reproductively self-sustaining" before downlisiting is warranted.[18] When FWS listed the Kootenai River white sturgeon, the agency considered recovery plans that included hatchery supplementation, but concluded that although "captive propagation and supplementation can be valid conservation tools and assist in recovery efforts, they, by themselves, do not contribute to the maintenance of a secure, self-sustaining Kootenai River white sturgeon population in the wild." 59 Fed. Reg. 45,989, 45,994 (Sept. 6, 1994). Finally, FWS and NMFS jointly listed the Gulf of Maine DPS of Atlantic salmon, the listing determination stated that "hatchery populations are vital to compensate for the prolonged period of low adult returns, but they are not counted

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[18] Recovery Plan for the California Condor, available at http://ecos.fws.gov/docs/recovery_plans/1996/960425.pdf at p. v (April 1996). This recovery plan is public record that is judicially noticeable for its existence and for its contents, although not for the truth of the matters asserted therein.

as part of the recovery goal. That goal is based upon wild spawners returning." 65 Fed. Reg. 69,459, 69,473 (Nov. 17, 2000).[19]

The ESA sets forth specific criteria that the agency must consider when making listing determinations:

> (A) the present or threatened destruction, modification, or curtailment of its habitat or range;
>
> (B) overutilization for commercial, recreational, scientific, or educational purposes;
>
> (C) disease or predation;
>
> (D) the inadequacy of existing regulatory mechanisms; or
>
> (E) other natural or manmade factors affecting its continued existence.

16 U.S.C. § 1533(a)(1). Under this provision, NMFS arguably must consider the impact of hatcheries upon the DPSs in question.

The only contrary language identified by Grange is from *Alsea*. In response to NMFS's argument that the ESA prioritizes "natural" salmon, the *Alsea* court reasoned:

> Finally, NMFS argues that its listing decision does not contradict the terms of the ESA because the listing

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[19] Defendants note that, when NMFS promulgated its 1993 Interim Artificial Propagation Policy, the agency directed that the evaluation of a species' status for listing or delisting depends on natural populations. 58 Fed. Reg. at 17,573. While recognizing artificial propagation as a potential conservation tool, NMFS emphasized that the status of a species depends on the viability of the population in the natural habitat. *Id.* at 17,574. *Alsea* invalidated the Interim Policy because it permitted listing only those hatchery stocks determined to be "essential for recovery," regardless of whether the hatchery stocks were part of the ESU. However, *Alsea* did not address NMFS's interpretation that the ESA focuses on natural populations.

> decision, and relevant polices, are in accordance with ESA goals that prioritize "natural" salmon populations and "genetic diversity" within those populations. Although I agree with the general concept that "genetic diversity" is one factor in the long term success of a threatened species, and thus is one of many underlying goals of the ESA, genetics cannot, by itself, justify a listing distinction that runs contrary to the definition of a DPS.

Alsea, 161 F. Supp. 2d at 1163. Notably, the ***Alsea*** court did not directly address NMFS's argument regarding ESA's goal of prioritizing "natural" populations, focusing instead on the narrower parallel concept of "genetic diversity" within "natural populations." Most critically, the district court agreed that "genetic diversity" (impliedly referencing genetic diversity that exists within natural populations) is a relevant factor and one of the "underlying goals of the ESA." *Id.* at 1163. The ***Alsea*** court did not find these underlying policy rationales sufficient to justify listing only part of a DPS. But, ***Alsea*** says nothing about whether these underlying policy interests justify treating natural populations differently during the process of determining whether a particular DPS should be listed as endangered or threatened.

It is a well accepted rule of statutory construction that "statutory interpretations which would produce absurd results are to be avoided." ***Arizona State Bd. For Charter Schools***, 464 F.3d at 1009. The reading of the ESA advanced by Grange would lead to an absurd result. If taken to its logical extreme, such a reading would permit NMFS to rely entirely on hatchery programs. This however, runs contrary to the ESA's purpose of aiding the species' (or DPSs') recovery "to the point where the measures provided pursuant to the [ESA] are no longer necessary." §

1532(3). Defendant-Intervenors also point out:

> [P]rotecting hatchery fish in their own right could lead to the protection of the concrete raceways and plastic spawning buckets of hatcheries as "critical habitat" for the listed fish. 16 U.S.C. § 1533(a)(3). A federal agency could be prohibited from closing down harmful or ineffective hatcheries. 16 U.S.C. § 1536(a)(2) (agency cannot take action that risks jeopardy to listed species). A technical malfunction or funding shortfall at a state or tribal hatchery could trigger civil liabilities for harming listed species. 16 U.S.C. § 1538 (prohibiting "take" of listed species).

(*Grange* Doc. 40 at 21.)

NMFS reasonably interpreted the ESA to allow, if not require, that emphasis be placed on natural (i.e., "wild") populations of species being considered for listing. Most importantly, the ESA requires that the condition of listed species (or DPSs) be improved so that they will no longer need the protection of the ESA. The reasonable implication of this requirement is that agencies should aim recovery efforts toward establishing self-sustaining populations. An interpretation that would permit exclusive reliance on hatcheries for "recovery" purposes is antithetical to the creation of a self-sustaining population. NMFS adopted an alternative, more reasonable, interpretation.

(2) <u>The Best Available Science Demands That Distinctions Be Drawn Between Naturally-Spawned and Hatchery-Born Fish, Even If Both Are Part of the Same DPS</u>.

Even if nothing in the ESA indicated a preference for the preservation of natural populations, the ESA requires NMFS to consider the best available science when making listing determinations:

> The Secretary shall make [listing] determinations...

> solely on the basis of the best scientific and commercial data available...after conducting a review of the status of the species and after taking into account those efforts, if any, being made by any State or foreign nation, or any political subdivision of a State or foreign nation, to protect such species, whether by predator control, protection of habitat and food supply, or other conservation practices, within any area under its jurisdiction, or on the high seas.

16 U.S.C. § 1533(b)(1)(A). Here, Federal Defendants and Defendant-Intervenors maintain that the best available science concerning *O. mykiss* justifies, if not requires, drawing distinctions between naturally-spawned and hatchery-born fish during the listing process. Federal Defendants maintain that if Grange's position prevails here, the agencies will be forced to ignore the best available science, a result which would be contrary to the statute's plain language.

Unlike in many APA cases, the underlying science regarding the impact of hatchery fish on natural populations and the conclusions reached by NMFS based on that science are entirely undisputed here. Defendant-Intervenors provide a helpful summary of the relevant scientific conclusions:

- Hatchery fish are less fit for survival in the wild than genetically similar wild fish. The fitness of hatchery-produced fish diminishes rapidly after only a few generations in the hatchery.

- Hatchery fish tend to be poorly adapted to life in a river and are subject to high predation and mortality. Hatchery fish are less successful at feeding in the wild, and are less wary of predators than wild fish, have altered growth rates, and are weaker swimmers.

- Hatcheries will never produce salmonids with the same evolutionary potential as those spawned and reared in the wild. A perpetual metapopulation between wild and hatchery salmonid populations is not an acceptable recovery for listed salmonids under the ESA. Fish removed from nature to

> propagate in hatcheries always constitute a loss to the evolutionarily significant natural population.
>
> - It is a fact that no one has ever used a salmon hatchery to restore a depressed wild population to the point where it is self-sustaining.
> - There is little or no evidence that hatcheries have been effective over the long term at assisting in the recovery of wild populations.
> - Hatchery releases have a significant negative effect, on the productivity of wild populations by competing with wild fish for food and space; diluting the fitness of wild fish when adult hatchery fish stray and spawn with wild fish; and by potentially spreading disease.

(*Grange* Doc. 66 at 2-3 (internal citations and quotations omitted.)

The Federal Defendants' summary of the best available science, which is also undisputed, embodies similar conclusions:

> Numerous scientific panels have concluded that artificial propagation can potentially benefit or decrease the viability of salmonid populations. *See* AR 506 at 14-16, 104-110; AR 505 at 1-10, 59-63; AR 507 at 14-16, 104-110; AR 1555 at 37-52. Furthermore, poorly run hatcheries have been found to be detrimental to the long-term health of the species. *See, e.g.*, AR 491 at 1-2, 5-9 (Oct. 20, 2004 Memorandum from Northwest and Southwest Fisheries Science Centers); AR 1458 at 22. Scientists and managers at the Artificial Propagation Evaluation Workshop recognized ESUs that lack self-sustaining natural populations are not viable, and while hatchery programs can benefit natural populations, any natural population that is sustained by hatchery fish is not self-sustaining. APEW Report, AR 1458 at 11. The importance of natural populations was further developed:
>
> > [A]n important component of the ESU concept is that the ESU is subject to natural biological processes, including the dynamics of natural selection that define the ESU's evolutionary legacy and trajectory. The importance of an ESU's evolutionary legacy forged by natural selective processes is captured by the diversity VSP criterion. An ESU that resides completely, or largely, in artificial hatchery environments would face

> extreme risks to its diversity, providing a strong indication of extinction risk. The longer an ESU resides in hatcheries, the more it will genetically adapt to these artificial environments, selecting for traits that are beneficial to survival in the hatchery. It is reasonable to infer that as an ESU adapts to the hatchery environment, it will lose fitness in the wild. This inference is consistent with observations that hatchery fish in the wild often reproduce and survive at lower rates than wild fish do, and that these differences are often genetically based. At some point, an ESU dependent upon artificial propagation becomes so different from its locally adapted evolutionary legacy that it is likely to go extinct. Additionally, ESUs dependent upon the indefinite operation of hatcheries are subject to significant risks and uncertainties that natural populations do not face (e.g., funding cuts, changing societal priorities, etc.). Artificial propagation is inherently unstable, requiring continual and active input that if relaxed results in the extirpation of the propagated stock(s). This situation is intrinsically of higher risk than a situation where there are healthy natural populations, in productive habitat, independent of continued human intervention. There was agreement among workshop participants that hatchery programs can play an important role in the recovery and conservation of salmonid ESUs, but that there is great risk if an entire ESU consists of only hatchery-produced fish.
>
> APEW Report, AR 1458 at 26-27. Because there is considerable uncertainty regarding the relative likelihood and magnitude of risks and benefits from hatcheries:
>
> > [T]he clear and unavoidable conclusion from the various scientific panels is that in order to assure the long-term persistence of salmon, it will be necessary to institute habitat, hydrosystem management, and harvest reforms to create or conserve ecosystem conditions that allow for viable naturally spawning salmonid populations.
>
> APEW Report, AR 1458 at 23.

(*Grange* Doc. 45 at 18-20.)

Grange does not dispute the substance of this science, nor do they dispute whether it is the "best available" science. Rather, Grange argues that once NMFS determined that hatchery fish should be part of the DPSs along with naturally-spawned fish, the agency should be prohibited from evaluating and using the best available science when determining whether the DPS should be listed as endangered or threatened because the agency may not "base its listing decision on only a portion of the DPS." But, NMFS did not base its listing decision on only a portion of the DPS. Rather, NMFS employed a process, set forth in the HLP, that gave weight to the natural component of the DPS (as the science required), but also considered all portions of the DPS.

First, applying the Joint DPS, NMFS determined which populations of fish it should include in a DPS. After defining each DPS, NMFS, relying on the BRT, conducted a status review based on the best available science, which resulted in a risk assessment for the natural populations which made up the DPSs. The BRT's findings were treated only as "a partial assessment of the ESU's extinction risk." AR 1458 at 15. Next, NMFS examined how the hatchery populations included in three of these DPSs affected the BRT's risk assessments. *See* AR 1459 at 534, 536 [29-4, 29-6] (applying VSP factors to hatchery populations in Central Valley steelhead DPS); AR 1458 at 25-28 (describing application of VSP factors to hatcheries in a DPS); 71 Fed. Reg. at 852-853 (final listing notice applying VSP factors to hatcheries in three DPSs that include hatchery fish). From this assessment, for each of the DPSs that include hatchery fish, NMFS concluded that while hatcheries decrease "risk to some degree by

contributing to increased abundance, of the DPS, [they] have a neutral or uncertain effect on productivity, spatial structure and diversity of the DPS." *Id.* at 852 (findings for Central Valley DPS). Finally, NMFS utilized these analyses to examine the five listing factors set forth in 16 U.S.C. § 1533(a)(1)(A)-(E), in order to determine whether a given steelhead DPS was threatened or endangered. *Id.* at 855-857.

Federal Defendants provide an overview of how this general process was utilized in the listing decision for the Central Valley steelhead DPS.

> The BRT found high risks to the abundance, productivity and spatial structure of the DPS, and moderately high risk for the DPS's diversity. 71 Fed. Reg. at 852; AR 1461 at B.2.10. Accordingly, the majority opinion of the BRT was that the naturally-spawned component of this DPS was "in danger of extinction." *Id.* NMFS then assessed the effect of the two hatchery programs considered to be part of this DPS on the viability of the DPS in total. NMFS concluded that the hatchery stocks decrease risk of extinction by contributing to increased abundance, but have a neutral or uncertain effect on the productivity, spatial structure, and diversity of the DPS. 71 Fed. Reg. at 852; AR 1459 at 29-1 to 29-7. Evaluating the BRT's findings with the effects of the hatchery programs, NMFS concluded that the presence of hatchery programs did not alter the BRT's conclusion that this DPS was "in danger of extinction." 71 Fed. Reg. at 852; AR 1458 at 49-51. However, this was not the final listing determination, but merely NMFS' assessment of risk to the DPS as a whole. As required by the ESA, NMFS then evaluated the existing efforts being made to protect the species to determine if those measures ameliorated the risks faced by the DPS. For the California Central Valley DPS, NMFS concluded that the habitat restoration efforts associated with the California Bay-Delta Authority Program and the Central Valley Project Improvement Act provided sufficient certainty of implementation and effectiveness to conclude that this DPS should be listed as threatened instead of endangered. 71 Fed. Reg. at 855; see also 71 Fed. Reg. at 845-846; 69 Fed. Reg. at 33,144, and 33,163.

(*Grange* Doc. 45 at 18.)

The ESA requires the agency to employ the best available science in the listing process. Here, the best science available to the NMFS, the conclusions of which are undisputed, strongly indicated that naturally-spawned and hatchery-born *O. mykiss* are different and that hatchery fish can have a wide range of effects on the long term viability of *O. mykiss* populations. Sometimes, hatchery stocks can be beneficial, while also being detrimental in other respects. In the final analysis for the DPSs at issue in this case, NMFS evaluated the contribution that the hatchery programs made to the overall extinction risk of these DPSs and concluded that the hatchery fish decrease the risk of extinction by contributing to increased abundance, but have a neutral or uncertain effect on the productivity, spatial structure, and diversity of the DPSs. *Id.* at 852-53. There is no dispute that this conclusion is supported by the scientific record. NMFS lawfully considered the potential inputs and impacts of hatchery stocks on the natural population by carefully evaluating whether and to what extent those stocks that were included within the DPS helped and/or hindered the potential for the natural population to become self-sustaining in the long term. The conclusion that they will not is not arbitrary, capricious, or unlawful.

Grange's motion for summary judgment on this issue is DENIED. Federal Defendants and Defendant-Intervenors' cross-motion for summary judgment is GRANTED.

C. Anadromous v. Resident: Challenges to NMFS' Treatment of Resident *O. mykiss* During the Listing Process.

Next, both Grange and MID challenge NMFS's decision to apply

the DPS policy to *O. mykiss*, which resulted in the exclusion of all resident *O. mykiss* from the five challenged DPSs, leaving only steelhead in those DPSs. Plaintiffs first argue that NMFS did not sufficiently justify applying the DPS policy to *O. mykiss*, a departure from its prior practice of applying its own ESU Policy. Second, although the DPS Policy has been previously upheld as a valid interpretation of the ESA, Plaintiffs argue that drawing any distinction between migratory and resident *O. mykiss* is contrary to the ESA's intent. Finally, Plaintiffs argue that the listing of the anadromous only DPSs is not supported by the best available science. Federal Defendants and Defendant-Intervenors in both cases cross-move for summary judgment on these claims, asserting that NMFS justifiably applied the DPS Policy, that the DPS Policy was lawful, and that NMFS properly applied the best available science in light of the DPS Policy to define the challenged DPSs.

1. Did NMFS Sufficiently Justify Departing from its Past Practice of Applying its Own ESU Policy to Instead Apply the Joint DPS Policy?

Plaintiffs argue that NMFS's decision to apply the DPS policy, instead of its ESU Policy, was not sufficiently justified, particularly in light of the fact that application of the DPS Policy resulted in a markedly different outcome than did application of the ESU Policy. Plaintiffs emphasize that NMFS previously concluded under the ESU Policy that where resident and migratory *O. mykiss* occur in the same stream, they are not "substantially reproductively isolated from one another and are therefore part of the same ESU," 71 Fed. Reg. at 838, in part because "available data suggest that resident [*O. mykiss*] and

migratory *O. mykiss*' in the same area generally share a common gene pool," 69 Fed. Reg. at 33,113. Plaintiffs insist that NMFS did not properly justify setting aside these conclusions in favor of a decision that excludes resident *O. mykiss* from the DPSs.

An administrative agency is entitled to change its position to "adapt their rules and policies to the demand of changing circumstances," but it must provide a rational explanation for doing so. *See Motor Vehicle Mfrs. Ass'n v. State Farm Mutual Auto. Ins. Co*, 463 U.S. 29, 41-42.[20] Here, the Federal

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[20] There is no dispute that the outcome of the listing analysis applying the DPS Policy differed from the previous outcome applying the ESU Policy. Plaintiffs suggest that little deference is owed to an agency when the challenged policy contradicts another interpretation of the same statutory language. In support of this proposition, Plaintiffs cite *Bonnichsen v. United States Department of the Army*, 969 F. Supp. 628, 644 (D. Or. 1997), quoting a parenthetical appended to *Bonninchsen's* citation of a Second Circuit Case, *1185 Ave. of Americas Associates v. Resolution Trust Corp.*, 22 F.3d 494, 497: "(where Congress has entrusted more than one federal agency with the administration of a statute, a reviewing court does not owe as much deference as it might otherwise give if the interpretation were made by a single agency similarly entrusted with powers of interpretation)". But, *Bonninchsen* itself was concerned with conflicts between one agency's interpretation of a statute and interpretations promulgated by an advisory review committee specially established by Congress for the purpose of administering implementation of the statute in question in that case. Accordingly, the *Bonninchsen* court indicated that it was "inclined to pay particular attention to the comments" of that advisory committee, and "to be less deferential than usual to the Corps' interpretation of the statute and regulations." *Id.* at 643. Moreover, although *Bonninchsen* does rely upon several cases from other circuits which have declined to afford *Chevron* deference where multiple agencies are charged with implementation of a statutory scheme, no case has ever applied this doctrine to the ESA, over which NMFS and FWS share jurisdiction and whose jurisdictions overlap under certain circumstances.

Defendants maintain that NMFS "fully explained the reasons for its change in policy." (Doc. 45 at 22.)

In support of its assertion that NMFS's decision to switch policies was arbitrary and capricious, MID cites *Friends of the Wild Swan v. U.S. Fish & Wildlife Service,* 12 F. Supp. 2d 1121 (D. Or. 1997). In that case, FWS previously concluded that the entire population of bull trout in the contiguous United States warranted ESA protection but that its listing was precluded by other, higher-priority, pending listing petitions. *See Id.* at 1123. The district court found that the FWS acted arbitrarily in making this determination and remanded the matter to the agency. *Id.* On remand, relying on the original administrative record that caused it to find listing was warranted for the entire population, FWS instead divided the population into five component DPSs and determined only two warranted protection. *Id.* at 1133.

The *Wild Swan* plaintiffs challenged FWS's determination that protection was not needed for the three remaining bull trout DPSs. With respect to the Coastal/Puget Sound DPS, the plaintiffs argued that FWS reached the opposite conclusion regarding that population in its original, pre-remand decision. *Id.* at 1133. The district court noted that the analyses FWS performed with respect to this DPS were similar in many ways: "Both findings, for instance, recognize that populations of bull trout in the northern regions are better off than populations in southern regions; that populations in some drainages are stable while others face a high risk of extinction; and that information on long-term population trends is limited." *Id.* at 1134.

However, "the two findings [] reach radically different conclusions, largely because of how [FWS] extrapolated from what was known to what was unknown." *Id.*

The *Wild Swan* court applied the general rule that "[a]n agency acts arbitrarily when it departs from its precedent without giving good reason." *Id.* at 1135 (*citing N. Cal. Power Agency v. FERC*, 37 F.3d 1517, 1522 (9th Cir.1994)). In the original decision, FWS accepted "that salmonids are generally in decline throughout the Coastal/Puget Sound region and that bull trout are more sensitive to habitat changes than are salmonids generally." *Id.* In contrast, in the revised decision, FWS chose to "extrapolate from 'trends' of bull trout populations in habitat that it had previously considered atypical and to rely on data [] that it previously considered to 'underestimate' the risk to bull trout populations." *Id.* The Wild Swan court found this to be arbitrary and capricious. *Id.*

The situation here is distinguishable. There is no evidence that NMFS's final decision disregarded information it previously considered controlling or that the final decision relied upon information it previously considered of questionable value. Rather, NMFS applied a different policy, emphasizing different factors, to the same body of evidence and in the process came up with a different result.[21] MID's reliance upon

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[21] *Wild Swan* also found FWS's listing to be arbitrary and capricious because it applied a different policy on remand than it did in its original decision. *Id.* at 1133. But, the *Wild Swan* court offers essentially no reasoning to support this holding and provides little of value to the current inquiry.

Friends of the Wild Swan **is not persuasive.**

a. Scientific Dispute.

Plaintiffs place great weight on NMFS's statement in the first Federal Register Notices proposing a possible shift from the ESU Policy to the DPS policy that the switch might be justified, at least in part, on the existence of "scientific dispute" over the relationship between the resident and anadromous forms of *O. mykiss*. Plaintiffs maintain that the evidence does not support such a conclusion, making the policy shift unjustified. Federal Defendants rejoin by conceding that there is no scientific dispute between the agencies as to the outcome that would result if the ESU Policy were applied. Rather, Federal Defendants maintain that the policy shift was made because "NMFS concluded that the application of the DPS policy to delineate the species was a better [scientific] fit [because] it allowed for the consideration of factors that had relevance in the context of steelhead and rainbow trout, that were not relevant in the context of salmon, which informed development and original application of the ESU policy." (*MID II* Doc. 95 at 26.)

It is easy to understand why Plaintiffs assumed that NMFS was relying, at least in part, on the existence of a fundamental scientific dispute, rather than the "fit" of the science to the policies. NMFS's own notice that it would be invoking the 6-month extension explicitly suggests that scientific dispute motivated the agency to reconsider its approach to the listings.

> **On June 7, 2005, FWS wrote to NMFS (FWS, 2005), stating its concerns about the factual and legal bases for our final listing determinations for the ten proposed *O.***

mykiss ESU listings. FWS suggested that we invoke the ESA 4(b)(6)(B)(i) provision for extending the final *O. mykiss* listing determinations "to allow for further scientific evaluation, data gathering, and debate among the scientific experts within FWS and NMFS ...."

The specific areas that FWS identified where there is substantial disagreement regarding the sufficiency or accuracy of available data on which to make final listing decisions are: (1) the determination of the *O. mykiss* ESUs, in particular whether resident and anadromous fish in a region are in a single ESU; (2) the relatedness of cooccurring resident and anadromous *O. mykiss*, including whether they form single, routinely interbreeding populations, and whether resident *O. mykiss* produce the anadromous life form and vice versa; and (3) assessment of the risk of extinction of ESUs containing both resident and anadromous *O. mykiss*, including the contributions of both types of populations to the stability of the ESU.

In the last two months, we have received three reports from independent scientific panels that bear directly on these areas of disagreement raised by FWS. (1) On April 8, 2005, the Independent Scientific Advisory Board hosted by the Northwest Power Planning Council issued a report, in response to five questions from NMFS' Northwest Fisheries Science Center, entitled "Viability of ESUs Containing Multiple Types of Populations" (ISAB, 2005). [] (2) On May 5, 2005, the Recovery Science Review Panel hosted by the Northwest Fisheries Science Center issued a report on its December 2004 meeting on the relation between anadromous and resident forms of *O. mykiss* and how life form diversity affects the viability of *O. mykiss* ESUs (RSRP, 2005). [] (3) On May 16, 2005, an independent scientific panel convened by the Northwest and Southwest Fisheries Science Centers issued a report entitled "Considering Life History, Behavioral, and Ecological Complexity in Defining Conservation Units for Pacific Salmon" (Hey et al., 2005). We are considering the concepts and the scientific information presented in these reports, both of which bear on the relationship of anadromous and resident *O. mykiss*.

In addition, we are aware of ongoing genetic *O. mykiss* research by NMFS and state wildlife agencies in Washington, Oregon, California, and Alaska on the ability of resident fish to adopt an anadromous life history and the degree of reproductive isolation between resident and anadromous populations. This research specifically includes studies of the Snake River Basin and Middle Columbia River *O. mykiss* ESUs, and pertains generally to the issues of concern to FWS for all ten of the *O. mykiss* ESUs proposed for listing.

70 Fed. Reg. 37,219, 37,220 (June 28, 2005).

Yet, NMFS did not actually base its decision to shift policies on the existence of any scientific dispute. Rather, in its November 4, 2005 request for comments on shifting from the ESU to the DPS policy, NMFS indicated, simply, that it "agree[d] ... that it is appropriate that [it] consider departing from [its] past practice of applying the ESU policy to *O. mykiss stocks,* and instead apply the DPS policy" when determining what populations of *O. mykiss* warranted listing. 70 Fed. Reg. 67,130, 67,131. NMFS noted that applying the DPS policy would be consistent with the past application, by both agencies, in defining DPSs of Atlantic Salmon, another species over which the two agencies share jurisdiction. *Id.*

NMFS further explained how application of the DPS policy would likely affect the proposed listings. *Id.* The primary distinction between the policies is that the discreteness criteria in the DPS policy does not rely on reproductive isolation, but rather on "marked separation of population groups as a consequence of biological factors." *Id.* at 67,132. Although there is some reproductive exchange between rainbow trout and steelhead, the two life forms "remain markedly separated physically, physiologically, ecologically, and behaviorally," so that a steelhead-only grouping would satisfy the discreteness criterion of the DPS policy. *Id.* With respect to significance, NMFS referred to prior status reviews which had concluded "that the steelhead population groups respectively represent an important component in the evolutionary legacy of the species based on unique or unusual life-history, genetic, and

ecological characteristics and occupied ecoregion(s) (i.e., unique geographic regions defined by climatic, geologic, hydrologic, and floral composition characteristics," thereby satisfying the significance criterion. *Id.* NMFS then reopened the comment period a final time to gather input on whether it should apply the joint DPS policy to delineate ten steelhead-only DPSs. *Id.* at 67,131.

After receiving public comment, NMFS determined that it would be appropriate to apply the DPS Policy to *O. mykiss* and did so in the final listing decision, issued January 5, 2006. 71 Fed. Reg. 834. The boundaries of the previously defined *O. mykiss* ESUs were unchanged, but, applying the Joint DPS Policy, all resident *O. mykiss* were excluded and the groupings were referred to as "DPSs" rather than "ESUs." *Id.* NMFS provided the following explanation of its rationale:

> In 1991 we issued a policy for delineating distinct population segments of Pacific salmon (56 FR 58612; November 20, 1991). Under this policy a group of Pacific salmon populations is considered an "evolutionarily significant unit" (ESU) if it is substantially reproductively isolated from other conspecific populations, and it represents an important component in the evolutionary legacy of the biological species. Further, an ESU is considered to be a "distinct population segment" (and thus a "species") under the ESA. In 1996, we and FWS adopted a joint policy for recognizing DPSs under the ESA (DPS Policy; 61 FR 4722; February 7, 1996). The DPS Policy adopts criteria similar to, but somewhat different from, those in the ESU Policy for determining when a group of vertebrates constitutes a DPS: The group must be discrete from other populations, and it must be significant to its taxon. A group of organisms is discrete if it is "markedly separated from other populations of the same taxon as a consequence of physical, physiological, ecological, and behavioral factors." Significance is measured with respect to the taxon (species or subspecies) as opposed to the full species. Although the ESU Policy did not by its terms apply to steelhead, the DPS Policy states that NMFS

> will continue to implement the ESU Policy with respect to "Pacific salmonids" (which include *O. mykiss*). FWS, however, does not use our ESU policy in any of its ESA listing decisions. In a previous instance of shared jurisdiction over a species (Atlantic salmon), we and FWS used the DPS policy in our determination to list the Gulf of Maine DPS of Atlantic salmon as endangered (65 FR 69459; November 17, 2000). Given our shared jurisdiction over *O. mykiss*, and consistent with our approach for Atlantic salmon, we believe application of the joint DPS policy here is logical, reasonable, and appropriate for identifying DPSs of *O. mykiss*. Moreover, use of the ESU policy--originally intended for Pacific salmon--should not continue to be extended to *O. mykiss*, a type of salmonid with characteristics not typically exhibited by Pacific salmon. NMFS and FWS also intend to continue to evaluate application of the statutory term "distinct population segment" in a process outside the context of a species-specific listing.

Id. at 834.

Then, NMFS touched on similar justifications in response to relevant comments.

> Comment 2: Several commenters felt we failed to provide a rationale for departing from our long-standing practice of applying the ESU policy. The commenters felt that the choice to use the DPS policy appeared to be based on an arbitrary jurisdictional division between NMFS and FWS, rather than new scientific information supporting an alternative approach. The commenters felt that it is not appropriate to base species delineations on arbitrary divisions between government agencies and the apparent desire to preserve jurisdictional authorities. These commenters stressed that such determinations must be made based on the best available scientific information.
>
> Other commenters supported the use of the DPS policy in delineating species of *O. mykiss*. They felt that consistency between NMFS and FWS would improve the public understanding of the listing process. They also felt that the DPS policy provides flexibility, affording a more practical consideration of resident populations, particularly above impassable dams, that do not warrant ESA protections.
>
> Response: In our previous status reviews for West Coast *O. mykiss* we applied our ESU policy and concluded that, where they co-occur and have the opportunity to interbreed, the resident and anadromous life-history forms are part of a single ESU. FWS disagreed that resident *O. mykiss* should be included in the steelhead

> ESUs and recommended that only the anadromous fish be listed (FWS, 1997). Accordingly, we listed only the steelhead portion of the ESUs. The *Alsea* ruling informed us that this approach to implementing our jurisdiction over *O. mykiss* was invalid; once we have equated an ESU with a DPS, delineated an ESU, and determined that it warrants listing, we must include all components of the DPS (ESU) in the listing. In our June 2004 proposed listing determinations (69 FR 33102; June 14, 2004), we proposed to continue applying our ESU policy in delineating species of *O. mykiss* for listing consideration, consistent with our previous practice. Informed by the *Alsea* ruling, we proposed to list entire *O. mykiss* ESUs, including both the anadromous and resident components. FWS disagreed with our DPS delineations under the ESU policy, and questioned whether the proposed delineations are consistent with the DPS policy (FWS, 2005).
>
> The preamble to the joint DPS policy acknowledged that "the NMFS [ESU] policy is a detailed extension of this joint policy. Consequently, NMFS will continue to exercise its policy with respect to Pacific salmonids" (61 FR 4722; February 7, 1996). FWS, however, does not use our ESU policy in any of its ESA listing decisions. In a previous instance of shared jurisdiction over a species (Atlantic salmon), we and FWS used the DPS policy in our determination to list the Gulf of Maine DPS of Atlantic salmon as endangered (65 FR 69459; November 17, 2000). Given our shared jurisdiction over *O. mykiss*, and consistent with our approach for Atlantic salmon, we believe application of the joint DPS policy here is logical, reasonable, and appropriate for identifying DPSs of *O. mykiss*. Moreover, use of the ESU policy--originally intended for Pacific salmon--should not continue to be extended to *O. mykiss*, a type of salmonid with characteristics not typically exhibited by Pacific salmon.

Id. at 837 (emphasis added).

Despite suggestions of a scientific disute in early notices, NMFS did not base its decision on the existence of a scientific dispute. Plaintiffs' objections to the policy shift on this ground are unfounded.

b. Atlantic Salmon.

NMFS did not base its decision to shift from the ESU Policy

to the DPS Policy on bureaucratic considerations[22] alone. NMFS justified the policy shift in part on the fact that the DPS Policy was used to evaluate the status of another species, Atlantic salmon, over which the two agencies, NMFS and FWS, shared jurisdiction.

> In a previous instance of shared jurisdiction over a species(Atlantic salmon), we and FWS used the DPS policy in our determination to list the Gulf of Maine DPS of Atlantic salmon as endangered (65 FR 69459; November 17, 2000). Given our shared jurisdiction over *O. mykiss*, and consistent with our approach for Atlantic salmon, we believe application of the joint DPS policy here is logical, reasonable, and appropriate for identifying DPSs of *O. mykiss*.

71 Fed. Reg. 834 (January 5, 2006).

MID maintains that the Atlantic salmon listing is not "precedential" or otherwise relevant to whether or not the DPS Policy should apply to West Coast *O. mykiss*. MID correctly points out that the DPS Policy applied to all vertebrate fish and wildlife except for "species of salmonids native to the Pacific." 61 Fed. Reg. at 4,722. NMFS and FWS expressly noted that NMFS's

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[22] Grange argues that NMFS's justification is insufficient because it is based on "bureaucratic considerations" rather than the best available science. However, Grange cites no authority for the proposition that NMFS's policy change could not be justified by bureaucratic concerns alone. The ESA requires that listing decisions be based on the "best available science," but does not separately require that NMFS utilize only the "best available science" to choose between two lawful policy approaches to a problem. Nevertheless, NMFS did not offer a bureaucratic rationale for the shift; their decision to switch policies must stand on the justification provided. *Arrington v. Daniels*, 516 F.3d 1106, 1112 (9th Cir. 2008) ("Although we may uphold a decision of less than ideal clarity if the agency's path may reasonably be discerned, we may not infer an agency's reasoning from mere silence.")(internal citations and quotations omitted).

existing ESU Policy is "consistent" with the DPS Policy, and as such "NMFS will continue to exercise its [ESU] policy with respect to Pacific salmonids." *Id.*; *see also* 2278R ("We chose to use the DPS policy for Atlantic salmon because FWS and NMFS developed the policy together for all other vertebrates except Pacific salmonids. The ESU policy was only meant for Pacific salmon."). But the fact that both the ESU Policy and the DPS Policy previously indicated that Pacific salmonids would be subject to the ESU Policy begs the question of whether NMFS properly concluded that it was appropriate to switch which of these policies applies to *O. mykiss*.

MID next argues that NMFS's application of the DPS Policy to *O. mykiss* was not consistent with how the DPS Policy was applied in the Atlantic salmon listing. In the Atlantic salmon listing, FWS and NMFS recognized that due to the Atlantic salmon's migratory life cycle, and the amount of time members of that species spend in both freshwater and ocean environments, neither FWS nor NMFS had clear jurisdiction under the 1974 MOU. AR 2381 at 1; *see also supra* note 1 for a summary of the 1974 MOU. As a result, FWS and NMFS had joint jurisdiction over the Atlantic salmon under the 1974 MOU. AR 2381 at 1; *see* AR 2380 at 6 In 1994, FWS and NMFS signed a Memorandum of Agreement specifically concerning Atlantic Salmon ("the 1994 MOA"). AR 2381 at 2. The 1994 MOA provided that both agencies would appoint a team to conduct all ESA actions related to the Atlantic salmon; that official ESA actions would be taken with the concurrence of the directors of both NMFS and FWS; and that NMFS and FWS would jointly develop and circulate a draft rehabilitation strategy.

Id. In addition, both NMFS and FWS agreed to continued agency cooperation with respect to Atlantic salmon and similar anadromous fishes as appropriate. *Id.* at 3. NMFS and FWS then jointly listed as endangered the Atlantic salmon DPS. 65 Fed. Reg. 69,459 (Nov. 17, 2000); AR 2380 at 6-7.

MID correctly notes that no such joint actions were taken in regards to *O. mykiss*. However, Federal Defendants point out that the 1994 MOU is an agreement between the two Northeast regional offices of FWS and NMFS concerning one specific species and is not binding upon NMFS as a whole. Therefore, NMFS was under no obligation to take any of the joint actions set forth in the 1994 MOU with respect to the 2006 final listings for *O. mykiss*. MID's argument is a complete *non sequitur*.

Finally, MID suggests that NMFS improperly "decided to unilaterally switch policies to maintain sole jurisdiction and avoid having to work together with FWS at all." (*MID II* Doc. 79 at 38.) To support this assertion, Plaintiffs cite AR 2343R and 899. The first is the statement of a NMFS regional employee expressing her opinion that shared jurisdiction might be unworkable due to FWS' refusal to cooperate in joint efforts over the past six years. AR 899 is a reference to different NMFS employee's phone log of a conversation held with a regional FWS employee, paraphrasing the FWS' employee's opinion about the proposed application of the DPS Policy. Federal Defendants correctly point out that opinions expressed by lower level employees cannot be ascribed to the agency itself.

None of MID's arguments regarding the Atlantic salmon listing call into question NMFS's listing in this case.

c. Pacific Salmon.

NMFS's primary justification for switching policies is that the "use of the ESU policy -- originally intended for Pacific salmon -- should not continue to be extended to *O. mykiss*, a type of salmonid with characteristics not typically exhibited by Pacific salmon." 71 Fed. Reg. at 835. In response to a related comment, NMFS listed *O. mykiss* characteristics "not typically exhibited by Pacific salmon." *Id.* at 837.

> Despite the apparent reproductive exchange between resident and anadromous *O. mykiss*, the two life forms remain markedly separated physically, physiologically, ecologically, and behaviorally. Steelhead differ from resident rainbow trout physically in adult size and fecundity, physiologically by undergoing smoltification, ecologically in their preferred prey and principal predators, and behaviorally in their migratory strategy. Where the two life forms co-occur, adult steelhead typically range in size from 40-72 cm in length and 2-5 kg body mass, while adult rainbow trout typically range in size from 25-46 cm in length and 0.5-2 kg body mass (Shapovalov and Taft, 1954; Wydoski and Whitney, 1979; Jones, 1984). Steelhead females produce approximately 2,500 to 10,000 eggs, and rainbow trout fecundity ranges from 700 to 4,000 eggs per female (Shapovalov and Taft, 1954; Buckley, 1967; Moyle, 1976; McGregor, 1986; Pauley et al., 1986), with steelhead eggs being approximately twice the diameter of rainbow trout eggs or larger (Scott and Crossman, 1973; Wang, 1986; Tyler et al., 1996). Steelhead undergo a complex physiological change that enables them to make the transition from freshwater to saltwater (smoltification), while rainbow trout reside in freshwater throughout their entire life cycle. While juvenile and adult steelhead prey on euphausiid crustaceans, squid, herring, and other small fishes available in the marine environment, the diet of adult rainbow trout is primarily aquatic and terrestrial insects and their larvae, mollusks, amphipod crustaceans, fish eggs, and minnows (LeBrasseur, 1966; Scott and Crossman, 1973; Wydoski and Whitney, 1979). These differences in diet are a function of migratory behavior and the prey communities available to resident and anadromous *O. mykiss* in their respective environments. Finally, steelhead migrate several to hundreds of miles from their natal streams to the ocean, and spend up to 3 years in the ocean migrating

> thousands of miles before returning to freshwater to spawn (Busby et al., 1996). Some fluvial populations of rainbow trout may exhibit seasonal migrations of tens of kilometers outside of their natal watersheds, but rainbow trout generally remain associated with their natal drainages (Meka et al., 1999). Given the marked separation between the anadromous and resident life-history forms in physical, physiological, ecological, and behavioral factors, we conclude that the anadromous steelhead populations are discrete from the resident rainbow trout populations within the ranges of the DPSs under consideration.

Id. at 838.

Plaintiffs argue that this rationale is not scientifically justified. MID specifically complains that, although the quoted listing decision does list *O. mykiss*' characteristics, it does not explain or document: (1) how these characteristics differ from those of Pacific salmon; (2) how the existence of distinguishing characteristics justifies its decision to no longer use the ESU Policy for evaluating distinct population segments of *O. mykiss;* or (3) why these distinctive characteristics suddenly caused NMFS to differentiate Pacific *O. mykiss* from Pacific salmon.[23]

In both cases, NMFS believes its conclusion that the steelhead's characteristics differ from those of Pacific salmon is "amply supported by numerous studies in the Record." (*MID II* Doc. 60 at 10-11; *see Grange* Doc. 64 at 12 (arguing that the different "biological characteristics were explained at length in

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[23] MID points out that NMFS's assertion that *O. mykiss* have characteristics that differ from Pacific salmon is not contained in the November 2005 notice in which NMFS announced its proposal to switch from the ESU Policy to the DPS Policy, *see* AR 804, nor is it part of the draft final listing decisions prepared on December 13, 2005, AR 2272-01R, December 14, 2005, AR 803, or on December 19, 2005, AR 2284R.

the proposal to apply the DPS Policy ... the final rule ... and in NMFS'[s] opening memorandum").) NMFS cites "AR 1474, 1481, 1474, 1430, 1450, 1448, 1468, 1473, 1479, 1478, 1445, 1473, 1481, 1432 and 1449," a series of books and studies concerning West coast salmonids. (*MID II* Doc. 60 at 10-11; *Grange* Doc. 45 at 28-29 & fn. 9.)

MID's first argument is that NMFS referenced these studies in its opening brief in *Grange* not to show that *O. mykiss* differ from Pacific salmon, but to show that "rainbow trout and steelhead remain markedly separate physically, physiologically, ecologically, and behaviorally." (*See Grange* Doc. 45 at 28-29 & n.9.) Federal Defendants rejoin that the cited studies contain both the assertion that rainbow trout and steelhead are markedly separate and the assertion that the entire *O. mykiss* species is generally distinguishable from Pacific salmon. Federal Defendants argue:

> [I]t is precisely the fact that no other Pacific salmonid exhibits such a wide ranging variety of morphological, behavioral, physical, and ecological differences within one species that sets *O. mykiss* apart. These studies indicate that *O. mykiss* as a whole, including rainbow trout and steelhead, exhibit characteristics not typically exhibited by Pacific salmon. Because Pacific salmon do not exhibit different resident and anadromous life forms, a consideration of other criteria adds little to the listing process.

(*MID II* Doc. 95 at 32-33.)

MID protests that this line of reasoning is insufficient because it "cannot be found anywhere in the record, [and] represents the post-hoc rationalization of counsel...." (*MID II* Doc. 100 at 20.) When reviewing an agency decision, the court must evaluate only the reasoning provided by the agency, and not

the post-hoc rationalizations of the agency's counsel. *Motor Vehicle Mfrs. Assn.*, 463 U.S. at 50. MID over-reaches by asserting that this reasoning is a post hoc rationalization, because NMFS took the same position in the listing decision itself -- that steelhead exhibit characteristics not seen in other Pacific salmonids. The question remains whether the record otherwise supports the agency's conclusion.

MID next argues that NMFS is factually incorrect in asserting that *O. mykiss* are unique from other Pacific salmon because they have resident and andadromous forms. MID points out that, of the seven species of Pacific salmonids (which includes *O. mykiss*), at least three -- *O. mykiss*, *O. nerka* (sockeye salmon) and *O. clarki clarki* (cutthroat trout) - have both anadromous and resident forms.[24]

MID also argues that NMFS is incorrect in asserting that *O. mykiss* has characteristics that are not shared by other Pacific salmon. MID cites portions of the administrative record that describe the differences used by NMFS to distinguish between the

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[24] For *O. nerka*, MID cites AR 1480 at 7; AR 2332 at 1; AR 2338 at 1; AR 2117; AR 2118 at 8, 42-45; AR 353-25 at 12 of 18; AR 522 at 7-10; AR 1522 at 1, 61; AR 1578 at 6; AR 1630; AR 1727 at 1-2; AR 1810; AR 1890; AR 2105 at 5, 7; AR 0581 at 37; AR 1441 at 43; AR 1586; AR 1602 at 26, 30-35; AR 2159; AR 1737. For *O. clarki clarki*, MID cites AR 1575; AR 1886 at 14, 35 and 66-68; For both, *see* AR 2314-22 at 4; AR 1628 at 2, 4; AR 1723 at 22, 43, 45 and 49; AR 477 at 62; AR 1441 at 43, 211; AR 1838 at 8, 9; AR 353-37 at 8.

There is also evidence in the administrative record that Chinook salmon (*O. tshawytscha*) also has both resident and anadromous forms in some instances. AR 1927 at 52; AR 1441 at 43.

resident and anadromous forms of *O. mykiss* (adult size, fecundity, egg size, smoltification, diet and migration), noting that these distinctions also exist between the resident and anadromous forms of *O. nerka* and *O. clarki clarki*. For example, *O. nerka* includes three types of fish -- the anadromous (sockeye), the resident (kokanee), and a third form known as the residual. AR 1522 at 61. The anadromous form of *O. nerka* migrates to the ocean and undergoes smoltification, just as the anadromous form of *O. mykiss* does, *id*. at 62-66; it is larger in size than either the residual, AR 1630 at 10, or kokanee, AR 1522 at 61; has greater fecundity than either the residual, AR 1522 at 61, or the kokanee, AR 1522 at 24; has larger eggs than either the residual, AR 1522 at 61, or kokanee, AR 1522 at 28; and has a different diet than either the residual or kokanee, AR 1522 at 62, 85. MID maintains that the anadromous and resident forms of *O. nerka* are different in the same manner that the resident and anadromous forms of *O. mykiss* differ.

MID points to similar evidence of the differences between the anadromous and resident forms of *O. clarki clarki*. The anadromous form migrates to the ocean and undergoes smoltification, AR 1886 at 68, 81. The anadromous form is also larger, AR 1886 at 72, more fecund, AR 1886 at 172, 173, has larger eggs, AR 1886 at 79, and eats different prey, AR 1886 at 72, than does the resident form. Again, MID asserts that the very same differences that NMFS claims "sets *O. mykiss* apart" from other Pacific salmon can be found in *O. clarki clarki*.

Finally, MID references evidence that both *O. nerka* and *O. clarki clarki* can produce offspring that express the alternative

life history, as *O. mykiss* does. *See* AR 2338 at 1 and AR 1602 at 93-94 for *O. nerka*; *see* AR 1441 at 211 for both. *O. clarki clarki* can spawn more than once, just like *O. mykiss*, perhaps even at a higher frequency. AR 1886 at 78.

Defendant-Intervenors respond that MID's "extensive discussion of these other species is much ado about nothing," because "whether *O. mykiss* share a common trait with other salmon and trout does not dictate which policy applies, or what the result must be." (Doc. 103 at 14.) Defendant-Intervenors note that while MID highlights that coastal cutthroat trout (*O. clarki clarki*) also have resident and anadromous life forms, MID ignores that when FWS evaluated coastal cutthroat trout for listing, it applied the DPS Policy. *Id.* (*citing* 67 Fed. Reg. 44,934, 44,941 (July 5, 2002)). Similarly, with respect to sockeye salmon, NMFS applied the ESU Policy to that species and determined that the freshwater form (kokanee) were not part of the ESU for either population it evaluated. For example, when the BRT evaluated the sockeye, it relied initially on differences in spawning timing and location to determine that Snake River sockeye salmon and resident kokanee were not part of same ESU. AR 2185 at 446-47.

Defendant-Intervenors insist that MID's discussion of other fish that may share some common characteristics with *O. mykiss* only highlights the complex biology of each of these species and the importance of individual determinations based on the best available science. "[T]he simple fact that FWS and NMFS have applied different policies (or even reached different results) for these other species does not demonstrate that NMFS's decision to apply the DPS Policy to Central Valley steelhead was

arbitrary and capricious." (Doc. 103 at 15.)

Overall, Federal Defendants maintain that MID's argument "suffers from the same flaws as its similar argument concerning consistency with past listing actions -- oversimplification of important biological characteristics and differences between the species." (Doc. 104 at 15.) Federal Defendants assert that:

> While there may be general similarities in migratory behavior, resulting physiological and behavioral differences, and interbreeding between the two life-history forms, *O. mykiss* demonstrate clear bifurcation between the resident and anadromous individuals not demonstrated in coastal cutthroat trout and sockeye salmon. Compared with the clear bifurcation of *O. mykiss*, coastal cutthroat trout exhibit a continuum of life histories.

(*Id.*) Federal Defendants point to evidence in the record supporting the assertion that coastal cutthroat express a wide spectrum of life history patterns. *See* AR 1886 at 14 ("Coastal cutthroat trout express a wide diversity of life-history attributes. This diversity includes several migratory pathways ... or they may follow migratory pathways that combine these behaviors."); *id.* at 39 ("Their populations show a bewildering diversity in size and age at migration, timing of migrations, age at maturity, and frequency of repeat spawning."); *id.* at 68-78. With respect to sockeye salmon, the two listed populations do contain resident and anadromous populations, AR 1441 at 443-444, but the co-occurring resident populations of kokanee have been found to be reproductively isolated and genetically distinct from the anadromous sockeye salmon. *Id.* Within the anadromous sockeye salmon there is a cooccurring residual form that does not migrate to the ocean, but it is believed to be a minor component of the ESU. *Id.* at 442; 70 Fed. Reg. at 37,161.

The critical inquiry is whether NMFS provided a reasonable justification for switching from the ESU Policy to the DPS policy. Despite the existence of somewhat similar life history patterns within all three of the species discussed above, the record supports NMFS' conclusion that the more significant separation between resident and anadromous *O. mykiss* sets them apart from other types of Pacific salmon so that the DPS Policy is the best fit for evaluating *O. mykiss*. MID has pointed to evidence in the record that tends to demonstrate that *O. mykiss* shares characteristics with two species of the Pacific salmon, but there is no clear evidence in the record that undermines NMFS's interpretation of the degree of difference between these species. NMFS has articulated a rational explanation for the policy shift. When reviewing agency action involving complex issues of fact and a high level of technical expertise, the court must defer to the informed discretion of the responsible federal agency, unless the agency offers an explanation that runs counter to the evidence before it or is so implausible that it could not be ascribed to a difference in view or the product of agency expertise. *See Sierra Club v. E.P.A.*, 346 F.3d 955, 961 (9th Cir. 2003). Here, no such error has been demonstrated.

Plaintiffs' motions for summary judgment on this issue are DENIED; Federal Defendants' and Defendant-Intervenors' cross-motions are GRANTED.

2. Is the Designation of a Steelhead Only (i.e., Anadromous Only) DPS Contrary to Statutory Intent?

Both the *Grange* and *MID II* Plaintiffs contends that the

designation of a steelhead only DPS (as opposed to a DPS containing both steelhead and rainbow trout) is contrary to Congressional intent embodied in the ESA.

a. *Alsea* Does Not Control the Outcome of This Claim.

Grange again attempts to invoke *Alsea's* holding that NMFS may not make "[l]isting distinctions below that of subspecies or a DPS of a species [which] are not allowed under the ESA." 161 F. Supp. 2d at 1162. *Alsea* did suggest in dicta that hatchery-born and naturally-spawned coho salmon are "likely not 'substantially reproductively isolated' from naturally-spawned coho" because:

> [O]nce released from the hatchery, it is undisputed that "hatchery spawned" coho and "naturally-spawned" coho within the Oregon Coast ESU share the same rivers, habitat and seasonal runs. It is undisputed that "hatchery spawned" coho may account for as much as 87% of the naturally spawning coho in the Oregon coast ESU. In addition, hatchery spawned and natural coho are the same species, and interbreed when mature. Finally, the NMFS considers progeny of hatchery fish that are born in the wild as "naturally-spawned" coho that deserve listing protection.

Id. at 1163-64 (internal citations omitted)(emphasis added). Plaintiffs suggest that this reference to "interbreed[ing] when mature" equates to a prohibition against excluding from a DPSs individuals or populations that are capable of interbreeding when mature with those individuals or populations included in the Dps. It is undisputed that rainbow trout interbreed with steelhead where they coexist, although the frequency of such interbreeding is unknown. AR 2241R.

But, the fact that coho interbreed when mature is just one of many factors the *Alsea* court suggested were relevant to the

question of whether the hatchery-born population was substantially reproductively isolated form the natural population. Moreover, as previously decided here, the exclusion of resident *O. mykiss* from a DPS was not before the *Alsea* court. *See MID Summary Judgment Decision*, 1:02-cv-06553, Doc. 79 at 43. As a district court decision from another district, *Alsea* has no binding effect, except as persuasive authority. *See Hart v. Massanari*, 266 F.3d 1155, 1174 (9th Cir. 2001).

b. Grange's "*Sparingly*" *Argument*.

Grange argues that "Congress did not intend the ESA to allow NMFS officials to wade into a river and pick and choose among members of an *O. mykiss* population, as NMFS has done here, treating members differently when they all meet NMFS population criteria." (*Grange* Doc. 29 at 23-24.) Specifically, Plaintiffs argue that the steelhead DPSs are invalid because they draw distinctions between populations based on factors other than geography, a practice Grange argues is contrary to Congressional intent. In support of this argument, Grange emphasizes comments made by Congress in response to NMFS and FWS's request to retain the "DPS of a species" language in the ESA's definition of "species." The agencies argued that the language should remain because, otherwise, the agencies would be required to provide the same amount of protection for the bald eagle population in Alaska, which is healthy, as it would be required to provide for bald eagles in other regions, where populations may be threatened with extinction. Congress responded by retaining the "DPS of a species" language, but warned that it was "aware of the great potential for abuse of this authority and expects the [wildlife]

agencies to list populations sparingly." S. Rep. No. 96-151 at 6. Grange argues that this warning bars NMFS from delineating the DPSs as it has in this case.

At least one other district court has rejected a very similar argument based on this "sparingly" language. *Center for Biological Diversity v. Lohn*, 296 F. Supp. 2d 1223, 1235 (W.D. Wash. 2003), explained:

> Defendants also contend that the significance factor serves to further congressional intent that the DPS authority be exercised "sparingly." (Defendants' Motion at 16 (citing 61 Fed.Reg. at 4723)). In 1979 testimony before a Senate committee, General Accounting Office ("GAO") officials recommended that the "distinct population segment" language be amended to prevent the Services from listing "geographically limited populations." S. Rep. No. 96-151, at 6 (1979) (DPS AR 6). Congress did not narrow the "species" definition as recommended by GAO. However, the Senate committee noted that it "is aware of the great potential for abuse of this [listing] authority and expects the FWS to use the ability to list populations sparingly and only when the biological evidence indicates that such action is warranted." *Id.* at 7. Because this report was issued by Congress after the 1978 amendment that added the "distinct population segment" element to the species definition, it is subsequent legislative history and therefore "is less illuminating than contemporaneous evidence." *Hagen v. Utah*, 510 U.S. 399, 420 (1994); *see also United States v. Price*, 361 U.S. 304, 313 (1960) ("views of a subsequent Congress form a hazardous basis for inferring the intent of an earlier one").
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> Because the "views of a subsequent Congress form a hazardous basis for inferring the intent of an earlier one," the Court does not find that one Senate committee's expectation that the Services only "sparingly" employ their ability to list populations supports the argument that a prior Congress intended the Services to use the DPS authority "sparingly." However, the Court finds that it is not contrary to clear congressional intent for the Services to consider the significance of a distinct population segment when determining whether that population is entitled to ESA listing. As noted, supra, the term "distinct population segment" is ambiguous. As the Services concluded when promulgating the DPS Policy, a DPS must be both discrete and significant because "[t]he interests of conserving genetic diversity would not be well served

> by efforts directed at either well-defined but insignificant units or entities believed to be significant but around which boundaries cannot be recognized." 61 Fed. Reg. at 4725. The Court therefore finds that the DPS Policy is not contrary to congressional intent regarding the ESA and that it is a reasonable interpretation of an ambiguous term.

Id. (separate portion of opinion vacated as moot by *Ctr. for Biological Diversity v. Lohn*, 511 F.3d 960 (9th Cir. 2007)(parallel citations omitted)(emphasis added). This reasoning from *Center for Biological Diversity* is sound and will be followed. The fact that a subsequent Congress warned that NMFS should use its DPS authority "sparingly" does not preclude the agency from applying the best available science, which, here, justifies the distinctions found between resident and migratory *O. mykiss*.

c. Does Designation of an Anadromous Only DPS Conflict with the Statutory Language "Which Interbreeds When Mature"?

Both Grange and MID focus on the ESA's definition of "species," which includes "any subspecies of fish or wildlife or plants, and any distinct population segment of any species of vertebrate fish or wildlife which interbreeds when mature." 16 U.S.C. § 1532(16)(emphasis added). Plaintiffs argue that NMFS acted unlawfully by separating resident and migratory *O. mykiss* because they do "interbreeds when mature." Federal Defendants' disagree on both legal and factual grounds.

(1) Legal analysis under *Chevron*.

The key legal question is whether the statutory language "interbreeds when mature" requires inclusion in a DPS of every member of a population that has the capacity to interbreed when mature with any other individual already included in the DPS.

Federal Defendants maintain that the "ESA requirement that a group of organisms defined as a DPS must 'interbreed when mature' is a necessary but not exclusive condition," and argue:

> Although all organisms in the DPS must interbreed when mature, on some time scale, this differs from a statutory requirement to include in the DPS all organisms that share some reproductive exchange. 71 Fed. Reg. at 838. Indeed, even among well-defined taxonomic groupings, such as subspecies, there may be reproductive exchange, *id.* at 839, yet this does not invalidate the subspecies.

(*Grange* Doc. 45 at 25.) When adopting the DPS policy, FWS and NMFS concluded that it was "inappropriate to require absolute reproductive isolation as a prerequisite to recognizing a [DPS.]"[25]

> The Services do not consider it appropriate to require absolute reproductive isolation as a prerequisite to recognizing a distinct population segment. This would be an impracticably stringent standard, and one that would not be satisfied even by some recognized species that are known to sustain a low frequency of interbreeding with related species ... the standard adopted does not require absolute separation of a DPS from other members of its species, because this can rarely be demonstrated in nature for any population of organisms. The standard adopted is believed to allow entities recognized under the Act to be identified without requiring an unreasonably rigid test for distinctness.

61 Fed. Reg. at 4,724.

As discussed, the DPS policy has previously been found to be a valid agency interpretation of the ESA under *Chevron*. *See Nw. Ecosystem Alliance,* 475 F.3d at 1143. But the Ninth Circuit was

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[25] This statement was a response to a suggestion that "complete reproductive isolation should be required as a pre-requisite to recognition of a [DPS]." Contrary to MID's assertion that the DPS Policy is silent about the issue of interbreeding, and, therefore, that *Chevron* does not apply, the DPS policy directly addresses the issue here.

not interpreting the "interbreeds when mature" language in that case. Therefore, ***NW Ecosystem Alliance*** stands only for the proposition that ***Chevron*** applies to the DPS Policy; a separate ***Chevron*** analysis is here required.

(2) Does the ESA Unambiguously Preclude Excluding Some Interbreeding Members of a Population from a DPS?

As mentioned above, under ***Chevron*** step one, a court "must give effect to the unambiguously expressed intent of Congress." ***Hemp Indus.***, 357 F.3d at 1015. The initial inquiry is whether the statutory text is ambiguous.[26] The relevant language is found in the definition of "species":

> The term "species" includes any subspecies of fish or wildlife or plants, and any distinct population segment of any species of vertebrate fish or wildlife which interbreeds when mature.

16 U.S.C. § 1532.

MID argues that the words are unambiguous, because the "which" in "which interbreeds when mature" makes the clause mandatory. But, the term "which" can be used to indicate both restrictive/defining and nonrestrictive/nondefining clauses.

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[26] A similar issue arose in a follow-up case to ***Alsea***, in which the plaintiffs argued that several listed ESUs of salmon were unlawful because they included salmon populations that do not interbreed when mature. ***Alsea Valley Alliance v. Lautenbacher***, 2007 WL 2344927, *6 (August 14, 2007). Plaintiffs in that case argued that populations within the same ESU do not interbreed because they spawn at different times in different locations. ***Id***. The federal defendants responded that the words "interbreeds when mature" merely reflect Congress's intent that members of the same species or DPS be capable of interbreeding when mature. ***Id***. at *7. Judge Hogan ruled in an unpublished decision that the words "distinct population segment... which interbreeds when mature" are ambiguous. ***Id***.

Strunk & White, The Elements of Style 63-64 (Penguin Press 2005); The Chicago Manual of Style 5.42 (14th ed. University of Chicago Press 1993). Technically, the preferred use of "which" is as a nonrestrictive pronoun, meaning that it is commonly used only to further describe preceding language, not to narrow its definition. *Id.*[27] At best, the phrase is grammatically ambiguous.

If the proper interpretation is not clear from the plain meaning, a court must look to the legislative history.[28] The

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[27] The Chicago Manual gives a relevant example, labeling "ambiguous" the phrase, "The report which Marshall had tried to suppress was greeted with hilarity," because it could mean either "The report, which Marshall had tried to suppress, was greeted with hilarity," or "The Report that Marshall had tried to suppress was greeted with hilarity."

[28] To determine whether Congress has directly spoken to the issue, we "employ the traditional tools of statutory construction." *Student Loan Fund of Idaho, Inc. v. U.S. Dep't of Educ.*, 272 F.3d 1155, 1165(9th Cir.2001) (internal quotation omitted). These tools of construction require us:

> first to engage in a textual analysis of the relevant statutory provisions and to read the words of a statute in their context and with a view to their place in the overall statutory scheme. If the proper interpretation is not clear from this textual analysis, the legislative history offers valuable guidance and insight into [c]ongressional intent. However, it is well established that legislative history which does not demonstrate a clear and certain congressional intent cannot form the basis for enjoining regulations.
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> *Id.* (citations and quotation marks omitted). In conducting this analysis, we are not vested with the power to rewrite the statutes, but rather must "construe what Congress has written...It is for us to ascertain-neither to add nor to subtract, neither to

"interbreeds when mature" language is traceable back to the 1973 version of the ESA, which did not include a provision for listing DPSs. The 1973 Act defined species to include "any subspecies of fish or wildlife or plants and any other group of fish or wildlife of the same species or smaller taxa in common spatial arrangement that interbreed when mature." Pub. L. No. 93-205, § 3(11), 87 Stat. 884 (1973). Environmental Intervenors suggest that Congress's inclusion of the phrase "interbreeds when mature" in the statute at that time is best interpreted as an attempt to embody the biological definition of a species as being confined to individuals who are capable of breeding to produce fertile offspring. H.R. Rep. No. 1804, at 38154 (1978) (Conf. Rep.) (referring to the "generally biologically accepted" definition of "species," Rep. Duncan used the words "capable of interbreeding"). But, it is not appropriate to read meaning into "legislative history which does not demonstrate a clear and certain congressional intent." *Resident Councils of Wash. v. Leavitt*, 500 F.3d 1025, 1031 (9th Cir. 2007). There is no indication in the ESA's legislative history that Congress believed that sub-populations or individuals needed to actually

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> delete nor to distort." *62 Cases, More or Less, Each Containing Six Jars of Jam v. United States*, 340 U.S. 593, 596 (1951); *Xi v. INS*, 298 F.3d 832, 839 (9th Cir.2002) ("[A] decision to rearrange or rewrite [a] statute falls within the legislative, not the judicial, prerogative.").

Arizona State Bd. For Charter Schools v. United States Dept. of Educ., 464 F.3d 1003, 1007 (9th Cir. 2006)(parallel citations omitted).

interbreed in any regular way to be considered a single species, nor that every individual that did interbreed must be included within a given species or population.

Congress added the phrase "distinct population segment" in 1978 to give the agencies greater flexibility to protect parts of populations that were at risk of extinction without having to protect other parts that were not. *See* Sen. Rep. No. 96-151 (1979), reprinted in Comm. on Env't. & Public Works, 97th Cong., A Legislative History of the Endangered Species Act of 1973, at 1397 (1982) ("the U.S. population of an animal should not be permitted to become extinct simply because the animal is more abundant elsewhere in the world"). This provision allowed the wildlife agencies to list populations that were not recognized in formal taxonomic terms. *See* 61 Fed. Reg. at 4,722. In amending the definition of species to include DPSs, Congress retained the "interbreeds" language from the original definition, which once applied only to species. There is no discussion in the 1978 amendments suggesting that Congress believed this language to operate as any kind of restriction on the Service's ability to designate DPSs. Again, absent any clear statement of Congressional intent in the legislative history, it is not appropriate for a court to assign meaning to legislative silence.

The phrase "which interbreeds when mature" is ambiguous.

(3) Is the Agency's Interpretation of the Statutory Language Reasonable?

If "the statute is silent or ambiguous with respect to the specific issue," at step two a court must sustain the Agency's

interpretation if it is based on a "permissible construction" of a statute. *Nat'l Ass'n of Home Builders v. Defenders of Wildlife*, 127 S. Ct. 2518, 2534 (2007). The key question is whether the agency's construction of the statutory provision is a "reasonable" one in light of the statute's text and overall scheme. Id.

The legislative history is silent as to the consequences of interbreeding between members of a DPS and other populations outside the DPS. The parties' arguments on this issue are limited. Grange argues that NMFS's interpretation would lead to absurd results because "if the ESA allowed NMFS to focus solely on mere portions of the same species in such geographic proximity, federal agencies could list a spotted owl in one nest but not a spotted owl in another nest -- in the same old growth tree." (*Grange* Doc. 29 at 23-24.) But, as Federal Defendants point out, the same is true for the converse. If NMFS was required to include in a DPS every individual capable of interbreeding with any other individual, this would also generate absurd results. As NMFS explained in a response to comments about the proposed listing, such a stringent standard would not be satisfied "even by some recognized species that are known to sustain a low frequency of interbreeding with members of related species." 61 Fed. Reg. 4,721, 4,724.[29] Other provisions within

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[29] Environmental Intervenors in *MID II* add that under any reading of the statute NMFS is "precluded from designating a DPS that included two different species of trout that could not interbreed and/or produce fertile offspring. But the converse is not true. An otherwise valid DPS is not so fragile as to be destroyed when a member, or even many members, of the DPS breed

the definition of "species," namely the requirement that distinct population segments be "distinct," preclude the single-tree, single-species, but dual-DPS scenario feared by Plaintiffs.

The reading offered by Plaintiffs is unworkably severe in light of biological reality. It would prevent, for example, a dwindling population of wolves from being listed simply because they co-existed with a large population of coyotes, with which they can and do interbreed. 50 Fed. Reg. 28,821, 28,823 (July 16, 1985) (describing in the listing of the Dismal Swamp Southeastern Shrew how the red wolf (*Canis rufus*), which is listed as endangered, was nearly destroyed by hybridization with the coyote (*Canis latrans*)). In light of the potentially absurd results that would flow from adopting Plaintiffs' interpretation of the act, the alternative interpretation advanced by Federal Defendants represents a reasonable construction by an expert agency.

(4) Factual Analysis.

Federal Defendants argue in the alternative that Plaintiffs "oversimplify the biology by implying that the two life forms always interbreed." (*Grange* Doc. 45 at 25.) NMFS concedes that steelhead and rainbow trout that co-exist below natural barriers may interbreed, but insists that the frequency with which this occurs is unknown and unpredictable, *see* AR 2185 at 174-75, and likely influenced by local habitat conditions and variability in their environment, see AR 2185 at 174.

Because it is lawful for NMFS to separate populations into

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with individuals outside the DPS." (*MID II* Doc. 103 at 9-10.)

multiple DPSs even though they may interbreed when mature, it is not necessary to further inquire into the extent of interbreeding for the purposes of determining whether NMFS's interpretation of the "interbreeds when mature" language is permissible as a matter of law.

3. Grange's Abandoned Third Claim For Relief Re: "Illegal Construction of Distinct Population Segments".

Grange's Third Claim for Relief arises from the ESA's definition of a "species" to include "any subspecies of fish or wildlife or plants, and any distinct population segment of any species of vertebrate fish or wildlife which interbreeds when mature." 16 U.S.C. § 1532(16)(emphasis added). Grange alleges that each of the challenged California DPSs consist of numerous sub-populations spread across large areas and that, for example, "[s]ome *O. mykiss* return to spawn in Redwood Creek in Humboldt County, in the far north portion of the DPS, while others return to spawn in the Gualala River in Mendocino County, in the far south portion of the DPS -- over 200 miles away." (*Grange* Doc. 1 at ¶95.) This, Grange contends, conflicts with the ESA's plain language requiring DPSs to "interbreed when mature."

Grange raises this claim for the first time in its reply brief and attempts to mask this untimeliness by characterizing its arguments on this claim as a response to an argument made by the Defendants in the context of a separate claim. In their cross motion for summary judgment, Federal Defendants responded to Grange's argument that any DPS of *O. mykiss* must include both resident and anadromous fish because they "interbreed when mature," by contending that "[t]he ESA requirement that a group

of organisms defined as a DPS must 'interbreed when mature' is a necessary but not exclusive condition." (*Grange* Doc. 45 at 25.) Federal Defendants discussed this statutory language in the context of Plaintiffs' First and Fourth Claims for relief (which challenge the distinction between resident and migratory *O. mykiss*). Grange cannot now resurrect into its broader Third Claim for Relief.

Even if Grange had not waived this claim, it is without merit. Its position implies that the ESA requires that every individual member of a DPS must have the opportunity to "interbreed when mature" with all other members of that population in every generation. In addition to the absence of supporting authority for this assertion, the argument is premised on a misunderstanding of the scientific record. Plaintiffs assert that "*O. mykiss* from different rivers do not interbreed." (*Grange* Doc. 53 at 15.) Although most steelhead return to their natal streams to spawn, every year a small number stray into different watersheds and spawn there. AR 1627 at 1-2. This behavior is thought to enable steelhead to recolonize empty habitat; permit them the option of not returning to unsuitable habitat; and provide some genetic interchange between populations. *Id.* *See also* AR 2185 at 14 (BRT finding that salmon and steelhead DPSs "are typically metapopulations; that is, they are usually composed of multiple populations with some degree of interconnection, at least over evolutionary time periods.").

Federal Defendants persuasively argue that Plaintiffs' "narrow reading of the statute would absurdly narrow the concept

of a distinct population segment." (*Grange* Doc. 64 at 11.)

> Indeed, following Plaintiffs' argument to its logical conclusion would create steelhead DPSs for each natal stream, which would be contrary to Plaintiffs' arguments regarding the GAO's concern that the DPS authority would be used to designate one population of squirrels in a city park. Instead, NMFS reasonably delineated steelhead populations that share a degree of reproductive exchange, or interbreed when mature, that is greater than the degree of reproductive exchange shared with neighboring populations. NMFS did not delineate even smaller populations, which would have even higher degrees of reproductive exchange, in observance of the Congressional intent that the DPS authority be used "sparingly."

(*Id.* (internal citations omitted).)

Grange's argument finds no support in the record, logic, or the law. Their motion for summary judgment on the Third Claim for Relief is DENIED and Defendant and Defendant-Intervenors' motions are GRANTED.

4. MID's Argument That NMFS's Decision to Separate Anadromous and Resident Forms of *O. mykiss* is Inexplicably Inconsistent With Prior Treatment of Other Fish Species With Resident and Anadromous Life Histories.

MID maintains that the current listing of only anadromous *O. mykiss* in the Central Valley steelhead ESU is inconsistent with FWS's past listings of bull trout (*Salvelinus confluentus*) and NMFS's past delineation of cutthroat trout (*O. clarki clarki*), which include both resident and anadromous forms. While an agency is not bound to adhere to its prior policies, an agency acts arbitrarily when it departs from its prior precedents in the absence of reasoned decision making. *N. Cal. Power Agency v. F.E.R.C.*, 37 F.3d 1517, 1522 (D.C. Cir. 1994); *see Nw. Envt'l Defense Ctr. v. Bonneville Power Admin.*, 477 F.3d 668, 687-688 (9th Cir. 2007)("[A]n agency changing its course must supply a

reasoned analysis indicating that prior policies and standards are being deliberately changed, not casually ignored, and if an agency glosses over or swerves from prior precedents without discussion it may cross the line from the tolerably terse to the intolerably mute.").[30]

NMFS explained its decision to treat steelhead differently than bull trout and cutthroat trout as follows:

> With respect to the Atlantic salmon, bull trout, and coastal cutthroat trout determinations, we acknowledge that their expression of a range of lifehistories may raise some of the same issues we confronted in delineating an anadromous-only DPS of *O. mkyiss*. We conclude, however, that there are important differences between *O. mykiss and* these species that warrant different treatment. In addition to expressing anadromy (the life-history pattern in which fish spend a large portion of their life cycle in the ocean and return to freshwater to breed), bull trout and coastal cutthroat trout express amphidromy (migration between fresh and salt water that is for feeding and overwintering, as well as breeding). While the anadromous and resident forms of *O. mykiss* differ clearly in ocean-migratory behavior and associated biological factors... ocean-going migratory behavior and associated physical, physiological, and ecological factors are comparatively more variable among the life-history forms and life stages of bull trout and coastal cutthroat trout given

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[30] MID suggests that NMFS should be compelled to provide a particularly strong rationale for its divergence the from prior precedent of the bull and cutthroat trout listings because changes to or inconsistent applications of a policy can suggest or provide evidence of pretext, citing *Coszalter v. City of Salem*, 320 F.3d 968, 977-78 (9th Cir. 2003) and *Russell v. TG Mo. Corp.*, 340 F.3d 735, 746 (8th Cir. 2003). But *Coszalter* and *Russell* concerned civil rights claims, for which there is an entire body of jurisprudence regarding the types of evidence that give rise to a showing of pretext. The only APA case cited by Plaintiffs in which pretext was mentioned does not apply a heightened burden. *See Bicycle Trails Council of Marin v. Babbitt*, 82 F.3d 1445, 1464-65 (finding National Park Service rationale regarding rule change restricting mountain bike use was not pretextual)). This invitation is declined.

> their expression of amphidromy.

71 Fed. Reg. at 840 (emphasis added).

In this passage, NMFS distinguishes *O. mykiss* from the bull and cutthroat trout on the ground that a host of factors, including a more diverse set of migratory behaviors, blurs any divisions that could be drawn between and among the various life forms of bull and cutthroat trout. NMFS concluded that the life-history forms of bull trout and coastal cutthroat trout are not as "markedly separate" as the resident rainbow trout and steelhead.

MID rejoins that NMFS' explanation is not credible because the ostensibly unique migratory behavior of amphidromy was not mentioned in prior actions for these two species. When the bull trout was first listed as threatened in 1999, FWS explained that bull trout "exhibit both resident and migratory life history strategies[,]....[r]esident and migratory forms may be found together, and bull trout may produce offspring exhibiting either resident or migratory behavior." 64 Fed. Reg. 58,910, 58,911 (Nov. 1, 1999). The listed bull trout population included both the resident and migratory life histories. *Id.* FWS did not mention the term "amphidromy" in this listing, nor mention that bull trout migrate for feeding and overwintering purposes in addition to migrating for spawning purposes.

Applying the ESU Policy, NMFS listed several DPSs of coastal cutthroat trout as threatened in 1996 (for the Umpqua River cutthroat trout), 61 Fed. Reg. 41,514 (Aug. 9, 1996), and again in 1999 (for the Southwestern Washington/Columbia River coastal cutthroat trout), 64 Fed. Reg. 16,397 (Apr. 5 1999). In the 1996

action, NMFS found that coastal cutthroat trout had three life history forms: resident, anadromous and potamodromous[31]. 61 Fed. Reg. at 41,515. NMFS did not use the term "amphidromy" in the listing, nor discuss this life history in any way. In the 1999 listing, NMFS examined the relationship between the resident, anadromous, and potamadromous life history forms of cutthroat cohabitating in the same location. NMFS found that "these different life-history forms are generally more closely related within a drainage than are populations from different drainages." 64 Fed. Reg. at 16,399. As a result, NMFS found the migratory "and non-migratory populations of the cutthroat trout represent a single evolutionary lineage," 64 Fed. Reg. at 16,399, and defined the cutthroat trout DPS to include both the migratory and resident forms located below long-term natural barriers, 64 Fed. Reg. at 16,409.[32]

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[31] Potamodromous refers to migration within rivers. *See* 61 Fed. Reg. at 41,515. NMFS admits that Central Valley *O. mykiss* exhibit this behavior. (*See MID II* Doc. 23 at ¶23.)

[32] MID attempts to support its argument from positions FWS has taken in prior litigation. In 2000, FWS and NMFS agreed to resolve their dispute over which agency had jurisdiction over coastal cutthroat trout, a species that had both resident members and members that migrated between fresh and salt water environments, by ceding jurisdiction to FWS. 65 Fed. Reg. 21,376 (Apr. 21, 2000). Thereafter, FWS de-listed the Southwestern Washington/Columbia River DPS of the coastal cutthroat trout and was sued on that decision. *See Ctr. for Biological Diversity v. FWS*, 402 F. Supp. 2d 1198 (D. Or. 2005). In that lawsuit, FWS recognized that coastal cutthroat trout had resident, anadromous, and freshwater migratory life histories, but made no mention of amphidromy. The plaintiffs in that case did not challenge FWS's definition of the ESU (i.e., they did not argue that FWS was required to treat the anadromous population as a separate ESU).

MID emphasizes that the most important issue for NMFS in the cutthroat actions was not the migration pattern or the reason for the migration, but rather the fact that the migratory forms and the resident forms interbred where they co-occurred and that offspring of one life history form could express the alternate life history form. This appears to be the case, but this is entirely consistent with the fact that these species were evaluated under the ESU Policy, with its emphasis on reproductive isolation. It was proper for NMFS to switch to the DPS policy for its action on *O. mykiss*, with its focus on marked separation as measured by a host of factors. MID compares apples to oranges. The relevant question is whether, under the factors of the DPS Policy, the populations can be judged to be markedly separate from one another. Federal Defendants maintain that the a preponderance of record evidence establishes that the anadromous and resident behaviors of *O. mykiss* are more clearly defined than the migratory behaviors in bull trout and coastal cutthroat trout.

a. Cutthroat Trout.

Federal Defendants maintain that, compared with the clear bifurcation between resident and anadromous life forms of *O. mykiss*, coastal cutthroat trout exhibit a continuum of life histories. *See, e.g.*, AR 1886 at 14 ("Coastal cutthroat trout

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Rather, the plaintiffs argued that the anadromous and resident life form are not interchangeable and that FWS should have considered the declines within and threats to the anadromous population when determining whether the entire ESU warranted listing. *Id.* at 1206-07. This is not analogous.

express a wide diversity of life-history attributes. This diversity includes several migratory pathways ... or they may follow migratory pathways that combine these behaviors."); *id.* at 39 ("Their populations show a bewildering diversity in size and age at migration, timing of migrations, age at maturity, and frequency of repeat spawning."); *id.* at 68-78.

MID correctly observes that *O. mykiss* also exhibit a large overlap in sizes of resident and anadromous fish, i.e., small steelhead and large resident rainbow trout are common in Central Valley rivers. AR 1269-07 at 1-2. However, MID has not cited any record evidence that undermines NMFS's conclusion that the cutthroat anadromous and resident life forms are more difficult to distinguish than are the anadromous and resident forms of *O. mykiss*.

b. Bull Trout.

NMFS draws similar distinctions between *O. mykiss* and bull trout. For example, FWS's 1999 listing acknowledges that some biologists believe the existence of true anadromy in bull trout is still uncertain. 64 Fed. Reg. 58,910. In fact, only one population of bull trout even has an anadromous form. *Id.* at 58,912 (indicating that the Coastal-Puget Sound population is thought to contain the only anadromous forms of bull trout in the coterminous United States).

MID challenges NMFS's delineation of the Central Valley *O. mykiss* DPS by suggesting that, like *O. mykiss*, resident bull trout are smaller in size than their anadromous counterparts, are less fecund, and have a different diet, referencing 64 Fed. Reg. 58,911. MID overstates the record. That citation actually

provides that "migratory" bull trout were found to be larger, more fecund, etc., than their resident counterparts. In the context of the bull trout listing, "migratory" is used to refer to life forms that migrate "to either a lake (adfluvial), river (fluvial), or in certain coastal areas, saltwater (anadromous)." *Id.* at 58,910. This supports, rather than undercuts, NMFS's assertion that there is a greater diversity of bull trout life forms, as compared to *O. mykiss*.

Whether NMFS' listing of the CV steelhead DPS is rational and reasonably supported by the final rule and the administrative record is determined by the rationality of its explanation for distinguishing between *O. mykiss* and the other trout species. The agency's expert opinions concerning the differences between *O. mykiss* and amphidromy are entitled to deference. *Baltimore Gas & Elec. Co.*, 462 U.S. at 103 ("a reviewing court must generally be at its most deferential" when the agency is "making predictions, within its area of special expertise, at the frontiers of science"). A court cannot substitute its judgment for that of the expert decision-maker.

5. Is NMFS's Decision to List Steelhead-Only DPSs Supported by the Best Available Science?

Plaintiffs in both Grange and *MID II* argue that NMFS applied the DPS Policy improperly (i.e., that the conclusion reached by NMFS under the DPS policy was not justified by the record).[33]

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[33] Grange raises this argument to challenge all five California steelhead DPSs in California, but provides little or no scientific argument. The MID Plaintiffs challenge only the Central Valley steelhead DPS and provide considerable scientific

Federal Defendants and Defendant-Intervenors' cross-motion for summary judgment argues that NMFS properly found that the steelhead-only populations met the standards set forth in the DPS Policy.

Under the Joint DPS Policy, three factors must be considered when determining whether a population may be considered a DPS:

> (1) Discreteness of the population segment in relation to the remainder of the species to which it belongs;
>
> (2) The significance of the population segment to the species to which it belongs; and
>
> (3) The population segment's conservation status in relation to the Act's standards for listing (i.e., is the population segment, when treated as if it were a species, endangered or threatened?).

61 Fed. Reg. at 4,725 (emphasis added).

A population segment of a species may be considered "discrete" if it satisfies either one of the following conditions:

> (1) It is markedly separated from other populations of the same taxon as a consequence of physical, physiological, ecological, or behavioral factors. Quantitative measures of genetic or morphological discontinuity may provide evidence of this separation.
>
> (2) It is delimited by international governmental boundaries within which differences in control of exploitation, management of habitat, conservation status, or regulatory mechanisms exist that are significant in light of section 4(a)(1)(D) of the Act.

Id. (emphasis added).

If a population segment is found to be discrete, its biological and ecological "significance" is evaluated, "in light

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argument.

of Congressional guidance...that the authority to list [DPSs] is to be used '...sparingly' while encouraging the conservation of genetic diversity." *Id.* The significance analysis may include, but is not limited to, an evaluation of:

> (1) persistence of the DPS in an ecological setting unusual or unique for the taxon;
>
> (2) evidence that loss of the DPS would result in a significant gap in the range of the taxon;
>
> (3) evidence that the DPS represents the only surviving natural occurrence of a taxon that may be more abundant elsewhere as an introduced population outside its historic range; or
>
> (4) evidence that the DPS differs markedly from other populations of the species in its genetic characteristics.

Id. If a population is found to be both "discrete" and "significant," it is evaluated against the five factors set forth in ESA § 4(a) in order to determine whether listing the population as endangered or threatened is warranted. *Id.*

a. Discreteness.

NMFS concluded that the steelhead-only populations met the discreteness requirement because resident rainbow trout and steelhead remain "markedly separate[] physically, physiologically, ecologically, and behaviorally." 71 Fed. Reg. at 838.

> Steelhead differ from resident rainbow trout physically in adult size and fecundity, physiologically by undergoing smoltification, ecologically in their preferred prey and principal predators, and behaviorally in their migratory strategy. Where the two life forms co-occur, adult steelhead typically range in size from 40-72 cm in length and 2-5 kg body mass, while adult rainbow trout typically range in size from 25-46 cm in length and 0.5-2 kg body mass (Shapovalov and Taft, 1954; Wydoski and Whitney, 1979; Jones, 1984). Steelhead females produce approximately 2,500 to 10,000 eggs, and rainbow trout fecundity ranges from

> 700 to 4,000 eggs per female (Shapovalov and Taft, 1954; Buckley, 1967; Moyle, 1976; McGregor, 1986; Pauley et al., 1986), with steelhead eggs being approximately twice the diameter of rainbow trout eggs or larger (Scott and Crossman, 1973; Wang, 1986; Tyler et al., 1996). Steelhead undergo a complex physiological change that enables them to make the transition from freshwater to saltwater (smoltification), while rainbow trout reside in freshwater throughout their entire life cycle. While juvenile and adult steelhead prey on euphausiid crustaceans, squid, herring, and other small fishes available in the marine environment, the diet of adult rainbow trout is primarily aquatic and terrestrial insects and their larvae, mollusks, amphipod crustaceans, fish eggs, and minnows (LeBrasseur, 1966; Scott and Crossman, 1973; Wydoski and Whitney, 1979). These differences in diet are a function of migratory behavior and the prey communities available to resident and anadromous *O. mykiss* in their respective environments. Finally, steelhead migrate several to hundreds of miles from their natal streams to the ocean, and spend up to 3 years in the ocean migrating thousands of miles before returning to freshwater to spawn (Busby et al., 1996). Some fluvial populations of rainbow trout may exhibit seasonal migrations of tens of kilometers outside of their natal watersheds, but rainbow trout generally remain associated with their natal drainages (Meka et al., 1999). Given the marked separation between the anadromous and resident life-history forms in physical, physiological, ecological, and behavioral factors, we conclude that the anadromous steelhead populations are discrete from the resident rainbow trout populations within the ranges of the DPSs under consideration.

Id. at 838. NMFS concluded, based on the steelhead's differences from rainbow trout -- in adult size and fecundity, physiologically in terms of smoltification, ecologically in terms of preferred prey, and behaviorally in terms of migratory strategy -- that steelhead are discrete from rainbow trout as a result of application of the four factor test prescribed by the DPS policy. *Id.*

All Plaintiffs argue that this conclusion is not supported by the record.

(1) MID's Argument That the Data Has Not Changed.

The MID Plaintiffs first suggest that NFMS's decision cannot withstand scrutiny because the data cited in the final rule is "not new" and predates prior steelhead listings under the ESU Policy. (*MID II* Doc. 79 at 41.) This argument does not account for the history of these listings. In the initial steelhead listings, made under the ESU policy, NMFS examined the best available science and concluded that the resident rainbow trout were part of the same ESU as the steelhead, but listed only the steelhead. After *Alsea* was decided in 2001, NMFS reassessed the way it evaluated the species in light of comments from the public and FWS, and concluded that the DPS Policy was the best policy to apply because it allowed the agency to take into consideration a broader range of criteria that acknowledged the behavioral, morphological, and ecological differences between the life forms. (*MID II* Doc. 95 at 33-34.) The agency's decision to change policies has been found lawful. It is entitled to re-apply the "old" data to the new policy to reach a different result. Whether the record supports the conclusion reached must be determined.

(2) Lack of Consistently Distinguishable Characteristics Between Life History Forms.

The *MID II* Plaintiffs next argue that NMFS found "no suite of morphological or genetic characteristics has been found that consistently distinguishes between the two life history forms." (*MID II* Doc. 79 at 41 (*citing* 69 Fed. Reg. at 33,113 (the proposed listing applying the ESU Policy)). But the DPS policy

provides that discreteness "does not require absolute separation of a DPS from other members of its species, because this can rarely be demonstrated in nature for any population of organisms." 61 Fed. Reg. at 4,724. A number of comments submitted to NMFS prior to its final decision to apply the DPSs policy criticized the agency's draft conclusion and the data that supported it on similar grounds. 71 Fed. Reg. 834, 838 (comment 5). NMFS responded that:

> The fact that there is an overlap between co-occurring steelhead and rainbow trout in the physical, ecological, behavioral and physiological factors does not prevent them from satisfying the discreteness criterion under the DPS policy. While commenters are correct that *O. mykiss* display a continuum of traits in these categories, at the end of that continuum steelhead are markedly separate in their extreme marine migration (leading to, or resulting from, marked separation in the other factors).

Id. at 839. Standing alone, the fact that there is no set of characteristics that consistently distinguishes between the two life history forms is not inconsistent with finding that resident and migratory *O. mykiss* should be in separate DPSs under the DPS Policy.

(3) The Cause of Distinctions Between Life History Forms.

MID makes a series of arguments concerning the underlying reasons why steelhead develop characteristics that distinguish them from rainbow trout. MID points out that NMFS recognized in 1991 when it adopted the ESU Policy that "phenotypic [and] life history traits such as size, fecundity, and age and timing of spawning," could be useful information for identifying distinct population segments, but cautioned that "interpretation of these traits is complicated by their sensitivity to environmental

considerations." 56 Fed. Reg. at 58,618. Many of the differences between the anadromous and resident forms cited by NMFS are consequences of the fact that the anadromous form lives for a time in the ocean, while the resident form does not. Thus, the differences in diet, prey, smoltification, and migration all result from the fact that the anadromous form goes to the ocean while the resident form does not. AR 864-01 at 5; AR 1269-07 at 1-3; AR 1276 at 3. However, the MID Plaintiffs assert it is not necessarily the case that these differences are caused by the fact that the anadromous and resident forms are different, citing comments by Drs. Moyle and Yoshiyama in response to NMFS's plans to apply the DPS Policy:

> [I]t is not necessarily true that those differences are intrinsically pre-set and unalterable characteristics. If such differences can be shown to be pre-set - e.g., genetically determined so that the anadromous part of the population is inherently different from the resident part - then the proposed DPS Policy would be compelling.
>
> In contrast, if the differences between steelhead are not interchangeable such that any individuals could become either anadromous or resident under suitable conditions, then the perceived "marked separation of population groups" would be artificial and would not delineate intrinsically distinct population entities. In such case, the proposed DPS Policy would not be meaningful.
>
> Presently, it is not clear how much pre-determination (i.e., genetic basis) is involved in the expression of anadromy versus freshwater residency in Central Valley *O. mykiss* populations. Such information is needed to justify the DPS Policy approach that has been proposed by NMFS.

AR 864-01 at 5.

Scientists at NMFS and FWS shared the concerns that it might be interpreted as and artificial construction if NMFS concluded that anadromous and resident *O. mykiss* were "markedly separate."

Jim Myers, a research fishery biologist with NMFS, reviewed one of the drafts of the final listing decision in December 2005 and noted that the size and diet distinctions were not very compelling. He commented that "one can take a 25 g rainbow and rear it in saltwater" and "diet here is not a preference but simply what is available. If there was a squid in fresh water, rainbows might eat them." AR 2272-01R at 16.

FWS's Dr. Campton, in a November 28, 2005 telephone call with Dr. Scott Rumsey of NMFS, noted that it could be argued that the best scientific information available did not support a conclusion that anadromous and resident *O. mykiss* were markedly separate. AR 899 at 1. Specifically, he noted that the decision to express anadromy or residency by *O. mykiss* was not necessarily pre-determined, citing evidence suggesting that the two life forms interbreed, an individual fish could express both life history types during its life, and that individuals expressing one life history form could produce offspring that expressed the alternate life history form. *Id.* Evidence also suggested that the relative proportion of anadromy/residency is largely due to extrinsic environmental factors like temperature, water flow and passage, etc. *Id.* Dr. Campton expressed concern that NMFS' attempted use of the DPS Policy could be construed as a "clever, legalistic approach" designed to avoid listing the resident form of *O. mykiss*. *Id.*[34]

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[34] MID also suggests that the proposed means to protect listed anadromous *O. mykiss* "explicitly contradicts" the notion that anadromous and resident *O. mykiss* are markedly separate. Specifically, the final listing decision provides that NMFS will

These anecdotal opinions tend to support MID's assertion that "nurture" rather than genetic makeup is the driving force behind any physiological, morphological, and behavioral distinctions that can are observed in the two life forms of *O. mykiss*. The weakest element of NMFS's rationale concerns diet. As Mr. Myers points out, only fish that migrate to the ocean have the opportunity to eat prey that live in the ocean. However, nothing in the ESA or the DPS Policy requires NMFS to give this or the related critiques controlling weight.[35]

Federal Defendants correctly point out that the DPS Policy gives NMFS the flexibility to look beyond only genetics "at a broader array of differences to determine whether a population is

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apply the "similarity of appearance" standard under Section 4(e) of the ESA [16 U.S.C. § 1533(e)] to protect all juvenile *O. mykiss* from unauthorized take. AR 795 at 9. According to NMFS, because "juvenile steelhead can be difficult to distinguish from resident rainbow trout," NMFS will presume that all juvenile *O. mykiss* are juvenile anadromous *O. mykiss* where the anadromous and resident forms co-occur. *Id.* (emphasis added). MID asserts that NMFS's presumption represents an "express admission" that *O. mykiss* life forms are not "markedly separate ... If they were, there would be no need to provide protection to all *O. mykiss* since the anadromous and resident forms would be readily distinguishable." This overstates the relevance of NMFS's protective regulations to the lawfulness of the listing decision. Among other things, the protective regulations on their face only apply to juvenile *O. mykiss* and indicate nothing about the separation (or lack thereof) between adult steelhead and rainbow trout.

[35] The two most substantial critiques, from Drs. Moyle and Yoshiyama and from Dr. Compton, are not definitive. Drs. Moyle and Yoshiyama pose alternative scenarios and call for the collection of additional data so it can be determined whether environmental factors explain the distinctions. Dr. Campton repeatedly qualifies his opinions.

'distinct.'" (*MID II* Doc. 95 at 35.) Federal Defendants maintain that "[w]hether or not the morphological, behavioral, physical, and physiological differences are caused by an inherent genetic difference or by environmental factors, the fact remains that steelhead and rainbow trout are markedly separate enough to be considered discrete...." (*Id.* (emphasis added).) NMFS reasoned in the final listing determination:

> With respect to the comment that resident and anadromous *O. mykiss* are genetically indistinguishable, we explained in adopting the DPS policy why we did not adopt genetic distinctness as the test of discreteness: "The Services understand the Act to support interrelated goals of conserving genetic resources and maintaining natural systems and biodiversity over a representative portion of their historic occurrence. The draft policy was intended to recognize both these intentions, but without focusing on either to the exclusion of the other. Thus, evidence of genetic distinctness or of the presence of genetically determined traits may be important in recognizing some DPS's, but the draft policy was not intended to always specifically require this kind of evidence in order for a DPS to be recognized" (61 FR 4721, at 4723; February 7, 1996).

71 Fed. Reg. at 839.

The ESA and the DPS Policy afford NMFS the flexibility to delineate DPSs based on characteristics unrelated to genetics. For some reason, and it is undisputed that no one knows why, certain populations of juvenile *O. mykiss* become steelhead, while other, genetically similar juveniles become rainbow trout. The triggers that cause individuals from one life form to create offspring that exhibit the alternative life form are also unknown, as is the frequency of any such intergenerational shift. NMFS is not required to solve these mysteries before it takes action under the ESA. The agency is only required to make a rational decision based on the best information available to it.

Here, the agency science presented a choice. On the one hand, NMFS could have concluded that it was not appropriate to separate resident and anadromous *O. mykiss* because environmental factors might be responsible for any distinctions between the two life forms. Alternatively, NMFS could, and did, conclude that, despite the possibility that environmental factors might drive the physiological distinctions between anadromous and resident *O. mykiss*, the very fact that these two populations end up in different environments for portions of their lives supports dividing them into separate DPSs. MID may disagree with NMFS's conclusion, but the evidence MID has presented does not establish the agency acted unlawfully.

The issue of what causes the distinction between the life forms cannot be viewed in a vacuum. A court must review the agency's rationale holistically. *See* 5 U.S.C. § 706 (In deciding whether an agency has acted arbitrarily and/or capriciously, "the court shall review the whole record or those parts of it cited by a party, and due account shall be taken of the rule of prejudicial error."). Here, notably, the agency has other reasons to draw the lines it did, and no reasons to draw the lines in the manner suggested by MID. It is undisputed that the steelhead life form is indispensible to the species as a whole. It would have been arbitrary for the agency to ignore to that reality.

(4) The Three Independent Scientific Reports.

The MID Plaintiffs point out that in 2005, NMFS received three independent scientific reports that it claimed "bear

directly" on the relationship between the anadromous and resident forms of *O. mykiss*. 70 Fed. Reg. 37,220. MID maintains that each of the reports concluded that, at least where the resident and anadromous forms of *O. mykiss* co-occur below long-standing natural barriers, there was no justification for distinguishing between the two forms. But, MID's citations to the three reports reveal more ambiguity than MID admits. For example, MID quotes page 14 of the Hey Panel Report, AR 1442, to assert: "there is little justification for putting the resident and anadromous life history types into different conservation units." In context, the Hey Panel was asked to evaluate the relationship between resident populations and related anadromous populations of *O. mykiss* under a series of hypothetical conditions. In evaluating resident and anadromous populations that inhabit the same spawning and rearing habitats, the Hey Panel Concluded:

> For...populations in which anadromous and resident fish appear to be exchanging genes and in which some parents produce progeny exhibiting both life history paths, the two life history alternatives occur as a kind of polymorphism. In these cases there is little justification for putting the resident and anadromous life history types into different conservation units. The situation is more complex for 'pure' resident populations that have no genetic exchange with anadromous fish that sometimes occupy the same river, because in these cases it may be best to consider them as two separate wild populations. Regardless of how the conservation unit is defined, however, it is important to conserve the evolutionary potential of the anadromous component of the conservation unit because of the highly asymmetrical transition rate between the two life-history types.

Id. at 14 (emphasis added). These are hypothetical conditions that may not reflect reality.

MID next cites the RSRP Report, AR 1471 at 6-8, although it is unclear what conclusion it draws from this citation. The

conclusion of the entire cited section on "Anadromy and Residency as a Polymorphism[36]," is that a number of conditions would have to be met before resident and anadromous populations should be listed as part of the same ESU:

> Taken together, [the] observations [described in this section] lead to the conclusion that resident and anadromous (or polymorphic) populations can be considered part of the same ESU if it can be demonstrated, through careful experimentation, that (i) resident fish still have the genetic capability to develop anadromy when faced with poor growth opportunity (see Thrower et al. 2004b), (ii) anadromous offspring of resident parents have the ability to complete seaward migration successfully and return for reproduction and (iii) that the fitness of anadromous fish derived from resident parents is sufficiently high to make a positive contribution to the overall viability of the population in a fluctuating environment, rather than acting as a demographic drain on the population.

AR 1471 at 8-9. MID identifies no experimental evidence in the record that suggests such conditions have been met in the case of Central Valley *O. mykiss*.

MID cites the ISAB Report, AR 1443, at pages 27, 31-32 [pdf. pages 39, 42-43].[37] Page 27 contains the following finding:

> Although the genetic similarity of sympatric resident and anadromous life histories of rainbow trout does suggest that interbreeding occurs at some level, there is little information for specific populations on the

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[36] Polymorphism is not defined in the RSRP. The American Heritage Dictionary of the English Language (4th ed., Houton Mifflin Co., 2004), defines polymorphism as "[t]he occurrence of different forms, stages, or types in individual organisms or in organisms of the same species, independent of sexual variations."

[37] MID also points to internal agency communications, in which Scott Rumsey stated that these three reports "strongly confirm the approach taken in the May 17 recommended *O. mykiss* listing," (i.e., the listing that kept resident and migratory *O. mykiss* within the same DPS).

> extent to which resident rainbow trout contribute to the abundance of the anadromous life history component. That is, evidence is not universally conclusive that resident populations play a key role in supporting the productivity or abundance of any steelhead population (or the reverse). On the other hand, the resident life histories may positively influence viability of an ESU that contains sympatric resident and anadromous forms by contributing to the overall abundance and diversity (because residency is an important life history strategy in some circumstances). The role of the resident life history in maintaining population connectivity and spatial structure is unclear, but it undoubtedly differs in timing and extent from the anadromous life history. As a result, the presence of both resident and anadromous life-history forms is critical for conserving the diversity of steelhead/rainbow trout populations and, therefore, the overall viability of ESUs.

Pages 30 and 31 contain, among other things, findings that undermine MID's assertions. The Report concludes that "it seems unlikely that a population of resident trout can consistently reestablish a steelhead population." The Report continues:

> The only clear evidence of a resident population giving rise to an anadromous component is the example from Argentina (Pascual et al. 2001). In this case, however, the anadromous population that arose from the resident fish did not reestablish an extirpated population but expanded into an unoccupied niche. If shifts in life history are common in steelhead generated by resident parents, reestablishment of a selfsustaining anadromous component of a population or ESU could be very difficult. The work of Thrower et al. (2005) suggests that the capacity to express anadromy is retained in a population of resident trout for many generations. In this study, the smolting rate and marine survival of the smolts produced by the resident fish were lower than that of the offspring of steelhead. In addition, it remains uncertain whether or not the smolting and survival rates exhibited by the resident fish would be sufficient to enable reestablishment of a viable steelhead life history type. Based on the various empirical observations of *O. mykiss* life-history variations and on principles from theory, we conclude that once anadromy is lost from an ESU, resident populations are not likely to regenerate self-sustaining anadromous populations in the short or intermediate term, and that the ESU viability would be largely compromised.

AR 1443 at 30; *see also* AR 1471 at 5 ("We conclude that anadromous fish ... represent a complex life history that cannot be easily reconstituted from a purely resident stock."); AR 1442 at 14 (noting only one case of anadromy developing from resident stock, and even then, there is question whether the resident stock was purely resident or not).

Here, the evidence goes both ways. The reports, indicate that in a hypothetical circumstance that may or may not reflect reality, there may be little genetic justification for separating the life history forms into separate conservation units. However, they also reiterate the importance of the steelhead and its contribution to the species as a whole. The DPS policy affords NMFS the flexibility to look beyond the narrow, genetic focus of the ESU Policy. The studies cited by MID, which all reflect the perspective of the ESU Policy, do not dictate the same outcome under the DPS Policy.

(5) The Role of Genetics and Reproductive Isolation in the DPS Policy.

It is undisputed that while NMFS was still applying the ESU policy, the agency concluded that "available data suggest that resident [*O. mykiss*] and [migratory *O. mykiss*] in the same area generally share a common gene pool." 69 Fed. Reg. at 33,113. MID maintains that the DPS Policy, as written and interpreted by NMFS and FWS, relies heavily on genetics and reproductive isolation as evidence of discreteness. (*MID II* Doc. 100 at 11.) MID argues that in light of the evidence of the genetic and reproductive relationship between resident and anadromous *O. mykiss*, NMFS's decision to exclude the resident form from the

Central Valley DPS under the DPS policy is arbitrary and capricious.

MID concedes that genetic evidence "is not required to determine if a population segment is discrete for purposes of the DPS Policy because in many instances genetic evidence is not available..." (*MID II* Doc. 100 at 12.) MID maintains, however, that "if such [genetic] evidence does exist, such as in this case, it trumps the more general phenotypic type differences that NMFS could rely upon in the absence of any genetic data." (*Id.*) The DPS Policy contains no language suggesting that genetic evidence should be given priority. Nor does any other formal policy document authored by either NMFS or FWS. Instead, to support this assertion, MID cites a December 2, 2005 Memorandum from the Assistant Director for Renewable Resources and Planning at the Bureau of Land Management to D. Allen at FWS "RE: BLM's Comments on the [NMFS] Proposed Rule on the Alternative Approach to Delineating Ten Evolutionary Significant Units (ESUs) of West Coast Onchorhynchus mykiss." AR 900 at 1. BLM's Assistant Director asserted in that memo that although "physical, physiological, ecological and behavioral factors can be considered secondarily when designating a DPS...the primary consideration in designating the DPS must be reproduction and the DPS must include that segment of the species that 'interbreeds when mature.'" *Id.* at 2.[38] This memo is not supported with any

[38] MID also cites a December 5, 2005 letter sent by Preston A. Sleeger, Regional Environmental Officer with Interior's Office of the Secretary to G. Griffin at NMFS "RE: Endangered and Threatened Species: Request for Comment on

legal or scientific authority. Contrary to MID's assertions, this statement, made by one branch of Interior to another, cannot be construed as Interior's official position on the relative importance of genetic information under the DPS Policy.

The DPS Policy lists a number of factors, including genetics, but does not rank them. *See, e.g., Trout Unlimited v. Lohn*, 2007 WL 1795036 *8, 65 ERC 1633 (W.D. Wash. June 13, 2007) at 8 (finding that the "[t]he most salient difference [between the ESU Policy and the DPS Policy] is the Joint DPS Policy's decreased focus on genetic differentiation, which results from measuring discreteness using 'physical, physiological, ecological, or behavioral factors' instead of simple reproductive isolation"). When promulgating the final DPS Policy, NMFS and FWS (the "Services") received a variety of comments addressing the role to be played by genetic information. 61 Fed. Reg at 4,723. The Services clarified that "evidence of genetic distinctness or of the presence of genetically determined traits may be important in recognizing some DPS's" but that the DPS policy does not "always specifically require this kind of evidence in order for a DPS to be recognized." *Id.* This means that in analyzing discreteness the Services consider, but do not require, genetic evidence. *Id.* The DPS Policy states that a population may be markedly separate as a consequence of physical, physiological, ecological, or behavioral factors. *Id.* at 4,725.

Alternative Approach to Delineating 10 Evolutionarily Significant Units of West Coast Oncorhynchus mykiss" at page 3, but nothing on that page supports MID's assertion. AR 901

The policy does not express a preference for genetic data; it simply provides that "[q]uantitative measures of genetic or morphological discontinuity may provide evidence of this separation." *Id.*

Federal Defendants concede that MID would be correct if the genetic data showed complete reproductive isolation. (*MID II* Doc. 104 at 5.) However, Federal Defendants argue that the genetic data here shows some unknown level of reproductive exchange and is not definitive. *Id.* Low levels of reproductive exchange over evolutionary time scales may result in genetic similarity, yet important adaptive morphological, physical, behavioral, or physiological differences still may exist between the populations, rendering them markedly separate and therefore "discrete" under the DPS Policy. *Id.*

The record reflects that some scientists caution against relying solely on genetics to the exclusion of other forms of evidence because existing "genetic profiling technology examines only a limited portion of the genome, and there is ample evidence of important genetic differences existing between stocks that we cannot identify with current technology." AR 457 at 2 (comments of Idaho Department of Fish and Game). As the Hey Panel recognized when discussing hatchery and wild fish, genetic divergence "may not be detectable with randomly selected or neutral molecular genetic markers," which are the kind generally used in genetic profiling. AR 793 at 6. The Hey Panel cautioned that "[g]enetic relatedness is not a direct determinant of shared adaptive diversity or ecological exchangeability among populations.... Therefore evidence of phylogenetic relatedness

should not be considered a sufficient condition for supposing that two groups are ecologically or physiologically exchangeable or equivalent." *Id.* at 5-6. The panel concluded that while genetic data were a useful "starting point," "important biological processes can be overlooked if it is used to the exclusion of other aspects of the evolutionary process." *Id.* at 7; *see also* AR 627-01 at 1 (U.S. Fish and Wildlife Service commenting that "[w]e believe that genetic, ecological and behavioral diversity should be evaluated in making ESU determinations") (emphasis added).

MID asserts that its interpretation of the importance of genetic evidence is confirmed by the Services' application of the DPS Policy to Central Valley *O. mykiss*. Specifically, in determining that the Central Valley *O. mykiss* population generally was discrete from other populations of West Coast *O. mykiss*, NMFS did not rely upon any alleged external/physical differences between *O. mykiss* populations in the Central Valley and those in Southern California. Instead, MID asserts that NMFS relied primarily on evidence of reproductive isolation and genetics. For example, NMFS concluded that evidence of reproductive isolation, including "available population genetic data," established that the various West Coast *O. mykiss* populations were sufficient to support an overall conclusion that such populations were reproductively isolated from one other which "satisf[ies] the 'discreteness' criterion of the DPS Policy." 70 Fed. Reg. at 67,131. NMFS also relied upon a report by Dr. Nielsen, AR 1465, to conclude that there was very little genetic variation between steelhead populations in the Sacramento

and San Joaquin river drainages and that there was no reproductive isolation between those two populations, 71 Fed. Reg. 841.

Contrary to MID's assertions, NMFS did not prioritize genetic information over all other types of data when it found that the steelhead populations in the Sacramento and San Joaquin river basins constituted a single DPS. Rather, NMFS relied on both genetic information and the fact that "ecological conditions ... are generally similar between the Sacramento and San Joaquin river basins." *Id.* at 841.

MID goes on to argue that NMFS and FWS have regularly relied on genetics and reproductive isolation to identify "discrete" populations under the DPS Policy, citing a long list of determinations of discreteness for other species. *E.g.*, 70 Fed. Reg. 69,903, 69,907 (Nov. 18, 2005) (relying upon genetics and reproductive isolation to determine discreteness in Southern resident killer whales); 71 Fed. Reg. 15,666, 15,669 (finding that "steelhead in Puget Sound are substantially reproductively isolated from other such groupings of West Coast *O. mykiss*").) But, of the many decisions listed, none indicates that the agencies relied on genetic data alone or discounted other information simply because they considered genetic data to be more important. Instead, genetic data was considered alongside other information. *See, e.g.*, 70 Fed. Reg. at 66,907 (detailing unique behavioral characteristics of Southern Resident Killer Whales and concluding "[b]ased on range, demography and behavior, as well as genetics, the BRT determined that Southern Residents meet the criterion for 'discreteness' under the DPS policy."); 65

Fed. Reg. 20 at 21-22 (Jan 3, 2000) (finding Sierra Nevada DPS of California Bighorn Sheep discrete based on both morphological factors, e.g., skull and horn size, and genetic data).[39]

MID's reference to the proposed listing of the Puget Sound steelhead DPS does not support its argument. Although NMFS found that Puget Sound steelhead are substantially reproductively isolated from "other such groupings of West Coast *O. mykiss*," genetic data was not the final criteria for defining this DPS. Like CV steelhead here, NMFS found that there is likely interbreeding between the steelhead and resident fish and that they were genetically similar. However, residents were not included in the DPS, as NMFS explained:

> The discreteness criterion of the DPS Policy, however, does not rely on reproductive isolation but on the marked separation of population groups as a consequence of biological factors. Despite the apparent reproductive exchange between resident and anadromous *O. mykiss*, the two life forms remain markedly separated physically, physiologically, ecologically, and behaviorally. Steelhead differ from resident rainbow

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[39] Some of the other examples cited by Plaintiffs are simply inapposite. For example, Plaintiffs point to the weight given to genetic information, as opposed to other factors, in FWS' delineation of two DPSs of Colombian white tail deer. 68 Fed. Reg. 43,647, 43,649 (July 24, 2003). However, the two DPSs of deer in that case are geographically isolated from each other, resulting in genetic difference between the populations. Similarly, although FWS considered evidence that the Columbia Basin DPS of pygmy rabbit is genetically and ecologically discrete, the primary data relied upon in delineating the DPS is that the population has been physically isolated from other populations for "several millennia." 68 Fed. Reg. 10,388, 10, 395 (March 5, 2003). In contrast, the steelhead and rainbow trout populations here considered are not geographically or reproductively isolated, so NMFS weighed genetic and reproductive exchange data against other factors which counsel in favor of a steelhead-only DPS.

> trout physically in adult size and fecundity, physiologically by undergoing smoltification, ecologically in their preferred prey and principal predators, and behaviorally in their migratory strategy. We recognize that there may be some overlap between co-occurring steelhead and rainbow trout in physical, ecological, behavioral and physiological traits; however, this apparent overlap does not prevent the two life forms from satisfying the discreteness criterion under the DPS policy. While *O. mykiss* display a continuum of life-history and morphological traits, at the end of that continuum, steelhead are markedly separate in their extreme marine migration (leading to, or resulting from, marked separation in physical, physiological, and ecological factors). As we stated in adopting the DPS policy, "the standard adopted [for discreteness] does not require absolute separation of a DPS from other members of its species, because this can rarely be demonstrated in nature for any population of organisms....[T]he standard adopted allows for some limited interchange among population segments considered to be discrete, so that loss of an interstitial population could well have consequences for gene flow and demographic stability of a species as a whole." Given the marked separation between the anadromous and resident life-history forms in physical, physiological, ecological, and behavioral factors, we conclude that the anadromous steelhead populations are discrete from the resident rainbow trout populations within the DPS under consideration (see previous determination of West Coast steelhead DPSs for further elaboration of the discreteness between the anadromous and resident life-history forms, 71 FR 834; January 5, 2006).

71 Fed. Reg. at 15,669 (citations omitted).

MID next claims that NMFS acted unlawfully by, on the one hand using reproductive isolation and genetic information to establish the outer geographic boundaries of the population under consideration, while on the other hand examining other (i.e., non-genetic) information to determine whether steelhead meet the "marked separation" test of the DPS Policy. (*MID II* Doc. 100 at 12-13, 14-15.) This is incorrect. First, NMFS did not rely exclusively upon genetic information to determine the boundaries of the Central Valley Steelhead DPS. Rather, reproductive

isolation was inferred from information about the ecology, physiology, and behavior of the population groups. *See* 71 Fed. Reg. at 848 ("Reproductive isolation was generally not conclusively demonstrated with genetic data but rather inferred from information about the ecology, physiology and behavior of the population groups."). In the November 2005 proposal to apply the DPS Policy to *O. mykiss*, NMFS specifically explained that the genetic, ecological, and behavioral data used to define the ESUs were sufficient to satisfy the criteria for defining a DPS under the DPS Policy:

> The discreteness of the 10 West Coast steelhead DPSs under consideration relative to other population groups of the *O. mykiss* species is well documented by the previous NMFS status reviews that delineated steelhead ESUs. These reviews concluded that the ESUs respectively are substantially reproductively isolated based on established phylogenetic groupings, available population genetic data, differences in migration and spawn timing, patterns in the duration of freshwater and marine residence, and geographic separation of populations. These traits that established the substantial reproductive isolation of the respective steelhead ESUs under the ESU Policy also satisfy the "discreteness" criterion of the DPS Policy.

70 Fed. Reg. at 67,131 (citations omitted)(emphasis added).

Consistent with the DPS Policy, NMFS did not rely on reproductive isolation alone to determine "discreteness" in defining the DPSs. Rather, it focuses on the marked separation of population groups as a consequence of biological factors. *See* 71 Fed. Reg. at 838. NMFS lawfully utilized genetic and reproductive exchange information, but did not rely on it exclusively; NMFS also considered physical, physiological, ecological, and behavioral information to delineate discrete groups.

b. Significance.

NMFS concluded that the steelhead-only populations met the "significance" factor. NMFS started with the proposition that the ESUs defined prior to the policy change, which were made up of resident and migratory fish, were found "significant" at that time, because they occupied "unique ecological regions." NMFS determined that "occupation of a unique ecological region satisfies the DPS criterion for significance." What NMFS did not discuss in the final listing determination was the significance of the all-migratory DPSs as related to an ESU that included both migratory and resident *O. mykiss*. This issue was discussed in the Request for Comment seeking input on NMFS's proposal to apply the DPS policy:

> The significance of the 10 West Coast steelhead DPSs under consideration to the *O. mykiss* species is well documented by the previous NMFS status reviews that delineated steelhead ESUs (e.g., NMFS, 1997; Busby et al., 1996, 1997, 1999; Adams, 2000; Good et al., 2005). These reviews concluded that the steelhead population groups respectively represent an important component in the evolutionary legacy of the species based on unique or unusual life-history, genetic, and ecological characteristics and occupied ecoregion(s) (i.e., unique geographic regions defined by climatic, geologic, hydrologic, and floral composition characteristics; Donley et al., 1979; Jackson, 1993; Omernik, 1987). These traits that established the evolutionary importance of the respective steelhead population groups under the ESU Policy also satisfy the "significance" criterion of the DPS Policy. These proposed steelhead DPSs, if lost, would represent: the loss of unusual or unique habitats and ecosystems occupied by the species; a significant gap in the species' range; and/or a significant loss to the ecological, life-history, and genetic diversity of the taxon. We may conclude, based on our previous ESU determinations, that the Southern California, South-Central California, Central California Coast, California Central Valley, Northern California, Upper Willamette River, Lower Columbia River, Middle Columbia River, Upper Columbia River, and Snake River Basin steelhead DPSs under consideration satisfy the

"significance" criterion under the DPS Policy. 70 Fed. Reg. at 67,132. Plaintiffs do not challenge the merits of the significance finding or any of the scientific data that supports it.

NMFS properly applied the DPS Policy to the challenged listings using the best available science. The resulting exclusion of resident *O. mykiss* from these DPSs was not unlawful. Both the Grange and MID Plaintiffs' motions for summary judgment on this issue are DENIED. Defendant and Defendant-Intervenor's Cross-Motions for Summary Judgment are GRANTED.

D. MID's Argument Concerning Distinctions Drawn Between Hatchery-Born and Naturally-Spawned *O. mykiss*.

The Central Valley DPS includes all naturally-spawned steelhead in the Sacramento and San Joaquin Rivers and their tributaries, 71 Fed. Reg. 849, as well as hatchery-spawned steelhead from the Coleman National Fish Hatchery and the Feather River Hatchery, *id.*, but excludes all naturally-spawned or hatchery-born resident trout in the Sacramento and San Joaquin Rivers and their tributaries, *id.*, and hatchery-born steelhead from the Nimbus and Mokelumne River Fish Hatcheries (located on the lower American and Mokelumne Rivers), 69 Fed. Reg. at 33,118.

MID claims that the Central Valley DPS's treatment of hatchery stocks is fatally flawed, because, despite NMFS's refusal to "adopt genetic distinctness as the test of discreteness" in determining that only anadromous, and not resident *O. mykiss* should be listed based on non-genetic factors,

71 Fed. Reg. at 838, NMFS nevertheless relied exclusively on genetic information to determine that only two of the four hatchery stocks within the Central Valley should be included in the DPS, *id.* at 849, pursuant to the HLP, *see id.* at 848; *see also* 70 Fed. Reg. 37,204.

The HLP (adopted several months before NMFS decided to switch from the ESU policy to the DPS policy to evaluate the *O. mykiss* listing) promulgated a policy to include hatchery stocks in an ESU "if they exhibit a level of genetic divergence relative to local natural populations that is no more than what would be expected between closely related populations within the ESU." *Id.* at 37,206. It is undisputed that the HLP relies on genetic distinctness to address concerns about genetic dilution of natural populations. *Id.* at 37,208. MID argues that "the scientific evidence in the record illustrates that the use of the genetically-based [HLP] is actually inconsistent with NMFS' interpretation of the DPS policy in this listing." (*MID II* Doc. 95 at 46.)

The HLP directs NMFS to include hatchery stocks with a level of genetic divergence relative to the local natural population(s) that is no more than what occurs within the ESU. 70 Fed. Reg. at 37,215. The June 2004 Central Valley Steelhead Proposed ESU included two steelhead hatcheries, the Coleman National Fish Hatchery and the Feather River Hatchery, and excluded the Nimbus and Mokelumne River hatcheries.[40] After

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[40] MID's comments to NMFS state that in the proposed listing, NMFS correctly distinguished between out-of-ESU broodstock and ESU broodstock. AR 1265 at 5.

proposing to use the DPS Policy to define the listable populations in November 2005, NMFS needed to evaluate whether the hatcheries previously determined to be part of the proposed ESU would also qualify as part of the DPS. NMFS explained in the final rule:

> We conclude that the considerations that informed the Hatchery Listing Policy for ESUs are equally valid for the steelhead DPSs we are now delineating under the DPS policy. The Hatchery Listing Policy is based in part on the recognition that important components of the evolutionary legacy of West Coast salmon and steelhead can be found in hatchery stocks, and that many hatchery stocks are derived from, and not significantly diverged from, the naturally spawning stocks. We developed a test for including hatchery stocks in the ESU based upon a consideration of "whether a particular hatchery stock reflects an ESU's 'reproductive isolation' and 'evolutionary legacy'" (70 FR 37204, at 37208; June 28, 2005). We believe those tests are equally applicable to determining whether hatchery stocks reflect the discreteness and significance of steelhead DPSs. Consistent with the June 14, 2004, proposed listing determinations (69 FR 33102) and the recent final listing determinations for 16 West Coast salmon ESUs (70 FR 37160; June 28, 2005), hatchery stocks are included in a steelhead DPS if they are no more than moderately diverged from local, native populations in the watershed(s) in which they are released. The level of divergence for hatchery programs associated with the steelhead DPSs is reviewed in the 2003Salmon and Steelhead Hatchery Assessment Group Report (NMFS, 2003) and the2004 Salmonid Hatchery Assessment and Inventory Report (NMFS, 2004b). The DPS membership of hatchery programs included in the steelhead DPS descriptions below and summarized in Table 1 are unchanged from that proposed for the 10 *O. mykiss* ESUs (69 FR 33102; June 14, 2004).

71 Fed. Reg. 848.

MID argues that there are four fatal internal contradictions in the final listing decision.

1. <u>MID's Argument That NMFS Unlawfully Used Genetic Discreteness as the Sole Reason to Exclude Nimbus and Mokelumne Hatchery-Born Steelhead, but Then Ignored the Close Genetic Relationship of Co-Occurring Resident and Anadromous *O. Mykiss* in</u>

Deciding to Exclude One but Not the Other from the Listing.

MID claims that NMFS' listing is arbitrary because it used genetics as the "sole reason" to exclude Nimbus and Mokelumne hatchery stocks from the DPS but ignored the genetic similarities when excluding resident rainbow trout from the DPS. Federal Defendants reply that NMFS's actions are consistent with the DPS Policy.

The DPS Policy does not focus exclusively on reproductive isolation in evaluating "marked separation." Nevertheless NMFS and FWS concluded that "[q]uantitative measures of genetic or morphological discontinuity may provide evidence of this separation." 61 Fed. Reg 4,725. When evaluating the hatchery stocks for potential inclusion in the Central Valley steelhead DPS, NMFS found that the Nimbus and Mokelumne stocks were derived from an out-of-DPS stock of coastal steelhead from the Eel River. AR 2335 at 295-298. NMFS determined that the stocks from these hatcheries demonstrated marked separation in genetic characteristics as well as behavioral characteristics such as early-run timing. AR 1441 at 333.

MID complains that Federal Defendants' opening brief is the "first time" that the government claimed its treatment of hatchery stocks was not just based on genetics, but also on other behavioral characteristics, such as run timing. MID further asserts that this "new notion" regarding "behavioral characteristics" is not mentioned in the listing decision. and that:

> **NMFS has failed to point to anything in the administrative record to illustrate that the run timing**

> of the Nimbus and Mokelumne River hatchery fish differs from the run timing of any other listed *O. mykiss* in the American and Mokelumne Rivers, or in the Calaveras River and Putah Creek. NMFS has also failed to point to any other evidence of behavioral or physical characteristic differences between these hatchery stocks and any naturally-spawned steelhead in these rivers. In fact, the document relied on by NMFS notes that there is considerable debate whether or not there ever was an indigenous steelhead population in the Mokelumne River prior to the planting of hatchery fish. (AR 2335 at 296.)

(*MID II* Doc. 100 at 28.) MID's evaluation of the record is inaccurate. Federal Defendants point to several places in the record where the relationships between hatchery stocks and the local, natural populations were evaluated. For example, the 2003 SSHAG Report concluded that "[r]un timing would indicate that the current Nimbus stock is Eel River derived," AR 2335 at 295, and that the Mokelumne hatchery relied on external sources of eggs, primarily from the Nimbus hatchery, *id*. at 297. The 2005 BRT Report noted that these two hatchery stocks are not included in the conservation unit due to broodstock source and genetic, as well as behavioral, and morphological, similarity to the Eel river stocks. AR 1441 at 333. Finally, the issue is mentioned, although not extensively discussed, in the final listing:

> We acknowledge that our review of hatchery programs (NMFS, 2003, 2004b, 2004c) was conducted in the context of the ESU policy; however, we disagree that our findings and the information we evaluated do not inform our considerations of discreteness under the DPS policy. In evaluating the "reproductive isolation" of individual hatchery stocks in the context of the ESU policy, we lacked program-specific genetic data. As reasonable indicators of reproductive isolation and genetic similarity we relied on information including hatchery broodstock origin, hatchery management practices (e.g., the timing and location of release), and hatchery stock life-history characteristics (e.g., spawn timing, the size and age at maturity) relative to the local natural populations. We conclude that this information directly informs evaluations of marked

> separation as a consequence of physical, physiological, ecological, or behavioral factors.

71 Fed. Reg. at 840-41 (emphasis added).

NMFS acknowledges that in previously evaluating the "reproductive isolation" of individual hatchery stocks in the context of the ESU policy, NMFS sometimes lacked program-specific genetic data and therefore relied upon information including hatchery broodstock origin, hatchery management practices (e.g., the timing and location of release), and hatchery stock life-history characteristics (e.g., spawn timing, the size, and age at maturity) relative to the local natural populations, as reasonable indicators of reproductive isolation and genetic similarity. *Id.* at 9. Accordingly, when evaluating these same stocks for "marked separation" under the DPS Policy, NMFS concluded that the previously referenced information directly informs evaluations of marked separation. NMFS' evaluation of resident rainbow trout was consistent with its evaluation of the hatchery stocks, as both focused on "marked separation" under the DPS Policy. NMFS lawfully used genetic information, but not exclusively, to evaluate whether hatcheries should be included in the DPS.

2. MID's Argument That NMFS Acted Unlawfully by Excluding the Nimbus and Mokelumne River Hatchery-Spawned Steelhead Based on Genetics, While Including in the DPS Their Naturally-Spawned Progeny.

MID argues that NMFS cannot rationally exclude certain hatchery fish based on genetic dissimilarities, but then include

their naturally-spawned progeny by default.[41] MID complains that this approach arbitrarily protects the naturally-spawned progeny of the excluded hatchery fish. Federal Defendants first assert that this argument fails because it assumes without any record support that a significant amount of hatchery fish spawn naturally in the river. The only available record evidence actually suggests that it is unlikely that hatchery fish spawn naturally in areas below the hatcheries because there is very little spawning area there. AR 2335 at 295, 297.

MID raises the legitimate question why, if this habitat is insufficient for natural spawning, NMFS included these river reaches in the Central Valley *O. mykiss* critical habitat? *See* 70 FR 52,604-06, 52,616, 52,621. This suggests that NMFS's conclusion that few hatchery fish spawn naturally in the river is not to be believed. But, the record is devoid of any evidence indicating the frequency with which hatchery fish spawn in the river, or if they do so at all. In the absence of such evidence, MID points out that it is undisputed that large numbers of hatchery fish do return to the lower American and lower Mokelumne Rivers and that the lower American River is dominated by Nimbus hatchery stock (90% of returning adults), while the lower Mokelumne River is dominated by Mokelumne River hatchery stock (88% of returning adults). AR 1265 at 5; AR 1262 at 1. It is

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[41] Federal Defendants note that this contention suffers from the same problem as the first MID argument, in that hatchery stocks were not included or excluded based on genetic factors alone, but rather on the basis of marked separation as a consequence of multiple factors.

also undisputed that these returning hatchery fish can migrate upstream no further than the hatcheries from which they were released, because these two hatcheries represent the end-of-the-line on each river -- they are located at the base of the impassible Nimbus Dam on the American River and Camanche Dam on the Mokelumne River. *See* AR 1265 at 16; *see* also Location Maps attached hereto as Exhibits A and B.[42] If there is any natural spawning to be done, it must occur between the confluence and the impassible dam, on each river.[43] However, the record does not reveal whether hatchery fish spawn in the reaches of the rivers below the hatcheries.

Critically, regardless of the number and frequency of hatchery fish spawning alongside wild steelhead on the American and Mokelumne Rivers, as a practical matter, NMFS has no choice but to consider the naturally-spawned progeny of the hatchery fish to be part of the protected population. As Environmental

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[42] MID's request for judicial notice of the geographic proximity of the two hatcheries to the two dams, is GRANTED. This is a matter not subject to reasonable dispute that is "capable of accurate and ready determination by resort to sources whose accuracy cannot reasonably be questioned" under Federal Rule of Evidence 201.

[43] NMFS indicates that these hatcheries are considered "terminal" hatcheries, meaning that returning hatchery fish are collected at a weir or other facility, where they are used for broodstock or are terminated. (*MID II* Doc. 95 at 42 n.12.) NMFS also states that "hatchery fish at 'terminal hatcheries' are not allowed to pass beyond the hatchery and spawn naturally." (*Id.*) NMFS does not cite anything from the record in support of these statements. Moreover, as MID points out, the fact that hatchery fish are not allowed to pass beyond the hatchery and to upstream of the hatchery is irrelevant to the question of whether they spawn before they get to the terminal hatchery.

Intervenors note "[t]here are wild steelhead residing in the rivers where these two hatcheries are located, and they need ESA protection." While hatchery salmon have a clipped adipose fin to facilitate their identification, AR 1265 at 5, n.5, the progeny of hatchery fish that stray and spawn naturally would be indistinguishable from fish with wild parents. In the absence of any record evidence that NMFS could have, from a practical standpoint, formulated the rule differently, it was not "arbitrary" for NMFS to extend ESA protections to the progeny of excluded hatchery fish.

3. NMFS's Exclusion of Nimbus and Mokelumne River Hatchery-spawned Steelhead While Including Genetically Similar Naturally-Spawned Populations on the Lower American River, the Mokelumne River, Putah Creek, and the Calaveras River.

MID next argues that NMFS acted unlawfully by excluding from the DPS, Nimbus and Mokelumne River hatchery-spawned steelhead based on genetics, while including the naturally-spawned populations in the lower American River, the Mokelumne River, Putah Creek, and the Calaveras River, which MID claims are genetically dominated by these hatchery stocks and are genetically more similar to the excluded Nimbus hatchery stocks than they are to the remainder of the natural populations in the DPS. MID's argument rests upon its reading of a tree diagram in a 2003 genetic study of Central Valley *O. mykiss* by Dr. Nielsen and others. *See* AR 1465 at 29, Figure 4. However, the authors of the study specifically caution against the use MID has made of the data:

> Other population genetic associations depicted by these analyses are more difficult to interpret...the

> associations depicted among Calaveras River, Putah Creek, lower American River, and Nimbus Hatchery are curious and difficult to explain...Without a better understanding of the history of these populations and a clearer depiction of the genetic signature on a finer scale, we cannot speculate on any meaningful biological interpretation of these associations.

AR 1465 at 37.[44]

MID points to the Nielsen study, arguing that, despite the fact that its authors "did not want to make any blanket conclusory statements," the findings illustrate that the lower American River, the Mokelumne River Hatchery, and the Calaveras River stocks are all connected genetically to the Nimbus Hatchery, and more so than to other natural populations in the Central Valley. *See* AR 1465. Federal Defendants advance a different interpretation of the Nielsen study:

> While the N[ie]lsen study may, at best, indicate some level of genetic relatedness to the out-of-DPS stock, it does not demonstrate that these natural populations are genetically isolated and thus 'discrete' from the other members of the CV steelhead DPS. Rather, the genetic data indicates that these natural populations remain related to other natural populations in the Central Valley. Furthermore, there is no evidence demonstrating that these natural populations are "markedly separated" from other CV natural populations within the meaning of the DPS Policy. The best available scientific information does not demonstrate

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[44] MID complains that NMFS "conveniently ignores its mandate to collect and use the best scientific and commercial data available," citing 16 U.S.C. § 1533(b)(1)(A). But, the best available data requirement simply "prohibits [an agency] from disregarding available scientific evidence that is in some way better than the evidence [it] relies on." *Southwest Ctr. for Biological Diversity v. Babbitt*, 215 F.3d 58, 60 (D.C. Cir. 2000) (citation omitted). An agency is not obliged to conduct independent studies to improve upon the best available science or to resolve inconclusive aspects of the scientific information. *Id.* at 61. MID in fact concedes that it submitted 180 pages of information to NMFS, including the Nielsen study.

> that the Calaveras and American River and Putah Creek populations are "discrete" from other natural populations in this DPS.

(*MID II* Doc. 104 at 23.)

MID admits that NMFS relied upon the Nielsen study for other purposes in the listing decision. (*MID II* Doc. 100 at 12.) NMFS did not fail to consider the "best available data." Rather MID disagrees with NMFS's scientific assessment and interpretation of that data. A court must defer to an agency's reasonable factual determinations, when they are based on the agency's scientific or technical expertise. *Marsh v. Oregon Natural Res. Council*, 490 U.S. at 377; *United States v. Alpine Land & Reservoir Co.*, 887 F.2d 207, 213 (9th Cir. 1989) ("[d]eference to an agency's technical expertise and experience is particularly warranted with respect to questions involving ... scientific matters").

MID's motion for summary judgment on these issues is DENIED. Federal Defendants' and Defendant-Intervenors' motion is GRANTED.

E. Grange's Challenge to NMFS's Selective Application of ESA § 4(d) Protections to Naturally Spawning *O. mykiss* and Only Those Hatchery *O. mykiss* Which Have an Intact Adipose Fins.

Grange also challenges the portion of the listing determination that sets forth a protective regulation, promulgated by NMFS pursuant to ESA § 4(d), applicable to three challenged DPSs designated as threatened.[45] The 4(d) regulation

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[45] The three DPSs at issue here are the Central California Coast, California Central Valley, and Northern California steelhead. The Southern California DPS is listed as endangered and accordingly is not subject to the challenged § 4(d) regulation. The South-Central California Coast DPS does not

extends take protections to only the "naturally-spawned" portion of the listed populations and those members of the hatchery-born population with an intact adipose fin. Those hatchery-born fish that are deemed "surplus to the conservation needs of the species," will have their adipose fins clipped as a mark for potential harvesters. Grange maintains that allowing the take of hatchery-born *O. mykiss* which have been deemed "surplus to the conservation needs of the species" violates the ESA.

Section 9 of the ESA makes it unlawful for any person to "take" an endangered species, without a permit. 16 U.S.C. §§ 1538(a)(1), 1539. Threatened species are not automatically subject to section 9's protections. Rather, for threatened species, the ESA provides the agency with more flexibility:

> Whenever any species is listed as a threatened species...the Secretary shall issue such regulations as he deems necessary and advisable to provide for the conservation of such species. The Secretary may by regulation prohibit with respect to any threatened species any act prohibited under [section 9 (take prohibition)], in the case of fish or wildlife....

§ 1533.

The ESA defines "conservation," in part, as "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 chapter are no longer necessary." § 1532(3). The definition of conservation also explains that "[s]uch methods and procedures include, but are not limited to, all activities associated with scientific resources

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include hatchery fish, so the arguments Grange makes against the § 4(d) regulation are irrelevant to that DPS.

management such as research, census, law enforcement, habitat acquisition and maintenance, propagation, live trapping, and transplantation, and, in the extraordinary case where population pressures within a given ecosystem cannot be otherwise relieved, may include regulated taking." *Id.* (emphasis added). Grange argues that this "extraordinary case" language operates as a prohibition against permitting the take of any listed species except in extraordinary cases. (*Grange* Doc. 1 at ¶¶ 103-108.) Grange's contention is premature. The option of permitting a "regulated taking," assumes that take protections have been previously extended to the population. Section 4(d) gives NMFS the discretion to extend or not extend take protections as "deem[ed] necessary for the conservation of such species." An agency cannot permit a "regulated taking" of species or DPSs that are not protected by the take prohibition.[46]

Here, NMFS concluded that it is advisable to prohibit take

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[46] Even if the § 4(d) regulation were viewed through the lens of a "regulatory taking," courts have permitted regulatory takings where internal population pressures may outpace the capacity of the ecosystem to support those populations. *See Christy v. Hodel*, 857 F.2d 1324, 1333 (9th Cir. 1988)(permitting the regulated taking of threatened grizzly bears through carefully regulated sport hunting where population pressures could not be relieved in any other way). Here, the science suggests that hatchery fish threaten the continued viability of steelhead DPSs because they compete with wild fish and diminish the fitness of the DPSs. AR 583 at 5-8; AR 793 at 12-13. Although it is not entirely clear if this science justifies the finding that this is an "extraordinary case" that warrants a regulatory taking, Grange points to no contrary scientific evidence. It is not necessary to decide this issue here, however, because take protections were never extended to the hatchery steelhead released with a clipped adipose fin.

of wild steelhead in order to promote the recovery of natural populations, but declined to extend such protection to all hatchery fish, in part because hatchery fish can reduce the viability of wild populations by diminishing the fitness of the wild fish. AR 583 at 5. Therefore, NMFS authorized the take of hatchery fish which have had their adipose fin clipped.[47] In response to NMFS's bases for permitting the take of marked hatchery *O. mykiss*, Grange argues that "to the extent NMFS determined hatchery *O. mykiss* should be included in the same DPSs and listed with 'naturally spawning' *O. mykiss*, it is arbitrary to subsequently determine that those same hatchery *O. mykiss* might harm naturally-spawned *O. mykiss*." (*Grange* Doc. 53 at 13.) But, the science indicates otherwise.

> Not all hatchery stocks considered to be part of listed ESUs are of equal value for use in conservation and recovery. Certain ESU hatchery stocks may comprise a substantial portion of the genetic diversity remaining in a threatened ESU, and thus are essential assets for ongoing and future recovery efforts. If released with adipose fins intact, hatchery fish in these populations would be afforded protections under the amended 4(d) protective regulations. NMFS, however, may need to approve the take of listed hatchery stocks to manage the number of naturally spawning hatchery fish to limit potential adverse effects on the local natural population(s). Other hatchery stocks, although considered to be part of a threatened ESU, may be of limited or uncertain conservation value at the present time. Artificial propagation programs producing within-ESU hatchery populations could release adipose-fin-clipped fish, such that protections under

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[47] Grange asserts that NMFS's use of the "adipose fin" as a distinguishing marker is "arbitrary." An adipose fin is a small fin on a steelhead's back, close to its tail. Once clipped off, it does not grow back and can therefore be used as a marking device. This is not an arbitrary distinction, as it is an identification means rationally related to identifying a category of steelhead. Whether it is a lawful one is a separate question.

> 4(d) would not apply, and these hatchery fish could fulfill other purposes (e.g., fulfilling Federal trust and tribal treaty obligations) while preserving all future recovery options. If it is later determined through ongoing recovery planning efforts that these hatchery stocks are essential for recovery, the relevant hatchery program(s) could discontinue removal of the adipose fin from all or a sufficient portion of its production as necessary to meet recovery needs.

70 Fed. Reg. at 37,195. Grange points to no factual nor legal arguments that undermine this reasoning.

Grange next argues that nothing in the ESA permits NMFS to "pick and chose between members of the same species based on whether NMFS considers them to be 'surplus to the conservation and recovery needs' of the population it has defined as 'threatened with extinction.'" (*Grange* Doc. 53 at 11-12.) Neither party cites any cases in which such "picking and choosing" took place under a § 4(d) regulation. The only arguably relevant case cited by Grange is *Carson-Truckee Water Conservancy District v. Watt*, 549 F. Supp. 704, 710 (D. Nev. 1982), advanced for the general proposition that NMFS "must bring [protected] species back from the brink so that they may be removed from the protective class, and [NMFS] must use all methods necessary to do so." Although *Carson-Truckee* does so hold, the language was included in a section discussing whether the needs of endangered and threatened fish must be given priority over other uses of water from a particular reservoir. *Carson-Truckee* does not discuss § 4(d) at all.

Defendants and Defendant-Intervenors rely on an unpublished case which discuss § 4(d), *Washington Environmental Council v. NMFS*, 2002 WL 511479, *7-8 (W.D. Wash, Feb. 27, 2002), in which a coalition of environmental and fishery protection groups

challenged two exemptions carved out of a take prohibition applicable to fifteen salmon ESUs. The first challenged exemption states "take prohibition will not apply to certain municipal, residential commercial, and industrial [] development undertaken pursuant to municipal governments' ordinances or plans that NMFS determines will adequately provide for salmon conservation." 50 C.F.R. § 223.203(b)(12). The second challenged provision "creates an exemption from the take prohibition for non-federal forestry activities [undertaken] in Washington that are 'in compliance with forest practice regulations adopted and implemented by the Washington Forest Practices Board that NMFS has found are at least as protective of habitat functions as are the regulatory elements of the Forests and Fish Report.'" 50 C.F.R. § 223.203(b)(13).

The plaintiffs in *Washington Environmental Council* claimed that "NMFS does not have authority to create a limited take prohibition under ESA § 4(d)." 2002 WL 511479 at *7.

> WEC argues, using the canon of statutory construction expresio unius est exclusio alterius, that because ESA sets forth a detailed mechanism for obtaining an incidental take permit under § 10 (and, for activities with a federal nexus, a parallel § 7), NMFS may not employ any other section of the ESA to promulgate a take prohibition exemption. WEC argues that allowing promulgation of take exemption rules under § 4(d) would render Congress's creation of the §§ 7 and 10 provisions, which the legislative history reveals was a deliberate and exacting process, an unnecessary exercise.

Id. The *Washington Environmental Council* court rejected this argument:

> WEC's expresio unius argument only makes sense if one has an underlying assumption that NMFS should have applied a blanket take prohibition, without limits and with all the protections of § 10, to the ESUs at issue

> in this case. The court, as discussed supra section II.B.3. and note 3, finds that this particular question is not ripe at this time. In any event, WEC's statutory construction argument does not obviate the starting point of the court's analysis: that the Secretary, acting through NMFS, has broad discretion under § 4(d) to promulgate such rules as he deems necessary and advisable, which "may" include a take prohibition. To prevail on this count, WEC must demonstrate that NMFS acted arbitrarily or capriciously in promulgating a limited take prohibition under § 4(d).
>
> The language of 4(d) makes it clear that NMFS "may" impose a take prohibition. The unavoidable implication is that NMFS may, in its discretion, choose not to impose a take prohibition. NMFS's decision to craft a limited take prohibition under 4(d) must be, a fortiori under this analysis, within its discretion. The rule does not state that NMFS may choose only to apply a blanket take prohibition, or no take prohibition at all. It is logically within the agency's discretion, therefore, that applying any number of different varieties of (otherwise legal) take prohibitions is also within NMFS's discretion. The court is not persuaded that choosing to promulgate a limited take prohibition under § 4(d) was arbitrary and capricious, and therefore grants defendant's motion for summary judgment on Count I, and denies plaintiffs' motion for the same.

Id. at *7-8. Although *Washington Environmental Council* is unpublished and is not binding authority, its reasoning is valid. Grange does not provide any contradictory authority.

Grange again invoke *Alsea's* finding as arbitrary the circumstance of having "two genetically identical [fish] swiming side-by-side in the same stream, but only one receives ESA protection while the other does not." 161 F. Supp. 2d at 1163. Here, however, although the fish swimming side-by-side may be genetically similar, those *O. mykiss* that will be exempted from the take protections will be physically distinguishable and have been delineated for separate treatment based on NMFS's valid (and undisputed) scientific reasons for making such distinctions.

These two factors, the ability to physically mark those

individual *O. mykiss* that will be subject to take and NMFS's well-supported rationale for subjecting these fish to harvest, distinguish this case from the past listings that have been invalidated. Grange's argument that "little has actually changed" since the first set of listings is not meritorious.

Grange's motion for summary judgment on that claim is DENIED; Federal Defendants and Defendant-Intervenors' Cross motions are GRANTED.

VI. CONCLUSION

Plaintiffs' attempts to discredit NMFS's listing decision identify some shortcomings in the agency's rationale. However, under the totality of the circumstances, in a case riddled with complex and uncertain scientific information, deference is owed to the agency's expert knowledge of the subject matter. Plaintiffs have not established that the agency 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 issued a decision so implausible that it could not be ascribed to a difference in view or product of agency expertise. *See United States v. Snoring Relief Labs.*, Inc., 210 F.3d 1081, 1085 (9th Cir. 2000). Nor does this case involve a decision that is totally internally inconsistent. *See, e.g., Natural Resources Defense Council v. Kempthorne*, 506 F. Supp. 2d 322 (E.D. Cal. 2007). NMFS properly exercised its discretion here.

For the reasons set forth above:

(1) In *Grange*:

(a) Plaintiffs' motion for summary judgment is DENIED.

(b) Federal Defendants' motion for summary judgment is GRANTED.

(c) Defendants-Intervenors' motion for summary judgment is GRANTED.

(2) In *MID II*:

(a) Plaintiffs' motion for summary judgment is DENIED.

(b) Federal Defendants' motion for summary judgment is GRANTED.

(c) Defendants-Intervenors' motion for summary judgment is GRANTED.

(3) Federal Defendants shall submit a form of order consistent with these rulings within five days of service of this decision.

SO ORDERED

DATED: October 27, 2008

/s/ Oliver W. Wanger
Oliver W. Wanger
United States District Judge