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**IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF OREGON
PORTLAND DIVISION**

**NATIVE FISH SOCIETY,
MCKENZIE FLYFISHERS,**

Plaintiffs,

v.

**NATIONAL MARINE FISHERIES
SERVICE, REBECCA BLANK, Acting
Secretary of Commerce, WILLIAM STELLE,
Regional Administrator, NMFS, OREGON
DEPARTMENT OF FISH & WILDLIFE,
ROY ELICKER, Director, ODFW,
BRUCE McINTOSH, Acting Fish
Division Administrator, ODFW, CHRIS
WHEATON, Northwest Region Manager,
ODFW,**

Case No.: 3:12-cv-431-HA

**MEMORANDUM IN SUPPORT OF
MOTION FOR TEMPORARY
RESTRAINING ORDER and/or
PRELIMINARY INJUNCTION**

Defendants.

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GLOSSARY OF ACRONYMS

APA	Administrative Procedure Act
BiOp	Biological Opinion
BMP	Best Management Practice
EA	Environmental Assessment
EIS	Environmental Impact Statement
ESA	Endangered Species Act
FONSI	Finding of No Significant Impact
HGMP	Hatchery and Genetic Management Plan
ITS	Incidental Take Statement
NEPA	National Environmental Policy Act
NMFS	National Marine Fisheries Service
ODFW	Oregon Department of Fish & Wildlife
pHOS	Proportion of Hatchery-Origin Spawners
USFWS	U.S. Fish & Wildlife Service

INTRODUCTION

Can wild, native fish survive and recover in a system dominated by hatchery-bred fish? The primary purpose of the Endangered Species Act (“ESA”) is to preserve and recover self-sustaining, natural populations of listed species that ultimately are able to survive in the wild without the protections of the ESA. This is the very definition of a wild fish. Hatchery fish on the other hand, will always rely on human manipulation to survive. Since 1872, Pacific Northwest hatcheries have substituted artificially-bred fish for naturally-spawning fish, to the point that more than 80% of the salmonids in the Columbia River basin are of hatchery, rather than wild, origin. These hatchery fish pose genetic and ecological risks to wild fish in the Sandy River.

Since the Chinook salmon (*Oncorhynchus tshawytscha*), coho salmon (*Oncorhynchus kisutch*), and steelhead (*oncorhynchus mykiss*) that inhabit the Sandy River basin were listed as “threatened” under the ESA in 2005 and 2006, the Oregon Department of Fish & Wildlife (“ODFW”) and its officials (“state defendants”) have engaged in the illegal take of wild fish. The Sandy Hatchery (“Hatchery”) operations have trapped and killed wild fish for broodstock for artificial propagation programs. The Hatchery harms and harasses wild fish by releasing over a million hatchery-reared smolts into the system, which prey on wild fish, compete with them for food, introduce disease and pathogens, and reduce the fitness of wild populations when hatchery fish returning from their time in the ocean spawn together with wild fish. And artificial barrier weirs installed in major spawning tributaries also harm, harass, trap, and kill wild fish.

In 2010, ODFW adopted a recovery plan for Lower Columbia salmon and steelhead that depends on the recovery of all populations of wild salmon and steelhead in the Sandy River in order to recover and delist ESA-protected Lower Columbia River species. Nonetheless, in 2011, state defendants submitted Hatchery and Genetic Management Plans (“HGMPs”) covering the

four artificial propagation programs at the Hatchery to the National Marine Fisheries Service (“NMFS”) for review. NMFS prepared an environmental assessment (“EA”) pursuant to the National Environmental Policy Act (“NEPA”), issued a Finding of No Significant Impact (“FONSI”), prepared a biological opinion (“BiOp”), and approved the HGMPs. The theme that runs throughout NMFS’s review of the HGMPs is that hatchery fish harm wild fish; that hatchery fish, when they interact with wild fish, prevent wild fish populations from recovering; and, implicitly, that hatchery fish will prevent the re-establishment of the “natural, self-sustaining” populations that will allow the species to be removed from the endangered species list. This harm is acknowledged in the series of measures, promises and vague commitments to attempt to reduce the harm hatchery fish cause to wild fish. The focus is on saving the hatchery programs, rather than survival and recovery of wild fish. This the ESA does not permit.

Native Fish Society and McKenzie Flyfishers¹ (collectively “NFS”) move for a temporary restraining order and/or preliminary injunction halting the release of hatchery-bred fish into the Sandy River basin. Illegal take of wild fish by the state defendants’ programs is ongoing, and NMFS violated the ESA and NEPA in its evaluations and decisions approving the Sandy Hatchery programs. Despite the significance of the Sandy River wild fish populations to their species, despite the unique potential of the Sandy River basin for wild fish recovery, and in the face of a program intent on continuing releases of hatchery fish into the Sandy River basin with no guarantees against harm to the remaining wild fish, NMFS failed to take a “hard look” at the environmental consequences of its proposal and failed to prepare an environmental impact statement (“EIS”). An injunction against releases of hatchery-bred fish is necessary to protect wild fish from further harm.

¹ The interests of the plaintiffs are described in the declarations of Bill Martin Bakke, Maggie Skenderian, Kenneth Anderson, Michael Moody, and David Thomas, filed herewith.

BACKGROUND

I. THE LEGAL FRAMEWORK

A. The Endangered Species Act.

The ESA is “the most comprehensive legislation for the preservation of endangered species ever enacted by any nation,” intended to “halt and reverse the trend towards species extinction, whatever the cost.” *TVA v. Hill*, 437 U.S. 153, 180, 184 (1978). The primary purpose of the ESA “is to preserve the ability of natural populations to survive in the wild.” *Trout Unlimited v. Lohn*, 559 F.3d 946, 957 (9th Cir. 2009). To achieve this goal, the ESA provides for listing species that are in danger of extinction as endangered or threatened, promulgating protective regulations for listed species, insuring that federal agency actions are not likely to jeopardize the continued existence of listed species, and prohibiting the take of listed species.

1. ESA Section 7 consultation.

ESA § 7(a)(2) requires all federal agencies to “insure that any action authorized, funded, or carried out by such agency ... is not likely to jeopardize the continued existence of any endangered or threatened species” or result in the adverse modification or destruction of critical habitat. 16 U.S.C. § 1536(a)(2). If an agency proposing an action determines that a listed species of anadromous fish is “likely to [be] adversely affect[ed]” by the proposed action, the agency conducts formal consultation with NMFS. 50 C.F.R. § 402.14(a)-(b)(1). In this case, NMFS acts both as the action agency, proposing to approve the HGMPs for the four artificial propagation programs at the Sandy Hatchery and preparing a NEPA analysis of its proposed action, and then as the consulting agency conducting a formal consultation, resulting in the BiOp. AR 16910; *see Wild Fish Conservancy v. Salazar*, 628 F.3d 513, 518 (9th Cir. 2010) (U.S. Fish & Wildlife Service (“USFWS”) acting as both action agency and consulting agency).

In the BiOp, NMFS determines whether the proposed action, together with its cumulative effects, is likely to jeopardize the continued existence of a listed species or adversely modify its critical habitat. 50 C.F.R. § 402.14(g)(4). To “jeopardize the continued existence” of a species is to “engage in an action that reasonably would be expected, directly or indirectly, to reduce appreciably the likelihood of both the survival and recovery of a listed species in the wild by reducing the reproduction, numbers, or distribution of that species.” *Id.* § 402.02. “[T]he jeopardy regulation requires NMFS to consider both recovery and survival impacts.” *Nat’l Wildlife Fed’n v. NMFS*, 524 F.3d 917, 931 (9th Cir. 2008).

If, in its consulting capacity, NMFS concludes that the proposed action would not result in jeopardy, the BiOp must include an Incidental Take Statement (“ITS”). 16 U.S.C. § 1536(b)(3). An ITS specifies the amount or extent of the impact on listed species of any incidental taking, as well as Reasonable and Prudent Measures to minimize such impact and Terms and Conditions that must be followed. 50 C.F.R. § 402.14(i)(1)(i), (ii), (iv). If the amount or extent of incidental take specified in the ITS is exceeded, the action agency and consulting agency are obligated to reinitiate formal consultation immediately. *Id.* §§ 402.14(i)(4), 402.16(a).

2. ESA Section 9 prohibition against take.

ESA Section 9 makes it “unlawful for any person subject to the jurisdiction of the United States . . . to take any [endangered] species.” 16 U.S.C. § 1538(a)(1)(B). “Take” is defined broadly to mean “harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect.” *Id.* § 1532(19). The ESA regulations define “harm” to include “significant habitat modification or degradation where it actually kills or injures wildlife by significantly impairing essential behavioral patterns, including breeding, feeding, or sheltering,” and “harass” to mean “an intentional or negligent act or omission which creates the likelihood of injury to wildlife by

annoying it to such an extent as to significantly disrupt normal behavioral patterns which include, but are not limited to, breeding, feeding, or sheltering.” 50 C.F.R. § 17.3. An exemption provides that “any taking that is in compliance with the terms and conditions specified in [an ITS] shall not be considered to be a prohibited taking of the species concerned.” 16 U.S.C. § 1536(o)(2); 50 C.F.R. § 402.14(i)(5).

3. ESA Section 4(d), hatchery programs, and listed fish in the Sandy River.

In conjunction with listing decisions in 2000 and 2005, NMFS issued a rule (the “4(d) Rule”) adopting regulations to conserve threatened anadromous fish species.² As used in the ESA, “conservation” means all methods to “bring any endangered species or threatened species to the point at which the measures provided pursuant to this [Act] are no longer necessary.” 16 U.S.C. § 1532(3). Protective measures adopted pursuant to the conservation mandate in ESA § 4(d) must provide for both the survival and the recovery of species in the wild. *Id.* § 1533(d).

In 2005 and 2006, NMFS designated the species that historically spawned in the Sandy River basin—the Lower Columbia River (“LCR”) Chinook, LCR Coho, and Columbia River Chum Evolutionarily Significant Units (“ESUs”) and the LCR Steelhead Distinct Population Segment (“DPS”)—as “threatened” under the ESA.³ Despite the ESA’s emphasis on the

² Endangered and Threatened Species; Final Rule Governing Take of 14 Threatened Salmon and Steelhead Evolutionarily Significant Units, 65 Fed. Reg. 42,422, 42,475–81 (July 10, 2000); Endangered and Threatened Species; Final Listing Determinations for 16 ESUs of West Coast Salmon, and Final 4(d) Protective Regulations for Threatened Salmonid ESUs, 70 Fed. Reg. 37,160, 37,194 (June 28, 2005) (amending 2000 rule); *codified at* 50 C.F.R. § 223.203.

³ 70 Fed. Reg. at 37,160; Endangered and Threatened Species; Final Listing Determinations for 10 Distinct Population Segments of West Coast Steelhead, 71 Fed. Reg. 834 (Jan. 5, 2006). The ESA allows for the listing of species, subspecies, or distinct population segments as threatened or endangered. 16 U.S.C. §§ 1532(16), 1533. “Evolutionarily Significant Units” are NMFS’s interpretation of “distinct population segments” and are used exclusively for salmonids. *See* Policy on Applying the Definition of Species Under the Endangered Species Act to Pacific Salmon, 56 Fed. Reg. 58,612 (Nov. 20, 1991). NMFS also has designated much of the Sandy

recovery of natural populations in the wild, NMFS may include hatchery-bred and wild, natural fish in the same designated ESU and DPS, and it did so in designating the four species at issue here. 70 Fed. Reg. at 37,175–76, 71 Fed. Reg. at 849; *see Trout Unlimited*, 559 F.3d at 952.

The 2005 4(d) Rule amendment applies the ESA § 9 take prohibition and other Section 4(d) protections to members of the threatened species with an intact adipose fin. 70 Fed. Reg. at 37,167. NMFS determined that, because most hatchery fish are produced for harvest and are adipose fin-clipped (“ad-clipped”) to allow anglers to distinguish them, protecting ad-clipped fish from take is not necessary to the conservation of listed species that comprise both hatchery and natural-origin fish. *Id.* In the Sandy River basin, all hatchery-bred fish are ad-clipped before release, *e.g.* AR 16549, and thus only wild fish are subject to the take prohibition.

The 4(d) Rule also establishes exceptions to the Section 9 take prohibitions for certain categories of activities in certain circumstances, known as the “4(d) Limits.” 50 C.F.R. §§ 223.203(b)(1)–(13). For artificial propagation programs such as those in the HGMPs, Limit 5 provides a series of criteria that NMFS must approve and the hatchery operator must implement to secure a take exemption. *Id.* §§ 223.203(b)(5)(i)–(v). These include minimization of the artificial propagation program’s genetic and ecological effects on natural populations, providing as many benefits and as few risks as possible for listed species when evaluated in conjunction with fisheries management, and adequate monitoring to evaluate the success of the program. *Id.*

In 2005, NMFS also issued a final Hatchery Listing Policy to guide its listing decisions and development of protective regulations. Policy on the Consideration of Hatchery-Origin Fish, 70 Fed. Reg. 37,204 (June 28, 2005). The Hatchery Listing Policy requires that NMFS “apply

River basin as critical habitat for threatened Chinook and steelhead. Endangered and Threatened Species; Designation of Critical Habitat for 12 Evolutionarily Significant Units of West Coast Salmon and Steelhead in Washington, Oregon, and Idaho, 70 Fed. Reg. 52,630, 52,711, 52,840 (Sept. 2, 2005).

this policy in support of the conservation of naturally-spawning salmon and the ecosystems upon which they depend” and requires NMFS to evaluate the contribution of hatchery fish “in assessing an ESU’s status in the context of their contributions to *conserving* natural self-sustaining populations.” 70 Fed. Reg. at 37,215 (emphasis added).

B. The National Environmental Policy Act of 1969.

Environmental review under NEPA “ensures that the agency, in reaching its decision, will have available, and will carefully consider, detailed information concerning significant environmental impacts,” and “guarantees that the relevant information will be made available to the larger audience that may also play a role in both the decisionmaking process and the implementation of that decision.” *Dep’t of Transp. v. Pub. Citizen*, 541 U.S. 752, 768 (2004) (internal citations and alteration omitted). NEPA “ensures that important effects will not be overlooked or underestimated only to be discovered after resources have been committed or the die otherwise cast.” *Robertson v. Methow Valley Citizens Council*, 490 U.S. 332, 349 (1989).

Through the NEPA process, a federal agency must “take[] a hard look” at the potential environmental consequences of the proposed action.” *Or. Natural Res. Council v. BLM*, 470 F.3d 818, 820 (9th Cir. 2006) (internal quotations omitted). Agencies must prepare an EIS for all “major Federal actions significantly affecting the quality of the human environment.” 42 U.S.C. § 4332(2)(C). A threshold question is whether a proposed action may significantly affect the environment, thereby triggering the EIS requirement. *Blue Mountains Biodiversity Project v. Blackwood*, 161 F.3d 1208, 1212 (9th Cir. 1998). If an agency is uncertain whether a proposed action may have a significant effect, it may first prepare an EA. 40 C.F.R. § 1508.9. The purpose of an EA is to provide the agency with sufficient evidence and analysis for determining whether to prepare an EIS or to issue a FONSI. *Metcalf v. Daley*, 214 F.3d 1135, 1143 (9th Cir. 2000).

If the agency decides not to prepare an EIS, the agency's FONSI must set forth a "convincing statement of reasons" to explain why the action will not have a significant impact on the environment. *Blue Mountains*, 161 F.3d at 1212; *see also* 40 C.F.R. §§ 1501.4(e), 1508.13. "The statement of reasons is crucial to determining whether the agency took a 'hard look' at the potential environmental impact of a project." *Blue Mountains*, 161 F.3d at 1212 (internal citations omitted). Conclusions reached without any study or supporting documentation are insufficient to satisfy an agency's NEPA obligations. *Marble Mountain Audubon Soc. v. Rice*, 914 F.2d 179, 182 (9th Cir. 1990).

II. THE ENVIRONMENTAL AND ECOLOGICAL CONTEXT

A. The Sandy River Basin.

The Sandy River flows 55 miles from its headwaters on the west side of Mount Hood, entering the Columbia River 17 miles east of Portland and about 120 river miles from the Pacific Ocean. AR 16529–30. Its watershed covers an area of about 508 square miles. *Id.* Major tributaries of the mainstem Sandy River include Beaver Creek (which enters the Sandy River at River Mile ("RM") 2), Gordon Creek (RM 13), Bull Run River (RM 18.75), and Cedar Creek (RM 22) in the lower basin, and the Salmon River (RM 38) and Zigzag River (RM 42.3) in the upper basin. AR 16530; *see also* AR 8058, Ex. 1 (ODFW map showing fish distribution).

The division between lower and upper basins is the former site of the Marmot Dam, located at RM 30. AR 16530, 16731. Other streams in the basin that contain significant fish habitat include the Little Sandy River, which flows into the Bull Run River about three miles upstream of the Bull Run's confluence with the Sandy River and Still Creek, which flows into the Zigzag River about two miles upstream of the Zigzag's confluence with the Sandy. AR

16530; Ex. 1. Spring Chinook spawning habitat⁴ in the basin occurs in the following streams:

<u>River/Creek</u>	<u>Length (mi.)</u>	<u>River/Creek</u>	<u>Length (mi.)</u>
Sandy River	23	Salmon River	14
Bull Run River	6	Zigzag River	4
Clear Fork Creek	1	Still Creek	5

AR 8058, 16530, 16562, 31405, Ex. 1; Ex. 2 (U.S. Forest Service 2012 Spawning Survey).

Prior to their removal in 2007 and 2008, Marmot Dam on the Sandy River and the Little Sandy River Dam acted as artificial barriers to fish migration into nearly 60 miles of spawning habitat in the upper Sandy River basin and Bull Run watershed. AR 16530, 16718. Wild fish were sorted at a fish ladder at the Marmot Dam and passed into the upper basin. AR 16770. The upper Sandy River Basin was and continues to be designated as a wild fish sanctuary, essential to the conservation, survival and recovery of these ESA-listed fish. *See, e.g.*, AR 16270. Over \$100 million are committed to habitat conservation in the basin. AR 16718. The Sandy River system thus contains extensive, high-quality, accessible spawning and rearing habitat from which its fish can pass to the oceans unimpeded by dams. AR16529, 16560. Because of these favorable conditions, the Sandy River basin offers an important opportunity for the recovery of wild fish. Declaration of Christopher A. Frissell, Ph.D. (filed herewith), ¶ 19.

B. Status and Life Cycle of Protected Fish in the Sandy River Basin.

Despite the critical and unique potential the Sandy River Basin offers for reestablishing self-sustaining wild fish runs, wild fish are barely surviving. Historically the Sandy River and its tributaries supported runs as high as 20,000 winter steelhead, 15,000 coho salmon, 10,000 fall Chinook, and 10,000 spring Chinook. AR 32391. These wild runs have dwindled to fewer than 1,000 winter steelhead, perhaps 900 coho, and just over 1,300 spring Chinook. AR 16561.

⁴ Habitat for spring Chinook, fall Chinook, steelhead and coho is generally co-extensive in the basin, with coho and steelhead able to access a few areas that Chinook cannot. Ex. 1; AR 16562, 16566, 16569. Not all occupied habitat is spawning habitat. AR 16562, 16566, 16569.

The LCR Chinook Salmon ESU as a whole is currently at very high risk of extinction while the Sandy River population is at moderate to high risk of extinction. AR 16560, 19551. The Sandy River spring Chinook population is essential to the survival of this species in the wild because it is the only one of the nine spring Chinook populations in the ESU not extirpated (or nearly so). AR 19541. Genetic and ecological threats from hatcheries pose a substantial risk factor. *Id.* Spring Chinook primarily return to spawn as three- or four-year old adults. AR 16925.

The Lower Columbia River Coho Salmon ESU is at very high risk of extinction, with 24 of the 27 populations, including the Sandy population, considered at very high risk. AR 16565, 19568, 19579. The Sandy River is again essential to any hope of recovery of this species, because its coho population is one of only two with any significant production. AR 19568. Coho usually migrate to sea in their second year and return to spawn after about 18 months. AR 16932.

The lower Columbia River Steelhead DPS, including the Sandy population, is at high risk of extinction. AR 16569. Only the winter steelhead run is native; the Sandy Hatchery produces a non-native summer steelhead run, which, together with its artificially propagated winter steelhead run, are limiting factors for wild winter steelhead. AR 16567, 16570. Winter steelhead spend up to two years in freshwater before emigrating to the ocean, then reside in marine waters for two to three years before returning to spawn. AR 16935.

C. The Sandy Hatchery.

Beginning in 1951, state defendants have operated the Sandy Hatchery, located on Cedar Creek about $\frac{3}{4}$ mile above its confluence with the Sandy River, 22 miles upstream from the Sandy River's confluence with the Columbia. AR 680, 16535. Despite the precarious status of the wild fish populations, the Hatchery's HGMPs provide for release of more than 1,000,000 hatchery-bred smolts into the Sandy River basin annually—300,000 spring Chinook, 500,000

coho, 160,000 winter steelhead, and 75,000 summer steelhead. AR 16535, 16541, 16546, 16550. The Sandy Hatchery programs are “harvest” rather than “conservation” programs, designed to provide fishing opportunities rather than maintain or increase the number of naturally producing fish. AR 680–81. The hatchery remains a major limiting factor preventing recovery of wild fish in the Sandy River basin. Frissell Decl. ¶ 19. ODFW plans reductions in the number of spring Chinook and coho released from the Sandy Hatchery in 2013 “associated with shifts of a portion of fish released to terminal fisheries in the Lower Columbia River,” and also apparently due to a loss of funding. Ex. 3 at 54.

Spring Chinook are released at various locations in the basin, with a plan to transition all releases to the Bull Run River acclimation pond in 2013, while the other programs release fish in Cedar Creek. AR 16540, 16928. Beginning in 2011, state defendants operated weir/traps in the Salmon and Zigzag Rivers to attempt to sort hatchery-bred spring Chinook spawners from wild spring Chinook. AR 16537; *supra* at 9 (chart of spawning habitat); *see* Anderson Decl., Ex. A (photographs of weirs). The Salmon River weir was located about 2 miles upstream from the confluence with the Sandy, shielding about 12 miles of spawning habitat; the Zigzag River Weir was located about one mile from the confluence with the Sandy, shielding about eight miles of spawning habitat in the Zigzag River and Still Creek. Ex. 2; Ex. 3 at 41, 44 (Excerpts from ODFW 2012 HGMP Compliance Report). Together, these rivers represent less than half the spawning habitat. Weirs were not used to prevent hatchery coho or steelhead from spawning.

D. Harmful Effects That Hatchery-bred Fish Cause to Wild Fish.

Scientific studies of hatchery operations consistently conclude that hatchery fish pose a threat to wild fish, and by extension to the survival and the recovery of wild fish populations. *See* Frissell Decl. ¶¶ 12–14, 31–32; Declaration of James A. Lichatowich (filed herewith) ¶¶ 15, 19–

20, 22–30; AR 16584–95. The Hatchery Listing Policy explains that “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.” 70 Fed. Reg. at 37,215.

Edward Bowles, the Fish Division Director for ODFW, submitted a declaration to this Court in the Columbia River dams litigation in which he succinctly explained the danger hatcheries pose to the survival and recovery of wild salmon and steelhead: “[t]he threats to wild populations caused by stray hatchery fish are well documented in the scientific literature. Among the impacts are substantial genetic risks that affect the fitness, productivity and genetic diversity of wild populations.” Amended Decl. of Edward Bowles at ¶ 127, *Nat’l Wildlife Fed’n v. NMFS*, 839 F. Supp. 2d 1117 (D. Or. 2011) (No. 01-cv-640-RE), ECF No. 1633 (citations omitted).

Mr. Bowles explained that “[h]atchery programs also pose ecological risks to wild populations that can further decrease abundance and productivity” and that “[g]enetic risks increase substantially when the proportion of the adult population that is hatchery fish increases over 5%.” *Id.* In addition, “[e]cological risks due to the presence of hatchery adults (including adults of a different species) have been demonstrated when the proportion that is hatchery fish is over 10%.” *Id.* This proportion of hatchery-origin spawners (“pHOS” or “stray rate”) is the key parameter for measuring effects on natural populations. AR 20668. The Hatchery Scientific Review Group, tasked by Congress to evaluate hatchery reform, recommended in 2009 that the pHOS in segregated programs, such as those in the Sandy River, be maintained at 5% or lower to limit genetic and ecological risks that hatchery fish pose to wild fish. *See* AR 21493.

In a case in which NMFS defended its emphasis on natural, wild populations for species recovery, the court noted that the science regarding harmful impacts of hatchery fish on wild

populations is “entirely undisputed.” *Cal. State Grange v. NMFS*, 620 F. Supp. 2d 1111, 1158 (E.D. Cal. 2008). In summary, “[h]atchery fish are less fit for survival in the wild than genetically similar wild fish” and “[h]atchery 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.” *Id.*; *see also* Frissell Decl. ¶¶ 12–14. NMFS reiterates these points in the EA and BiOp in this case. *See, e.g.*, AR 16584–98, 16947–61. Furthermore, “[i]t 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,” and “there is little or no evidence that hatcheries have been effective over the long term at assisting in the recovery of wild populations.” *Cal. State Grange*, 620 F. Supp. at 1158. The 2011 NMFS status review described hatcheries as continuing “to pose genetic and ecological risks to natural populations and to mask their performance” and as an “important risk factor” to the LCR species affected by the Hatchery. AR 19541, 19568.

In addition, the operation of artificial barriers to migration, such as the weir/traps state defendants are using to attempt to control the spring Chinook stray rate, harms wild fish by delaying upstream migration, forcing fish to spawn prematurely in stream reaches containing high concentrations of redds, and physically harming fish by handling them during the trapping and sorting process. AR 16589; Frissell Decl. ¶¶ 31–37.

III. SANDY HATCHERY OPERATIONS AND PROCEEDINGS SINCE 2007.

A. Hatchery Impacts in 2007–2011.

In 2007, the removal of the Marmot Dam opened 50 miles of habitat in the upper Sandy River basin to unimpeded access for returning salmon and steelhead, and the removal of the Little Sandy Dam opened additional potential habitat to which there had been no previous

access. AR 16530, 16838. Hatchery-bred spring Chinook surged into the wild fish sanctuary above the former Marmot Dam site. In the EA, NMFS dryly understates that “[c]urrently, the proportion of hatchery spring Chinook salmon in the naturally spawning population exceeds the 10 percent goal” in ODFW’s HGMP. AR 16538. Nowhere does NMFS expressly disclose that the stray rates of hatchery spring Chinook among the naturally-spawning population were 45%, 52%, 78%, and 61% in the four years after removal of the Marmot Dam (2008–2011) in the reaches ODFW actually monitored. AR 31748; Ex. 4 at 1. The proportion of hatchery-origin spring Chinook in the Bull Run River, which ODFW does not monitor, reached 36.8% in 2010 and 43.1% in 2011. Ex. 5 at 3 (Excerpts from Bull Run Water Supply Habitat Conservation Plan Annual Compliance Report 2011).

Stray rates for steelhead and coho also have exceeded the 5% threshold which ODFW’s Edward Bowles and the best available science consider to be protective of wild fish during the period shortly after the Marmot Dam removal. In 2010, ODFW reported in its Lower Columbia River Conservation and Recovery Plan for Oregon Populations of Salmon and Steelhead (“Recovery Plan”) that “[h]atchery strays are believed to comprise about ... 52 percent of Sandy winter steelhead spawners.” AR 17334; *see also* AR 17268 (table showing same). The EA shows that no monitoring for winter steelhead stray rates occurred in 2008 and 2009. AR 16561. Also, when ODFW *was* monitoring for winter steelhead in the Sandy River basin, it was looking in the wrong place: although the EA states that “ODFW estimates that 70 percent of the spawning habitat for winter steelhead is located above the former Marmot Dam site in the Salmon River and its tributaries and in Still Creek,” AR 16569, in fact, surveys showed that, of the estimated production of 15,694 steelhead smolts produced in the system, nearly 76% are from the Bull Run and Little Sandy Rivers—downstream of the former Marmot Dam site. AR 4865.

In its final revision to the coho program HGMP, submitted to NMFS only two days before NMFS approved the program on September 28, 2012, ODFW reported that coho stray rates had reached 10.4% in 2009 and 24.2% in 2010. AR 15626. Conflicting data in the record put the 2010 coho stray rate at 16.2%, AR 11404, or—the figure NMFS ultimately included in the final EA, without explaining why it rejected the other, higher figures—at 12.4%. AR 16621.

During 2011, state defendants also installed weir/traps in the Salmon and Zigzag Rivers for one month each. AR 31747. These weirs caused an alarming change in the distribution of spawning fish in both rivers, with an increase of 500% in the proportion of redds in the one-mile-long reach downstream of the Zigzag River weir (from 3% to 18% of the redds in the river) and an increase of 109% in the proportion of redds in the approximately 2 mile reach downstream of the Salmon River weir (from 11% to 23% of redds in that river). *Id.* An ODFW biologist observed that “[a]ltered distribution of spawning Chinook could be caused by delay in upstream migration or reluctance of fish to enter traps resulting in displacement of fish to areas downstream of the traps or to other tributaries.” *Id.*

B. Procedural History, 2011–2012.

On April 13, 2011, Native Fish Society provided notice to the state and federal defendants of on-going violations of the ESA and of its intent to sue to enforce the law if the violations were not rectified. First Suppl. & Am. Comp. (Dkt # 46) Ex. 1. On June 14, 2011, state defendants requested NMFS’s approval of the HGMPs. AR 16913. After months of NMFS inaction, Native Fish Society filed this suit on March 9, 2012. NMFS then issued a draft EA for public comment, along with the HGMPs, in May 2012. AR 16914. After NMFS released the draft EA, this Court stayed the case until September 25, 2012. Order at 8 (Dkt # 38).

On August 16, 2012, NFS sent another letter to state defendants and NMFS alerting them to the ongoing violation of the ESA from the operation of the Sandy Hatchery, with particular reference to harm from the weirs which were then being operated on the Salmon and Zigzag Rivers. First Suppl. & Am. Comp. Ex. 2. On September 28, 2012, NMFS issued a decision approving the Hatchery HGMPs (“Section 4(d) Decision”) and concurrently issued the final EA, a FONSI, and the BiOp, including an ITS, related to the proposed action adopted in the Section 4(d) Decision. AR 17007, 16518, 16661, 16905.

The Section 4(d) Decision contained implementation terms with which state defendants must comply, including “to ensure that the proportion of hatchery fish in the naturally spawning population requirements as described in the HGMPs and the Recovery Plan are met (i.e., annually less than 10 percent for spring Chinook salmon, coho salmon and winter steelhead, and less than 5 percent for summer steelhead)” and that “[s]pawning ground surveys must be conducted sufficient to verify that the proportion of hatchery fish in the naturally spawning population requirements continue to be met.” AR 17010–11. The BiOp’s ITS included five limits of permissible take, related to (1) broodstock collection, (2) interactions on the spawning grounds, (3) interaction in juvenile rearing areas, (4) construction, operation and maintenance of hatchery facilities (e.g., weirs), and (5) research, monitoring and evaluation. The second limit specifies “the extent of take for spawning ground interactions is stray rates of 10 percent of the spawning population in the case of Chinook and coho salmon and winter steelhead, and five percent of the spawning population in the case of hatchery summer steelhead,” and the fourth is “any change greater than 20 percent in spawning distribution above and below the weirs and in pre-spawning mortality from what was measured during previous spawning ground surveys prior to the installation and operation of the weirs in 2011.” AR 16970–71

On October 22, 2012, Native Fish Society and McKenzie Flyfishers filed the First Supplemental and Amended Complaint, and the parties proceeded with discovery and production of a preliminary administrative record (Dkt # 51).

C. Harm to Wild Fish from 2012 Operations.

During 2012, state defendants operated weir/traps for four months each on the Salmon River and Zigzag River, and released over 1,000,000 hatchery-bred smolts into the Sandy River basin from among which survivors will return to spawn in two to four years. AR 680–81; Ex. 3 at 5. Serious harm to spring Chinook and winter steelhead resulted from the Hatchery operations in 2012. Despite operation of the weirs in the Salmon and Zigzag Rivers for the duration of the spring Chinook spawning season, the proportion of hatchery-bred spring Chinook among the spawning population *in the areas ODFW monitored* was at least 25–30%. Ex. 3 at 5. ODFW did not monitor the mainstem Sandy River, nor the Bull Run River where the stray rate in 2011 had been 43.1%. *Id.*; *see* Ex. 5 at 3. The total proportion of hatchery-origin spring Chinook spawners in the Sandy River basin therefore is almost certainly higher than 30%.

State defendants also did not conduct sufficient monitoring to verify that their operations are preventing harm to wild fish by keeping stray rates below 10%. Their spring Chinook monitoring does not evaluate 33 miles of spawning habitat, including all of the spawning habitat in the mainstem Sandy River and Bull Run watershed, and their 2012 steelhead monitoring resulted in such low sample sizes as to “make assessment of hatchery/wild interactions in [the Sandy River] unreliable.” Ex. 3 at 30; *see supra* table at 9. During 2012, state defendants passed 34 wild and 334 hatchery-bred winter steelhead into spawning habitat in Cedar Creek upstream of the Sandy Hatchery itself—a proportion of 90.8% hatchery-origin spawners in the newly-accessible 12 miles of spawning habitat above the Hatchery. AR 11369. The 2012 estimate of the

number of winter steelhead redds “is the lowest on record, being roughly half of the previous low estimate, which occurred in 2004.” Ex. 3 at 30. About 877 winter steelhead were counted in 2004. AR 16561. A conservative estimate of the pHOS for winter steelhead in the whole basin in 2012 is about 27% (assuming the same number of fish in 2012 as in 2004, and that all 877 were wild), but likely the proportion is much higher.

In addition, the placement of weirs for the full duration of the spring Chinook spawning season on two major tributaries resulted in dramatic displacement of spring Chinook spawning downstream of the weirs. 2012 Redd monitoring by the U.S. Forest Service showed that the proportion of redds in the Zigzag River downstream of the weir rose to 63% of the redds in that river, compared with 3% in 2010 and 18% in 2011—a 2,000% increase in the proportion of spawning occurring downstream of the weir since the year prior to the introduction of the barrier. Ex. 6 at 1; AR 31747. In the Salmon River, over 20% of the redds were downstream of the weir, compared to 11% in 2010 and 23% in 2011—a nearly 82% increase in the proportion of spawning occurring downstream of the weir since 2010. Ex. 6 at 1; AR 31747.

Measured in terms of redds per mile, the distribution of spawning downstream of the weirs also increased tremendously. The short reaches downstream of the weirs contained the highest concentrations of redds of any stream reaches monitored in 2012 in the Salmon and Zigzag Rivers (82 redds/mile and 135 redds/mile, respectively), with the concentration of redds in those reaches increasing by 100% from the previous high concentration measured in the same reach of the Salmon (41 redds/mile in 2004) and 237.5% in the Zigzag (from 40 redds/mile in 2006). Ex. 6 at 2. Field visits and surveys disclosed significant numbers of fish holding and spawning downstream of the weirs, and the intermixing of hatchery and wild fish in these premature spawning locations. Anderson Decl. ¶¶ 9–10; Ex. 2. On September 24, 2012, between

363 and 420 spring Chinook were holding below the wier on the Salmon River. Ex. 2 at 2 n.3. Only 199 fish passed through the weir after that date, with the remainder spawning prematurely in a heavily-saturated reach. Ex. 3 at 52. These delays in spawning and premature spawning of hatchery and wild fish in concentrated competition harm wild fish. Frissell Decl. ¶¶ 14, 31.

ARGUMENT

I. STANDARD OF REVIEW

This Court may enjoin NMFS’s authorization of, and the state defendants’ operation of, the Sandy Hatchery based on their violations of ESA §§ 7 and 9. *See* 5 U.S.C. § 706(2); 16 U.S.C. § 1540(g)(1). “In cases involving the ESA, Congress removed from courts their traditional equitable discretion in injunction proceedings of balancing the parties’ interests.” *Nat’l Wildlife Fed’n v. Burlington N. R.R., Inc.*, 23 F.3d 1508, 1510–11 (9th Cir. 1994) (noting also that the “traditional test for preliminary injunctions . . . is not the test for injunctions under the [ESA]”). Congress altered the traditional injunction standard under Federal Rule of Civil Procedure 65 to ensure protection of endangered and threatened species, and “the balance has been struck [by the ESA] in favor of affording endangered species the highest of priorities.” *TVA*, 437 U.S. at 194. “[I]n the context of the ESA, ‘the test for determining if equitable relief is appropriate is whether an injunction is necessary to effectuate the congressional purpose behind the statute.’” *Nat’l Wildlife Fed’n v. NMFS*, 422 F.3d 782, 795–96 (9th Cir. 2005) (quoting *Biodiversity Legal Found. v. Badgley*, 309 F.3d 1166, 1177 (9th Cir. 2002)).

To obtain injunctive relief under the ESA, a plaintiff must show a likelihood of success on the merits, irreparable injury to a listed species, and—for claims involving violation of ESA § 9—that a future ESA violation “is at least likely.” *Nat’l Wildlife Fed’n*, 23 F.3d at 1510–11. Under ESA § 7, an injunction should issue once a plaintiff establishes the likelihood of an ESA

violation. *Sierra Club v. Marsh*, 816 F.2d 1376, 1384 (9th Cir. 1987) (holding that plaintiff was “entitled to injunctive relief if the [action agency] violated a substantive or procedural provision of the ESA” related to ESA § 7).

For injunctive relief based on NEPA violations, “[a] plaintiff seeking a preliminary injunction must establish that he is likely to succeed on the merits, that he is likely to suffer irreparable harm in the absence of preliminary relief, that the balance of equities tips in his favor, and that an injunction is in the public interest.” *Winter v. Natural Res. Def. Council, Inc.*, 555 U.S. 7, 20 (2008). The Ninth Circuit applies a “sliding scale” approach, in which “serious questions going to the merits and a balance of hardships that tips sharply towards the plaintiff can support issuance of a preliminary injunction, so long as the plaintiff also shows that there is a likelihood of irreparable injury and that the injunction is in the public interest.” *Alliance for the Wild Rockies v. Cottrell*, 632 F.3d 1127, 1135 (9th Cir. 2011) (internal quotations omitted).

Review of agency decisionmaking is governed by the judicial review provision of the Administrative Procedure Act (“APA”), which requires a court to hold unlawful and set aside an agency decision that is “arbitrary, capricious, an abuse of discretion, or not otherwise in accordance with law,” or adopted “without observance of procedure required by law.” 5 U.S.C. § 706(2). A decision is arbitrary and capricious if the agency has “entirely failed to consider an important aspect of the problem, offered an explanation for its decision that runs counter to the evidence before the agency, or is so implausible that it could not be ascribed to a difference in view or the product of agency expertise.” *Motor Vehicle Mfrs. Ass’n, Inc. v. State Farm Mut. Auto. Ins. Co.*, 463 U.S. 29, 43 (1983). A court’s inquiry must be “searching and careful,” and an agency must articulate a rational connection between the facts found and the conclusions made. *Marsh v. Or. Natural Res. Council*, 490 U.S. 360, 378 (1989).

II. DEFENDANTS HAVE VIOLATED THE ESA AND NEPA.

A. State Defendants and NMFS are in violation of ESA Section 9.

State defendants have engaged in the unlawful take of listed wild spring Chinook, steelhead and coho since the take prohibition was extended to wild members of the LCR species. Until 2010, state defendants captured and killed wild fish for broodstock for the hatchery programs. State defendants have taken wild fish by releasing hatchery-bred fish into the system to interact and spawn with wild fish at rates which the undisputed scientific evidence shows cause genetic and ecological harm to wild fish, and, more recently, harm and harassment of wild fish whose spawning behavior is dramatically altered by the presence of artificial barriers and traps in key spawning areas. Frissell Decl. ¶¶ 12–14, 20–26, 34–37, 39, Lichatowich Decl. ¶¶ 17–34. As described above at 17–18, the spring Chinook stray rate was at least 25-30% in 2012 and peaked at 78% in 2010; the pHOS among winter steelhead was over 27% in 2012, and reported by ODFW to be 52% in 2010; ODFW also reported the coho stray rate at 24.2% in 2010.

There is no dispute that harm from genetic introgression in wild fish becomes a serious risk when the proportion of hatchery-origin spawners surpasses 5%, and ecological effects become harmful when the pHOS rises above 5% or 10%. *See* discussion *supra* at 12. The state defendants' releases of hatchery-bred fish have caused stray rates to exceed the levels at which hatchery-wild interaction is harmful to wild fish for each of the last five years, including by causing significant habitat modifications that injure wild fish by impairing their essential behavioral patterns. *See* Frissell Decl. ¶¶ 13–14, 26, 39. The placement of weirs in 2011 and 2012 has also harmed and harassed wild spring Chinook by impairing their essential behavioral patterns, causing profound changes to their spawning distribution and extensive premature

spawning, with increases of up to 500% in the proportion of redds downstream of the weirs and doubling the concentration of redds per mile in those reaches compared to before the weirs were installed. *See supra* at 18–19. These effects from the weirs have harmed and harassed wild fish. *See Frissell Decl.* ¶¶ 31–37. These violations of the statutory take prohibition are ongoing, and have been continuous before and after NMFS issued the ITS and the Section 4(d) Decision on September 28, 2012, and are causing irreparable harm to the survival and recovery of the species. Neither decision exempts defendants from liability for violating ESA § 9 because the ongoing take is not in compliance with the limits set in those decisions as exemptions from the take prohibition. 16 U.S.C. § 1536(o)(2); 50 C.F.R. § 223.203(c).⁵

B. NMFS’s BiOp violated ESA Section 7.

1. The BiOp fails to consider important aspects of the problem.

A biological opinion is arbitrary and capricious if it fails to “consider the relevant factors and articulate a rational connection between the facts found and the choice made.” *Ctr. for Biol. Diversity v. BLM*, 698 F.3d 1101, 1121-22 (9th Cir. 2012) (internal quotations omitted). In a BiOp, the “problem” is whether the project will jeopardize listed species, and “any effect that is likely to adversely affect the species is plainly an important aspect of this problem.” *S. Yuba River Citizens League v. NMFS*, 723 F. Supp. 2d 1247, 1270 (E.D. Cal. 2010) (citing 50 C.F.R. §§ 402.13(a), 402.14(b)(1)). A BiOp is invalid where it fails to consider a factor relevant to species survival or recovery. *See, e.g., Ctr. for Biol. Diversity*, 698 F.3d at 1124 (USFWS acted unreasonably by not discussing potential impacts of groundwater withdrawals on listed species occupying project’s action areas); *S. Yuba*, 723 F. Supp. 2d at 1272, 1274–75 (NMFS failed to

⁵ NMFS is liable for violating the take prohibition in ESA § 9 by funding and authorizing activities carried out by others that result in take. *Pac. Rivers Council v. Brown*, No. 02-243-BR, 2002 WL 32356431, at *11-*12 (D. Or. Dec. 23, 2002) (citing *Strahan v. Coxe*, 127 F.3d 155, 163 (1st Cir. 1997) and *Defenders of Wildlife v. EPA*, 882 F.2d 1294, 1301 (8th Cir. 1989)).

consider impact of hatchery on an environmental baseline, extent to which migratory habitat conditions impact listed fish, and impacts from poaching in pools below fish ladders).

i. The BiOp fails to consider impacts to wild fish from the weir/traps.

The BiOp is invalid because it does not evaluate the effects of the weirs on listed fish. NMFS acknowledges that operation of the weirs can have detrimental effects on wild fish due to weir rejection, fallback, handling, and delay, AR 16953–54, but eventually concludes that the weirs pose an “uncertain threat” ostensibly mitigated by Best Management Practices (“BMPs”) and ODFW monitoring. AR 16956, 16961. NMFS ignores *other* important detrimental effects from the presence of the weirs, such as increased premature spawning and genetic risk from an increased concentration of redds downstream of the structures. *See* AR 16961. NMFS also does not describe what the weir-operation BMPs are, nor explain or analyze how or whether they will actually mitigate harm. *Id.* Yet NMFS jumps to the unsupported and arbitrary conclusion that the effects “will occur at levels not meaningfully beyond background levels.” *Id.*

The failure to evaluate the effects of the weirs is exacerbated by the data showing that the proportion of redds downstream of the Salmon and Zigzag River weirs increased dramatically after the weirs were first installed in 2011. AR 11927; *see* discussion *supra* at 17–18. NMFS was aware that an ODFW scientist recommended reductions in hatchery program operations until other measures proved effective in reducing the number and percentage of hatchery-origin Chinook in the spawning population. *See* AR 31747. Despite this ominous data, NMFS fails to discuss and evaluate this important aspect of the problem in the BiOp.

ii. The BiOp does not take into account significant data regarding spring Chinook and winter steelhead.

NMFS fails to take into account several important aspects of the environmental baseline for this project. *See S. Yuba*, 723 F. Supp. 2d at 1272. The BiOp fails to analyze any data from

the Bull Run River, despite evidence that spring Chinook stray rates reached as high as 43.1% during 2011, and despite the Bull Run system accounting for 76% of the steelhead smolts in the Sandy River basin, belying ODFW's unfounded estimate that 70% of steelhead spawning habitat occurs upstream of the former Marmot Dam site. AR 4865; Ex. 5 at 3, 9. NMFS also was aware that state defendants lack data on how quickly Bull Run River smolts emigrate, and has no plans to conduct research specific to that question. AR 3337. Despite this, NMFS concludes in the BiOp that emigrating hatchery smolts are not expected to impact wild salmonids because they are not in close proximity and because hatchery releases are expected to leave the Sandy Basin within a matter of hours or at most days from the time of release. AR 16956. NMFS thus ignores the significance of the Bull Run to the species, ignores the impacts in that system, and ignores the glaring lack of research to support its suppositions about hatchery smolt emigration.

Additionally, NMFS fails to include the elevated proportion of hatchery strays that have been present in the Sandy River basin in recent years in its baseline. AR 16943–45. Spring Chinook have had rates up to 78% pHOS and the 2010 ODFW Recovery Plan estimated that 52% of Sandy River winter steelhead spawners are hatchery strays. AR 31748, 17334. Further, NMFS fails to account for the plan to continue to pass both wild and hatchery-origin winter steelhead spawners above the weir on Cedar Creek, at the Hatchery itself. AR 11369. Without evaluation of the baseline of harm that the Hatchery's operations *already* have caused, NMFS's conclusion that the *continued* operations will not cause jeopardy is arbitrary and capricious.

iii. The weirs are not guaranteed to reduce pHOS below the jeopardy threshold.

NMFS BiOp is also flawed for failing to evaluate whether the temporary weirs are actually guaranteed to be effective. Instead, NMFS accepts as true ODFW's conclusion that weir operation is an effective measure to prevent hatchery fish from spawning naturally. AR 16954.

However, despite the presence of the weirs in the Salmon and Zigzag Rivers each for a month in 2011, ODFW still estimated nearly 65% of spring Chinook spawners to be of hatchery origin. AR 31745. NMFS' failure to evaluate this data in the BiOp, and its reliance on a guarantee that the weirs will be successful in the BiOp's no jeopardy conclusion, reveals a flaw in the agency's assumptions about the effects of the weirs, and renders the conclusion arbitrary and capricious.

2. The BiOp relies on mitigation that is not reasonably certain to occur.

Mitigation measures may be included as part of a proposed action and relied upon to support a no jeopardy conclusion only where they involve "specific and binding plans" and "a clear, definite commitment of resources" to implement those measures. *Nat'l Wildlife Fed'n*, 524 F.3d at 935–36 (finding that a mere expression of intent to implement mitigation measures is inadequate absent an enforceable means to effectuate that intent). Additionally, measures supporting a BiOp's no jeopardy conclusion must be "reasonably specific, certain to occur, and capable of implementation; they must be subject to deadlines or otherwise enforceable obligations; and most important, they must address the threats to the species in a way that satisfies the jeopardy and adverse modification standards." *Ctr. for Biol. Diversity v. Rumsfeld*, 198 F. Supp. 2d 1139, 1152 (D. Ariz. 2002) (citing *Sierra Club*, 816 F.2d 1376). Measures that lack "solid guarantees that they will actually occur" fail to satisfy these standards. *Nat'l Wildlife Fed'n*, 524 F.3d at 935. NMFS may not rely on a third party to implement mitigation measures that are not reasonably certain to occur. *Nat'l Wildlife Fed'n v. NMFS*, 254 F. Supp. 2d 1196, 1213 (D.Or. 2003). If an agency cannot guarantee mitigation measures, "the proper course is to exclude them from the analysis and only consider those actions that are in fact under agency control or otherwise reasonably certain to occur." *Nat'l Wildlife Fed'n*, 524 F.3d at 936 n. 17.

The BiOp relies on three general categories of mitigation measures to support its no jeopardy conclusion. ODFW retains the responsibility, and discretion, for implementing each set of actions. First, the BiOp concludes that gene-flow and competition on the spawning grounds will be mitigated by the operation of weirs and traps to achieve a “strict” 10% limit on the pHOS in the system. AR 16958. Second, the BiOp concludes that BMPs will mitigate impacts to wild fish from the presence of the weirs and from interactions with hatchery fish experiencing delayed emigration. *See, e.g.*, AR 16954, 16961, 16964–66. These BMPs—of which NMFS rarely provides descriptions or analysis—include actions that would ostensibly reduce wild fish injury and delay from the weirs as well as certain rearing and marking practices to ensure that hatchery fish move through the system quickly. *Id.* Third, the BiOp describes that extensive monitoring is planned, although it does not describe what specific, mandatory, protective changes will result from such monitoring. *See, e.g.*, AR 16961–62.

However, the BiOp contains no assurances that these sets of necessary measures actually will occur, nor does it evaluate their effectiveness. Indeed, the BiOp lacks any enforceable measures to ensure that ODFW will actually achieve its 10% stray rate target or implement the BMPs—both key mitigation measures in the HGMPs. *See* AR 16954–56. Rather, the BiOp implies that, because ODFW will monitor weir operation and survey the presence of adult and juvenile fish throughout the Sandy River basin, the agency will therefore realize its goals. *See* AR 16961, 16965, 16972. NMFS misses the fact that this monitoring serves only to “determine if the standard[s are] being achieved;” it does not guarantee that ODFW will implement the monitoring. *See* AR 16965. There are no binding plans for crucial (albeit likely ineffective) mitigation measures, such as construction Bull Run River weir, AR 16961, and no defined and binding plan for how state defendants are required to adjust its operations in the event they fail to

meet standards. Without more, a requirement to monitor results is insufficient to guarantee that mitigation actually will be implemented and certain standards achieved, and NMFS' unthinking reliance on that monitoring is inadequate to support its no jeopardy finding.

Finally, the Mitchell Act is the principal source of funding for implementation of the Sandy HGMPs. Even though this program is "ongoing" indefinitely, NMFS's approval does not evaluate whether that funding will continue. There is no guarantee that the funding will continue indefinitely, yet the BiOp effectively allows release of hatchery smolts without assurance that, when they return in three or four years, ODFW will have the staff or infrastructure necessary to sort them. Indeed, the BiOp relies on the contingent recurrence of annual funding to support mitigation—some of it yet unfunded—to ensure the continued existence of listed species forever.

3. NMFS' incidental take statement is unlawful.

NMFS's ITS is also arbitrary and capricious. While a specific numerical limit is "ideal," an ITS may use ecological conditions or a "combination of numbers and estimates" as a "surrogate" to define the amount or extent of incidental take. *Arizona Cattle Growers' Ass'n v. U.S. Fish & Wildlife Serv.*, 273 F.3d 1229, 1249–50 (9th Cir. 2001). At bottom, the agency must demonstrate a "causal link"—a "rational connection"—between the surrogate and the taking of species. *Id.* (quoting ESA Consultation Handbook at 4-47 to 4-48). The surrogate must also contain measurable guidelines and provide a "clear standard for determining when the authorized level of take has been exceeded." *Id.* at 1250-51. An ITS is arbitrary and capricious if it is "too vague" or fails to explain "how the level of take will be quantified" in relation to an ecological condition surrogate. *Ctr. for Biol. Diversity v. BLM*, 422 F. Supp. 2d 1115, 1139-40 (N.D. Cal. 2006); *see also Wild Fish Conservancy*, 628 F.3d at 532 (voiding an ITS that lacked adequate

monitoring and reporting requirements to establish a meaningful trigger for renewed consultation after take exceeded authorized levels).

In addition, the ESA requires that a federal agency's actions under section 7 must be based on "the best scientific and commercial data available." 16 U.S.C. § 1536(a)(2); 50 C.F.R. § 402.14(g)(8). Courts interpret this "best science" mandate to prohibit federal agencies from "ignor[ing] available biological information." *Conner v. Burford*, 848 F.2d 1441, 1454 (9th Cir. 1988); *see also Sw. Ctr. for Biol. Diversity v. Babbitt*, 215 F.3d 58, 60 (D.C. Cir. 2000) (the best science requirement "prohibits the Secretary from disregarding available scientific evidence that is in some way better than the evidence he relies on"). A jeopardy analysis violates the best science requirement where it "entirely ignore[s] relevant factors and admittedly fail[s] to develop projections based on information that was available." *Greenpeace v. NMFS*, 80 F. Supp. 2d 1137, 1150 (W.D. Wash. 2000). An agency must use the best available science to "provide a reasoned and scientifically justified basis for selecting the specific remedial measures chosen." *Consol. Salmonid Cases*, 713 F. Supp. 2d 1116, 1165, 1168 (E.D. Cal. 2010) (finding it improper one agency to "blindly adopt the conclusions of" another to conclusively establish its compliance with substantive legal obligations) (internal quotations omitted).

Two measures of incidental take violate these legal standards. First, NMFS' BiOp has "blindly adopted" ODFW's conclusion that a 10% pHOS limit is sufficient to avoid harm to native wild salmonids from interactions with hatchery fish on spawning grounds. AR 16970. NMFS fails to use the best available science and provide a reasoned and scientifically justified basis for adopting this conclusion. NMFS fails to provide a rational explanation for its departure from its own guidelines and leading scientific articles indicating that, in segregated hatchery programs like the Sandy Hatchery, the hatchery-origin stray rate should be "no more than 5% of

any natural spawning population” to prevent genetic introgression. *See* AR 16614, 20518 (Grant 1997), 21493, 4356 (Hatchery Scientific Review Group Report). NMFS arbitrarily sets the pHOS at 10% to avoid “be[ing] more restrictive than” ODFW’s Recovery Plan, despite acknowledging that the Interior Columbia Technical Recovery Team Risk Criteria mandates a 5% pHOS for this type of program. *See* AR 2000-2001. The BiOp uncritically adopts ODFW’s figure, failing to acknowledge relevant studies or justify its conclusion with current science.

Second, the surrogate for take from construction, operation, and maintenance of the weirs is vague and inexplicable. NMFS sets the take limit as “any change greater than 20 percent in spawning distribution above and below the weirs and in pre-spawning mortality from what was measured during previous spawning ground surveys prior to the installation and operation of the weirs in 2011.” AR 16971. NMFS fails to explain, however, how it derived this number, what it represents, what baseline ODFW will use to measure the change, and thus how the agency will monitor the changes. NMFS also provides no explanation of the causal link to the take it is attempting to measure, and hence this surrogate is arbitrary and capricious.

C. NMFS violated NEPA in approving the HGMPs.

1. Failure to consider reasonable alternatives.

NEPA requires that an agency “[r]igorously explore and objectively evaluate all reasonable alternatives.” 40 C.F.R. § 1502.14(a). The requirement that alternatives be given full and meaningful consideration applies to EAs as well as to EISs. *Native Ecosystems Council v. U.S. Forest Serv.*, 428 F.3d 1233, 1245–46 (9th Cir. 2005). By considering only the proposed action of approving ODFW’s HGMPs without modification, and “no action,” AR 16534–35, NMFS has failed to consider a reasonable range of alternatives in its EA.

NMFS articulates the purpose and need to “provide fishing opportunities for the citizens of the Columbia River basin”; meet vague, undefined “mitigation responsibilities, related to impacts from development in the Sandy River and Columbia River basins, by providing hatchery fish to support fishing opportunities”; and “provide hatchery fish for meeting mitigation responsibilities.” AR 16528–29. The scope of reasonable alternatives to be considered is shaped by the purpose and need statement the agency articulates, and the agency must consider all reasonable alternatives that could achieve the defined purpose and need. *‘Ilio’ulaokalani Coal. v. Rumsfeld*, 464 F.3d 1083, 1098 (9th Cir. 2006). NMFS here has failed to evaluate any of several viable alternatives that could “provide fishing opportunities” that would not involve continuing the hatchery programs exactly as ODFW proposed them.

The range of reasonable alternatives is potentially large, because the “need” for the action is so vaguely defined and involves a false premise, namely that this is a “mitigation” program. NMFS readily admits in the EA that no mitigation is required for effects of the Marmot Dam because it has been removed, and the effects of the Bull Run Dam are being mitigated by the roughly \$100 million habitat conservation plan financed by the City of Portland. AR 16531, 16535, 16781. NMFS also notes that there are “no numeric harvest goals for ocean, Columbia River, and Sandy River fisheries” for any of the four programs operated by the Sandy Hatchery. AR 16535, 16541, 16546, 16550. The “need” for the proposed action thus amounts to production of an unspecified number of additional hatchery-bred fish to meet unquantified harvest objectives and provide “mitigation” for habitat loss that already has been mitigated. Because NMFS must protect listed fish from harm and evaluate how a hatchery’s operation contributes to the recovery of the affected species, NMFS had an obligation under NEPA to consider reasonable alternatives beyond “no action” and “exactly what ODFW proposed.”

Comments to the draft EA disclosed several reasonable alternatives that would meet the need to “provide fishing opportunities”: managing the Sandy River for recovery of wild fish and transitioning to a wild-fish fishery; rearing fish at the Hatchery for release and harvest outside the Sandy River basin; reduced production of hatchery fish to guarantee protection of wild fish; and developing a set of mandatory, certain-to-occur measures that will reduce or halt hatchery impacts if performance standards are not met. AR 16552–53, 16804–05. All would advance the purpose of providing fishing opportunities, while minimizing the genetic and ecological effects on wild fish. NMFS violated NEPA by evaluating *no* alternative besides the proposed action.

2. Failure to prepare an EIS.

NMFS must prepare an EIS if “the agency’s action *may* have a significant impact upon the environment.” *Nat’l Parks & Conservation Ass’n. v. Babbitt*, 241 F.3d 722, 730 (9th Cir. 2001) (“*NPCA*”) (emphasis in original; internal quotes omitted); *see also Anderson v. Evans*, 371 F.3d 475, 488 (9th Cir. 2004) (an EIS is required if “substantial questions” exist as to whether a project may have a significant environmental effect). “This is a low standard.” *Klamath Siskiyou Wildlands Ctr. v. Boody*, 468 F.3d 549, 562 (9th Cir. 2006).

NEPA regulations define the term “significantly” as requiring analysis of both the “context” and the “intensity.” 40 C.F.R. § 1508.27. The context of the action includes “society as a whole (human, national), the affected region, the affected interests, and the locality.” *Id.* § 1508.27(a). The regulation lists ten, non-exclusive intensity factors. *Id.* § 1508.27(b). The potential presence of even one significance factor is sufficient to require the preparation of an EIS. *Ocean Advocates v. U.S. Army Corps of Eng’rs*, 402 F.3d 846, 865 (9th Cir. 2005).

If the agency decides not to prepare an EIS, the agency must supply a “convincing statement of reasons” to explain why the action will not have a significant impact on the

environment. *Blue Mountains*, 161 F.3d at 1212. The Court is to defer to the agency’s decision not to prepare an EIS only when that decision is “fully informed and well considered.” *Jones v. Gordon*, 792 F.2d 821, 828 (9th Cir. 1986). NMFS provides no convincing statement of reasons explaining why approval of the HGMPs may not have significant effects. AR 16661–68.

i. The unique characteristics of the geographic area and the context of the proposed action require preparation of an EIS.

When “the unique characteristics of the geographic area in which the proposed activity is to occur involves proximity to ecologically critical areas, the impact of the action may be considered significant.” *Ocean Mammal Inst. v. Gates*, 546 F. Supp. 2d 960, 978 (D. Haw. 2008) (citing 40 C.F.R. § 1508.27(b)(3)). ODFW has designated and ostensibly manages the Sandy River basin above the former Marmot Dam site as a wild fish sanctuary. *See, e.g.*, AR 16246. Trapping and other harm to wild fish from the weirs and from the straying of hatchery-bred fish occurs within this “sanctuary,” as well as within designated critical habitat for LCR Chinook and LCR steelhead. AR 16530. An activity that may cause harm to a protected species within a designated sanctuary or other ecologically critical area must be analyzed in an EIS. *Ocean Mammal Inst.*, 546 F. Supp. 2d at 978. NMFS does not even acknowledge in the EA that the area impacted by its proposed action is an ecologically critical wild fish sanctuary.

NMFS also ignores the significant context of its proposed action. The Sandy River basin is unmatched as a potential venue for wild fish recovery and for ensuring the survival and recovery of the listed species that inhabit the basin. *See* discussion *supra* at 9. The affected resource—threatened fish—is protected by the nation’s most comprehensive environmental protection law, and the wild fish populations in the Sandy River are among the few viable populations remaining in the ESUs or DPS. NMFS’s EA simply ignores the cumulative significance of *these* wild fish within *these* species in *this* unique locality for their preservation.

NMFS's FONSI does not even evaluate the "context" factor. AR 16661–68. The significant context of the proposed action warrants preparation of an EIS. *See Anderson*, 371 F.3d at 490.

ii. The proposed action is likely to be highly controversial and involves uncertain effects and unique or unknown risks.

NMFS must prepare an EIS for its approval of the Sandy Hatchery HGMPs if the effects on the human environment are "likely to be highly controversial," 40 C.F.R. § 1508.27(b)(4), or if the "possible effects . . . are highly uncertain or involve unique or unknown risks." 40 C.F.R. § 1508.27(b)(5). "A proposal is highly controversial when there is "a substantial dispute [about] the size, nature, or effect of the major Federal action rather than the existence of opposition to a use.'" *Anderson*, 371 F.3d at 489 (quoting *Blue Mountains*, 161 F.3d at 1212). A project also is controversial if "substantial questions are raised as to whether a project ... may cause significant degradation of some human environmental factor." *NPCA*, 241 F.3d at 736 (quotations omitted).

Many of the most important effects of NMFS's proposed action are "uncertain" or "unknown." AR 16538, 16612–13, 16615, 16662. For one of the fundamental questions regarding the effects of the proposed action, NMFS forthrightly admits that "it is unknown if the operation of the weir/traps will be successful in removing enough of the hatchery spring Chinook salmon adults to meet the 10 percent goal, while at the same time minimizing impacts on natural-origin spring Chinook salmon that are handled and released during collection activities." AR 16538. In addition, ODFW had provided NMFS with a series of conflicting information that coho stray rate in 2010 was 24.2%, or perhaps 16.2%, or perhaps 12.4%. AR 15626, 11404, 16621. The range of conflicting information about stray rates demonstrates that the effects of hatchery strays among coho are highly uncertain. State defendants' plan to mix wild and hatchery fish in Cedar Creek upstream of the Hatchery meant that the proportion of hatchery

spawners among the winter steelhead population was exceeding 27%, and ODFW had reported in 2010 that the winter steelhead stray rate was 52%. AR 11369, 17334; *see supra* at 14, 17–18.

With spring Chinook stray rates ranging from 45% to 78% during the four years preceding its decision to approve the HGMPs, and no plans to sort steelhead or coho except at the Hatchery itself, the possible effects of continued releases of hatchery fish and operation of the weir/traps are almost certainly harmful to wild fish. NMFS acknowledges, at least, that the effects are highly uncertain and involve unknown risks. Therefore there are substantial questions whether these operations may cause a degradation of the wild fish populations in the Sandy River basin. NMFS also had before it evidence that the operation of the weirs during 2011 had increased the proportion of spawning redds located downstream of the two weirs, doubling the proportion in the Salmon River and increasing it six-fold in the Zigzag River. AR 31747.

The certainty of threats to wild fish raise few questions as to whether the Hatchery operations will degrade wild fish populations, rendering the project highly controversial. *NPCA*, 241 F.3d at 736. Likewise, the FONSI's statement that no unknown risks have been identified and that uncertainties will be addressed with monitoring does not provide a convincing explanation that the effects of continued releases of hatchery fish and operation of the weirs and other Hatchery facilities may not be significant, given the agency's acknowledgment of several critical uncertainties in its analysis. AR 16666. NMFS must prepare an EIS to evaluate the highly controversial, uncertain, and unknown effects of the proposed action.

3. Failure to analyze mitigation.

NEPA regulations require that NMFS discuss possible mitigation measures as a means to “mitigate adverse environmental impacts.” 40 C.F.R. § 1502.16(h). “An agency’s decision to forego issuing an EIS may be justified in some circumstances by the adoption of [mitigation]

measures.” *NPCA*, 241 F.3d at 733-34. An adequate discussion of mitigation measures requires the agency to analyze the effectiveness of the proposed mitigation. *S. Fork Band Council of W. Shoshone v. U.S. Dep’t of Interior*, 588 F.3d 718, 727 (9th Cir. 2009). This allows the court to evaluate “the sufficiency of mitigation measures,” determine “whether they constitute an adequate buffer against the negative impacts that may result from the authorized activity,” and examine “whether the mitigation measures will render such impacts so minor as to not warrant an EIS,” based on “supporting analytical data.” *NPCA*, 241 F.3d at 734.

With respect to the principal mitigation measure proposed—the weirs—NMFS admits that “it is unknown if the operation of the weir/traps will be successful in removing enough of the hatchery spring Chinook salmon adults to meet the 10 percent goal.” AR 16538. NMFS includes no analysis of whether or not the proposed suite of mitigation *will* bring the stray rates below the 10% or 5% that may avoid significant genetic and ecological risk to wild fish.

In addition, although NMFS acknowledges that “the more fish that are handled or delayed during migration—the greater the threat to listed species,” the EA contains no analysis of whether the operation of the weirs will actually result in mitigation of harm from migration delay, and does not address premature spawning impacts at all. AR 16953, 16612. It simply says that “proper weir design, the use of trained personnel” and unspecified “operations” will mitigate harm, without explaining how. In the BiOp, NMFS references BMPs to be used to operate the weirs, but these are never described, much less analyzed by the agency. NMFS’s discussion of the mitigation and monitoring associated with the project refers to actions by ODFW over which NMFS has no control and which are not reasonably certain to occur or be effective. The FONSI’s conclusion that “limited and negligible impacts due to migration delay from weir operations” is therefore unsupported by any analysis in the EA and contradicted by the data. AR

16661. Where success of mitigation measures depends upon how they are applied and enforced, and the latter is uncertain, the measures are suspect. *Jones*, 792 F.2d at 829.

III. IRREPARABLE HARM TO WILD FISH AND PLAINTIFFS' INTERESTS IS LIKELY ABSENT AN INJUNCTION.

If an injunction against release of hatchery fish does not issue, irreparable harm to the wild fish in the Sandy River basin, and therefore to the interests of plaintiffs and their members, will follow. Irreparable harm will result from the release of hatchery fish that will return to cause genetic and ecological harm to wild fish present in the system. Frissell Decl. ¶¶ 12–14, 21–26, 37, 39; Lichatowich Decl. ¶¶ 22–29, 33–34. The genetic and ecological effects from hatchery fish interacting with wild fish, and the harm to wild spring Chinook from the operation of the weir/traps, are harming the wild fish present in the Sandy River basin and, in turn, the interests of plaintiffs in the protection and recovery of these wild fish populations. These harms are likely to continue in the future. Frissell Decl. ¶¶ 26, 37, 39; Lichatowich Decl. ¶¶ 20, 29, 33–34. This is underscored by the failure of a full-season of operation of weirs in two main spawning tributaries to bring the proportion of hatchery-origin spring Chinook spawners below 25–30% in those tributaries (much less in the whole system), still far above the 5% level at which harmful genetic introgression will occur, and the harmful concentration of spawning activity downstream of the weirs during 2012. Frissell Decl. ¶¶ 25–26; *see* discussion *supra* at 12, 17–18.

IV. NO BALANCE OF HARMS ANALYSIS IS NEEDED UNDER THE ESA, AND UNDER NEPA THE BALANCE WEIGHS IN FAVOR OF AN INJUNCTION.

Congress has restricted the scope of analysis for injunctions based on the ESA to ensure protection of listed species, and thus the balancing of equities and hardships does not apply because Congress has “decided the order of priorities” and has made “it abundantly clear that the balance has been struck in favor of affording endangered species the highest of priorities.” *TVA*,

437 U.S. at 194. Therefore “the balance of hardships always tips sharply in favor of the endangered or threatened species.” *Wash. Toxics Coal. v. EPA*, 413 F.3d 1024, 1035 (9th Cir. 2005). Because of ongoing unlawful take of wild fish and the likelihood of future harm, and NMFS’s violations of the ESA in approving the HGMPs, an injunction should issue to protect listed fish. *See Nat’l Wildlife Fed’n*, 23 F.3d at 1510–11; *Sierra Club*, 816 F.2d at 1384.

Beyond the concern for ESA-listed species, the Ninth Circuit has “held time and again that the public interest in preserving nature and avoiding irreparable injury outweighs economic concerns.” *Lands Council v. McNair*, 494 F.3d 771, 780 (9th Cir. 2007), *vacated on rehearing en banc on other grounds*, 537 F.3d 981 (9th Cir. 2008). The balance of harms and the public interest support an injunction based on NMFS’s violation of NEPA because of “the public interest in careful consideration of environmental impacts before major federal projects go forward.” *Alliance for the Wild Rockies*, 632 F.3d at 1138) (quoting *S. Fork Band*, 588 F.3d at 728). “[S]uspending such projects until that consideration occurs ‘comports with the public interest’” where NEPA is violated. *Id.*; *see also Sierra Club v. Bosworth*, 510 F.3d 1016, 1033 (9th Cir. 2007) (“the public interest favor[s] issuance of an injunction because allowing a potentially environmentally damaging program to proceed without an adequate record of decision runs contrary to the mandate of NEPA”). Accordingly, the public interest is furthered by prohibiting further releases of hatchery fish pending compliance with NEPA.

Any economic interest that defendants have in continuing releases of hatchery fish into the Sandy River basin for recreational fishing is outweighed by the harm to wild fish and to the public from the inadequate and unlawful NEPA process. The smolts produced at the Sandy Hatchery can be transferred to other streams and provide equivalent recreational fishing opportunities in those areas. AR 16805. In fact, state defendants have already made plans to shift

part of the previously-anticipated releases of spring Chinook and coho out of the Sandy River basin in 2013 as a result of “shifts of a portion of fish released to terminal fisheries in the Lower Columbia River” and a lack of funding for production of the higher HGMP targets. Ex. 3 at 54.

At least since the removal of the Marmot Dam in 2007, state defendants and NMFS have ignored their obligations under the ESA to avoid harm to wild salmon and steelhead in the Sandy River basin. Enjoining NMFS’s authorization of the operation of the Hatchery and prohibiting state defendants from releasing hatchery-bred smolts until they demonstrate compliance with the law will have the effect of focusing their attention on discharging their duties properly.

V. THE COURT SHOULD WAIVE THE BOND REQUIREMENT.

NFS respectfully requests that if the Court grants NFS’s motion for injunctive relief, the Court waive the bond requirement of Rule 65(c). The Court has discretion to waive this requirement or to set nominal security. *See, e.g., Cal. ex rel. Van de Kamp v. Tahoe Reg’l Planning Ag’y*, 766 F.2d 1319, 1325 (9th Cir. 1985); *Friends of the Earth v. Brinegar*, 518 F.2d 322, 323 (9th Cir. 1975). When requiring security would effectively deny access to judicial review, courts routinely waive the bond requirement in public interest environmental litigation. Neither of the plaintiffs here is able to afford a substantial bond. *See* Moody Decl. ¶¶ 4–7; Thomas Decl.

CONCLUSION

For the reasons stated above, NFS respectfully requests that this Court issue relief as requested in NFS’s Motion for Temporary Restraining Order and/or Preliminary Injunction.

Respectfully submitted this 19th day of February 2013.

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