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**UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF OREGON**

NORTHWEST ENVIRONMENTAL
ADVOCATES,

Plaintiff,

v.

UNITED STATES FISH AND WILDLIFE
SERVICE and UNITED STATES
ENVIRONMENTAL PROTECTION
AGENCY,

Defendants.

Case No: 3:18-cv-01420

**PLAINTIFF'S MOTION FOR
SUMMARY JUDGMENT AND
MEMORANDUM OF LAW IN SUPPORT**

ORAL ARGUMENT REQUESTED

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MOTION

Pursuant to Federal Rule of Civil Procedure 56, Plaintiff Northwest Environmental Advocates (“NWEA”) respectfully moves this Court for an order granting summary judgment in its favor on all claims for relief, as set forth in NWEA’s Complaint for Declaratory and Injunctive Relief (Dkt. #1). The grounds for the motion are set forth in the following Memorandum, the supporting declarations, exhibits previously filed with the Court, and the excerpts of the administrative record cited below.

As required by Local Rule 7-1(A), the parties have made a good faith effort to resolve this dispute on several occasions, including via telephone conference on October 22, 2020, but were unable to reach agreement on the subject matter of this motion.

MEMORANDUM OF LAW

INTRODUCTION

Toxic water pollution poses a grave threat to aquatic species throughout Oregon. Threatened and endangered salmonids such as bull trout are especially vulnerable because they are highly sensitive to toxic pollutants and other forms of habitat degradation, and require cold, clear, and clean water to thrive. The two federal agency actions under review here compound those threats because they risk exposing threatened bull trout to concentrations of toxic pollution greater than the species can sustain.

After years of advocacy and several prior lawsuits by NWEA, defendants Environmental Protection Agency (“EPA”) and U.S. Fish and Wildlife Service (“FWS”) finally engaged in formal consultation, pursuant to Section 7 of the Endangered Species Act (“ESA”), on the likely and potential impacts to threatened and endangered species and their critical habitat from EPA’s proposal to approve a suite of revised water quality criteria for toxic pollutants in Oregon. That consultation concluded with FWS’ issuance of a biological opinion, dated July 30, 2012, which found that Oregon’s new toxics criteria would not jeopardize the continued existence of

threatened or endangered species in Oregon, including bull trout.¹ Based on that BiOp, EPA then approved Oregon’s new toxics criteria.

Both of these agency actions were arbitrary, capricious, and not in accordance with the ESA. The Oregon BiOp itself is not based on the best available science and ignores the real-world threats to bull trout; instead, FWS relied on formulaic toxic effects modeling drawing on laboratory experiments performed on often unrelated surrogate species. FWS also drew unfounded assumptions about the likely exposure of bull trout to the toxic pollutants under review, ignoring the fact that EPA was approving *state-wide* water quality criteria. For these and other reasons, the BiOp must be set aside. For its part, EPA unlawfully relied upon that flawed BiOp, thereby violating Section 7(a)(2) of the ESA, and later failed to reinstate consultation under Section 7 when new information became available—including, for example, data and analysis contained in a related FWS BiOp prepared in 2015 for the State of Idaho’s toxics criteria, which found that the same concentrations of several toxics approved for Oregon would actually jeopardize bull trout and its critical habitat.

These agency decisions were legally flawed and will not protect species to the extent required by the ESA; they should therefore be remanded to the agencies and, in the case of the BiOp itself, set aside.

LEGAL FRAMEWORK

Section 7(a)(2) of the ESA requires “[e]ach Federal agency” insure that any action it undertakes “is not likely to jeopardize the continued existence of any endangered species or threatened species or result in the destruction or adverse modification of habitat of such species[.]” 16 U.S.C. § 1536(a)(2). This determination must be made “in consultation with and with the assistance of” the appropriate federal wildlife management agency, either the FWS or the U.S. National Marine Fisheries Service (“NMFS,” also known as NOAA Fisheries). 50

¹ FWS, Final Biological Opinion on U.S. Environmental Protection Agency Proposed Approval of Oregon Water Quality Criteria for Toxics (July 30, 2012) (“Oregon BiOp”). FWS-000001.

C.F.R. § 402.14(a); *see Karuk Tribe of California v. U.S. Forest Serv.*, 681 F.3d 1006, 1011 (9th Cir. 2012). The result of this consultation is a document called a biological opinion (“BiOp”), which sets forth the relevant Service’s opinion “detailing how the agency action affects the species or its critical habitat.” 16 U.S.C. § 1536(b)(3)(A); *see also* 50 C.F.R. § 402.14(h).

The BiOp’s central component is the Service’s determination of whether the agency action may cause “jeopardy” to ESA-listed species or “adverse modification” of the species’ critical habitat; if jeopardy or adverse modification is found, the Service must also “suggest those reasonable and prudent alternatives” that the agency may take to avoid violating ESA Section 7(a)(2). 16 U.S.C. § 1536(b)(3)(A). The geographic scope of the Service’s analysis is called the “action area”, defined to mean “all areas to be affected directly or indirectly by the Federal action and not merely the immediate area involved in the action.” 50 C.F.R. § 402.02.

“Jeopardy” occurs within the meaning of ESA Section 7 when an action “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.” 50 C.F.R. § 402.02. For bull trout, as a matter of FWS policy, the “jeopardy” assessment is primarily made not range-wide but rather at a smaller scale that recognizes the importance of discrete populations of bull trout and their areas of habitat called “interim recovery units” (“IRUs”). FWS-000032 (citing FWS Final Rule, *Determination of Threatened Stats for Bull Trout in the Coterminous United States*, 64 Fed. Reg. 58,910, 58,930 (Nov. 1, 1999) and USFWS and NMFS, *Endangered Species Consultation Handbook* (1998)).

FWS must evaluate the “effects of the action” together with “cumulative effects” on the listed species. 50 C.F.R. § 402.14(g)(3)-(4). This multi-step analysis requires the agency to consider the direct, indirect, interrelated and interdependent effects of the proposed action. 50 C.F.R. § 402.02. The agency must review all information provided by the action agency, as well as any other relevant information, to determine whether the proposed action is likely to jeopardize a listed species or destroy or adversely modify its designated critical habitat. 50

C.F.R. §§ 402.14(g)–(h). “Critical habitat” is that habitat identified by the relevant Service as being “essential to the conservation of the species.” 16 U.S.C. § 1532(5)(A).

After consultation has been completed, under certain circumstances the action agency or the relevant Service must reinstate consultation. For instance, the action agency or Service must reinstate formal consultation if “discretionary Federal involvement or control over the action has been retained or is authorized by law and . . . [i]f new information reveals effects of the action that may affect listed species or critical habitat in a manner or to an extent not previously considered[.]” 50 C.F.R. § 402.16.

Finally, independent of the interagency consultation process, “Section 7 of the ESA imposes a substantive duty on the [action agency] to ensure that its actions are not likely to jeopardize the continued existence of the listed fish or result in destruction or adverse modification of critical habitat.” *Ctr. for Biological Diversity v. U.S. Bureau of Land Mgmt.*, 698 F.3d 1101, 1127 (9th Cir. 2012) (citing 16 U.S.C. § 1536(a)(2)).

FACTUAL BACKGROUND

I. Bull Trout in Oregon

Bull trout are salmonids, native to both the coastal and intermountain west of North America, and are either resident (remaining in the same stream their entire lives) or migratory (moving from high mountain streams and lakes, through larger river systems, and even to the ocean for certain coast populations). FWS-000034.² The bull trout’s range extends throughout the Pacific Northwest, including coastal drainages from Puget Sound to Southern Oregon and most major river basins including the Columbia, Willamette, and Klamath Rivers and their tributaries. FWS-000034.

² Defendants filed separate administrative records in this case, and the parties have used the prefixes “FWS” and “EPA” to differentiate between the two. NWEA continues that practice here. Citations to NWEA’s other evidence will be by ECF docket or exhibit number, and will use the prefix “NWEA” when identifying specific Bates-numbered pages.

The entire coterminous U.S. population of bull trout was listed as “threatened” under the ESA in 1999, and its critical habitat was designated in 2010. FWS-000034–035. In Oregon, nearly 3,000 miles of rivers and streams and over 30,000 acres of lakes are designated as bull trout critical habitat, primarily for their value as habitat for spawning, rearing, foraging, migration, and overwintering. FWS-000035–036. Discrete populations of bull trout are organized by FWS into interim recovery units (“IRUs”), and two such IRUs exist in Oregon: the Klamath River IRU and the Columbia River IRU. FWS-000047–048. FWS has recognized that maintaining and restoring “multiple, interconnected populations in diverse habitats across the range of each [IRU]” is essential to the survival and recovery of bull trout. FWS-000052–053. The FWS-designated bull trout critical habitat within Oregon contains 13 discrete critical habitat units (“CHUs”), including all or portions of the Columbia, Deschutes, John Day, Klamath, and Willamette Rivers, among others. FWS-000060–062.

Bull trout remain at grave threat of survival, both within Oregon and throughout its coterminous U.S. range. As FWS notes,

Throughout its range, the bull trout are threatened by the combined effects of habitat degradation, fragmentation, and alterations associated with dewatering, road construction and maintenance, mining, grazing, the blockage of migratory corridors by dams or other diversion structures, poor water quality, entrainment (a process by which aquatic organisms are pulled through a diversion or other device) into diversion channels, and introduced nonnative species. Although all salmonids are likely to be affected by climate change, bull trout are especially vulnerable given that spawning and rearing are constrained by their location in upper watersheds and the requirement for cold water temperatures. Poaching and incidental mortality of bull trout during other targeted fisheries are additional threats.

FWS-000034–035 (internal citations omitted). Today, the status of bull trout in the Columbia River and Klamath River IRUs is poor; FWS’ estimated total Oregon population of bull trout is only about 4,600 to 13,200 fish, with many populations declining. FWS-000056–061.

II. The FWS and EPA Actions Under Review

The State of Oregon, acting through its Department of Environmental Quality, submitted to EPA a wholesale revision to its water quality standards for toxic pollutants on July 8, 2004,

with amended submissions following in April of 2007 and July of 2011. *See* EPA-000913; EPA-001267; EPA-001418. Oregon's revisions changed the acute and chronic water quality criteria for 20 toxic pollutants. *See* FWS-000027. Because revised state water quality standards require EPA review and approval under the Clean Water Act, 33 U.S.C. § 1313(d)(2), and because such EPA approval is a federal action that may affect listed species under Section 7(a)(2) of the ESA, 16 U.S.C. § 1536(a)(2), EPA initiated formal consultation with both FWS and NMFS regarding its proposal to approve Oregon's new standards. *See* EPA-006877. Accordingly, on January 14, 2008, EPA delivered to FWS and NMFS its biological evaluation ("BE") of its proposed action, which set forth EPA's analysis of the potential effects of Oregon's revised water quality standards on threatened and endangered species and designated critical habitat. FWS-031717.

On July 30, 2012, FWS issued its BiOp for EPA's proposed approval of Oregon's revised water quality standards, concluding (among other things) that approval of Oregon's revised freshwater and saltwater criteria for arsenic, selenium, and zinc was not likely to adversely affect threatened bull trout in Oregon (among other species) or its critical habitat. In the Oregon BiOp, FWS based its analysis and conclusions almost exclusively upon a set of assumptions about the likely exposure of bull trout to *existing* sources of pollution, combined with the results of its statistical toxics effects modeling that were developed in sterile laboratory settings and used not bull trout (or in many cases even related species) but surrogate species of fish. *See generally* FWS-000475-507.³

Based largely upon the Oregon BiOp, EPA then partially approved and partially disapproved Oregon's revised water quality criteria for toxic pollutants on January 31, 2013, and approved other revised criteria on April 11, 2014.⁴

³ Appendix 1 to the Oregon BiOp, found in the record beginning at FWS-000475, describes the "[d]etailed methodologies used to characterize exposure and ecological effects" to various ESA-listed species.

⁴ Letter from Daniel Opalski, EPA Region 10, to Greg Aldrich, Oregon Dept. of Env'tl. Quality, Re: EPA's Action on New and Revised Aquatic Life Water Quality Criteria for Toxics in Oregon's Water Quality Standards (Jan. 31 2013), EPA-000001; Letter from Daniel Opalski, EPA Region 10, to Wendy Wiles, Oregon Dept. of Env'tl. Quality, Re: EPA's Action on the State

Some years later, on June 25, 2015, FWS issued a BiOp for the State of Idaho’s revisions to its water quality standards for toxic pollutants, which, like Oregon, included revisions to Idaho’s criteria for chronic arsenic, chronic selenium, and acute and chronic zinc at the same or more stringent concentrations proposed for Oregon.⁵ However, for those three pollutants, FWS found that jeopardy *would* occur to threatened bull trout in Idaho. Idaho BiOp at NWEA-000673-674. In the Idaho BiOp, FWS’ analysis was not confined to statistical modeling as it was in Oregon, and in fact the agency expressed serious concern about the assumptions used and uncertainties inherent in those same models. *See, e.g.*, Idaho BiOp at NWEA-000541.

STANDARD AND SCOPE OF REVIEW

A BiOp is a reviewable final agency action under the Administrative Procedure Act (“APA”), 5 U.S.C. § 706. *Bennett v. Spear*, 520 U.S. 154, 179 (1997). The reviewing court must determine that agency decisions are not “arbitrary, capricious, an abuse of discretion, or otherwise not in accordance with law.” 5 U.S.C. § 706(2)(A); *Ariz. Cattle Growers’ Ass’n v. U.S. Fish & Wildlife Serv.*, 273 F.3d 1229, 1236 (9th Cir. 2001). “A [BiOp] is arbitrary and capricious and will be set aside when it has failed to articulate a satisfactory explanation for its conclusions or when it has entirely failed to consider an important aspect of the problem.” *Greenpeace v. Nat’l Marine Fisheries Serv.*, 80 F. Supp. 2d 1137, 1147 (W.D. Wash. 2000); *Motor Vehicle Mfrs. Ass’n v. State Farm Mut. Ins. Co.*, 463 U.S. 29, 43 (1983).

NWEA’s first claim challenges the Oregon BiOp under the APA, thus the arbitrary and capricious standard of review applies to it. The Court’s review of that claim is limited to the administrative record, except that the Court may consider extra-record evidence in appropriate

of Oregon’s December 12, 2013 Revision to Their Surface Water Quality Standards (Apr. 11, 2014), EPA-003990. These actions are collectively referred to herein as the “EPA Approval.”
⁵ FWS, Biological Opinion for the Idaho Water Quality Standards for Numeric Water Quality Criteria for Toxic Pollutants (June 25, 2015) (“Idaho BiOp”). The Idaho BiOp is not in the administrative record, but was previously filed as Exhibit 22 to the Declaration of James Saul dated May 31, 2019. Dkt. #21-3, Ex. 22, beginning at page NWEA-000406. Citations to it will use “Idaho BiOp” followed by the corresponding page reference.

circumstances, *Lands Council v. Powell*, 395 F.3d 1019, 1030 (9th Cir. 2005); here, NWEA maintains that such circumstances exist.⁶ NWEA’s remaining three claims are brought pursuant to the ESA’s citizen suit provision, and review thereof (as the Court previously held) is not limited to the record, even though the APA’s “arbitrary and capricious” standard of review applies. *See* Dkt. #31; *W. Watersheds Proj. v. Kraayenbrink*, 632 F.3d 472, 496 (9th Cir. 2011).

While the court usually defers to an agency’s application of its technical expertise, particularly within its area of competence, *Marsh v. Or. Nat. Res. Council*, 490 U.S. 360, 377 (1989), such deference is not unlimited, and the court need not defer where “the agency has completely failed to address some factor consideration of which was essential to making an informed decision.” *Nat. Res. Def. Council v. Bernhardt*, No. 105CV01207LJOEPG, 2019 WL 937872, at *9 (E.D. Cal. Feb. 26, 2019) (quoting *Brower v. Evans*, 257 F.3d 1058, 1067 (9th Cir. 2001)). Similarly, the court need not defer to an agency when its decision lacks substantial basis in fact, and there must be “a rational connection between the facts found and the determinations made.” *Ariz. Cattle Growers’ Ass’n v. Salazar*, 606 F.3d 1160, 1163 (9th Cir. 2010).

While the standards for summary judgment under Rule 56 do not strictly apply to APA claims, summary judgment nonetheless “serves as the appropriate vehicle for the court to conduct its review of the agency action.” *Nw. Env’tl. Def. Ctr. v. U.S. Army Corps of Engr’s*, No. 3:18-CV-00437-HZ, 2020 WL 4756323, *3 (D. Or. Aug. 17, 2020). Summary judgment on the

⁶ On December 19, 2020, the Court denied NWEA’s motion to compete or supplement the administrative record “with leave to refile if clear evidence surfaces which suggests supplementation is necessary to resolve dispositive motions[.]” and also held that review of NWEA’s three ESA citizen suit claims was not bound to the administrative record. Dkt. #31 at 34. NWEA respectfully renews its motion to supplement the administrative record for NWEA’s First Claim as to those previously-filed documents (Dkt. ## 21-1, 21-2, and 21-3, Exhibits 1–23) because they are “necessary to determine whether the agency has considered all relevant factors and has explained its decision[.]” *Sw. Ctr. for Biological Diversity v. U.S. Forest Serv.*, 100 F.3d 1443, 1450 (9th Cir. 1996). In particular, NWEA introduces the proffered evidence to show that FWS failed to consider the best available scientific data information as required by the ESA. *See Nat’l Wildlife Fed’n v. Nat’l Marine Fisheries Serv.*, No. 3:01-CV-00640-SI, 2015 WL 423090, at *5 (D. Or. Feb. 2, 2015); *Wild Fish Conservancy v. U.S. Env’tl. Prot. Agency*, No. C08-0156-JCC, 2009 WL 10676069, at *5 (W.D. Wash. Dec. 18, 2009) (admitting extra-record evidence for similar reasons).

citizen suit claims is appropriate “when there is no genuine issue as to any material fact and the moving party is entitled to judgment as a matter of law.” *Nat. Res. Def. Council v. Zinke*, 347 F. Supp. 3d 465, 474 (E.D. Cal. 2018) (citing Fed. R. Civ. P. 56(a)); *see Sw. Ctr. for Biological Diversity v. U.S. Bureau of Reclamation*, 143 F.3d 515, 522 (9th Cir. 1998).

ARGUMENT

I. NWEA Has Standing to Sue Under Article III

An organization has standing to sue on behalf of its members if “(a) its members would otherwise have standing to sue in their own right; (b) the interests it seeks to protect are germane to the organization's purposes; and (c) neither the claim asserted nor the relief requested requires the participation of individual members in the lawsuit.” *Ecological Rights Found. v. Pac. Lumber Co.*, 230 F.3d 1141, 1147 (9th Cir. 2000) (quoting *Hunt v. Wash. State Apple Advert. Comm’n*, 432 U.S. 333, 343 (1977)). An organization’s members, in turn, have standing when:

(1) [they have] suffered an “injury in fact” that is (a) concrete and particularized and (b) actual or imminent, not conjectural or hypothetical; (2) the injury is fairly traceable to the challenged action of the defendant; and (3) it is likely, as opposed to merely speculative, that the injury will be redressed by a favorable decision.

Friends of the Earth, Inc. v. Laidlaw Env'tl. Servs. (TOC), Inc., 528 U.S. 167, 180–81 (2000).

Individual members suffer a cognizable injury in fact if they “use the affected area and are persons for whom the aesthetic and recreational values of the area will be lessened by the challenged activity.” *Id.* at 183. The injury prong does not require a showing of actual environmental degradation, *Ecological Rights Found.*, 230 F.3d at 1141; rather, a “a credible threat of harm” from agency action constitutes a cognizable injury, *Cent. Delta Water Agency v. United States*, 306 F.3d 938, 950 (9th Cir. 2002), including harm to a member’s “aesthetic or recreational interest in a particular . . . animal or plant species” affected by the challenged agency conduct. *Ocean Advocates v. U.S. Army Corps of Engr’s*, 402 F.3d 846, 860 (9th Cir. 2005).

NWEA and its members meet these standards here. The recreational, aesthetic, and other interests they seek to protect by this action are germane to NWEA’s purpose. *See Bell Decl.* ¶¶

3–13. NWEA’s claims do not require the participation of individual members. Further, NWEA has members whose aesthetic and recreational interests in the ESA-listed species affected by the challenged actions, including threatened bull trout and the Oregon rivers and streams they rely upon, has and will continue to be lessened by the risks posed by levels of toxic pollution allowed by FWS and EPA. In particular, these members use bull trout habitat waters for recreational activities such as fishing, swimming, rafting, hiking, fish and wildlife viewing, and camping; they observe, study, and work to conserve bull trout; and aver that their use and enjoyment of such activities is threatened by FWS’ and EPA’s actions here. *See* Johnson Decl. ¶¶ 3–15; Anuta Decl. ¶¶ 2–15; Marlett Decl. ¶¶ 3–12. Those cognizable injuries are caused in part by FWS’ BiOp and its “no jeopardy” determinations as well as EPA’s failures to comply with ESA Section 7, which pave the way for potentially harmful concentrations of toxic pollutants in Oregon’s waters that pose further risk to bull trout. Plaintiffs thus satisfy Article III’s jurisdictional requirements.⁷

II. The Oregon BiOp is Arbitrary, Capricious, and Contrary to Law

NWEA’s first claim is against FWS, and alleges that the Oregon BiOp is arbitrary, capricious, and contrary to the Endangered Species Act. Summary judgment in favor of NWEA on this claim is warranted for the reasons that follow.

A. FWS Failed to Use the Best Available Science as Required by the ESA

The ESA requires the Services to use the “best scientific and commercial data available” during consultation. 16 U.S.C. § 1536(a)(2); 50 C.F.R. § 402.14(g)(8). While FWS’ determination of what constitutes the best scientific data may warrant deference, *San Luis & Delta-Mendota Water Auth. v. Jewell*, 747 F.3d 581, 602 (9th Cir. 2014), it “cannot ignore available biological information” in preparing its biological opinions. *Conner v. Burford*, 848 F.2d 1441, 1454 (9th Cir. 1988). “The purpose of the best available science standard is to prevent

⁷ NWEA has also satisfied the ESA’s 60-day notice requirement. *See* Dkt. #1, ¶ 8; Dkt. #5, ¶ 8.

an agency from basing its action on speculation and surmise.” *San Luis & Delta-Mendota Water Auth. v. Locke*, 776 F.3d 971, 995 (9th Cir. 2014) (citing *Bennett*, 520 U.S. at 176)).

Even under this somewhat deferential standard, FWS’ Oregon BiOp fails to meet the best available science requirement of the ESA in multiple ways as discussed below, and the Oregon BiOp must therefore be set aside as arbitrary, capricious, and not in accordance with law.

1. FWS’ Reliance on Laboratory Data and EPA Toxicity Models Using Surrogate Species to the Exclusion of Field Studies and other Relevant Data and Information Regarding the Actual Species of Concern was Arbitrary and Capricious

As FWS explains in Appendix 1 to the Oregon BiOp, its assessment of the impacts to ESA-listed species from EPA’s proposed approval of Oregon’s toxics criteria was limited to a review of laboratory data and toxicity modeling that, by the agency’s own admission, provides an incomplete and uncertain picture of the true range of impacts to ESA-listed species from the Oregon toxics criteria. Its choice to limit its review in that fashion, while ignoring available and relevant studies and other information about the effects of toxic pollution on listed species, was arbitrary and capricious.

Unlike the Idaho BiOp that followed three years later, the impacts analysis of the Oregon BiOp was almost exclusively based upon the use of statistical models, the inputs for which were derived from laboratory testing on sometimes distantly-related surrogate species. *See generally* FWS-000479-000512. FWS generally did not consider field studies or other quantitative or qualitative information about the potential impacts to specific ESA-listed species; as the agency notes, “[i]n analyzing the effects of the action on listed species, we have considered the best available *laboratory* information to estimate how these species or surrogates would respond from exposure to toxic chemicals in natural settings.” FWS-00178 (emphasis added).

The models used to determine acute⁸ toxicity effects were first developed by EPA, and are discussed in its *Draft Methodology for Conducting Biological Evaluations of Aquatic Life*

⁸ Oregon’s toxics criteria address acute and chronic toxicity. An acute criterion is “an estimate of the highest concentration of a material in surface water to which an aquatic community can be

Criteria Methods Manual (2005) (“*Draft Methodology*”). FWS-030951. To assess acute toxicity, two models were used: (1) the Interspecies Correlation Estimates (“ICE”) method, which estimates the acute toxicity of a particular chemical to a particular aquatic species using a correlation to known toxicity for surrogate species determined via laboratory experiments, *see* FWS-000490-493; FWS-030972; and (2) the Species Sensitivity Distribution (“SSD”) method, which uses laboratory toxicity results for several surrogate species to derive a distribution curve of possible toxicities for the species of concern. FWS-000494-498; FWS-030973. For chronic toxicity, FWS used a “chronic level of effects” model, developed in 2010, that estimates the effects of exposure to the chronic criterion by using the ICE-derived acute toxicity value of the listed species described above, which is then used to calculate the potential effects at the pollutant’s chronic criteria value. *See* FWS-000504–505.

Importantly, these models account *only* for waterborne exposure to individual toxic pollutants; the underlying data supporting the models come from lab experiments that are “used to isolate test organisms from confounding factors to delineate species responses to the chemical or stressor under study.” FWS-000481. Thus other paths of exposure, such as diet, are not accounted for in the models.

The model input data used by FWS throughout the Oregon BiOp were generally derived from surrogate species—for example, fathead minnow or bluegill. *See, e.g.*, FWS-000204; FWS-000262. While the use of surrogate data is not unlawful per se, an agency violates the ESA by relying upon uncorrelated surrogate data without the use of an appropriate conversion or safety factor that adequately accounts for the differences between species. *See Wash. Toxics Coal. v. U.S. Fish & Wildlife Serv.*, 457 F. Supp. 2d 1158, 1190 (W.D. Wash. 2006). FWS expressly acknowledged the “uncertainty and variability associated with these extrapolations” between species, *see* FWS-000487, but ultimately failed to account for them in its analysis. Instead, the

exposed briefly without resulting in an unacceptable effect.” FWS-000027. A chronic criterion is “an estimate of the highest concentration of a material in surface water to which an aquatic community can be exposed indefinitely without resulting in an unacceptable effect.” *Id.*

agency plowed ahead, claiming to lack “the resources to develop species-specific or chemical-specific safety factors” that would minimize the uncertainty. Ultimately, FWS took this approach even though it knew it would “introduce additional uncertainty to the consultation.” FWS-000488.

Because of these unresolved uncertainties and risks inherent in the models used by FWS, it was arbitrary for the agency to rely almost exclusively on these modeled effects in the Oregon BiOp, and to ignore the other evidence of toxic effects reflected in the scientific literature and discussed in, e.g., the Idaho BiOp. EPA’s *Draft Methodology*—the original source of the ICE and SSD models used by FWS here—was developed to guide national consultations on aquatic life criteria guidelines promulgated by EPA under CWA Section 304(a); it was never intended to be used as the sole methodology for state-specific, species-specific, or even pollutant-specific ESA consultations such as one at issue here. The *Draft Methodology* notes the limitations of its own models, explaining that:

For some chemicals and organisms, [toxicity] tests are not suitable for assessing risks because the constraints of duration and/or exposure route result in less chemical accumulation by the organism than is true for exposures in natural systems. Therefore, for a particular exposure concentration, effects can be underestimated.

FWS-030951; *see also id.* at FWS-030969 (“Although these methods provide good information in most cases, differences in the type of data available might make other approaches more appropriate for certain chemicals and taxa.”).

FWS itself has recognized the limitations of models built upon laboratory toxicity data, stating that “laboratory conditions are not usually reflective of the complexities of natural systems.” FWS-00481. As the agency admitted in the Oregon BiOp,

laboratory studies do not replicate complex environmental conditions, including species competition, varying physical conditions, and exposure to other stressors. Extrapolating the stress responses of individuals in a limited number of laboratory tests to organisms exposed to similar chemical concentrations while in highly complex natural environments provides for gross scale predictions. The uncertainty involved in applying toxicity test data to the prediction of environmental outcomes

increases with the discrepancy in scale between the measurement endpoint and the assessment endpoint or management goal.

Id. FWS even acknowledged that its reliance on laboratory toxicity data and statistical models in the Oregon BiOp to the exclusion of other information was driven not by scientific reasons but by expediency, stating that “review of mesocosm or field studies could help provide additional information for risk assessment,” but that “no such studies were reviewed for this analysis due to time constraints.” *Id.*

Later, in the Idaho BiOp, FWS abandoned the ICE model altogether because of these and other weaknesses. Although it recognized that the model might be the best available information “in some instances,” for example “in the absence of data” about specific affected species, it was quick to point out that the

ICE modeling approach has obvious limitations and uncertainties, such as the assumption that relative sensitivities are maintained across chemicals with different modes of toxic actions, and that correlations determined from short-term, acute toxicity tests can be extrapolated to long-term indefinite exposures.

Idaho BiOp at NWEA-000541. FWS noted that the model’s uncertainties led to “considerable variability in predictions” and in some cases “under-predict[ed] toxicity by up to 240 percent,” *id.*, and ultimately “chose not to use the ICE models” and instead “relied on the primary literature to assess acute toxic effects[,]” finding that approach provided a “more transparent comparison of species-specific assessment of effects.” *Id.* at NWEA-000553.

Here, FWS essentially ignored the “primary literature” and other sources of information regarding the effects of arsenic, selenium, and zinc exposure (both acute and chronic) on bull trout, as NWEA has previously argued in the context of its motion to complete or supplement the administrative record. *See* Dkt. #20 at 13-15 and Appendix thereto. Some of these studies address the effects of dietary exposure to arsenic in bull trout and other salmonids—a topic not considered in the Oregon BiOp, *see* discussion *infra* at 24–26, 29–32. For example, FWS ignored and did not consider a trio of studies that the agency cites in the Idaho BiOp for the proposition that “inorganic arsenic in the diet of rainbow trout can be associated with reduced growth, organ

damage and other physiological effects[.]” Idaho BiOp at NWEA-000560. These three studies—Cockell, et al., 1991;⁹ Hansen, et al., 2004;¹⁰ and Ericksen, et al., 2010¹¹—now appear in FWS’ “Supplemental Administrative Record” lodged on June 12, 2020, Dkt. #47, but are not cited or discussed in the Oregon BiOp.

Especially in light of the myriad inadequacies of the ICE, SSD, and chronic level of effects models, these studies represent the best available science specific to bull trout, and FWS acted in an arbitrary and capricious fashion and contrary to the ESA when it relied almost exclusively on the modeled effects analysis and failed to account for other available studies and information.

2. FWS Inappropriately Relied on Surrogate Bluegill Data Despite the Availability of Bull Trout Data & More Closely Related Surrogate Species Data Regarding Exposure to Chronic Arsenic

In its assessment of the effects of Oregon’s water quality criteria for chronic arsenic on threatened bull trout, FWS stated that “[b]uegill data were used for evaluating both growth and survival effects,” claiming that bluegill “was used as a surrogate in this analysis for bull trout because there are insufficient chronic toxicity data for bull trout or any other more closely related salmonid.” Oregon BiOp at FWS-000204. FWS’ choice to rely on modeling data from an unrelated fish species and its failure to consider numerous field studies describing the effects of arsenic toxicity on bull trout was arbitrary and capricious.

At the outset, FWS deviated from its own data quality rules for its “chronic level of effects” model when it used bluegill data to estimate the effects of bull trout exposure to

⁹ Cockell, et al. Chronic toxicity of dietary disodium arsenate heptahydrate to juvenile rainbow trout (*Oncorhynchus mykiss*) Archives of Environmental Contamination and Toxicology. 21(4): 518-527 (1991). In FWS’ Supplemental Administrative Record at FWS-061273.

¹⁰ Hansen, et al. Reduced growth of rainbow trout (*Oncorhynchus mykiss*) fed a live invertebrate diet pre-exposed to metal-contaminated sediments. Environmental Toxicology and Chemistry. 23(8): 1902–1911 (2010), in FWS’ Supplemental Administrative Record at FWS-061347.

¹¹ Erickson, et al. Effects of copper, cadmium, lead, and arsenic in a live diet on juvenile fish growth. Canadian Journal of Fisheries and Aquatic Sciences. 67(11): 1816-1826 (2010). <http://dx.doi.org/10.1139/F10-098>. In FWS’ Supplemental Administrative Record at FWS-061336.

Oregon’s chronic arsenic criterion. Those rules instruct the agency to “use tests from surrogate species *within the same family*, or consider life history similarities as a possible surrogate selection tool.” FWS-000506 (emphasis added). EPA similarly states that its ICE model—which measures acute toxicity, but forms the basis for the “chronic level of effects” model—should not be used to compare surrogate species beyond the family taxonomic level, explaining that “reliable ICE estimates have been found *only through the family level* and accordingly ICE estimates will not be used at higher taxa until EPA is able to identify such models.” FWS-030972 (emphasis added). Bluegill are not in the same taxonomic family as bull trout, and FWS was wrong to base its chronic arsenic effects assessment solely on the model’s results.¹²

Other record evidence shows why FWS’ use of bluegill data to assess chronic arsenic toxicity to bull trout was arbitrary. For example, one study notes that there have been virtually no attempts to date to “quantify the relationship between life history traits and the reliability of surrogate species population outcomes as a predictive tool in conservation[.]” and explains particularly with respect to salmonids, “extrapolations from surrogate species’ responses to disturbance seem woefully simplistic in the context of more complex ecological factors that influence their population dynamics” and that typical laboratory methods “are generally unable to detect longer-term population outcomes.” FWS-001889. FWS did not account for this concern when it chose to use toxic effects modeling only as the basis for its assessment.

In any event, FWS’ claim that no better chronic toxicity data were available for bull trout is belied by other documents in the record. For example, one study, Kiser et al., 2010 (“2010

¹² The bluegill is a member of the sunfish family *Centrarchidae* in the order *Perciformes*; bull trout are a member of the family *Salmonidae*, in the order *Salmoniformes*. See Interagency Taxonomic Information System (ITIS), available at <https://www.itis.gov/> (last checked October 20, 2020). The ITIS database is developed and maintained through a partnership between multiple federal agencies, including FWS, and the Court may take judicial notice of its contents. See *Daniels-Hall v. Nat’l Educ. Ass’n*, 629 F.3d 992, 998–99 (9th Cir. 2010); *Century Indem. Co. v. Marine Grp., LLC*, No. 3:08-CV-1375-AC, 2015 WL 5144330, at *2 (D. Or. Aug. 31, 2015); Fed. R. Evid. 201(b)(2).

Kiser Study”)¹³ examined bull trout and cutthroat trout data from multiple sites along Gold Creek, Idaho, which is highly contaminated with mine waste. FWS-014721. Of all the metals assessed, regression analyses showed that arsenic had the highest correlation with liver damage in bull trout. *Id.* at FWS-014727. The 2010 Kiser Study concluded that “[l]aboratory studies may underestimate effects of diet-borne contaminants to salmonids”; and that differences between field and lab conditions “could have vastly different toxicological effects” on salmonids, and therefore “site-specific field investigations can be invaluable in evaluating risks to threatened species such as bull trout.” *Id.* at FWS-014729. The 2010 Kiser Study is cited only briefly in the Oregon BiOp, for wholly unrelated reasons. *See* FWS-000148.

At least one other study that was available in 2012—and cited in the Idaho BiOp as a key basis for FWS’ “jeopardy” determination for bull trout exposed to Idaho’s arsenic criteria—discussed the effects of exposure to arsenic on rainbow trout, a surrogate species more closely related to bull trout than bluegill.¹⁴ Hansen et al., 2004 (“2004 Hansen Study”)¹⁵ raised aquatic earthworms in metals-contaminated sediments and fed the worms to rainbow trout, which resulted in reduced growth and other physiological effects that were strongly correlated with arsenic and no other metals. The 2004 Hansen Study is not cited or discussed in the Oregon BiOp.¹⁶

¹³ Tim Kiser, James Hansen, & Brian Kennedy. *Impacts and Pathways of Mine Contaminants to Bull Trout (*Salvelinus confluentus*) in an Idaho watershed*. 59 *Archives of Env'tl. Contamination and Toxicology* 301 (2010), in the administrative record at FWS-014720.

¹⁴ Bull trout and rainbow trout are both members of the *Salmonidae* family. *See* <https://www.itis.gov/>.

¹⁵ James A. Hansen et al., *Reduced Growth of Rainbow Trout (*Oncorhynchus Mykiss*) Fed a Live Invertebrate Diet Pre-exposed to Metal-Contaminated Sediments*, 23 *Env'tl. Toxicology and Chemistry* 1902, 1910 (2004). In the Idaho BiOp, FWS relies heavily on the 2004 Hansen Study as evidence of adverse effect of dietary arsenic on bull trout, including “arsenic-contaminated diets having adverse effects on salmonids” including “reduced growth and physiological effects” *See* Dkt. #21-3 Ex. 22, Idaho BiOp at NWEA-000545–546 and NWEA-000560–561. Although the 2004 Hansen Study is not cited in the Oregon BiOp, it was included in FWS’ Supplemental Administrative Record at FWS-061347.

¹⁶ Without mention of the 2004 Hansen Study, FWS stated in the Oregon BiOp that it “found little supporting evidence that dietary arsenic would contribute additional, significant adverse effects beyond water only exposure to invertebrates or fish.” FWS-000182.

Because FWS' administrative record does not support its choice to base its arsenic chronic effects analysis exclusively upon modeling data derived from laboratory studies of the unrelated bluegill, its decision to do so renders the Oregon BiOp arbitrary and capricious.

B. Other Portions of the Oregon BiOp are Based Upon Unfounded Assumptions or are Otherwise Arbitrary and Capricious

1. FWS' Exposure Analysis Arbitrarily Limits the Scope of its Assessment to Waters Presumed to Receive Point or Nonpoint Source Pollution

Another fundamental error made by FWS in the Oregon BiOp was its decision to rely exclusively upon a set of assumptions about the likely exposure of bull trout to toxic pollutants that ignore the fact that EPA's proposal was to approve *state-wide* water quality criteria. This arbitrary choice impermissibly limited the scope of FWS' BiOp and rendered it unlawful.

As FWS admits in the Oregon BiOp, it "only assessed the effects of the proposed water quality standards on listed species and critical habitat in those areas where there are likely to be point or nonpoint source discharges subject to these standards." FWS-000029. As a result, FWS "did not conduct an exposure/response analysis to assess the sensitivity of listed species to individual water pollutants" but relied instead solely on its "ability to identify all current and future point and nonpoint discharges" to assess the impacts of Oregon's revised toxics criteria to listed species or their critical habitat. *Id.* In other words, FWS *assumed* that for certain Oregon waters the potential for exposure to toxic pollutants at the EPA-approved criteria concentrations was low, and the resulting potential effects on listed species "are considered discountable." FWS-000133.

Moreover, for bull trout specifically, FWS assumed even lower levels of exposure apparently derived from the location of existing "mining operations and NPDES Permits[.]" FWS-000195.¹⁷ This approach was instrumental to FWS' no-jeopardy conclusions; only by

¹⁷ FWS claims that "[a]ll known potential sources [of toxics] that could specifically be identified that lay within 2 miles of bull trout habitat were included in the analysis", FWS-000148; as a result, the amount of bull trout habitat considered was artificially reduced to 820.6 miles—some 24% of the 3,436 miles of bull trout stream habitat within Oregon. FWS-000148–149. The record also contains a spreadsheet that appears to be a list of NPDES-permitted facilities in

assuming that “more than 75% of bull trout habitat within the action area has little or no real potential for exposure to the chemicals in this proposed action” was FWS able to conclude that most bull trout would not be adversely affected by EPA’s proposed approval. FWS-000234, FWS-000239–246.¹⁸

Through this assumption, FWS artificially narrow the geographic scope of its analysis to something far less than what EPA had already identified as the “action area.” This is unlawful. FWS regulations require the agency to analyze the “direct and indirect effects of an action on the species or critical habitat” within the relevant “action area,” which is defined to mean “all areas *to be affected directly or indirectly by the Federal action* and not merely the immediate area involved in the action.” 50 C.F.R. § 402.02 (emphasis added). “A biological opinion which is not coextensive in scope with the agency action is contrary to law.” *Greenpeace*, 80 F. Supp. 2d at 1147. *See also Nat. Res. Def. Council v. Rodgers*, 381 F. Supp. 2d 1212, 1239-40 (E.D. Cal. 2005) (finding that FWS violated the ESA when it limited its consultation to “historical annual deliveries” of allocated water “rather than the full amount authorized by” the federal water delivery contracts under review, and explaining that FWS could not exclude those deliveries it found to be “unrealistic.”). Here, the action under review was EPA’s approval of Oregon’s state-wide toxics criteria, not FWS’ artificially circumscribed assumptions about current toxics exposure from NPDES-permitted sources.

Oregon, FWS-000513, but there is no further record support for how or why FWS made this “likely exposure” determination—and no discussion of which waters in Oregon are *actually monitored* for the presence of toxic pollutants.

¹⁸ FWS took a markedly different approach in the Idaho BiOp, where it noted that the EPA-approved toxics criteria “will be applied statewide without deference to species’ ranges,” and that “the purpose of the consultation is to evaluate the protectiveness of the criteria.” Idaho BiOp at NWEA-000539. Indeed, in the Idaho BiOp FWS acknowledged that limiting its analysis to the “existing conditions in the action area” would “result in identifying fewer likely adverse effects than would evaluating the criteria directly,” and that “such an approach to defining the action would be inconsistent with the salient parts of the definition of an action which describes programs or permits authorized by the action agency that directly or indirectly cause modifications to the land, water, or air.” *Id.* at NWEA-000539 (citing 40 C.F.R. § 402.02).

FWS states in the Oregon BiOp that it merely “followed USEPA’s lead” in limiting the geographic scope of its assessment in this manner. FWS-000029. But contrary to FWS’ assertion, EPA expressly acknowledged in its BE that “[t]he action area of this consultation consists of *all* surface waters of the state of Oregon for which the aquatic life toxics criteria have been proposed” and EPA’s “approval of new Oregon water quality standards *affects all waters within the state boundaries that are used by ESA-listed species.*” FWS-031761, 031885 (emphasis added).¹⁹ Yet even if FWS was correct that it simply followed EPA’s lead, that would not absolve FWS here. *See Nat’l Wildlife Fed’n v. Nat’l Marine Fisheries Serv.*, No. CV 01-640-RE, 2005 WL 1398223, at *3 (D. Or. June 10, 2005) (faulting agency for embracing “the same fundamental legal flaws that NOAA attempted to use to justify its circumscription of the action subjected to jeopardy analysis.”).

FWS’ narrowed analysis also ignores the function of state water quality standards under the Clean Water Act and the scope of the numeric toxics criteria promulgated by Oregon. Oregon’s freshwater aquatic life criteria for toxics apply to all “waters of the state.” OAR 340-041-0033(2).²⁰ The purpose of the consultation was to determine the protectiveness of those criteria, which is not dependent upon the current range of bull trout in Oregon or current exposure levels to particular toxic pollutants. Indeed, EPA itself recognized that even those future discharges that comply with the EPA-approved criteria will likely result in “environmental degradation from baseline conditions.” FWS-031937.

¹⁹ EPA’s BE contains a brief discussion of the “location of NPDES point sources” and other sources of toxic discharges within the range of Oregon bull trout, but does not otherwise limit its analysis to bull trout habitat waters that are *known* to receive point source discharges. *See* FWS-031916–917. In fact, elsewhere in the BE, EPA acknowledges that toxic pollutants can come from a variety of natural and anthropogenic sources including airborne deposition, mining and smelting, pesticides application, among others, FWS-031892–900, many of which likely fall outside of the NPDES permitting program.

²⁰ As shown in the various basin-specific criteria and designated beneficial use tables found in OAR-340-041-0101 through 0345, “fish and aquatic life” is a designated use for all major watersheds in Oregon.

In short, FWS arbitrarily limited the scope of its analysis by assuming bull trout will only be exposed to toxic pollutants from known, permitted sources, thus ignoring the true state-wide extent of EPA's proposed action. This analytical misjudgment renders its BiOp unlawful.

2. FWS Arbitrarily Assumed, without Explanation in the Record, that Bull Trout will “Move Through or Avoid the Highest Concentrations of” Pollutants they Encounter Within Large Streams

In the Oregon BiOp FWS recognizes that chronic exposure of bull trout to certain toxics at EPA's proposed criteria “may occur within portions of Columbia River and Snake River foraging, migratory, and overwintering habitat and such exposure is likely to cause adverse effects to the exposed individuals.” FWS-000205. But FWS wholly disregards this exposure by stating, without any further discussion or record citation, that “because of the high flows within these two rivers, and the ability of bull trout to move through or avoid the highest concentrations of” the pollutants “they encounter within large streams,” the adverse effects of any such exposure are “not likely to cause additional death or injury of affected bull trout[.]” *Id.* FWS makes this conclusory statement about a number of pollutants. *See* FWS-000202 (ammonia); FWS-000205 (arsenic); FWS-000208 (cadmium); FWS-000217 (copper); FWS-000220 (lead); FWS-000223 (nickel); FWS-000227 (silver); FWS-000231 (zinc); FWS-000351 (selenium). FWS' ungrounded assumptions about streamflow and bull trout avoidance behavior were arbitrary and capricious.

In appropriate circumstances, FWS may permissibly draw reasonable assumptions about the potential effects of toxic pollution exposure or ecological conditions in its biological opinions. But such assumptions must have a clear scientific underpinning and a factual basis in the administrative record. *See Nw. Env'tl. Advocates v. U.S. Env'tl. Protection Agency.*, 855 F. Supp. 2d 1199, 1216 (D. Or. 2012) (upholding EPA's approval of Oregon's temperature water quality criterion that was based in part upon “assumptions . . . supported in part by the administrative record[.]”). By contrast, where FWS draws unfounded assumptions that lack support in or contradict the record, its resulting conclusions render the BiOp arbitrary and

unlawful. *See Pac. Coast Fed'n of Fishermen's Assns. v. Gutierrez*, 606 F. Supp. 2d 1122, 1184 (E.D. Cal. 2008) (granting summary judgment to plaintiff challenging a BiOp where NMFS had failed to “address, adequately explain, and analyze the effects of” certain ecological conditions but instead made “assumptions [that were] . . . without basis in then-available science[.]”); *Concerned Friends of the Winema v. U.S. Forest Serv.*, No. 1:14-CV-737-CL, 2016 WL 10637010, at *12 (D. Or. Sept. 12, 2016) (rejecting as arbitrary an agency assumption that “appears to be little more than a guess for which the record provides no scientific support.”). Conclusory statements without supporting data cannot substitute for an adequate analysis of the effects of the proposed action. *Ctr. for Biological Diversity v. Salazar*, 804 F. Supp. 2d at 1008.

There is scant record support for FWS’ contention that bull trout will “move through or avoid the highest concentrations of” the pollutants they encounter in the Columbia and Snake Rivers. FWS-000205. One study in the record indicates that “the behavioral effects of many heavy metals have not been evaluated” and that avoidance responses have been shown in salmonids for copper, nickel, mercury, and zinc—but makes no mention of other pollutants. FWS-010498. Similarly, EPA’s BE recognizes the potential for avoidance behavior in response to copper, nickel, selenium, and zinc toxicity, but is silent with respect to other toxic pollutants. FWS-031893, 031895, 031897, 031898, 031899.²¹ There is some record support for an avoidance response to arsenic exposure in the golden shiner (*N. crysoleucas*), but no suggestion that the same holds true for salmonids such as bull trout. FWS-028117.

Because FWS offers no record support for its assumptions regarding bull trout avoidance behaviors when exposed to toxic pollutants—especially ammonia, arsenic, cadmium, lead, and silver—its resulting conclusions in the BiOp are arbitrary and capricious.

²¹ Perhaps just as importantly, EPA’s BE suggests that when assessing “toxicity to aquatic species from multiple concurrent routes of exposure . . . “[a]nimal behavior such as seasonal migration or toxicant avoidance is not considered.” FWS-031964.

3. FWS Failed to Assess Whether EPA's Approval of Oregon's Toxics Criteria May Reduce the Likelihood of Bull Trout Recovery

The ESA and its implementing regulations require BiOps to consider not only survival of a species, but also the extent to which the federal action may impede its recovery. 50 C.F.R. § 402.02 defines “jeopardize the continued existence of” to include actions that “reduce appreciably the likelihood of both the survival *and recovery* of a listed species[.]” (emphasis added). Thus, as the Ninth Circuit has held, in their BiOps the Services must “consider both recovery and survival impacts” to listed species. *Nat'l Wildlife Fed'n v. Nat'l Marine Fisheries Serv.*, 524 F.3d 917, 931 (9th Cir. 2008).

The Oregon BiOp fails to comply with these requirements as it lacks any real analysis of the extent to which EPA's approval of Oregon's toxics criteria may reduce the likelihood of bull trout recovery. Although the Oregon BiOp states in conclusory fashion that FWS “anticipate[s] that all 11 affected CHUs will continue to function in their intended conservation and recovery roles[.]” FWS000247, there is no analysis to substantiate this assertion. And even these passing references to “recovery” of bull trout in the BiOp are inseparably linked to FWS' flawed assumptions about exposure to toxics discussed above. *See, e.g.*, FWS-000356 (presuming, without further analysis, that a low risk of exposure to toxic pollutants means that the designated critical habitat units will “continue to function and provide adequate contributions towards both survival and recovery of the species”). These passing references are not enough, and the lack of any genuine analysis of the impacts of the Oregon toxics criteria to bull trout recovery in the Oregon BiOp doom it to failure. *See Gifford Pinchot Task Force v. U.S. Fish & Wildlife Serv.*, 378 F.3d 1059, 1072 n.9 (9th Cir. 2004) (“Accepting ‘implied’ consideration of recovery would reject the bedrock concept of record review”); *Ctr. for Biological Diversity v. Salazar*, 804 F. Supp. 2d 987, 999 (D. Ariz. 2011) (finding ESA violation where the “BiOp concludes that the proposed action . . . will not affect the ability to recover the southwestern willow flycatcher” but lacked “a full *analysis* of the effect of the proposed action on recovery[.]” (emphasis added)).

4. FWS Failed to Fully Analyze Dietary Pathways and Bioaccumulation of Arsenic and Zinc in Bull Trout

The Oregon BiOp also fails to adequately consider alternate routes of bull trout exposure to toxics that may occur at the proposed criteria levels—including dietary sources—and fails to account for potential bioaccumulation in fish tissue over time. The Oregon BiOp includes a short section that “briefly describes the toxic mode of action . . . and addresses multiple routes of exposure” of the toxics under review, FWS-000179, but the discussion with respect to arsenic and zinc is cursory at best, and ignores available science, and reaches conclusions unsupported by the record.

With respect to arsenic, FWS briefly discusses the effects of arsenic on aquatic life generally, and concludes based on EPA guidance and “available literature” that there was “little supporting evidence that dietary arsenic would contribute any additional, significant adverse effects beyond water only exposure to invertebrates or fish.” FWS-000181–182. With respect to zinc, after a similarly cursory discussion based entirely upon “tissue-residue” modeling found in EPA’s BE, the Oregon BiOp again concludes that “dietary zinc would not contribute any additional adverse effects beyond water only exposure to invertebrates or fish.” FWS-000193. These conclusions were unfounded, and ignored available scientific literature undermining them.

FWS’ conclusions three years later in the Idaho BiOp—based largely on studies and information available at the time of the Oregon BiOp—undercut the Oregon BiOp’s analysis. For example, FWS in Idaho found that “[a]dverse effects in fish caused by arsenic are most likely from dietary rather than waterborne exposures” and that “arsenic poses significant health risks to salmonids, including reduced growth and survival, organ damage, and behavioral modifications.” Idaho BiOp at NWEA-000555, 000559. The agency relied in part upon the 2010 Kiser Study cited above (*supra* at 17) which found that all metals studied were “transferred to salmonids through the dietary pathway,” with “food-chain pathways” being more strongly correlated to arsenic levels in fish tissue than water-borne exposure. FWS-014727. The 2010 Kiser Study also warned that “[l]aboratory studies may underestimate the effects of diet-borne contaminants to

salmonids.” FWS- 014729. The Idaho BiOp cites numerous other studies that were available to FWS at the time the Oregon BiOp was published, but not considered by FWS at that time, showing the adverse effects of dietary arsenic and arsenic bioaccumulation on salmonids,²² ultimately concluding that the proposed arsenic criteria were “likely to impair or preclude maintaining or increasing the bull trout’s current rangewide distribution, abundance, and reproduction.” Idaho BiOp at NWEA-000564.

FWS in the Idaho BiOp also found that the proposed zinc criteria were “likely to adversely affect the bull trout by reducing its prey base,” NWEA-000619, a topic not even discussed in the Oregon BiOp. Citing one study in the administrative record here (Besser et al. 2007),²³ FWS notes in the Idaho BiOp that some known bull trout prey species could be “decimated” at concentrations similar to the proposed chronic zinc criterion. NWEA-000620. FWS’ analysis and conclusions in the Idaho BiOp were also based in part upon other studies available to the agency at the time the Oregon BiOp was published—but not considered.²⁴

Defendants may repeat their contention that information “about dietary routes of exposure is of questionable relevance to evaluating the effects of water column concentrations of arsenic on bull trout or other aquatic species” because the criteria under consideration are expressed as dissolved criteria. *See* Dkt. #25 at 20, fn.11. But FWS itself rebutted that point in the Idaho BiOp, noting that such an approach compounds the risk to aquatic species:

Exclusive use of water column criteria may underestimate the toxicity of an aquatic system by excluding ingestion of particulates and ingestion of prey that consume particulates as a pathway for toxic chemical exposure (EPA 2000, p. 18). Most

²² *See, e.g.*, 5/31/19 Saul Decl. Exhibits 1, 2, 3, 5, 6, 8, 10, 12, 14, 18, 19, 20, all of which are cited and discussed in the Idaho BiOp’s lengthy discussion of dietary arsenic at NWEA-000558 through 000564, but none of which are cited or discussed in the Oregon BiOp’s cursory, two-paragraph consideration of dietary arsenic at FWS-000182.

²³ *See* Besser, J.M., et al., Sensitivity of mottled sculpins (*Cottus bairdi*) and rainbow trout (*Oncorhynchus mykiss*) to acute and chronic toxicity of cadmium, copper, and zinc. *Environmental Toxicology and Chemistry* 26:1657-1665. FWS-060359.

²⁴ *See, for example*, 5/31/19 Saul Decl. Exhibits 9, 16, 17, and 21, all of which were discussed in the Idaho BiOp’s discussion of the impacts of zinc on bull trout, including via dietary pathways, at NWEA-000613-614 and NWEA-000617-620.

organic and inorganic contaminants adsorb to organic particulates and settle out in sediments, so at sites with past or continuing discharges of contaminants into the water column, a repository and continuing source of exposure likely exists (Hoffman et al. 1995, p. 4). The Service has assumed that this additional route of exposure is likely to increase the adverse effects of each contaminant addressed in this Opinion on listed species and critical habitat.

Idaho BiOp at NWEA-000544–545. Thus, the evidence available to FWS in 2012 runs counter to the Oregon BiOp’s proposition that dietary exposure to arsenic and zinc would not present any adverse effects beyond those that might be anticipated from water borne exposure only.

III. EPA Violated Its Independent Duty under Section 7(a)(2) of the ESA to Ensure Against Jeopardy

Section 7(a)(2) of the ESA imposes a strict substantive duty on federal agencies to “ensure” that their actions do not cause jeopardy to endangered or threatened species. 16 U.S.C. § 1536(a)(2). “Arbitrarily and capriciously relying on a faulty [BiOp] violates this duty.” *Ctr. for Biological Diversity v. U.S. Bureau of Land Mgmt.*, 698 F.3d at 1127–28 (quoting *Wild Fish Conservancy v. Salazar*, 628 F.3d 513, 532 (9th Cir. 2010)); *Save Our Cabinets v. U.S. Fish & Wildlife Serv.*, 255 F. Supp. 3d at 1063; *Ctr. for Biological Diversity v. Salazar*, 804 F. Supp. 2d at 1010. Specifically, an agency cannot meet its obligations under Section 7 by relying on a BiOp that is legally flawed or by failing to discuss information that would undercut the BiOp’s conclusions. *Ctr. for Biological Diversity v. U.S. Bureau of Land Mgmt.*, 698 F.3d at 1127–28.

In *Center for Biological Diversity v. Bureau of Land Management*, the Ninth Circuit held that a FWS BiOp was arbitrary and capricious because it did not discuss potential impacts of groundwater withdrawals on listed fish, thereby failing to “examine the relevant data and articulate a satisfactory explanation for its action including a rational connection between the facts found and the choice made.” 698 F.3d at 1124 (internal quotations omitted). In turn, because the Bureau’s record of decision relied on FWS’ flawed BiOp, the court held that the Bureau violated its substantive duty under section 7 to ensure that its authorization of the project would not jeopardize the survival of listed fish or adversely modify critical habitat. *Id.* at 1128. Thus, the Ninth Circuit vacated and remanded the Bureau’s record of decision. *Id.*

Here, by approving Oregon’s water quality criteria for toxics—which are intended to protect aquatic life including bull trout—based on FWS’ arbitrary and capricious BiOp, EPA has likewise violated Section 7(a)(2), and the Court should declare EPA’s Approval unlawful.

IV. Alternatively, EPA Violated Section 7 of the ESA and its Implementing Regulations at 50 C.F.R. § 402.16(b) by Failing to Reinitiate Consultation on Oregon’s Revised Chronic Arsenic and Acute and Chronic Zinc Criteria in Light of New Information

If this Court determines that FWS and EPA did not act arbitrarily and capriciously in issuing and approving the Oregon BiOp, then in the alternative the Court should find that EPA failed to reinitiate the required ESA Section 7 consultation based on new information and analysis found in the Idaho BiOp, among other sources.

A. EPA Has Sufficient Discretionary Control over Oregon’s Water Quality Standards to Allow for Reinitiation of ESA Consultation

The ESA’s implementing regulations require federal agencies to reinitiate consultation “where discretionary Federal involvement or control over the action has been retained or is authorized by law and ... [i]f new information reveals effects of the action that may affect listed species or critical habitat in a manner or to an extent not previously considered[.]” 50 C.F.R. § 402.16(a). Discretionary federal involvement exists where the agency has “the ability to implement measures that inure to the benefit of the listed species.” *Wild Fish Conservancy v. U.S. Env’tl. Protection Agency*, 331 F. Supp. 3d 1210, 1222 (W.D. Wash. 2018) (quoting *Env’tl. Protection Info. Ctr. v. Simpson Timber Co.*, 255 F.3d 1073, 1080 (9th Cir. 2001)). Ninth Circuit law is clear that agencies may retain sufficient discretionary involvement or control over broad planning or management actions. *See e.g., Pac. Rivers Council v. Thomas*, 30 F.3d 1050, 1056 (9th Cir. 1994) (affirming district court’s order requiring Forest Service to reinitiate consultation over Land and Resource Management Plans); *Cottonwood Env’tl. Law Ctr. v. U.S. Forest Serv.*, 789 F.3d 1075 (9th Cir. 2015) (holding the Forest Service was required to reinitiate consultation on Forest Plan amendments).

Here, EPA retains discretionary involvement or control over Oregon’s water quality

criteria; pursuant to the Clean Water Act and its implementing regulations, EPA has an ongoing duty to review a state's water quality standards, approve or disapprove them, and to promulgate its own criteria for the state if EPA determines at any point that new or updated criteria are necessary. *See* 33 U.S.C. § 1313(c); *see also* 50 C.F.R. §§ 131.5, 131.21, & 131.22. As the Western District of Washington recently found, EPA's regulations and policy "contain explicit, unequivocal statements by the agencies that the CWA authorizes EPA to remain involved in both the drafting and implementation of state water quality standards, even after a state gains EPA's approval, including for the specific purposes of protecting a listed species." *Wild Fish Conservancy*, 331 F. Supp. 3d at 1222–26 (citing, *inter alia*, an interagency *Memorandum of Agreement Regarding Enhanced Coordination Under the Clean Water Act and Endangered Species Act*, 66 Fed. Reg. 11,202 (Feb. 22, 2001)). This Court should reach the same conclusion; any argument to the contrary is "unsupportable." *Id.* at 1224.²⁵

B. "New Information" Arose After the Oregon BiOp that Triggered EPA's Duty to Reinitiate Consultation on Oregon's Toxics Criteria

Three years after FWS concluded that Oregon's proposed chronic arsenic and acute and chronic zinc criteria would not jeopardize bull trout and its critical habitat, FWS reached the opposite conclusion in Idaho, where EPA had consulted on *identical* criteria concentrations. *Compare* FWS-000474 (July 30, 2012 FWS letter summarizing no jeopardy determinations for Oregon's toxics criteria) *with* Idaho BiOp at NWEA-000674 (summarizing jeopardy determinations).²⁶ FWS' determination in Idaho that the same criteria would cause jeopardy to the same species and its critical habitat, and the information and analysis in the Idaho BiOp that supports these determinations, is "new information" that post-dates the Oregon BiOp and EPA's

²⁵ As FWS states in the Oregon BiOp, "USEPA may need to reinitiate this consultation if the underlying assumptions about the likely exposure of listed species or critical habitats to the pollutants at issue herein change in the future based on new information and subsequent exposure of certain species (or portions of the range of a particular species) or critical habitats to pollutants covered under the proposed action is then considered likely or known to occur." FWS-000029.

²⁶ Both states' proposed chronic arsenic criteria were 150 µg/L, and both states' proposed acute and chronic zinc criteria were 120 µg/L. FWS-000027; Idaho BiOp at NWEA-000424.

Approval of Oregon’s toxics criteria. This new information revealed effects of the criteria that may affect bull trout and its critical habitat “in a manner or to an extent not previously considered” in the Oregon BiOp, 50 C.F.R. § 402.16(a), thereby triggering additional required consultation.

The regulatory phase “in a manner or to an extent not previously considered” does not require that the new information be on an entirely new topic or mode of impact to the species; it suffices that the new information reveals that the “net effect on listed species and their habitat will be greater than previously thought.” *Pacificans for a Scenic Coast v. California Dep’t of Transp.*, 204 F. Supp. 3d 1075, 1092 (N.D. Cal. 2016). As one court has noted, “[t]he crux of the matter is whether the new information reveals effects that were not previously considered.” *All. for Wild Rockies v. Probert*, 412 F. Supp. 3d 1188, 1204 (D. Mont. 2019). While it is true that the mere publication of a new study does not by itself trigger reinitiation of consultation, “where the original consultation failed to address the effects described in the new information” further consultation is required. *Friends of the River v. Nat’l Marine Fisheries Serv.*, 293 F. Supp. 3d 1151, 1175 (E.D. Cal. 2018). Further, the new information need not be conclusive with respect to the effects on species; so long as it “reveals that the decision ‘may’ affect listed species, reinitiation of consultation is required under the ESA.” *Rodgers*, 381 F. Supp. 2d at 1248 (emphasis in original).

Here, new information, studies, and analysis contained or cited in the Idaho BiOp triggered reinitiation of consultation on Oregon’s arsenic and zinc criteria. In Idaho, FWS included a robust assessment of the effects of the proposed criteria on bull trout from multiple routes of exposure, including dietary exposure and effects on bull trout prey species. *See e.g.*, Idaho BiOp at NWEA-000559–564 (discussing effects of arsenic criteria on bull trout from diet and on prey) and 619–620 (discussing effects of zinc criteria on bull trout prey). Such analysis is absent from the Oregon BiOp, where FWS only considered effects from “water-only exposure.”

FWS-000179.²⁷

These effects to bull trout are not tangential; in fact, the extensive analysis conducted by FWS in Idaho specifically regarding dietary routes of exposure and impacts to prey species were central to FWS' jeopardy determination there. For example, with regard to dietary toxicity of arsenic to bull trout, the Idaho BiOp concluded "that at environmentally relevant concentrations, arsenic poses significant health risks to salmonids, including reduced growth and survival, organ damage, and behavioral modifications." Idaho BiOp at NWEA-000559. And in a subsection addressing arsenic's toxicity to bull trout food organisms, FWS concluded that, "the proposed chronic criterion for arsenic is likely to cause adverse effects to the bull trout in the form of reduced growth and tissue damage. These effects have been documented in salmonids at concentrations much lower than the proposed chronic arsenic criterion of 150 µg/L." *Id.* at NWEA-000564. These dietary exposure effects and impacts to bull trout prey species plainly contributed to the jeopardy determination for chronic arsenic in Idaho. Idaho BiOp at NWEA-000676–677.

For zinc, the first part of FWS's analysis in Idaho focuses on two studies which "extensively investigated" zinc toxicity to bull trout, Idaho BiOp at NWEA-000617–619, one of which (Hansen et al. 1999) was available at the time but not discussed in the Oregon BiOp.²⁸ Based largely on these studies, FWS concluded that "the proposed aquatic life criteria for zinc are likely to cause substantial mortality of juvenile bull trout throughout its distribution in

²⁷ While FWS did pay lip service to "multiple routes of exposure," it did so cursorily and generically, for all species together, and ignored most of the studies and data it later used in Idaho. FWS-000179; *see also* FWS-000181–182 (arsenic); FWS-000191–193 (zinc).

²⁸ This study is a report to USEPA Region 10, titled "Sensitivity of bull trout (*Salvelinus confluentus*) to cadmium and zinc in water characteristic of the Coeur d'Alene River Basin." *Cf.* Idaho BiOp at NWEA_000725 (Reference List, including study) *with* EPA_018529 (Oregon BiOp Reference List, not including study). The study is included in FWS' Administrative Record, which says it is cited in Oregon BiOp Appendix 3. *See* Dkt. 14-4 at 96 (entry for 060500–747). The Oregon BiOp does not cite to, reference, or mention "Appendix 3." According to EPA's Administrative Record index, Appendix 3 is EPA-018647–659. This document, which is not labeled Appendix 3, cites Hansen et al. 1999 in its discussion related to the acute cadmium criterion, not arsenic. EPA-018647–649.

Idaho.” *Id.* at NWEA-000619; *see also id.* at 000682 (zinc jeopardy determination rationale). FWS further concluded that the proposed zinc criteria were also likely to adversely affect bull trout in Idaho by reducing their prey base. *Id.* at NWEA-000619–620.

In sharp contrast, the Oregon BiOp is silent as to the effects of the proposed arsenic criteria on bull trout via dietary exposure and on their food organisms. FWS-000203–206.²⁹ Similarly, the Oregon BiOp did not discuss whether the proposed zinc criteria might cause a reduction in bull trout prey. FWS-000229–233. As for effects on prey, in the Oregon BiOp FWS “assum[ed] that there may be a reduction in [bull trout] prey species under some of the proposed standards” that “may have adverse effects to bull trout” but claimed “we have no way to quantify those effects,” FWS-000199—and thus ignored them altogether. FWS’ failure to adequately consider these effects paved the way for the “no jeopardy” determination in Oregon.

As discussed above, *supra* at 11–15 and 24–26, FWS’ failure to include adequate consideration of dietary arsenic and zinc, impacts to prey species, and other direct and indirect effects of the proposed toxics criteria other than “water-only exposure” stems largely from its choice to rely almost exclusively on statistical modeling approaches, largely ignoring studies, data, and information it later considered in Idaho on these alternate routes of exposure. In the Idaho BiOp FWS’ analysis was not confined to such modeling, and in fact FWS expressed serious concern about the assumptions used and uncertainties inherent in the models. *See, e.g.*, Idaho BiOp at NWEA-000541. Declining to over-rely on modeling, in Idaho FWS instead turned to relevant studies and other existing literature, many of which predate, but were not considered by FWS in, the Oregon BiOp. *See e.g.*, Dkt. #20, Appendix (listing studies related to arsenic and zinc that were cited in the Idaho but not Oregon BiOp).³⁰ These studies contributed to FWS’

²⁹ Similarly, the Idaho BiOp has subsections addressing “Tissue Concentrations of Arsenic Associated with Chronic Responses in Fish,” and the “Behavioral and Neurotoxic Effects of Arsenic,” Idaho BiOp at NWEA-000562–564, issues that FWS in Oregon did not consider when analyzing the proposed chronic arsenic criterion’s effects on bull trout. FWS-000203–206.

³⁰ *See* Dkt. #20, Appendix (relevant studies are those cited in the “Dietary Toxicity of Arsenic” or “Arsenic Toxicity to Food Organisms” subsections of the Idaho BiOp, included in Idaho BiOp Table 6, or that discuss the impact of zinc on bull trout prey species). These include the Boyle,

conclusions in Idaho that the proposed chronic arsenic and acute and chronic zinc criteria would have significant adverse effects on bull trout, and thus led to jeopardy. *See* Idaho BiOp at NWEA-000676–677, 682 (jeopardy determination rationales for arsenic and zinc criteria).

Lastly, in Idaho, FWS also analyzed the effects to bull trout critical habitat in a manner or to an extent not considered by FWS in Oregon. In Idaho, FWS specifically considered the effects of the proposed arsenic and zinc criteria on bull trout critical habitat and provided a qualitative discussion as to how those criteria would adversely affect that habitat by negatively impacting bull trout prey and water quality. Idaho BiOp at NWEA-000565 (arsenic); *id.* at 000620–621 (zinc); *see also id.* at NWEA-000677, 682–683 (arsenic and zinc jeopardy determination rationales for bull trout critical habitat). In contrast, in the Oregon BiOp FWS addressed impacts to bull trout critical habitat from all pollutants collectively, and only in a cursory fashion. FWS-000237–247. The vast majority of FWS’s critical habitat discussion focused not on the actual effects of the pollutants to critical habitat, but rather *how much* of that habitat would be affected. FWS-000239–247. In this manner—by focusing on the impacts to critical habitat in a quantitative rather than qualitative manner—FWS was able to minimize the impacts of the proposed criteria and, ultimately, reach a different conclusion than it later reached in Idaho.

The new information, analysis, and conclusions regarding the effects of the proposed chronic arsenic and acute and chronic zinc criteria contained in the Idaho BiOp itself, as well as the studies cited therein, reveal that those criteria “may affect” bull trout and its critical habitat. For purposes of EPA’s duty to reinstate consultation, that is all that is required. *Rodgers*, 381 F. Supp. 2d at 1248. Because EPA failed to reinstate consultation on the criteria, it is in violation of ESA Section 7 and 50 C.F.R. § 402.16(b), and the Court should grant NWEA summary judgment on its Third Claim for relief.

Burgess, Canivet, Erickson, Farag, Hoff, Irving, Pedlar, Schmidt, Williams, and Woodward studies (Saul Dec., Dkt. #21-3, Exs. 1–3, 5, 6, 8, 10, 14, 17, 18, and 20).

V. EPA Violated Section 7(a)(2) of the ESA by Failing to Consult on Oregon’s Selenium Water Quality Criteria

After FWS completed the Oregon BiOp in 2012, EPA disapproved Oregon’s proposed standard of 5 µg/L for chronic selenium in 2013.³¹ Thereafter, Oregon adopted a slightly more stringent water quality criterion for chronic selenium of 4.6 µg/L total dissolved selenium (which is the equivalent of the standard for which FWS found jeopardy in Idaho); EPA approved Oregon’s 4.6 µg/L standard in 2014, having never consulted on this criterion.³²

FWS and NMFS joint regulations provide that “[e]ach Federal agency shall review its actions at the earliest possible time to determine whether any action may affect listed species or critical habitat” and that “[i]f such a determination is made, formal consultation is required[.]” 50 C.F.R. § 402.14. The Ninth Circuit has consistently held that this “may affect” language represents a “relatively low” threshold for triggering consultation. *Karuk Tribe*, 681 F.3d at 1027 (citing *Cal. ex rel. Lockyer v. U.S. Dep’t of Agric.*, 575 F.3d 999, 1018 (9th Cir. 2009)). “Any possible effect, whether beneficial, benign, adverse or of an undetermined character,” triggers consultation. *Id.* An agency may avoid the consultation requirement *only* if it determines that its action will have “no effect” on a listed species or critical habitat. *Id.* (citing *Sw. Ctr. for Biological Diversity v. U.S. Forest Serv.*, 100 F.3d 1443, 1447–48 (9th Cir. 1996)). Once an agency has determined that its action “may affect” a listed species or critical habitat, the agency *must* consult, either formally or informally, with the appropriate expert wildlife agency. *Id.* The statutory scheme ensures that actions that have *any* chance of affecting listed species or critical habitat—even if it is later determined that the actions are “not likely” to do so—require at least some consultation under the ESA. *Id.*

Here, because FWS acknowledged in the Oregon BiOp that even small amounts of selenium can have disproportionately large adverse effects on aquatic life,³³ the minimal “may affect” threshold is met. Further, EPA never made a finding that even the more stringent standard

³¹ See EPA Approval (Jan. 30, 2013), EPA-000001.

³² See EPA Approval (Apr. 11, 2014), EPA-003990.

³³ See, e.g., Oregon BiOp at FWS-000189–190, 000335–3363.

would have “no effect” on listed species. Even though FWS might have reached the same “no jeopardy” conclusion, that does not mean there was no chance that the criterion would affect listed species or critical habitat, and therefore EPA was not excused from undertaking at least some consultation under the ESA. *Karuk Tribe*, 681 F.3d at 1027.

VI. The Appropriate Remedies for Defendants’ Violations of the APA and the ESA

Should the Court grant summary judgment to NWEA on its first claim against FWS, it should “set aside,” or vacate, the Oregon BiOp, which is the default remedy under the APA. 5 U.S.C. § 706(2)(A); *Alsea Valley All. v. Dep’t of Commerce*, 358 F.3d 1181, 1185 (9th Cir. 2004). If the Court grants summary judgment in NWEA’s favor on any of the remaining three ESA citizen suit claims against EPA, NWEA respectfully requests that the Court give the parties a further opportunity to confer or, if necessary, brief the appropriate remedies. As the majority of the revised toxics criteria assessed in the Oregon BiOp are more stringent (i.e., more protective) than the previous criteria, the parties and the Court may wish to consider whether a remand without vacatur of at least certain portions of EPA’s approval of those revised criteria is more appropriate under the circumstances. *See, e.g., Pollinator Stewardship Council v. U.S. Env’tl Protection Agency*, 806 F.3d 520, 532 (9th Cir. 2015) (recognizing that remand without vacatur is an appropriate remedy when vacatur of the EPA action “could result in possible environmental harm[.]”).

CONCLUSION

For the foregoing reasons, NWEA respectfully requests that this Court declare unlawful and set aside the Oregon BiOp as arbitrary, capricious, and not in accordance with the ESA, and to declare unlawful EPA’s approval of Oregon’s revised water quality criteria that were made in reliance on the Oregon BiOp. Alternatively, the Court should order FWS and EPA to initiate or reinstate ESA consultation on Oregon’s water quality standards for chronic arsenic, acute and chronic zinc, and chronic selenium.

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Respectfully submitted,

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