ALLISON M. LAPLANTE (OSB # 02361)
DANIEL P. MENSHER (OSB # 07463)
DANIEL J. ROHLF (OSB # 990069)
Pacific Environmental Advocacy Center
Lewis & Clark Law School
10015 SW Terwilliger Blvd.
Portland, OR 97219
(503)768-6894, laplante@lclark.edu
(503)768-6926, dmensher@lclark.edu
(503) 768-6707, rohlf@lclark.edu

Attorneys for Plaintiff

# IN THE UNITED STATES DISTRICT COURT FOR THE DISTRICT OF OREGON

NORTHWEST ENVIRONMENTAL ADVOCATES, a non-profit corporation,

Plaintiff,

v.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY, a United States Government Agency, NATIONAL MARINE FISHERIES SERVICE, a part of the National Oceanic and Atmospheric Administration, a part of the United States Department of Commerce, and UNITED STATES FISH AND WILDLIFE SERVICE, a part of the United States Department of the Interior,

Defendants, and

(CORRECTED) MEMORANUDUM IN SUPPORT OF PLAINTIFF'S MOTION FOR PARTIAL SUMMARY JUDGMENT ON CLEAN WATER ACT CLAIMS

Civil No: 05-1876-HA

(Oral Argument Requested)

(CORRECTED)MEMORANDUM IN SUPPORT OF PLAINTIFF'S MOTION FOR PARTIAL SUMMARY JUDGMENT ON CLEAN WATER ACT CLAIMS i

# THE STATE OF OREGON, and NORTHWEST PULP AND PAPER ASSOCIATION

Intervenor-Defendants.

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#### INTRODUCTION

Water quality in Oregon is poor, and the species that depend on Oregon's waters as habitat are threatened with extinction. Specifically, Oregon's waters are simply too warm to support cold-water fish, such as salmon, steelhead, and bull trout. Oregon substantially revised its water quality standards, or goals, for these degraded waters. Rather than establishing water quality standards that would ensure the viability of these imperiled species, however, Oregon adopted standards that exempt the largest sources of heat to Oregon's waters, and do not support the biological needs of the species, as required by the Clean Water Act ("CWA"). The U.S. Environmental Protection Agency ("EPA") approved Oregon's water quality standards, and turned a blind eye to the gaping holes in the standards' reach. In doing so, EPA violated its mandatory duty under the CWA and acted arbitrarily and capriciously within the meaning of the Administrative Procedure Act ("APA"). Plaintiff Northwest Environmental Advocates ("NWEA") respectfully seeks summary judgment on its CWA claims.

#### LEGAL BACKGROUND

In 1972, Congress adopted amendments to the CWA in an effort "to restore and maintain the chemical, physical, and biological integrity of the Nation's waters." 33 U.S.C. § 1251(a). The CWA establishes an "interim goal of water quality which provides for the protection and propagation of fish, shellfish, and wildlife." *Id.* at § 1251(a)(2). To those ends, the CWA requires states to develop water quality standards that establish, and then protect, the desired conditions of each waterway within the state's regulatory jurisdiction. *Id.* at § 1313(a).

Water quality standards "serve both as a description of the desired water quality for particular waterbodies and as a means of ensuring that such quality is attained and maintained." 64 Fed. Reg. 37,073, 37,074 (July 9, 1999); 40 C.F.R § 131.2. They are the benchmarks by

which the quality of waterbodies is measured: waterbodies that do not meet these benchmarks are deemed "water quality limited" and placed on the CWA § 303(d) list. States must develop total maximum daily loads ("TMDLs") for all such 303(d)-listed waters to establish the scientific basis to clean the waters and bring them back into compliance. 33 U.S.C. § 1313(d)(1)(C).

Water quality standards must include three elements: (1) one or more designated "uses" of a waterway, such as swimming or fish propagation; (2) numeric and narrative "criteria" specifying the water quality conditions necessary to protect the designated uses; and (3) an antidegradation policy ensuring continued protection of any uses that have existed since 1975 and maintenance and protection of high quality waters, along with methods to implement the antidegradation policy. *Id.* at §§ 1313(c)(2), 1313(d)(4)(B); 40 C.F.R. Part 131, Subpart B. Implementation methods must be identified as part of the policy's adoption. 40 C.F.R. § 131.12.

States must review and revise their water quality standards at least every three years, in a process called "Triennial Review," thereafter submitting all new and revised standards to EPA for review and action. 33 U.S.C. § 1313(c)(1), (3); 40 C.F.R. § 131.20(c). EPA must review the submitted standards and determine if they meet CWA requirements. 33 U.S.C. § 1313(c)(3); 40 C.F.R. §§ 131.5, 131.13, 131.21(b). A state-developed water quality standard, including any policies affecting those standards, does not become effective until it receives EPA approval. 40 C.F.R. § 131.21(c). When EPA's approval of state water quality standards could have an adverse effect on threatened or endangered species, EPA must consult with U.S. Fish & Wildlife Service ("FWS") and National Marine Fisheries Service ("NMFS") (together "Services"), pursuant to the Endangered Species Act ("ESA"). 16 U.S.C. § 1536(a)(2), 50 C.F.R. § 402.14.

Once approved by EPA, water quality standards serve as the regulatory basis for the establishment of water quality-based controls. For "point sources" of pollution, EPA retains

direct control – which states, such as Oregon, may be authorized to carry out – to enforce effluent limitations through the National Pollutant Discharge Elimination System ("NPDES") permitting program. 33 U.S.C. §§ 1311(a), 1342. Congress did not establish an analogous federal permitting scheme for "nonpoint source" pollution, such as pollution from timber harvesting and agriculture. Instead, Congress assigned states the task of implementing water quality standards for nonpoint sources, with oversight, guidance, and funding from EPA. *See, e.g.*, 33 U.S.C. §§ 1288, 1313, 1329. "[S]tates are required to set water quality standards for *all* waters within their boundaries regardless of the sources of the pollution entering waters." *Pronsolino v. Nastri*, 291 F.3d 1123, 1127 (9th Cir. 2002) (emphasis in original).

#### FACTUAL AND PROCEDURAL BACKGROUND

Historically, salmonids<sup>1</sup> thrived in Oregon's waters, with millions of fish returning from the ocean each year to spawn and rear in the rivers and streams across the state. EPA 122 at 014601. Today, however, salmonid populations have declined precipitously; many salmon runs and resident bull trout populations are threatened or endangered. *See* FWS 2 at 00124; NMFS 2 at 8-20. While reasons for the dramatic decline are numerous, anthropogenic temperature increases are one of the most significant, making Oregon's current temperatures a serious threat to coldwater fish. EPA 121 at 014564; EPA 122 at 014601. Indeed, temperature influences survival of salmonids more than any other nonliving variable. EPA 121 at 014564, 014572–79; EPA 104 at 013532. Water quality standards that protect and restore cold water are vitally important to these and other coldwater species. EPA 693 at 023994.

Recognizing these problems, EPA Region 10 developed its *Guidance for Pacific*Northwest State and Tribal Temperature Water Quality Standards ("Temperature Guidance") "to

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<sup>&</sup>lt;sup>1</sup> The term "salmonids" generally refers to species of salmon and steelhead, as well as bull trout, which is actually a char species, not a salmon.

assist States and Tribes to adopt temperature [water quality standards] that EPA can approve." EPA 104 at 13526. EPA enlisted the assistance of the Services, Pacific Northwest Tribes, Oregon, Washington, and Idaho. The Temperature Guidance addresses many aspects of water quality standards, focusing on recommended numeric criteria for key life stages of salmonids.

The first public draft Guidance proposed species life-stage criteria derived by EPA's Technical Committee to protect life stages such as spawning, juvenile rearing, and migration. The Committee had started with a range of temperatures that allow optimum growth in fish, and then factored in other impacts from temperature such as increased disease, lowered swimming speed, and changes in metabolism. EPA 523, Att. 11 at 22417; EPA 559, Att. 1 at 022689. It proposed a 16°C criterion for rearing, 18°C for migration and *no* 20°C criterion.<sup>2</sup> EPA 571 at 022859. EPA, however, eventually rejected these recommendations and, in its final Guidance, suggested states adopt temperatures *at or above the upper end of the ranges* identified in scientific literature as protective. The "upper optimal" temperatures failed to consider issues such as disease. *See e.g.*, NMFS 243a at 8 (18°C criterion is "associated with elevated disease rates" and "[in large rivers 18°C] poses even greater risk of disease"). Agency scientists questioned most of the recommended criteria in the final Temperature Guidance.

EPA's committees also recognized the protection afforded by numeric criteria is only as good as the decisions on *where* they apply. EPA 758 at 024601 ("[I]n order to be technically rigorous, the [species life stage] approach absolutely must be based on species distribution data."). For this reason, the first draft Guidance cautioned that "neither best professional

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<sup>&</sup>lt;sup>2</sup> EPA used a metric for temperature called the "maximum 7 day average of the daily maxima" ("7DADM"). EPA 104 at 013546. It is intended to focus on maximum temperatures while at the same time averaging them over a week in order to reflect both the maximums and averages that fish experience. *Id.* NWEA has expressed all temperatures using the 7DADM metric.

judgment, nor field surveys indicating absence of that species should be used to eliminate the area from the species potential distribution." EPA 571 at 022874-022875.

The first draft Guidance also melded species' biological needs with models of historical temperatures, a result it termed "natural thermal potential." EPA noted that modelling *historical* temperatures was essential because it is "the only thermal regime that we know with certainty will provide necessary thermal dynamics to support recovery of salmonids[.]" *Id.* at 022870. The first draft Guidance also recognized some allowance above natural temperatures might be required for human impacts, at least for "irreversible" changes. This "human use allowance" would be added to estimates of *historical* conditions and adjusted if the final natural thermal potential was too high. *Id.* at 022882. Responding to the draft Guidance, FWS objected to EPA's "giv[ing] a misleading impression that the proposed thermal potential numeric criteria will be based solely on 'an estimate of the thermal potential[.]" FWS 584 at 10915. In contrast, Oregon strongly opposed using historic temperatures, only using "natural" thermal potential "after all *reversible* anthropogenic sources of heat are removed." EPA 867 at 026171 (emphasis added). Oregon made clear "the guidance [should] focus on the human contributions of heat *rather than the biological needs of the fish*[.]" EPA 801 at 024950 (emphasis added).

EPA finalized the Temperature Guidance, side-stepping many of the scientific issues raised in the process. It dismissed scientists' concerns about risks of using upper optimal criteria and simply went silent on issues such as how much human impact is allowed in modeled estimates of "natural" thermal potential. As Geoffrey Poole, EPA's lead scientist for the Guidance project later wrote, "[t]his 'off ramp' to a thermal potential is indefensible in light of the conclusions of the technical workgroup." EPA 758 at 024602.

While EPA was developing the Temperature Guidance, this Court was reviewing EPA

and NMFS' approvals of Oregon's previous water quality standards. *See Nw Envtl. Advocates v. EPA*, CV-01-510-HA (filed April 12, 2001). This Court held EPA's approval of certain Oregon water quality standards, and NMFS' "no jeopardy" conclusion regarding EPA's decisions on threatened and endangered species, were arbitrary, capricious, and noncompliant with the CWA and ESA. *See Nw Envtl. Advocates v. EPA*, 268 F. Supp. 2d 1255 (D. Or. 2003)("*NWEA I*").

In response to this Court's ruling, Oregon substantially revised its water quality standards. While largely following the Temperature Guidance, Oregon built into its standards myriad exemptions for the very nonpoint sources known to cause the most significant and widespread temperature increases, making implementation of temperature controls virtually impossible. In doing so, Oregon impermissibly retracted with one hand what it had attempted to protect with the other. EPA refused to review these nonpoint provisions, thus issuing a *de facto* approval of this egregious and yawning loophole in Oregon's standards. EPA 1, Att. 1 at 000029.

EPA approved Oregon's use designations and associated numeric criteria: 13°C for Salmon and Steelhead Spawning Through Fry Emergence; 18°C for Salmon and Steelhead Juvenile Rearing and Migration; 20°C and Sufficiently Distributed Cold Water Refugia for Salmon and Steelhead Migration; and 12°C for Bull Trout Spawning and Juvenile Rearing. EPA 1, Att. 1 at 000049, 53, 54, 55, 58. EPA also approved a 16°C Core Cold-Water Habitat criterion. *Id.* at 000049. And EPA approved numerous exceptions to these biologically-based numeric criteria that allow temperature increases well beyond protective limits. *See e.g.*, *id.* at 000061, 65. Finally, EPA approved changes to Oregon's antidegradation policy, as well as a document Oregon claims constitutes antidegradation implementation methods.<sup>3</sup>

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<sup>&</sup>lt;sup>3</sup> Prior to issuing its approval decision, EPA consulted under the ESA with NMFS and FWS on certain parts of the revised water quality standards. NMFS and FWS concluded that EPA's approval of Oregon's water quality standards would not cause jeopardy to threatened and

#### STANDARDS OF REVIEW

Summary judgment is appropriate if there are no genuine issues of material fact and the moving party is entitled to judgment as a matter of law. Fed. R. Civ. P. 56(c).

NWEA's claims pertaining to EPA's approval of Oregon's water quality standards are governed by the Administrative Procedure Act ("APA"). Under the APA, an agency action may be set aside if it is "arbitrary, capricious, an abuse of discretion, or otherwise not in accordance with law." 5 U.S.C. § 706(2)(A). A decision is arbitrary and capricious "if the agency has relied on factors which Congress has not intended it to consider, entirely failed to consider an important aspect of the problem, offered an explanation for its decision that runs counter to the evidence before the agency, or is so implausible that it could not be ascribed to a difference in view or the product of agency expertise." Nw Coal. for Alternatives to Pesticides v. EPA, 544 F.3d 1043, 1047 (9th Cir. 2008) ("NCAP") (quoting Motor Vehicle Mfrs. Ass'n v. State Farm, 463 U.S. 29, 43(1983)). Under this standard, an agency must "examine the relevant data and articulate a satisfactory explanation for its action including a rational connection between the facts found and the choice made." *Id.* at 1048 (quoting *Motor Vehicle Mfrs.*, 463 U.S. at 43). While this standard of review is narrow, the court "may not supply a reasoned basis for the agency's action that the agency itself has not given." Ctr. for Biological Diversity v. Natl. Highway Traffic Safety Admin., 538 F.3d 1172, 1193 (9th Cir. 2008)("NHTSA") (internal quotation omitted).

NWEA's claim that EPA violated CWA § 303(c) arises under the citizen suit provision of the CWA, and not the APA. 33 U.S.C. § 1365(a)(2); *NWEA I*, 268 F.Supp.2d at 1259 (review to determine whether "the agency has failed to exercise a nondiscretionary duty").

endangered salmon, steelhead, and bull trout. NWEA addresses its claims pertaining to those decisions in its separately filed Motion for Partial Summary Judgment on ESA Claims.

#### **ARGUMENT**

#### I. NWEA Has Standing to Bring Suit

An organization has standing if it can show that at least one member would have standing individually, the interests sought to be protected are germane to the purposes of the organization and the case does not require the participation of individual members. Hunt v. Wash. Apple Adver Comm'n, 432 U.S. 333, 343 (1977). NWEA has standing to sue because its members have suffered injuries in fact that are fairly traceable to, and would thus be redressed by overturning, EPA's actions and inactions regarding Oregon's water quality standards. See Friends of the Earth, Inc. v. Laidlaw Envtl. Servs., Inc., 528 U.S. 167, 180-81 (2000). NWEA's members use the waters affected by EPA's approval and failure to act on Oregon's revised water quality standards. See Huhtala Decl.¶¶ 4, 5, 7-8; Riskedahl Decl.¶¶ 3-4. NWEA's members have significant aesthetic, cultural and recreational interests in the health of salmonids and their habitat. See Huhtala Decl. ¶¶ 3-4; Riskedahl Decl. ¶¶ 3-4. These members' use and enjoyment of Oregon's waters is lessened because of degraded water quality and its resulting impacts on fish. See Huhtala Decl. ¶ 6-7, 10-11; Riskedahl Decl. ¶ 4-5. But for their concerns about the status of salmonids in Oregon, these members would engage in activities, such as fishing or eating wild salmon, more than they do. *Id.* A favorable decision by this Court would redress these injuries. NWEA can sue on behalf of its members because its purpose is germane to the interests sought to be protected in this lawsuit. See Bell Decl. ¶¶ 2-3. Thus, NWEA has standing to bring suit.

# II. EPA Violated its Mandatory Duty to Review and Act on Oregon's Water Quality Standards Related to Nonpoint Sources

Though the Ninth Circuit has made clear that state water quality standards apply "regardless of the sources of the pollution entering waters," *Pronsolino*, 291 F.3d at 1127, Oregon blatantly exempted the most significant sources of temperature pollution in the state,

"nonpoint sources" such as agriculture, forestry, and grazing. Despite their sweeping and detrimental reach, however, EPA failed to review and act on Oregon's provisions related to nonpoint sources of pollution. EPA violated Congress's clear mandate.

Section 303(c) of the CWA places a mandatory duty on EPA to review and approve or disapprove state submitted standards, without exception. 33 U.S.C. § 1313(c). EPA justifies its inactions by claiming the provisions are not water quality standards, and that because EPA itself lacks the authority to regulate nonpoint sources, it has no duty to review state nonpoint source provisions. *See* EPA 1, Att. 1 at 000029, 34, 38, 39, 41, 94-97. EPA is wrong on both counts.

### A. Oregon's Water Quality Standards Do Not Apply to the Most Significant Sources of Pollution in the State

It is no secret nonpoint source pollution poses a huge threat to water quality in Oregon and across the nation. *See* EPA 857 at 026094 (noting "the most intransigent water pollution problems in the United States involve diffuse non-point sources"). EPA's record makes clear nonpoint sources are the largest sources of warming in Oregon's waters. The Temperature Guidance itself recognizes that "temperature impairments in Pacific Northwest waters are *largely caused by non-point sources*." EPA 104 at 013569 (emphasis added). The record also details the ways in which loss of riparian canopy, shade, vegetation, and changes in stream morphology – all caused by nonpoint sources – have significant harmful effects on salmonids. *See* EPA 655 at 023542; *see also*, *e.g.*, EPA 1065, Att. 1 at 031781 (noting that "[s]cientific literature abounds documenting increased stream temperature with decreased canopy" from logging).

Despite this reality, Oregon exempted nonpoint sources from complying with standards. In its water quality standards package submitted to EPA, Oregon included provisions that deem nonpoint sources in compliance with temperature standards, if they use best management practices ("BMPs") defined by other agencies. *See* OAR 340-041-0028(12)(e)-(h). Together

these exemptions make the temperature standards inapplicable to logging, farming, and ranching on private, state or federal lands. Oregon also exempted nonpoint sources from antidegradation requirements under the legal fiction that activities such as rotating grazing pastures and agricultural crops are "recurring" and, therefore, not a lowering of water quality. OAR 340-041-0004(4). Finally, to leave no doubt as to the reach of these exemptions, Oregon extended them to *every* water quality requirement in Division 41. *See* OAR 340-041-0061(11)-(13).

This Court recently affirmed the sweep of these exemptions. In *Center for Biological Diversity v. Wagner ("CBD")*, the plaintiffs challenged U.S. Forest Service decisions pertaining to grazing on federal lands in Oregon spotted frog habitat. CV No. 08-302-CL, 2009 WL 2176049 (D. Or. June 29, 2009). Despite water quality monitoring results clearly establishing violations of Oregon's *E. coli* criteria, the Court held plaintiffs had no CWA claim because "Oregon's water quality standards dictate that such [federal] agencies are compliant with state requirements where they implement [BMPs.]" *Id.* at \*18 (interpreting OAR 340-041-0061(13)).

As *CBD* demonstrates, because Oregon deems nonpoint sources in compliance with water quality standards if they meet other laws, the standards are unenforceable against those sources even if they are the primary cause of violations. This is especially problematic for temperature because those other agency requirements referenced in Oregon's exemptions are inadequate to meet Oregon's temperature criteria or protect threatened and endangered salmonids. For example, in its Biological Opinion, NMFS pointed out the inadequacies of Oregon's rules for forestry and agriculture, stating that it "generally does not consider existing rules governing timber harvests [and] agricultural practices. . . to be sufficiently protective . . . to

support the survival and recovery of listed species." NMFS 2 at 52.<sup>4</sup> By explicitly deferring to other agencies' requirements – requirements which do not *result in* compliance with water quality standards – Oregon's nonpoint source provisions negate Oregon's temperature standards. Thus Oregon adopted standards that fail to apply to the primary causes of temperature pollution.

# B. EPA Must Review Oregon's Nonpoint Source Exemptions Because They Are Water Quality Standards

EPA has a mandatory duty to review Oregon's nonpoint source provisions because of their practical negating effect on Oregon's water quality standards. Courts have uniformly rejected narrow readings of the term "water quality standard" for purposes of determining when EPA's mandatory duty is triggered. See Fla. Pub. Interest Research Group Citizen Lobby, Inc. v. EPA, 386 F.3d 1070 (11th Cir. 2004) ("FPIRG"); Miccosukee Tribe of Indians of Florida v. EPA, 105 F.3d 599 (11th Cir. 1997) ("Miccosukee P"); Miccosukee Tribe of Indians of Florida v. U.S., No. 95-0533-CIV-DAVIS, 1998 WL 1805539 (S.D. Fla. Sept. 14, 1998) ("Miccosukee II"); Miccosukee Tribe of Indians of Florida v. U.S., 2006 WL 648055 (S.D. Fla. February 16, 2006) ("Miccosukee III"). Consistent with those decisions, this Court should reject EPA's overly narrow interpretation here, and hold that Oregon's nonpoint source provisions are subject to review under the CWA.

In *FPIRG*, the plaintiffs challenged EPA's failure to review Florida's Impaired Waters Rule ("IWR"), arguing that while the otherwise applicable water quality standards required the criteria "not be exceeded at any time," the IWR allowed multiple exceedances to occur without

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<sup>&</sup>lt;sup>4</sup> See also NMFS 36 at 10 (stressing that a 2002 DEQ and Oregon Department of Fish & Wildlife "sufficiency analysis" demonstrated that the state forest practice rules do not meet water quality standards); EPA and NMFS Findings for the Oregon Nonpoint Coastal Program, available at <a href="http://coastalmanagement.noaa.gov/nonpoint/docs/findor.txt">http://coastalmanagement.noaa.gov/nonpoint/docs/findor.txt</a>. (finding, inter alia: Oregon's forest practices and implementation are "inadequate to ensure that water quality standards are attained and maintained and beneficial uses protected;" Oregon failed to ensure agricultural water quality management plans can be implemented).

triggering classification of the waterbody as impaired. *FPIRG*, 386 F.3d at 1075. The IWR also adopted specific nutrient concentrations to determine whether a waterbody was impaired, whereas the otherwise applicable water quality standards simply established a "narrative" nutrient standard. *Id.* at 1075-76. Thus the IWR, according to the plaintiffs, weakened the water quality standards and changed what it meant to comply with them. The Eleventh Circuit agreed that, irrespective of the IWR's explicit intent, the relevant question was whether, as applied, the IWR "had the practical effect of loosening Florida's water quality standards." *Id.* at 1090-91. The Eleventh Circuit remanded to the district court to apply this effects-based test.

As in *FPIRG*, Oregon's nonpoint source exemptions have a "practical effect" on water quality standards because they change, and indeed negate, the applicability of numeric criteria. In Oregon, the *only* sources of pollution on many river miles are nonpoint sources. This is true for waters used by some of the most thermally sensitive species, such as bull trout. *See* FWS 11 at 00332 (noting "bull trout spawning habitat is generally upstream of point source[s]"). Although these waters may be designated to meet 12°C, the nonpoint source exemptions render that criterion effectively meaningless in these nonpoint-impacted stretches of bull trout habitat.

Moreover, as in *FPIRG*, Oregon's nonpoint source provisions modify what it means to comply with standards. This, in turn, impacts TMDLs, or clean-up plans, for waters exceeding standards. The statute plainly requires TMDLs "be established at a level necessary to implement the applicable water quality standards." 33 U.S.C. § 1313(d)(1)(C). A TMDL in Oregon cannot ensure compliance with temperature standards for waters impaired primarily by nonpoint sources, as the standards do not apply to those sources. Thus, Oregon's exemptions render the TMDL, an essential CWA tool for applying and implementing water quality standards, useless.

Another line of cases supports the conclusion that Oregon's nonpoint source exemptions

are water quality standards subject to review. At issue in *Miccosukee II* was the Everglades

Forever Act (EFA), which exempted farmers who used BMPs from any additional water quality
improvement measures for twelve years. 1998 WL 1805539 at \*1, \*6. The court noted about
one EFA provision "[t]his requires nothing more than developing programs which consider water
quality standards. It does not compel farmers to meet any particular standard[.]" *Id.* at \*17.

Oregon's nonpoint source provisions mirror those in *Miccosukee II* because they exempt sources
from compliance with standards if they use similar BMPs. Indeed, Oregon's provisions are more
blatant exemptions; here, there is *no date* by which the standards will eventually apply to
nonpoint sources. As the court held in *Miccosukee II*, this is a "de facto suspension of, and
therefore a change in, water quality standards." *Id.* at \*16.

Oregon blatantly exempted nonpoint sources from complying with water quality standards, therefore negating the standards' applicability to many, if not all, waters in the state.

These exemptions have an "effect on" water quality standards, and EPA must review them.<sup>5</sup>

# C. EPA Has the Authority to Review Water Quality Standards Related to Nonpoint Sources

EPA's second rationale for not reviewing Oregon's nonpoint source exemptions is that "EPA does not have legal authority over nonpoint sources and therefore is not required to review and cannot disapprove regulation of nonpoint sources." *See* EPA 1, Att. 1 at 000039. EPA

<sup>&</sup>lt;sup>5</sup> Even if Oregon's nonpoint exemptions are not themselves water quality standards, they qualify as general policies affecting water quality standards. "States may, at their discretion, include in their State standards, policies generally affecting their application and implementation, such as mixing zones, low flows, and variances. Such policies are subject to EPA review and approval." 40 C.F.R. § 131.13. This list of policies is not inclusive. *Id.* Nor has EPA deemed the regulation to apply to only those three types of policies. *See, e.g., In re Star-Kist Carbide, Inc.*, 3 E.A.B. 172, 182-183, n. 16 (Adm'r 1990) ("compliance schedules" included in state water quality standards are general policies subject to EPA review). For the same reasons discussed above, Oregon's nonpoint source exemptions affect the "application and implementation" of Oregon's water quality standards, within the meaning of 40 C.F.R. § 131.13.

injects an artificial distinction into its review of these standards, and confuses their broad applicability with EPA's authority to directly regulate certain activities. EPA's rationale misconstrues its mandatory duty under the CWA and contradicts binding Ninth Circuit case law.

First, water quality standards apply to all sources of pollution, point and nonpoint alike. Standards create the water quality goal for waters in order to "restore and maintain . . . the integrity" of the water. 33 U.S.C. § 1251(a). Therefore, "the states are required to set water quality standards for all waters within their boundaries regardless of the sources of the pollution entering waters." *Pronsolino*, 291 F.3d at 1127 (emphasis in original). "Water quality standards reflect a state's designated uses for a water body and do not depend in any way upon the source of pollution." *Id.* at 1137 (emphasis in original). Congress fully understood "that the waters of the Nation cannot be restored and their quality maintained unless the very complex and difficult problem of nonpoint sources is addressed." S. Rep. No. 92-414 at 38 (1971), reprinted in 1972 U.S.C.C.A.N. 3668, 3705. Therefore, Congress created CWA provisions, including water quality standards, to address nonpoint source pollution. As one court explained, "[t]he CWA would be nothing more than a paper tiger if it didn't apply to nonpoint sources. It would make no sense to have an act that tightly regulated the sources of some pollutants, but gave others carte blanche to pollute at will." Miccosukee II, 1998 WL 1805539, at \*18 (emphasis in original).

Moreover, the Ninth Circuit has already rejected the argument that EPA cannot review state water quality measures related to nonpoint sources. *See Pronsolino*, 291 F.3d at 1127-28, 1135-41. In *Pronsolino*, landowners challenged EPA's authority to promulgate a TMDL for waters impacted exclusively by nonpoint sources. The court rejected the argument that EPA lacks legal authority over nonpoint sources and thus exceeded its authority by including nonpoint

sources in the TMDL. *Id.* There, EPA *defended* its authority to review state water quality measures – and indeed to directly establish a TDML clean-up plan in the absence of state action – which address only nonpoint sources. EPA cannot possibly reconcile its position here with its position in *Pronsolino*, and more importantly, with the Ninth Circuit's conclusion.

Inexplicably, EPA relies on the Tenth Circuit's decision in *American Wildlands v*. *Browner*, 260 F.3d 1192 (10th Cir. 2001), to support its failure to act on Oregon's nonpoint source provisions. EPA 1, Att. 1 at 000039. In *American Wildlands*, the Tenth Circuit upheld EPA's approval of Montana standards exempting nonpoint sources from antidegradation review. *American Wildlands*, 260 F.3d at 1198. EPA claimed its lack of CWA regulatory authority over nonpoint sources rendered it "powerless to disapprove state antidegradation review policies on the basis of how those policies deal with nonpoint source pollution." *Id.* at 1197. The Tenth Circuit may have accepted this argument, but the Ninth Circuit definitively has not.

In sum, the question in this case is not what activities EPA can regulate directly, but what water quality standards EPA must review and act upon. EPA's duty under Section 303 is entirely distinct from its direct regulatory authority. EPA's review of state water quality standards is based solely on whether the standard "meets the requirements of" the CWA. 33 U.S.C. § 1313(c)(3). Thus EPA violated its mandatory duty under CWA Section 303(c) to review and act on Oregon's provisions regarding nonpoint sources.<sup>6</sup>

<sup>&</sup>lt;sup>6</sup> In the alternative, EPA's decision that Oregon's nonpoint source provisions are not water quality standards or general policies affecting water quality standards is arbitrary and capricious. *See* NWEA's Alternative Claim 13. NWEA's claim is properly brought under the CWA because EPA violated its mandatory duty to review these provisions for compliance with the CWA and EPA's regulations. Nonetheless, if this Court determines EPA's decision not to review the nonpoint source provisions is an agency action challengeable only under the APA, for the reasons set forth above, this action was arbitrary, capricious and not in accordance with the CWA or EPA's implementing regulations.

#### III. EPA's Approval of Oregon's Numeric Criteria Was Arbitrary and Capricious

Not only did Oregon exempt the largest sources of heat from complying with water quality standards, the numeric water quality criteria it adopted are woefully inadequate to protect salmonids. Numeric water quality criteria are central to ensuring protection of designated uses. 33 U.S.C. § 1313(c)(2)(A); 40 C.F.R. § 131.3(b). Criteria "must be based on sound scientific rationale and must . . . protect the designated use." 40 C.F.R. § 131.11(a). Importantly, criteria "shall support the most sensitive use" of the waterbody. *Id.* By approving Oregon's numeric criteria, however, EPA failed to fulfill its mandatory duty to ensure that the criteria, in fact, support all salmonid uses. EPA's approvals of 20°C for Salmon and Steelhead Migration, 12°C for Bull Trout Spawning and Juvenile Rearing, 13°C for Salmon and Steelhead Spawning Through Fry Emergence, and 18°C for Salmon and Steelhead Juvenile Rearing and Migration were arbitrary and capricious because the numeric criteria do not support these uses. See OAR 340-041-0028(4)(a), (4)(d), (4)(f). Rather than requiring Oregon to establish criteria in an optimal temperature range that would ensure salmonid survival, EPA allowed Oregon to set temperatures that will increase disease rates, prevent spawning, retard rearing, and push salmon closer to extinction in the Pacific Northwest.

#### A. EPA Arbitrarily and Capriciously Approved the 20°C Criterion

EPA approved Oregon's 20°C criterion for Salmon and Steelhead Migration despite overwhelming evidence in the record that the criterion does not satisfy the biological demands of threatened and endangered salmonids in Oregon. As EPA's Technical Support Document ("TSD") for its decision explains, salmon migrating in 20°C water suffer serious detrimental effects, including a "high" disease risk, reduced ability to feed, decreased migration rates, and an inability to avoid predators. EPA 1, Att. 1 at 000056. Every agency involved has recognized

20°C water presents serious risks to salmon survival. *See, e.g.*, EPA 66 at 002203 (DEQ admitting "we do not claim that 20 is optimal or risk free for salmonid use."); NMFS 2 at 37 (finding the 20°C criterion is "likely to adversely affect" threatened and endangered salmon and steelhead); EPA 1238 at 037609 ("the numeric criterion of 20°C alone [is] unprotective of the designated use"); FWS 441 at 09227 (EPA also "does not believe 20°C...by itself, is protective of migrating juveniles and adults in [the] lower mainstem rivers that experience little diurnal variation"). Indeed, in its 1999 review of Oregon's standards, EPA already disapproved a 20°C criterion, concluding that it failed to protect salmonids. *NWEA I*, 268 F.Supp.2d at 1259.

Despite its earlier rejection of a 20°C criterion and the overwhelming evidence again before the agency, EPA approved the criterion based on two insufficient rationales. First, EPA simply assumed river temperatures will fall below 20°C when migrating salmonids are present. Second, EPA relied on an accompanying "coldwater refugia" provision to compensate for the harmful effects that will occur at 20°C. Both rationalizations are without merit, lack support in the record, and fail to ensure the protection of salmonid migration. *NCAP*, 544 F.3d. at 1052 n.7 ("where [an] agency's reasoning is irrational, unclear, or not supported by the data it purports to interpret, we must disapprove the agency's action"). EPA's approval should be set aside.

# 1. EPA's Assumption That Waters Will Cool in Time to Allow Salmonid Migration Is Unenforceable and Unsupported

EPA justified its approval of an unprotective standard by assuming "most migrating adults and nearly all migrating juveniles (except for late migration fall Chinook), will migrate through these water during other times of the year when temperatures are colder than the summer maximum condition." EPA 1, Att. 1 at 000056. In other words, although EPA recognized that 20°C is unsafe, it simply assumed that waters would actually be cooler than 20°C when salmon migrate, apparently ignoring the significant populations that migrate at summer peak

temperatures. See e.g. EPA 972 at 027039-40 (explaining that many salmonids—out-migrating fall chinook, in-migrating adult spring chinook, summer steelhead and sockeye—are regularly present in the large and main-stem rivers during peak summer temperatures). Moreover, EPA cannot fulfill its duty to protect uses by relying on an unenforceable assumption that water temperature will automatically fall below the criterion; water quality criteria must be set at the level necessary to protect the use. 40 C.F.R. §§ 131.5(a)(2), 131.11(a). Unless the criterion mandates a water attain a particular temperature, there is no regulatory tool to ensure that it will reach that temperature or protect the use. EPA's decision to approve a criterion that relies on unenforceable and wishful temperature decline fails to meet the mandates of the CWA.

### 2. EPA's Reliance On Coldwater Refugia Cannot Compensate for the Inadequate Numeric Criterion

EPA also approved the 20°C criterion in reliance on Oregon's supplemental narrative provision requiring "sufficient coldwater refugia." Oregon's 20°C criterion provides that:

In addition, these water bodies must have coldwater refugia that is [sic] sufficiently distributed so as to allow salmon and steelhead migration without significant adverse effects from higher water temperatures elsewhere in the water body.

OAR 340-041-0028(4)(d). The associated "coldwater refugia" provision, however, fails to compensate for the inadequate 20°C criterion. Coldwater refugia once existed throughout Oregon's waters, providing salmonids areas of cooler water where groundwater welled up, small tributaries emptied into larger rivers, and well-forested riverbanks shaded shorelines. EPA 1000 at 028034. Oregon's rivers have substantially changed, however, and these pockets of cold water no longer offer the same reliable refuge to salmonids. EPA 121 at 014587. While protecting existing refugia is critical to the species' survival, EPA's attempt to mend the 20°C criterion with this tag-on provision simply cannot fix this broken criterion.

First, EPA does not know where, when, or even if coldwater refugia currently exist or could be restored. In the TSD, EPA admits that "[w]ithout extensive monitoring and modeling in the waterbodies where this use is designated, it is *impossible to know at this time the specific locations and times* in the water body where cold water refugia currently exist or may potentially exist." EPA 1, Att. 1 at 000056 (emphasis added). Absent this information, the coldwater refugia narrative is meaningless, and simply cannot ensure the protection of salmonid migration as required by the CWA. 33 U.S.C. §1313(c); 40 C.F.R. § 131.11(a). Although a court may defer to an agency's complete, reasoned, and adequate explanation, the court owes no deference where the decision is not supported by the data and reasoned analysis. *NCAP*, 544 F.3d. at 1052. Without this data, EPA's conclusion is the very definition of an arbitrary and capricious action.

Second, neither EPA nor Oregon knows how many refugia would be "sufficient." EPA's Technical Work Group stressed that for a coldwater refugia provision to provide any protection for salmonids, it requires a *specified* minimum amount of required refugia. NMFS 370 at 2. EPA ignored this advice; nowhere in the record does EPA provide any guidance as to the spatial extent, distribution, duration, or timing of coldwater refugia that would suffice to protect salmonids. Nor did EPA require that information from Oregon. Without any measure to determine the sufficiency of coldwater refugia, this provision is unenforceable at best, and meaningless at worst. There is no method to determine whether discharges authorized by NPDES permits will destroy refugia, nor is there a benchmark for providing "sufficient" refugia when Oregon implements its standard in a TMDL. EPA has failed to provide a reasoned explanation of how, without a definition of sufficiency, it expects the coldwater refugia criterion to protect salmonid migration.

Finally, Oregon's definition of coldwater refugia further undermines this already flawed

standard. The Temperature Guidance defines refugia as "waters that are 2°C colder than the surrounding water." EPA 104 at 013556. In contrast, Oregon defines refugia as "those portions of a water body where, or times during the diel temperature cycle when, the water temperature is at least 2 degrees Celsius colder than the daily maximum temperature of the adjacent well-mixed flow of the water body." OAR 340-041-0002(10) (emphasis added). This difference is biologically significant. Oregon allows waters that cool 2°C at night to qualify as refugia, providing no protection during daytime peak temperatures. If refugia are not required to exist contemporaneously with maximum temperatures, salmonids cannot use them to avoid injury from peak temperatures – the very rationale for EPA's reliance on refugia. See EPA 1, Att. 1 at 000056; NMFS 9 at 2. EPA also failed to explain how coldwater refugia that are defined in relation to ambient temperatures, which may be well in excess of 20°C, will protect salmonids. Oregon's waters frequently reach 25°C. See, e.g., EPA 1106 at 033610. Where water temperatures reach 25°C, refugia could be 23°C and still satisfy the definition of cold water refugia. Yet, 23°C is above the upper incipient *lethal* temperature for salmonids. EPA 104 at 013543. This clearly fails any definition of refuge.

### B. EPA Approved Oregon's 12°C Criterion for Bull Trout Despite the Record Demonstrating that 12°C Will Not Protect All Bull Trout Life Stages

Despite the exacting temperature demands of bull trout during different parts of its life cycle, Oregon established a single, inadequate temperature criterion for the species. OAR 340-041-0028(4)(f), EPA 693 at 023994; EPA 464 at 021806. In approving a single, legally and biologically inadequate criterion of 12°C for bull trout juvenile rearing, spawning, and incubation, EPA ignored its own recommendations in the Temperature Guidance and the CWA's requirements. EPA 1, Att. 1 at 000048, 58-59. EPA's approval of this criterion was unlawful.

### 1. The 12°C Criterion Fails to Protect Bull Trout Spawning and Egg Incubation

EPA arbitrarily approved Oregon's 12°C criterion as protective of bull trout spawning and egg incubation. The record clearly demonstrates that bull trout require 9°C or colder to spawn. EPA 104 at 013544. EPA itself recommended a 9°C criterion for bull trout spawning, in the Temperature Guidance. *Id.* at 013558. FWS also, "strongly support[ed] this number and believes this temperature is *required* to initiate spawning." FWS 421 at 09134 (emphasis added). To justify its approval of a 12°C criterion for spawning, EPA assumed that "if the summer maximum temperature is 12°C ... temperatures will naturally decrease to levels that are protective of bull trout spawning [9°C (48°F)] when it occurs in the late summer and fall." EPA 1, Att. 1 at 000058. Neither the CWA nor the record allows EPA to make this assumption.

By relying on the 12°C criterion to protect a spawning use that requires streams to fall below 9°C by August 15, EPA failed to ensure the criterion will protect that "most sensitive" use. 40 C.F.R. §§ 131.5(a)(2), 131.11(a)(1). Even if EPA's assumptions about thermal cooling are reasonable (and they are not, as discussed below), they do not translate into legally enforceable protections. Merely hoping, rather than mandating, that waters reaches 9°C in time for spawning amounts to setting no bull trout spawning criterion at all.

Moreover, EPA's assumptions are incorrect. To protect the most sensitive use, the criterion must protect bull trout when and where they begin to spawn. In Oregon, bull trout begin to spawn in seven basins on August 15th, and in the remainder on September 1st.<sup>7</sup> FWS 168 at 01460. Nothing in the record supports the assumption that water temperatures will cool

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<sup>&</sup>lt;sup>7</sup> These include the Klamath, Willamette, Grande Ronde, Hood River, Deschutes, Powder, and Malheur basins.

from a 12°C summer maximum to 9°C by August 15th or September 1st.<sup>8</sup> In fact, during development of the Temperature Guidance FWS warned EPA that "[i]n sites where spawning occurs at a time close to the summer maximum, application of the criterion for juvenile rearing may not be protective of spawning and incubation." EPA 783 at 024786. EPA acknowledged in the Guidance it "did not assess data in sufficient detail to determine the extent to which these uses are protected vis-à-vis the summer maximum criterion." EPA 104 at 013557-58. Oregon, however, did a comprehensive temperature study of the John Day River and concluded that "no site met the optimal spawning initiation temperature of 9°C" by the first week of September. FWS 140 at 01245. There, streams reached 9°C by the middle of September, at the earliest. *Id.* at 01247-92. Despite this evidence and EPA's conclusion that a 9°C criterion was necessary "where bull trout spawning occurs early enough (e.g. late summer) that limiting the summer maximum temperature to 12°C 7DADM via the bull trout juvenile rearing criterion will be insufficient [to] protect bull trout spawning," EPA arbitrarily approved Oregon's criterion. EPA 1195 at 035749.

Finally, EPA concluded the 12°C criterion would protect incubating bull trout eggs and emerging fry because temperatures would "further decrease to protect egg incubation [2 to 6°C...] when it occurs over the winter." EPA 1, Att. 1 at 000058; *See also* EPA 104 at 013558. This conclusion contradicts the Guidance, which states: "Meeting [the 9°C spawning] criterion *at the onset of spawning* will likely provide protective temperatures for egg incubation." EPA 104 at 013558 (emphasis added). The record contains no evidence to support the conclusion that a water body warmer than 9°C at the onset of spawning will naturally cool to protect bull trout egg

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<sup>&</sup>lt;sup>8</sup> There are a few streams and rivers that remain below 12°C all year, such as the Metolius River, that are protective of bull trout spawning. However, there are no data in the record that show rivers or streams falling from summertime maximum temperatures of 12°C to 9°C by August 15.

incubation. By approving a criterion that is not protective of bull trout spawning at its onset in the late summer, EPA also failed to ensure that bull trout egg incubation would be protected. EPA may not layer one assumption upon another when that initial assumption is clearly contradicted by the record. *See, e.g., Native Ecosystems Council v. Tidwell*, 2010 WL 843761, \*7-\*8 (9th Cir. 2010).

#### 2. The 12°C Criterion Fails to Protect Juvenile Bull Trout Rearing

Consistent with its Temperature Guidance, EPA approved Oregon's 12°C criterion as protective of bull trout rearing. EPA 1, Att. 1 at 000058. Rather than recommending a criterion based on biological needs of rearing bull trout, the Temperature Guidance instead recommended a temperature EPA believed was feasible and politically palatable. FWS had advised EPA that 11°C is "biologically...what the literature supports" as necessary for bull trout rearing, and that "11 is the upper optimal for juvenile bull trout." FWS 581 at 10905. EPA rejected 11°C because "we would necessarily need to limit the geographic scope where that number applies (i.e. less [sic] river miles)," to avoid having too many streams violating the criterion. FWS 581 at 10906-07. EPA further explained "we need to keep in the back of our minds the current political climate/administration and what could happen if we can't come to an agreement within this forum." FWS 581 at 10905. Ultimately, FWS capitulated, conceding this is where "science and the real world must be blended to make policy." Id. EPA's approval improperly elevated politics and policy above the biological considerations of bull trout, a species on the brink of extinction. See Earth Island Inst. v. Hogarth, 494 F.3d 757, 769 (9th Cir. 2007) (holding NOAA's decision was arbitrary and capricious because it was "influenced. . .by foreign policy considerations rather than science alone, in contravention of the Congressional mandate"). EPA's approval of Oregon's 12°C for bull trout rearing was thus unlawful.

# C. EPA Unlawfully Approved Oregon's 13°C Criterion for Salmon and Steelhead Spawning Through Fry Emergence

EPA similarly failed to require Oregon to protect salmon and steelhead spawning, egg incubation, and fry emergence, and thus failed to meet its requirements under 40 C.F.R. § 131.5(a)(2). Oregon established a single numeric criterion of 13°C for salmon and steelhead spawning, egg incubation, and fry emergence. OAR 340-041-0028(4)(a). EPA approved this criterion even though EPA recognized that salmon preparing to spawn need water colder than 13°C, spawning takes place in water 4 to 14°C, and the optimal range for egg incubation is 6 to 10°C. EPA 1, Att. 1 at 000053. EPA relied on an assumption that the 13°C criterion will provide colder water than the applicable criterion "assuming the typical annual thermal pattern." *Id.* As discussed above, this is a legally unsupportable approach. By relying on the 13°C criterion to protect colder water uses, EPA failed to protect the uses. 40 C.F.R. § 131.5(a)(2).

# D. EPA's Unlawfully Approved Oregon's 18°C Criterion for Salmon and Steelhead Juvenile Rearing & Migration

Finally, EPA ignored science and relied on unsupportable assumptions to approve the 18°C criterion for the Salmon and Steelhead Juvenile Rearing & Migration. The 18°C criterion applies to the broadest range of species and life stages -- including adult migrations of all anadromous salmon and all juvenile rearing of salmon and trout outside the limited Core Cold Water Habitat (16°C) designations. OAR 340-041-0028(4)(c). It covers large stretches of Oregon's waters. Despite its importance, however, and knowing it posed a significant risk to salmonids, EPA approved the 18°C criterion.

Scientists developing the Temperature Guidance originally recommended 18°C exclusively for migration; and the highest rearing criterion was set at 16°C. EPA 523, Att. 11 at 022417; EPA 559, Att. 1 at 022693. The risks of 18°C were well known to EPA when it

approved Oregon's 18°C criterion. First, EPA recognized that 18°C is *above* the *upper optimal* growth temperatures for individual fish under the limited food conditions likely to be found in nature. EPA 1, Att 1 at 000053; EPA 123 at 014634-45. Second, 18°C is correlated with an "elevated" disease risk for both migrating adults and rearing juveniles. EPA 1, Att 1 at 000053.

EPA downplayed fish presence during *peak* summer temperatures in rivers and streams designated for 18°C. In response, NMFS criticized EPA for justifying 18°C criterion because "it would 'prevent adults and juveniles from prolonged exposure of 16-17°C that can lead to elevated disease rates.' . . . The draft guidance acknowledges this risk of increased disease . . . but dismisses the concern since 'out-migrating juveniles have generally completed their outmigration by this time and the number of adults migrating through these waters at this time is limited and of short duration." EPA 972 at 027039. NMFS noted salmon "often can be found migrating or holding in large and medium sized rivers during the summer maximum period" (spring and summer adult chinook and summer steelhead). *Id.* at 027040 (emphasis added). NMFS identified species migrating "throughout the summer" (out-migrating juvenile fall chinook and adult summer steelhead) and adults migrating during peak temperatures (spring and summer chinook). Id. at 027039-40. Moreover, both agencies agreed larger rivers "with the greatest potential for . . . adverse effects to occur are ones with small diurnal temperature variations such that fish are exposed to average [higher] temperatures . . . for multiple days." EPA 1, Att 1 at 000056. NMFS explained that in these rivers, the 18°C criterion is equivalent to a higher temperature "which poses even greater risk of disease." EPA 972 at 027039. This level is beyond "elevated." EPA 1, Att 1 at 000055. As shown above, adult and juvenile salmon rely on larger rivers during peak temperatures. EPA 972 at 027039-40; EPA 787 at 024827.

EPA attempted to reconcile its desired outcome with the facts by noting dismissively that

"most fish" migrate at non-peak times but "some species (e.g., late migrating juvenile fall chinook; adult summer chinook, summer steelhead, and sockeye) may migrate in these waters during the period of summer maximum temperatures." EPA 104 at 013555. EPA's rationale does not square with the facts. It cannot ignore fish because they inconveniently use waters during peak summer temperatures.

Recognizing some rivers with salmon rearing and migration were likely to exceed the optimal and preferred 16°C criterion, NMFS accepted an 18°C criterion based on the assumption "most fish" would experience it before or after peak summer temperatures. Because NMFS recognized this assumption was not true, as discussed above, its support was predicated on having refugia wherever the 18°C criterion would apply to "mainstem rivers with chinook or steelhead." EPA 972 at 027040.

Finally, for fish rearing or migrating in 18°C criterion areas *outside* peak temperatures, EPA assumed the same cooling as with the other numeric criteria. EPA 1, Att 1 at 000053. For the same reasons discussed above, this assumption fails to ensure the criterion protects the most sensitive use. *See* pg 23 *supra*. By setting the widespread 18°C criteria above upper optimal temperatures, EPA "[left no] margin for error." EPA 541.

Although EPA admitted the 18°C criterion will "decrease juvenile growth, increase disease risk, and increase competition with cool and warm water species," EPA approved the criterion based on the unproven assumption "temperatures will be cooler than 18°C most of the time and places where this use occurs." EPA 1, Att 1 at 000055. And, EPA was fully aware the 18°C applied to waters where *peak* salmonid use occurred during *peak* summer temperatures.

IV. The Narrative Exemptions From the Numeric Water Quality Criteria Furthers EPA's Failure to Ensure the Protection of Salmonid Uses in Oregon Waters

Oregon included several exemptions in its temperature standards that allow significant

warming above its already inadequate numeric criteria. Styled as "narrative criteria," these provisions – the "Natural Conditions" criterion and "Human Use Allowance" – are exemptions that allow waters to become even hotter than Oregon's biologically-based numeric criteria. By approving both exemptions, EPA authorized significant loopholes that undermine Oregon's temperature standards, rendering EPA's approval arbitrary and capricious.

#### A. The "Natural Conditions" Criterion Fails to Protect Designated Uses

Under Oregon's Natural Conditions provision, if Oregon decides the "natural thermal potential" of a waterbody is hotter than the biologically-based numeric criterion, this thermal potential automatically supersedes the otherwise applicable numeric criterion for that water.

OAR 340-041-0028(8). In approving this provision, EPA relied on flawed models, it allowed Oregon to improperly include anthropogenic warming in estimates of "natural" potential, it failed to consider the stresses salmon face today, and it undermined its own duty to review and approve all standards before they become applicable. EPA's approval of the Natural Conditions criterion was therefore arbitrary and capricious and violated the CWA's mandate to ensure the protection of designated uses. 33 U.S.C. § 1313(c)(2); 40 C.F.R. Part 131, Subpart B.

### 1. EPA's Reliance on Models with Known Flaws and Significant Error Rates is Arbitrary and Capricious

EPA justified allowing waters to exceed biologically-based criteria up to estimated "natural" levels "because river temperatures prior to human impacts clearly supported healthy salmonid populations." EPA 104 at 013562. Although historical temperatures allowed salmon to thrive, Oregon's Natural Conditions criterion cannot, according to EPA's and Oregon's own

<sup>&</sup>lt;sup>9</sup> EPA also approved the "Statewide Narrative Criteria—Natural Conditions" at OAR 340-041-0007(2) which applies to all pollutant parameters, not just temperature. This too allows Oregon to automatically replace numeric criteria whenever it deems waters were "naturally" hotter. For clarity and brevity, NWEA relies on its arguments pertaining to the "Natural Conditions" criterion as the basis for also challenging the "Statewide Narrative Criteria."

science, accurately estimate historical temperatures. EPA 1, Att 1 at 000063; *See e.g.* EPA 499 at 022258. EPA's internal and interagency discussions demonstrate modeling cannot reliably estimate historical temperatures. *See e.g.*, FWS 508 at 09994 ("our estimates of historical conditions are uncertain."); FWS 210 at 04102 ("there are uncertainties in modeling and perhaps even greater uncertainty around whether we are making the correct estimates and assumptions about the natural or site potential stream conditions we use in our modeling[.]"); EPA 630 at 023254 ("The modeled distribution is not the same thing as historical stream temperatures[.]"). EPA's Peer Review Panel concluded inadequate "data available to describe past conditions will seriously limit the ability to model past conditions with good accuracy and precision." EPA 630 at 023257; *see also* EPA 592 at 023004. Despite recognizing the impossibility of accurately modeling historical temperatures, EPA approved the exemption based on such models.

Absent the ability to accurately model historical temperature conditions, EPA's approval is unsupported by the record. As FWS biologist Shelly Spalding explained, it is unimaginable "you would want to increase temperature criteria above the recommended life stage thresholds where fish [continue] to exist based solely on a model with error rates." EPA 499 at 022258. In *Native Ecosystems Council*, the Ninth Circuit found the U.S. Forest Service's reliance on one species, the sage grouse, as a proxy for "wildlife diversity" – even though the record established few sage grouse were present in the area – was "neither reasonably reliable nor accurate," and therefore arbitrary and capricious. 2010 WL 843761, at \*7. Here, EPA's reliance on admittedly flawed models is likewise arbitrary and unlawful.

#### 2. The "Natural Conditions" Criterion is Not Natural or Historical

Even if EPA could demonstrate models are reliable, the Natural Conditions criterion allows Oregon to take into account *anthropogenic* temperature contributions, and thus does not

produce a superseding criterion reflecting the true historical conditions salmonids experienced. By its terms, the Natural Conditions criterion supplants numeric criteria when Oregon "determines that the *natural thermal potential* exceeds the biologically-based criteria[.]" OAR 340-041-0028(8)(emphasis added). This superseding "natural thermal potential" is not the water's natural conditions but, rather, is Oregon's estimate of what feasibly can be changed on the landscape. *See* OAR 340-041-0002(41) (defining "natural thermal potential"). That is, Oregon estimates what the temperature would be if *reversible* human impacts were removed.

Although Oregon ostensibly assured EPA the Natural Conditions criterion would not factor in temperature increases from human activities, (see EPA 4 at 000146), the record demonstrates EPA fully understood Oregon's approach does, in fact, include such human contributions. Indeed, through the development of the Temperature Guidance, Oregon relied on its current approach for estimating natural thermal potential under its existing standards: "[Oregon's target] is not absolute 'natural conditions,' or pre-settlement conditions absent any human impact." EPA 801 at 024951. And Oregon pressed EPA to adopt the same approach: "the guidance [should] focus on the human contributions of heat rather than the biological needs of the fish[.]" Id. at 024950 (emphasis added). See also EPA 867 at 026172. Further, EPA understood the problems with this approach. "EPA believes that this [natural background narrative] provision is most applicable for areas where it can be demonstrated that human impacts are negligible. . . . Use of this provision for 'mixed waters' (natural background plus human impairment) is problematic." EPA 694, Att. 1 at 024001. NMFS agreed. EPA 689, Att. 4 at 023977. Yet, EPA approved the Natural Conditions criterion, which by its terms incorporates Oregon's problematic approach to estimating "natural thermal potential." Because the Natural Conditions criterion does not, in fact, estimate real historical natural conditions,

EPA's justification for allowing this criterion to supersede otherwise applicable numeric criteria is wholly unsupported.

# 3. EPA's Assumption that "Naturally" Degraded Conditions Will Support Salmonids Ignores Critical Factors

Even if EPA could demonstrate models reliably determine true historical temperatures, EPA failed to evaluate if such temperature conditions can protect salmonids *today*. Many of Oregon's waters are now irreversibly and significantly degraded. *See e.g.* NMFS 114 at 25-26; NMFS 241 at 8; EPA 141 at 016770-1. As Dale McCullough, a fisheries biologist on EPA's Technical Workgroup, explained, "[o]ne cannot assume . . . that historical thermal conditions will provide the same level of protection for salmon populations that are now subjected to a combination of anthropogenic and natural environmental stresses." NMFS 256 at 3. While EPA acknowledged current degraded conditions limit salmonids' ability to survive added stresses (*see* EPA 104 at 013556-57) it provided no rationale for approving a provision which fails to take into consideration these additional stresses salmon now face. EPA arbitrarily ignored this critical factor. *See NHTSA*, 538 F.3d at 1203 (NHTSA's decision was arbitrary and capricious by ignoring certain monetary benefits in assessing the costs and benefits of fuel efficiency standards).

# 4. The "Natural Conditions" Criterion Allows Oregon to Change Water Quality Criteria without EPA Oversight

The Natural Conditions criterion allows Oregon to set *new*, *currently unknown*, numeric criteria without additional EPA approval, as the rule provides the "natural thermal potential" is simply "*deemed* to be the applicable temperature criteri[on]" for a water. OAR 340-041-00028(8) (emphasis added). Once Oregon determines the new "natural thermal potential" for a water body, it is not required to submit this new numeric criterion for EPA review and action.

This subverts EPA's mandatory duty to review state water quality standards and ensure the criteria protect uses. 33 U.S.C. § 1313(c)(3); *Ohio Valley Environmental Coalition v. Horinko*, 279 F.Supp.2d 732, 763-64 (S.D.W.Va. 2003) ("*OVEC*"); EPA 866 at 026160.

In *OVEC*, the court overturned EPA's approval of a provision allowing the state to exempt sources from antidegradation review because it did not require the state "to submit any new exceptions to the EPA for approval." *OVEC*, 279 F.Supp.2d at 764. Despite EPA's assurances it *would* review any new exceptions the state granted, the court concluded that because the rule did not mandate EPA review, it violated CWA § 303(c)(3). *Id.* Likewise, EPA's own rules preclude states using standards for CWA purposes until EPA approves them. 40 C.F.R. § 131.21(c)(2); *Alaska Clean Water Alliance v. Clark*, No. C96–1762R, 1997 WL 446499 (W.D. Wash. 1997). Further, EPA's rules prescribe a specific process for a state to determine that naturally occurring conditions exceed the applicable criteria. *See* 40 C.F.R. § 131.10(g)(1). By approving the Natural Conditions criterion, EPA has allowed the state to bypass all of these requirements. EPA lacks the authority to allow Oregon to circumvent § 303(c)(3) review and its own rules.

## B. The "Human Use Allowance" Exemption Allows Sources to Add Significant Amounts of Heat Without Ensuring the Protection of Coldwater Uses

Oregon's "Human Use Allowance" ("HUA") exemption allows sources to automatically add 0.3°C of heat to waters that are already violating temperature standards. OAR 340-041-0028(12)(b). NWEA acknowledges some sources of temperature must, as a practical matter, discharge thermal loads into waters violating temperature standards. However, this accommodation cannot be virtually limitless. Yet, that is what EPA has authorized. As discussed above, because of the way Oregon determines the "natural thermal potential" of a water – by including some unknown but potentially significant anthropogenic influences – EPA has already

allowed Oregon to include one form of a human use allowance. The HUA exemption, therefore, adds a *second* allowance for human use on top of this. Moreover, because EPA does not know what the new numeric criteria will be once Oregon applies its Natural Conditions rule, EPA approved the HUA exemption without knowing the temperatures to which 0.3°C will be added in the future. EPA cannot possibly have assessed the biological sufficiency of an additional 0.3°C added to *unknown* temperature criteria to conclude that the HUA protects designated uses.

Further, EPA unreasonably dismissed that in the absence of a TMDL for a polluted waterbody, the HUA exemption places *no* limits on cumulative impacts. OAR 340-041-0028(12)(b)(A). This exemption allows each NPDES source to increase temperatures that already violate standards up to 0.3°C, calculated after partial dilution. *Id*. There is no limit on their cumulative impact. *Id*. Without a limit, the HUA exemption could allow temperatures to exceed those necessary to protect designated uses. The Sixth Circuit rejected EPA's approval of Kentucky's "de minimus" exemptions from antidegradation review, because EPA "avoided assessing the exemptions' cumulative effects." *Kentucky Waterways Alliance v. Johnson*, 540 F.3d 466, 492 (6th Cir. 2008). Just as there, Oregon's HUA exemption places no limit on cumulative effects of individual sources, making EPA's approval of the exemption inconsistent with the mandate that criteria protect uses. EPA's approval of the HUA was therefore arbitrary and capricious.<sup>10</sup>

V. EPA's Approval of Oregon's Use Designations Was Arbitrary and Capricious Because Oregon Failed to Properly Analyze or Determine What Uses Are "Existing" and "Attainable"

The CWA's overarching goal is to "restore and maintain the chemical, physical, and

<sup>10</sup> For the same reasons, EPA's approval of Oregon's exemption to antidegradation review for temperature increases consistent with these provisions (OAR 340-041-0004(3)(c)) was arbitrary and capricious.

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biological integrity of the Nation's waters." 33 U.S.C. § 1251(a) (emphasis added). The CWA also seeks to achieve "wherever attainable, an interim goal of water quality which provides for the protection and propagation of fish, shellfish, and wildlife and provides for recreation in and on the water." 33 U.S.C. § 1251(a)(2) (emphasis added). These twin goals require states to protect aquatic uses attained any time since November 28, 1975 – termed "existing uses" – as well as those "attainable" in the future. 40 C.F.R. §§ 131.3(e); 131.6(d); 131.10(a) & (d); 131.12(a)(1). When a state changes use designations for its waterbodies, as here, it must ensure its new designations continue to protect both existing and attainable uses. Oregon failed to meet this requirement and EPA's approval of Oregon's use designations was arbitrary and capricious.

### A. The CWA and EPA's Regulations Require Use Designations Based on What is "Existing" and What is Attainable

A state's benchmark obligation in the designation process is to protect "existing" uses, which are those "actually attained in the water body on or after November 28, 1975." 40 C.F.R. § 131.3(e). This serves the CWA's critical goal of maintaining water quality by "ensur[ing] that the better of the past or present condition, *at a minimum*, will be maintained and protected." 63 Fed. Reg. 36742, 36751 (July 7, 1998) (emphasis added). And while states may revise their use designations, they must, at every stage, maintain or improve upon that 1975 status quo. Specifically, a state may not revise its designations to remove an existing use unless it is replaced by a use that requires *more* stringent criteria. 40 C.F.R. §§ 131.10(h)(1), 131.10(g) ("States may remove a designated use which is not an existing use[.]").

Additionally, states may not remove designated uses that "can be achieved by the imposition of effluent limits ... and cost-effective and reasonable best management practices for nonpoint source control." 40 C.F.R. § 131.10(d) & (h)(2). And, even when attainment would demand more than imposition of these controls, a state cannot remove a use without a structured

analysis of the socioeconomic costs of remedying human caused conditions precluding that use. See 40 C.F.R. § 131.10(g)(3),(4),(6). That is, a state must prove attainment is not "feasible." *Id*.

To carry out the CWA's dual focus of maintenance *and* restoration, EPA requires states to employ a Use Attainability Analysis ("UAA") when designating uses. A UAA is "a structured scientific assessment of the factors affecting the attainment of [a] use which may include physical, chemical, biological, and economic factors." 40 C.F.R. §§ 131.3(g); 131.10(g). UAAs are the mechanisms through which a state "identif[ies] and define[s] the existing uses of [a] water body." 48 Fed. Reg. 51400, 51401 (Nov. 8, 1983). In turn, "[a]n existing use can be established by demonstrating that fishing, swimming, or other uses have actually occurred since November 28, 1975, or that the water quality is suitable to allow such uses to occur (unless there are physical problems which prevent the use regardless of water quality)." EPA 91, Att. 1 at 003380 (emphasis in original). And even where current water quality does not support a particular use, states must still assess whether water quality as of 1975 would have supported that use 11

A state must conduct a UAA, and identify *both* existing and attainable uses, whenever a state wishes to remove a use or to adopt sub-categories of a use that require less stringent criteria. 40 C.F.R. § 131.10(j)(2). In other words, a UAA is required whenever a state "changes [a] use designation with the effect of removing or lowering the level of protection [.]" Guidance: Coordinating CSO-Long Term Planning with Water Quality Standards Reviews at 29 (July 31, 2001), *available at* http://www.epa.gov/waterscience/standards/policy.htm. <sup>12</sup> As EPA explains:

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<sup>&</sup>lt;sup>11</sup> See 63 Fed. Reg. at 36753 (explaining that existing use status depends on whether "the limiting water quality problems have been in existence prior to November 28, 1975..."). <sup>12</sup> This includes when a state chooses to switch to a regime that "differentiate[s] between cold water and warm water fisheries." 40 C.F.R. § 131.10(c). This also differentiates by lifestage, e.g. "salmonid spawning." See 62 Fed. Reg. 41162, 41167-68 (July 31, 1997).

[I]f a State has a broad aquatic life use, EPA generally assumes that the use will support all aquatic life. The State may demonstrate [in a UAA] that, for a specific water body, such parameters as dissolved oxygen or temperature will not support trout but will support perch[.]

EPA 91 at 03020.<sup>13</sup> Thus, EPA's regulations set up a "rebuttable presumption" that a state may not change a use to one that is associated with less protective criteria without performing a UAA. 63 Fed. Reg. at 36749. *See also, Idaho Mining Ass'n., Inc. v. Browner*, 90 F.Supp.2d 1078, 1089 (D.Idaho 2000) (upholding EPA's rebuttable presumption because, since 1983, EPA's regulations "have always required that waters be designated for fishable/swimmable uses unless a UAA demonstrates that fishable/swimmable uses cannot be attained").

### B. Oregon Revised its Uses Without the Required UAAs and Therefore Without Analyzing Existing Uses or Attainability of Uses

Oregon sub-categorized its earlier use designation categories and it re-designated many stretches of waters to uses that require less stringent criteria. However, contrary to EPA's regulations, Oregon did not conduct UAAs and, in many places, primarily relied upon *current* water quality conditions and *current* uses to complete its designations. Thus, Oregon altogether bypassed evaluating *existing* uses (i.e., dating to 1975) and *attainable* uses.

Oregon's original designated uses applied broadly to all but a few watersheds, covering Salmonid Rearing, Salmonid Spawning, and Resident Fish & Aquatic Life. Under Oregon's prior rules, a Use Designation Table for each basin indicated with an "X" whether these broad uses applied to named waters or all waters in a basin. Oregon had designated Salmonid

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<sup>&</sup>lt;sup>13</sup> See also 62 Fed. Reg. 41162, 41168 (July 31, 1997) ("Protecting a use category such as 'fishable,' or a subcategory such as 'cold water biota,' plainly must mean protecting all of the species-specific activities that occur within that category, including the most sensitive" and this is "the only reasonable reading of the Act . . . .").

<sup>&</sup>lt;sup>14</sup> The citation "Former Table" and associated number refers to Oregon's old use designation tables. For the Court's convenience, NWEA has submitted these and other tables set forth in Oregon's former rules.

Rearing for all or nearly all waters in every basin.<sup>15</sup> In its earlier ruling, this Court set aside three numeric criteria, in part because Oregon had not updated these use tables. See NWEA I, 268 F.Supp.2d at 1267-1269 (Oregon "misidentified the times and places where [salmonid] spawning, rearing, and incubation occurred" and "ha[d] not designated migration corridors for protection" of bull trout).

After this Court's ruling, Oregon completely re-categorized its designated uses to reflect species- and life stage-specific uses and their location and timing, and developed new criteria associated with each new use. Many of these new designated uses are sub-categories of Oregon's former Salmonid Rearing use, which was previously associated with a 17.8°C criterion. And in three cases, Oregon's new uses are now associated with less protective numeric criteria. These less protective uses include: Lahontan cutthroat and Redband trout (20°C); Salmon and Trout Rearing & Migration (18°C); and Salmon & Steelhead Migration (20.0°C), which does not protect rearing at all. OAR 340-41-0002(37). Before Oregon re-designated Salmonid Rearing stretches for these less protective uses, it was required to demonstrate, through a UAA, that a more sensitive use could not be attained or had not been present anytime since 1975. 40 C.F.R. § 131.10(j)(2); 63 Fed. Reg. at 36751 ("[A] new use sub-category and less stringent criteria triggers the use attainability requirements in § 131.10.").

The very document that directed Oregon's re-designation decisions demonstrates that Oregon did not address either requirement. For example, Oregon did not designate Core Cold-Water Habitat (16°C), a sub-category of Salmonid Rearing, <sup>16</sup> based on where that use is attainable or where it existed in 1975. Instead, Oregon designated that use: (1) where "Chinook

<sup>&</sup>lt;sup>15</sup> See Former Tables 1-18.

<sup>&</sup>lt;sup>16</sup> See OAR 340-41-0002(13) (explaining that Core Cold-Water Habitat is intended to protect salmon and steelhead rearing and bull trout migration, foraging, and sub-adult rearing).

spawn during the late summer months"; (2) in "waters having sub-adult and adult bull trout use where available timing data indicate that use *occurs* during July or August"; (3) in "salmon anchor habitat"; (4) in "waters upstream [from these areas] that also support salmon and steelhead rearing or provide cold water to these areas"; (5) and in waters where the "*current* 7[DADM] stream temperature for the warmest week of the year stays below 16°C." EPA 10, Att. H at 000504 (emphasis added). These designation "rules" do not address whether the use could feasibly be attained; nor do they ensure the *better* of past or present habitat is preserved.

Perhaps most egregious, the Malheur, Klamath, and Powder basins contain virtually no Core Cold-Water Habitat designations simply because Oregon did not have adequate information for these areas. EPA 20 at 000722 ("[T]he 16°C criteria was not applied to the maps because there was no timing information for these basins."). Not only does this show that Oregon did not honor its mandatory duty to protect attainable and existing uses, it also demonstrates that EPA simply relieved Oregon of the "rebuttable presumption," imposed by its own regulations, that every use should be designated unless it is "affirmatively demonstrate[d]" to not be appropriate. 63 Fed. Reg. at 36749. Moreover, Oregon clearly failed to remedy the problem that this Court identified when it set aside EPA's prior approval because "[1]imited or no information exists for certain water bodies." *NWEA I*, 268 F.Supp.2d at1267 (citation to record omitted).

Additionally, Oregon's rules for Bull Trout Spawning & Juvenile Rearing use designation do not require designation wherever that use is attainable or wherever it is necessary to preserve the 1975 status quo. Oregon designated that use for the following waters:

(a) waters classified in DEQ's report as *known* bull trout spawning and juvenile rearing habitat (BTHD1) or *potential* bull trout spawning and juvenile rearing habitat necessary for long-term health and viability of bull trout populations (BTHD3), (b) any additional waters identified by the USFWS as proposed bull trout spawning and rearing critical habitat, and (c) waters upstream of these habitats that support the bull trout use by providing cold water to the areas where

bull trout use occurs.

EPA 10, Att. H at 000504 (emphasis added). However, an undefined reference to "potential" habitat contrasts sharply with EPA's requirement to conduct UAAs, specifically to determine what uses are attainable or feasible, and what uses existed as of 1975, before Oregon redesignated waters to uses with less protective criteria. 40 C.F.R. §§ 131.10(c) & (j)(2).<sup>17</sup>

Because Oregon's designation rules for these two uses do not fully address existing uses, and do not address attainable uses with the rigor required by a UAA, EPA effectively relieved Oregon of the presumption that these new uses should apply to all former Salmonid Rearing waters. This is especially significant for bull trout, which require very cold water, because Oregon re-designated many former Salmonid Rearing waters for far less protective uses. <sup>18</sup> This is troubling because the state's re-designations to less protective uses occur in many waters that were historically occupied by bull trout in the Willamette, Deschutes, Powder, Malheur and Klamath Basins. <sup>19</sup> Oregon's own scientists identified these very waters as critical to the recovery of the species. <sup>20</sup>

<sup>&</sup>lt;sup>17</sup> Nor do Oregon's use designation rules for warmer water uses cure this defect because they too were based on current conditions and are silent on more sensitive uses. For example, Salmon and Trout Rearing & Migration (18°C) was limited to where "salmon and steelhead rearing occurs in July or August," "rainbow or coastal cutthroat trout rearing occurs," and "waters upstream" of those areas. EPA 10, Att. H at 000505. Likewise, Migration Corridors (20°C) were designated where, currently, "there is migration use but no rearing use in July or August." *Id*.

<sup>&</sup>lt;sup>18</sup> In the Klamath, Powder, and Malheur basins, effectively all waters not designated for Bull Trout Spawning and Rearing are designated only for Lahontan cutthroat or Redband trout (20.0°C), and in the Deschutes, Hood, John Day, and Willamette basins, waters not designated for bull trout are protected at various times of the year for only Salmon and Trout Rearing & Migration (18°C). *See* EPA 6 at 000268, 000272, 000274, 000280-81, 000286, 000297 (compare Former Tables 6, 8-10, 14, 15, 19).

Compare the basins identified in footnote 13 above to FWS 546 and FWS 180 at 01870, 01890-01891, 01966, 01960, 01972, and 01860 (identifying historic bull trout runs).

See BTHD2 and BTHD4 proposed designations in FWS 112 at 01106, 01108, 01113, 01114, 01105. Note that FWS 112 is a color copy of EPA 99.

A particularly telling example of how Oregon's designation rules worked in practice can be seen in the lower half of Eagle Creek, a tributary of the Powder River. In that area, bull trout are suspected to have been extirpated subsequent to 1990. *See* FWS 546; FWS 180 at 01969. Oregon did not designate any Core Cold-Water Habitat for that stretch even though bull trout were caught there "during July, August, and September during the mid-1980's[,]" the very months where that designation is supposed to protect that species, and within the very years that define existing use status. FWS 180 at 01964. Oregon's failure to preserve this existing use through its designations impermissibly eliminates this use. Moreover, in this particular case, Oregon's failure puts other designated uses at risk -- for current populations of bull trout to survive and expand, they need cold water *between* locations. *See* EPA 100 at 013242 ("[C]onnectivity among local populations in the upper Powder and North Powder rivers and Eagle Creek is essential for the long-term conservation of the Species[.]").

In short, Oregon failed to protect existing and attainable uses because it simply did not ask the right questions. And there is no telling how many such uses the state ignored without a proper effort, at least, to define the 1975 status quo. Oregon's failure is antithetical to the CWA's purpose to improve and, at least, prevent water quality from sinking below the "floor" that existed at the Act's passage. It is especially troubling given the state's past inability to prevent the species' decline – and even extirpation – in recent years. 33 U.S.C. § 1251(a); 48 Fed. Reg. 51400-01, 51402 (Nov. 8, 1983). Because Oregon re-designated its uses without performing UAAs to ensure continued protection of both existing and attainable uses, EPA's approval was contrary to the CWA and its own regulations.

### VI. EPA's Approval of Oregon's Antidegradation Policy and Implementation Methods Was Arbitrary and Capricious

As the third component of water quality standards, a state must submit to EPA for review an antidegradation policy consistent with EPA's minimum requirements. 40 C.F.R. §§ 131.6(d), 131.12. States must also adopt and submit to EPA for review methods to implement the antidegradation policy. *Id.* Just as states must protect existing uses through the use designation process discussed above, so must they ensure their antidegradation requirements meet this minimal goal. Neither Oregon's antidegradation policy nor its implementation plan ensures full protection of existing uses. Further, Oregon's implementation plan lacks methodology for implementing the very elements the Federal Defendants deemed necessary to preserve temperature water quality in Oregon. As such, EPA's approval of both the antidegradation policy and the implementation methods should be set aside.

#### A. Oregon's Antidegradation Policy Does Not Protect Existing Uses

EPA's antidegradation regulation establishes requirements that vary according to the quality of the waters involved. EPA established three tiers of protection for waterbodies. 40 C.F.R. § 131.12. "Tier 1" protections assure that "[e]xisting instream water uses and the level of water quality necessary to protect the existing uses shall be maintained and protected." *Id.* § 131.12(a)(1). As noted above, existing uses are defined as "those uses actually attained in the waterbody on or after November 28, 1975, whether or not they are included in the water quality standards." *Id.* § 131.3(e). "Tier 2" adds another layer of protection for existing uses. Tier 2 also requires maintenance and protection of water quality that exceeds levels necessary to support aquatic life and recreation. *Id.* § 131.12(a)(2). It allows states to lower water quality if "necessary to accommodate important economic or social development," but still requires existing uses be fully protected. *Id.* Finally, "Tier 3" requires the maintenance and protection of

waters designated by a state as outstanding national resource waters. *Id.* § 131.12(a)(3). A state antidegradation plan must comply with the protections set forth for each tier. *Id.* § 131.12(a).

Oregon has established three levels of protection under its antidegradation policy: (1) Water Quality Limited Waters Policy (WQLWP), which applies to waters that "d[o] not meet narrative or numeric water quality criteria;" (2) High Quality Waters Policy (HQWP), which applies to waters that "meet or exceed levels that are necessary to support the propagation of fish, shellfish, and wildlife; recreation in and on the water; and other designated beneficial uses;" and (3) Outstanding Resource Waters Policy (ORWP), which applies to those waters Oregon deems to be "outstanding State or national resource[s]." OAR 340-041-0004(6)–(8).

Though these three levels of protection are ostensibly designed to mirror EPA's three tiers, Oregon does not ensure the most basic element of antidegradation – protection of existing uses. 40 C.F.R. § 131.12(a)(1). Tier 1 protection "provides the absolute floor of water quality," and is intended to apply "a minimum level of protection" to all waters of the United States. EPA 91 at 003090. Although the Oregon antidegradation policy "purpose" statement purports to protect "existing uses," its antidegradation policy quickly runs afoul of this basic federal requirement. The WQLWP provides that "[w]ater quality limited waters may not be further degraded except in accordance with section 9(a)(B), (C) and (D) of this rule." OAR 340-041-0004(7). In turn, section 9(a)(C) provides that impaired waters may be degraded if "[t]he new or increased discharge load will not unacceptably threaten or impair any recognized beneficial uses or adversely affect threatened or endangered species." OAR 340-041-0004(9)(a)(C). This provision is inconsistent with minimum requirements for two reasons.

First, by its terms, the regulation only applies to "recognized beneficial uses." Oregon does not define "recognized beneficial uses," but its context supports the conclusion this

provision refers to "designated beneficial uses," which Oregon has defined. *See* OAR 340-041-0002(17). That is, the rule presumes these particular beneficial uses will be protected if the water quality criteria are met. *Id.* Since Oregon established its water quality criteria to protect designated uses, not existing uses, the beneficial uses must be those that are designated. As explained above, designated uses are distinct from existing uses; designated uses may or may not include existing uses – yet the CWA requires protection of both. And the very point of Tier 1 is to ensure that *existing* uses are maintained and protected.<sup>21</sup>

Oregon's use of the term "beneficial use" in its Antidegradation Policy Implementation Internal Management Directive (hereinafter "Antidegradation IMD") confirms that Oregon's antidegradation policy does not protect existing uses. For example, a sample antidegradation analysis refers to the "beneficial uses" of the creek at issue, and cites only to Oregon's designated use tables. EPA 174 at 019046. The sample analysis goes on to conclude that because the proposed discharge will meet the water quality criterion for the pollutant of concern, dissolved oxygen, it will not impair any beneficial uses. *Id.* at 019049. Thus, the IMD demonstrates that the term "beneficial use" means only *designated* uses.

Second, even if Oregon's reference to "beneficial uses" in its WQLWP were read to include "existing uses," the WQLWP still fails to comply with EPA's regulations. Not allowing uses to be "unacceptably threatened or impaired" is not the equivalent of "protect[ing] existing uses fully," as required by 40 C.F.R. § 131.12(a)(2). EPA's conclusory finding that Oregon's policy protects existing uses is an "unreasonable attempt to effectively amend the plain meaning

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<sup>&</sup>lt;sup>21</sup> Oregon's version of Tier 2 protection does not save the policy. Oregon's HQWP allows high quality waters to be degraded in certain circumstances as long as, among other things, "beneficial uses" are protected. OAR 340-041-0004(6). In contrast, the federal Tier 2 regulations, like Tier 1, require full protection of existing uses, which has a precise legal meaning in federal law and for which Oregon has chosen not to include in its definitions.

of those provisions so as to bring them into line with the federal requirements." *OVEC*, 279 F.Supp.2d at 737; *see also id.* at 756 n.23 (cautioning against EPA approval of an ambiguous "State provision that could reasonably read in a manner inconsistent with EPA regulations").

### B. EPA's Approval of Oregon's Antidegradation Implementation Plan Was Arbitrary and Capricious.

In the prior litigation, this Court ruled that EPA should have promulgated an antidegradation implementation plan for Oregon because Oregon's standards "d[id] not contain even a semblance of an implementation plan." *NWEA I*, 268 F.Supp.2d at 1265. Rather than promulgate an antidegradation implementation plan, as the Court directed, Oregon incorporated by reference the Antidegradation IMD, which it had finalized in 2001, prior to the Court's ruling and prior to the water quality standards revisions at issue in this case. This internal guidance document does not provide implementation methods to protect existing uses. Nor does it provide methods to implement Oregon's revised standards, including those provisions that attempt to maintain cold waters and, on the other side of the equation, those exemptions that threaten to undermine the entire antidegradation policy.

First, Oregon's Antidegradation IMD provides absolutely no methodology for identifying or protecting existing uses. To protect existing uses, permit writers, applicants and others must determine what the existing uses of a waterbody are – that is, what the waterbody supported dating back to 1975 and what it could support now – even if such uses are not currently designated by the state. The Antidegradation IMD mentions existing uses only with the general add-on reference that "[e]xisting uses must also be protected." EPA 174 at 019004, 019008. It is simply irrational for EPA to conclude that this document provides methods for implementing antidegradation's fundamental requirements. *Cf.* Water Quality Antidegradation Implementation Guidance, Pennsylvania Dept. of Envtl. Protection, November 29, 2003, *available at* 

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http://www.elibrary.dep.state.pa.us/dsweb/Get/Document-47704/391-0300-002.pdf (including guidance on identifying waters for existing use protection, evaluating existing uses, keeping track of existing use, upgrading existing uses into use designations).<sup>22</sup>

Second, the Antidegradation IMD fails to ensure cold waters *remain* cold. Oregon's revised water quality standards contain several provisions ostensibly requiring the protection of waters that are already colder then the applicable numeric criteria. As explained above, EPA approved a 20°C numeric criterion because it has an associated requirement for the protection of "sufficiently distributed cold water refugia." EPA 1, Att. 1 at 000056. Also, EPA approved Oregon's "Protecting Cold Waters" provision, for the stated reason that it prevents warming of waters that are cooler than the applicable numeric criteria. These two provisions are about maintaining water quality – the heart of antidegradation. Indeed, the Temperature Guidance presumed that cold water refugia would be protected by state antidegradation requirements. EPA 104 at 013556. The record also demonstrates that agency experts felt it was critical to implement such protections *through the state's antidegradation review. See,* EPA 693 at 023993 (noting Oregon has no "*methodology* for identifying thermal refugia nor a method for protection") (emphasis added). Oregon's antidegradation implementation methods, had they been developed to implement the revised standards, could and should have provided such methodology.

Further, EPA approved Oregon's "Protecting Cold Waters" provision on the assumption

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Wetlands provide an example of the importance of state procedures to protect existing uses. Oregon has not adopted wetlands water quality standards. FWS 227 at 04654. And designated uses, such as salmon and trout, and criteria that protect flowing streams, are of no utility in protecting wetlands' water quality. For this reason, EPA has instructed states that they "will need to use the existing use protection in their antidegradation policies to ensure protection of wetland values and functions." EPA 91, Att. 1 at 003277. Despite the pollution threats to Oregon's dwindling wetlands, and findings a decade ago that "24% of the wetland dependant amphibians are considered listed as imperiled," Oregon has no antidegradation implementation method to protect existing uses in wetlands. See FWS 227 at 04758.

that it will be applied through, for example, NPDES permits and nonpoint source programs. EPA 1, Att. 1 at 000064-65. But there is no methodology for implementing this rule because Oregon adopted the Antidegradation IMD before promulgating the rule. Moreover, the IMD – while stating that antidegradation review applies to nonpoint sources in Oregon – explicitly only addresses NPDES permits and section 401 certifications for point sources and federally-permitted actions. *See* EPA 174 at 018992. And in any event, despite the IMD's pronouncement about nonpoint sources, Oregon's revised antidegradation policy explicitly exempts many nonpoint source activities from antidegradation review by creating the legal fiction that these activities are "recurring," and therefore not a lowering of water quality. *See supra* at p. 10; *see also* U.S. EPA Region 9, Guidance on Implementing the Antidegradation Provisions of 40 C.F.R. 131.12, June 3, 1987. ("As part of their implementation methodologies, States must adopt procedures which adequately assure that non-point sources of water pollution will comply with. . antidegradation requirements"). The IMD provides no methodologies for nonpoint sources.

EPA's own guidance directs EPA to disapprove an antidegradation implementation plan if it "can be implemented in such a way as to circumvent the intent and purpose of the antidegradation policy." EPA 91 at 003089. While EPA would have this Court believe that it has unfettered discretion in reviewing state antidegradation polices (*see* EPA 1, Att 1 at 000025-26), other courts have made clear these approval decisions are not the paper-pushing exercise EPA suggests. *See OVEC*, 279 F.Supp.2d at 776-77 (reversing EPA's approval of seven aspects of West Virginia's antidegradation implementation methods); *Kentucky Waterways Alliance*, 540 F.3d at 490 (reversing in part EPA's approval of Kentucky's antidegradation implementation methods). Because Oregon's antidegradation policy and implementation methods do not meet minimum requirements, EPA's approval was arbitrary and capricious.

### VII. Taken Together, Oregon's Water Quality Standards Do Not Protect Uses - Threatened and Endangered Species

EPA has acknowledged that, by setting the numeric water quality criteria at upper optimal temperatures, it did "not leave any margin of error." EPA 541 at 022550. Yet at every turn, Oregon chipped away at this non-existent margin. Oregon established numeric criteria at or above upper optimal temperatures, applied the most protective criteria to fewer waters, exempted the primary sources of temperature increases, adopted provisions allowing waters to get warmer, and otherwise further weakened the few beneficial provisions recommended by the Temperature Guidance. *See* EPA 611 at 023125. EPA nevertheless approved all of Oregon's choices, ignoring the most glaring of them. EPA certainly did not consider that, *taken together*, Oregon's water quality standards will not protect salmonids. Further, EPA failed to fulfill its CWA obligation to protect uses in light of the fact that the very uses in question are at risk of extinction or localized extirpation. Therefore, EPA's approval of Oregon's standards was arbitrary and capricious.

## A. EPA's Approval Decisions Were Based on Assumptions that Are Unsupported or Undermined by the Very Standards EPA Approved

EPA justified its approval of Oregon's numeric criteria and limited extent of colder water use designations (e.g., bull trout spawning) based on the assumption the standards require most waters to be colder than applicable criteria. *See, e.g.*, EPA 1, Att 1 at 000053, 59, 63. EPA justified Oregon's setting its highest criteria and their broad applicability (through use designations) across the state on the assumption that for waters to meet those high criteria at their downstream end, the waters upstream must be cooler. EPA 693 at 023994. But, as scientists noted, the assumption water is colder upstream is "[u]nfortunately...a generalization with many exceptions." *Id*.

EPA's approval of Oregon's Natural Conditions exemption, and its failure to take action or *even consider in its action* the numerous exemptions from the standards for nonpoint sources, undermines its "cooling" assumption. As discussed above, under the Natural Conditions exemption, Oregon may *increase* the allowable temperature of a stream if it decides a waterbody is "naturally" warmer than numeric criteria. OAR 340-041-0028(8). But, notably, the criterion does not work in the other direction. If Oregon's models predicted waters could be *cooler* than an applicable numeric criterion, the higher of the two criteria would apply. Not only does this not protect the thermal diversity the record demonstrates is key to salmonids, it ensures waters downstream of a criterion's reach will always be warmer. These upstream waters are the very waters EPA counts on to cool the 18 and 20°C waters, yet EPA cannot assume that they are a source of cooling.

Moreover, the stark reality is that Oregon's temperature standards do not apply to nonpoint sources that cause warming. Thus, a clearcut located at a stream's headwaters, ostensibly providing cooling water downstream, is deemed in compliance with the applicable criterion regardless of its impact. EPA was aware it could not assume these headwaters will flush cooler water downstream. *See* NMFS 281 at 4-5 (EPA rebutting timber industry that rivers cool below clearcuts, noting "conditions var[y] by river and that accumulation of heat are prevalent in NW rivers").

Finally, Oregon's "Protecting Cold Water" provision, OAR 340-041-0028(11), does not support EPA's "cooling." While it *should* be an important tool to ensure the few Oregon water bodies colder than criteria remain so, there is no mechanism to implement it. As EPA's Scientific Peer Review Group stressed throughout the Temperature Guidance development, the importance of "existing high quality thermal habitats (i.e. colder than criteria)," warranted EPA's

action to "strengthen and highlight...the non-degradation clause." EPA 113 at 013991; *see also* FWS 210 at 04103. Oregon's Protecting Colds Waters provision will not, however, have that effect.

"When EPA began [the Temperature Guidance] project one of the main goals was to ensure enough cold water where and when the species needed it." FWS 487 at 09909. The record demonstrates EPA strayed from that goal as the Guidance was finalized, and it is strayed even further from that goal when it approved Oregon's water quality standards.

## B. For All of Oregon's Water Quality Standards, EPA Was Required to Consider the Depleted Status of the Salmonid Populations

While salmonid ESA listings spurred EPA's decision to develop the Temperature Guidance, the status of these imperiled species ultimately failed to drive the final Guidance or EPA's approval of Oregon's standards. In its approval, EPA failed to account for the higher level of protection warranted by the depleted status of threatened and endangered species, species unable to withstand the risks a normal population could. As a study on chinook remarked, "the combination of tremendous freshwater habitat loss, and extremely small anadromous salmonid populations has caused these fish to be *more vulnerable to extirpation* arising from natural events." EPA 138 at 015809 (emphasis added). That is, threatened and endangered species cannot withstand the same stresses that healthy populations might otherwise withstand.

Likewise, an EPA biologist explained that restoring cold water to salmonid habitat required more than choosing biologically-based numeric criteria. EPA 532, Att. 7 at 022482. He further noted that focusing just on the criteria, "protecting the individual fish" rather than "protecting the population," is too limited a picture. He explained an "individual basin may have room for warming just to protect fish in the basin, but if the basin serves as landscape scale refugium, we may need to maintain the colder than [criteria] in the basin." *Id.* While Oregon

was concerned with "not end[ing] up with an over-abundance of 16 degree water" (FWS 129 at 01179), the Columbia River Intertribal Fish Commission (CRITFC) pointed out that, "[u]nless bull trout habitat and all headwater streams are fully protected and restored, salmon habitat quality will not be effectively addressed downstream." EPA 42 at 001204. Terming "all headwater streams" as a "savings account' of cold water," CRITFC noted that failing to assign cold water criteria to many upstream reaches was "not a formula for species conservation." *Id.* at 001203; EPA 805, Att. 1 at 024975; EPA 689, Att. 4 at 023977-8. EPA did not heed scientists' advice or analyze the imperiled species' population level analysis.

While EPA must independently comply with ESA obligations, EPA's obligations to account for the tenuous status of the listed species arise under the CWA. The CWA requires protection of uses. 33 U.S.C. § 1313(a). When those uses are threatened or endangered species, or even just locally at risk, EPA must ensure states do more than prevent harm to individual fish. It must ensure the populations survive. EPA has previously acknowledged its "statutory responsibilities [to ensure] that water is of a sufficient quality to ensure the protection of endangered and threatened species." 66 Fed.Reg 11,202, 11,204 (Feb 22, 2001). Indeed, EPA recognized a need to build in an extra margin of safety for threatened or endangered species when it set 10°C as the criterion for bull trout in Idaho. 62 Fed.Reg. 41,162, 41169 (July 31, 1997). In Idaho, EPA equated the required "full support" of the "use" under the CWA with ensuring the health and survival of populations. *Id.* That level of analysis, however, is simply absent from EPA's decision record for Oregon. As one scholar said: "The real question EPA should ask is this: To how much temperature-related stress should we subject these [salmon], given that these runs are teetering on the edge of extinction[.]" Craig N. Johnston, Salmon and Water Temperature: Taking Endangered Species Seriously in Establishing Water Quality

Standards, 33 Envtl. 151, 168 (2002). The record demonstrates EPA never asked or answered this question. By failing to review Oregon's standards through this lens, EPA's approval of the standards was arbitrary and capricious, and inconsistent with its CWA obligation to ensure full protection of state waters.

#### CONCLUSION

For the foregoing reasons, NWEA respectfully requests summary judgment on its claims against EPA arising under the CWA.  $^{23}$ 

DATED this 27th day of April, 2010.

Respectfully submitted,

/s/ Allison LaPlante
ALLISON LAPLANTE (OSB # 02361)
DANIEL MENSHER (OSB # 074636)
DANIEL J. ROHLF (OSB # 990069)
Pacific Environmental Advocacy Center

Attorneys for Plaintiff

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<sup>&</sup>lt;sup>23</sup> As soon as practicable, NWEA intends to file a motion for leave to file an amended complaint to conform to the claims on which NWEA seeks summary judgment.