No. 42364-2-II
Thurston County Cause No.: 10-2-01236-0

COURT OF APPEALS FOR THE STATE OF WASHINGTON
DIVISION II

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NORTHWEST SPORTFISHING INDUSTRY ASSOCIATION, ASSOCIATION OF NORTHWEST STEELHEADERS, PACIFIC COAST FEDERATION OF FISHERMEN'S ASSOCIATIONS, INSTITUTE FOR FISHERIES RESOURCES, and IDAHO RIVERS UNITED,

Appellants,

v.

WASHINGTON DEPARTMENT OF ECOLOGY,

Respondents.

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# OPENING BRIEF OF APPELLANTS

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## INTRODUCTION

Salmon and steelhead (collectively, salmon) in the Columbia River basin exist today at an alarmingly small fraction of their former abundance. The transformation of the free-flowing Columbia and Snake rivers into a series of slackwater impoundments by the dams that form the Federal Columbia River Power System ("FCRPS") has led to federal Endangered Species Act protection for thirteen stocks of salmon. Dozens of other populations are extinct. The Washington Department of Ecology ("Ecology") is required by State and federal law to set and enforce water quality standards for these rivers that protect these endangered fish and other aquatic life.

Petitioner-Appellants in this case, a coalition of sport and commercial fishing organizations and conservation groups, asked Ecology to initiate rulemaking that would provide better river conditions for migrating salmon by modifying Washington's current water quality standards for Total Dissolved Gas ("TDG"). Changing this standard would allow federal dam managers to release more water over the spillways of dams, an action that would increase salmon survival through the FCRPS by up to 9%. The change is widely supported by state, federal, and tribal fisheries biologists as an essential tool to boost salmon survival. Faced with the same request and the same evidence, the State of Oregon

recently altered its TDG standards to protect salmon. Ecology – standing alone among the region's fisheries and water quality agencies – denied Petitioners' request to strengthen Washington's water quality standards. Ecology's petition denial was arbitrary and capricious and not supported by credible scientific information. This is an appeal of the Thurston County Superior Court's ruling upholding Ecology's denial of the rulemaking petition.

## ASSIGNMENTS OF ERROR AND ISSUES ON APPEAL

### I. ASSIGNMENTS OF ERROR ON APPEAL

1. Ecology erred by arbitrarily denying a petition for rulemaking and by failing to act within its statutory authority.

### II. ISSUES PERTAINING TO ASSIGNMENTS OF ERROR ON APPEAL

1. Where the record contains extensive field-gathered data from the Columbia and Snake Rivers demonstrating biological benefits to endangered salmon and no additional risk of harm to any other species of aquatic life from total dissolved gas levels of 120%, and where Ecology instead relied solely on findings from a handful of unrepresentative laboratory studies without addressing or distinguishing the field data, whether Ecology's reasoning is, in light of the facts in the record, arbitrary and capricious?

2. Where Washington State law and Ecology's regulations require Ecology to use credible information in is decisions and to protect key salmon uses of the Columbia and Snake Rivers, whether Ecology failed to act within its statutory authority or was otherwise arbitrary and capricious by failing to address or distinguish the overwhelming field-gathered data in the record demonstrating no additional risk to other aquatic life and instead relying solely on findings from a handful of unrepresentative laboratory studies?

3. Whether Ecology's other reasons for denying the petition were otherwise arbitrary, capricious, and/or contrary to the law?

4. Should Petitioners prevail on appeal, whether they are entitled to an award of costs and attorneys' fees pursuant to Washington's Equal Access to Justice Act, RCW 4.84.350-.360?

## STATEMENT OF THE CASE

### I. STATUTORY AND FACTUAL BACKGROUND

The federal Clean Water Act mandates that states develop water quality standards for all waters within their boundaries, including designated uses and criteria that protect those uses. 33 U.S.C. § 1313.[1]

[1] State water quality standards must include both designated uses for specific water bodies and more specific numeric or narrative water quality criteria set to protect each designated use of the water body. 33 U.S.C. §

Ecology has designated four uses for Washington's fresh surface waters, including the Snake and Columbia Rivers. WAC 173-201A-200. The first of these is "aquatic life uses," which includes protection of the "key uses" of "[s]almonid spawning, rearing, and migration" and "salmonid rearing and migration only." WAC 173-201A-200(1)(a)(iii)-(iv). Other "key uses" include "core summer salmonid habitat," including "summer salmonid spawning or emergence," "use as important summer rearing habitat," "foraging," and "spawning outside the summer season, rearing, and migration by salmonids." WAC 173-201A-200(1)(a)(ii). In addition to these "key uses," water quality standards must also protect "all indigenous fish and nonfish aquatic species." WAC 173-201A-200(1)(a).

Ecology's water quality criteria for Washington's fresh surface waters include numeric criteria for TDG. WAC 173-201A-200(1)(f). While these criteria generally require that TDG levels not exceed 110% saturation, the rule includes exemptions to facilitate fish passage through the federal dams on the Snake and Columbia Rivers during the salmon migration season. That exemption allows higher TDG levels that "must not exceed an average of one hundred fifteen percent as measured in the

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1313; 40 C.F.R. § 131.6(a)-(d); 40 C.F.R. §§ 131.10-.13. These standards must be based on "sound scientific rationale." 40 C.F.R. § 131.11(a)(1) When there are multiple use designations, the water quality criteria "shall support the most sensitive use." *Id.*

[upstream] forebays of the next downstream dams and must not exceed an average of one hundred twenty percent as measured in the [downstream] tailraces of each dam." WAC 173-201A-200(1)(f)(ii).

As discussed in greater detail below, eliminating the 115% forebay TDG standard (or raising it to 120% to match the tailrace standard) would allow federal dam managers to "spill" more water over the FCRPS dams. *See* AR 1840.25-1840.32; AR 1753.11.[2] Petitioners requested this change because the resulting increased spill would significantly increase survival rates of juvenile salmon migrating through the FCRPS dams to the sea, while also protecting other aquatic life in the rivers. AR 1753.9-.14. Petitioners explained to Ecology why changing the standard is therefore consistent with – and required by – Ecology's duties to protect all designated uses of the Columbia and Snake Rivers. AR 1753.14-.15, .19-.20.

A. Spill is a Proven Salmon Protection Measure

While salmon suffer injury and death from multiple causes as they migrate to the ocean through the Snake and Columbia Rivers, passage

[2] "CP" refers to Washington Court of Appeals Clerk's Papers. "AR" refers to the Administrative Record transmitted to this court pursuant to RAP 9.7(c). The index for this record is included in at CP 86-120. Citations to the AR reference Ecology's internal bates-stamped pages as follows: AR XXX.yy, where XXX is the document number that corresponds to Ecology's Index and .yy is the bates-stamped page number.

through dams is a major source of juvenile salmon mortality.[3] *See* AR 289.7. *See also Nat'l Wildlife Fed'n v. Nat'l Marine Fisheries Serv.*, 2011 WL 3322793 at *12 (D. Or. Aug. 2, 2011) ("NOAA Fisheries acknowledges that the existence and operation of the dams accounts for most of the mortality of juveniles migrating through the FCRPS."). Salmon are killed or injured as they are forced through power turbines, which subject them to rapid pressure changes and direct impacts with turbine blades, AR 1688.5, or they are shunted through a complex series of "bypass" screens and pipes to be ejected at the lower side of the dam. AR 276.15; AR 1879.2 (describing decreased survival from passage through bypass systems). One of the most effective ways to reduce this dam passage mortality is to pass salmon over the dams by releasing water through the spillways. AR 1688.7 (excerpt from National Marine Fisheries Service's 2000 Endangered Species Act biological opinion evaluating the impacts of the dams on threatened and endangered salmon). "Spill," as this practice is known, allows 96-100% of the salmon to survive passage at each dam. *See id.* Increasing spill (either the total

[3] The transformation of the Snake and Columbia system from free-flowing rivers into a series of slack-water pools also kills and harms salmon by restricting the velocity and timing of river flows, increasing water temperature in the reservoirs, providing habitat for non-native and native predators to flourish, and by inundating former spawning and rearing habitat. *See, e.g.*, AR 289.6-289.7.

amount or the duration) would improve overall salmon survival through the FCRPS dams from 1-9%. AR 1840.10, 1840.42.

Because it provides the safest way for salmon to pass the many FCRPS dams, spill has been a centerpiece of efforts to protect migrating salmon since 1995. *See* AR 1688.1-1688.25 (excerpt from National Marine Fisheries Service's 2000 Endangered Species Act biological opinion). Indeed, the National Marine Fisheries Service ("NMFS") – the federal agency charged with protecting endangered salmon – has concluded that higher spill volumes improved the survival of in-river migrants by 4-6% since 1995. AR 1688.5; *see also* AR 1832.7 (Independent Scientific Advisory Board noting that because it produces the highest survival relative to other means of fish passage, "spill should be considered the default recommendation").

Based on this and other evidence about the effectiveness of spill, the Federal District Court for the District of Oregon has for the past seven years required the federal agencies responsible for managing the FCRPS to increase the duration and amount of spill at the dams. *See, e.g., Nat'l Wildlife Fed'n v. Nat'l Marine Fisheries Serv.*, 2005 WL 1398223 (D. Or. June 10, 2005) (spill is "necessary to avoid irreparable harm to juvenile fall chinook and other listed species.") *aff'd Nat'l Wildlife Fed'n v. Nat'l Marine Fisheries Serv.*, 422 F.3d 782, 797-98 (9th Cir. 2005)

(summarizing evidence "that summer spills would provide the best and safest alternative to the planned operations contemplated" by the federal dam managers). The Court recently ordered this spill to continue, noting that NMFS "now acknowledges that spring and summer spill is necessary to avoid excessive juvenile salmon mortality." *Nat'l Wildlife Fed'n v. Nat'l Marine Fisheries Serv.*, 2011 WL 3322793 at *12. *See also id.* (holding that "[i]n light of the clear survival benefits associated with spill and Federal Defendants' history of attempting to curtail spill without adequate justification, I order them to continue to spill in a manner consistent with this court's annual spill orders.")

It is undisputed that this increased spill, along with favorable ocean conditions, have produced some of the largest salmon returns the region has experienced in years, AR 1754.3 (Ecology's petition denial); AR 1753.2-1753.4 (March 2010 petition summarizing recent evidence from Fish Passage Center and others), even though these increased returns are still only a fraction of the numbers needed for self-sustaining salmon populations.

Without careful management, however, spills can supersaturate river water with high levels of atmospheric gases that can be harmful to salmon and other aquatic life. AR 1840.13-.14. Water spilling over the dams can briefly cause elevated levels of TDG in the river by forcing the

absorption of air into water at the base of the dam. AR 32.24; AR 1840.13-.14. TDG levels may also be elevated by low barometric pressure and local weather and wind conditions, high water temperatures, or high levels of algal growth. AR 32.24. Extended exposure to elevated TDG levels can be harmful to aquatic life by causing gas bubble disease ("GBD") – also known as gas bubble trauma ("GBT") – a condition caused by the formation of gas bubbles in the cardiovascular system of aquatic species. AR 1840.13. That is why both Washington and Oregon require that TDG levels may not exceed 120 percent in the downstream tailrace of the dams – the area of the river with the highest levels of TDG. AR 276.27.[4]

[4] This case does not involve what is called "involuntary" or "uncontrolled" spill that occurs during high spring runoff or at other times when the volume of water exceeds power generation needs, or when dam operators perform other "routine" actions. AR 1840.13. *See also* AR 720.10 (describing maintenance action at Bonneville dam that caused 130% TDG). *See also* AR 720.3-720.9 (discussing event); AR 720.2 (noting that TDG above the current 115/120 standard from high water is not a "violation" of Washington's water quality standards because "we are currently in an involuntary spill operation."); AR 1688.13 (noting that most exceedences of 120% TDG criterion from 1995-2000 "were due largely to involuntary spill"). In contrast to the "voluntary" spill dam managers are required to provide to help migrating salmon affected by the water quality standards at issue here, Ecology's concerns about invertebrates and other aquatic life (or even salmon) have not been applied to these (often much greater) exceedences.

B. Washington's Current Water Quality Standards Limit Spill

Washington's current 115% forebay standard results in appreciable reductions in spill that would be provided in the absence of this standard. AR 32.21-32.23 (FPC analysis finding that 115% forebay standard eliminated 4.1 million acre-feet of spill in the spring of 2006 alone); AR 1840.9 (Joint Adaptive Management Team ("AMT") Report noting that depending on the assumptions about dam operations and future power use, the 115% criterion could limit spill by up to 60% under certain conditions).[5]

Increased spill that would be available by changing or removing the 115% forebay TDG standard would increase salmon survival by up to 9% for some stocks. AR 1840.33-1840.42.[6] Fisheries biologists at NMFS, the U.S. Fish and Wildlife Service ("USFWS"), Washington Department of Fish and Wildlife ("WDFW"), Oregon Department of Fish

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[5] The exact reductions at each of the eight federal dams governed by this standard vary based on runoff volume, operational assumptions, and other factors. AR 1840.25-1840.31 (AMT Report summarizing three different analyses). Regardless of which analysis is used, removing the 115% forebay criterion results in increased spill at many of the eight dams. *See, e.g.*, AR 1840.26 – 1840.28 (independent Fish Passage Center's analysis showing large increases over spill actually provided at all eight dams); AR 1840.29 (U.S. Army Corps of Engineers' analysis showing a range of increases at five dams).

[6] Estimated survival increases range from 1-9% depending on the water year, which population is being evaluated, and which assumptions and methods are employed. AR 1840.10; 1840.38-.42.

and Game ("OWFW"), Idaho Department of Fish and Game ("IDFG"), and Tribal fish managers (through the Columbia Intertribal Fish Commission ("CRITFC")) all supported eliminating Ecology's current 115% forebay standard. *See* AR 276.4 – 276.18 (comments from USFWS, WDFW, CRITFC, ODFW, IDFG finding that "managing spill to 120% TDG criteria in the tailraces is conservative and best protects the sensitive fishery existing and designated use of the Columbia River"); AR 1399.1-1399.5 (comments of WDFW, ODFW, IDFG, USFWS, CRITFC, Nez Perce Tribe summarizing current science and studies and recommending that spill be managed "based on 120% TDG in dam tailraces"); AR 276.1 -276.2 (WDFW, CRITFC, and ODFW joint comments supporting using only 120% tailrace criteria and increasing spill); AR 1741.1-.2, (WDFW comments on draft AMT report supporting change); AR 1400.2 (CRITFC supporting change to 120% because "more salmon and steelhead will be afforded spill passage, which the weight of the evidence clearly indicates will increase both the direct and indirect survival of these tribal cultural trust resources"); AR 1705.1 (NMFS indicating support for change); AR 1360.1 (NMFS staff commenting that Oregon's decision to change the standard is "good news" and that "I wish Washington had done the same thing."); AR 1664 (2006 update to 2000 NMFS risk assessment finding that 120% TDG is protective); AR 1711.1-

1711.37 (2008 NMFS literature review discussing studies that 120% TDG poses little risk to resident fish, invertebrates, or salmon).

Opposition to this change is based largely on economic reasons: water spilled past dams cannot be used to generate power for sale by Bonneville Power Administration. Bonneville Power Administration characterizes the lost opportunity to generate power as a "cost." *See* AR 1729.2 (listing "decreased power generation" and opposition from Bonneville Power Administration and business groups as "cons" in changing standard); AR 1837.1 (intervenor-appellee's comments mischaracterizing spill an "extremely costly mitigation measure").[7]

## II. PROCEDURAL HISTORY

In 2007, many of the petitioners in this action asked Ecology and the Oregon Department of Environmental Quality ("DEQ") to eliminate

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[7] Ecology's review of the TDG standard included consideration of these economic concerns and other policy issues. *See, e.g.*, AR 1729.2 (memo immediately preceding Ecology's decision listing "decreased power generation," "increase[d] power costs," and opposition from Bonneville Power Administration and business groups as "cons" in changing standard); AR 1694.2 (same). Moreover, parties outside Ecology – including officials from the Washington Governor's office and Washington's political appointees to the Northwest Power and Conservation Council – commented on a late draft of Ecology's Literature Review, and suggested changes and edits. AR 1712 to 1713. *See, e.g.*, AR 1712.2 (Governor's office stating position that current spill levels at 115% are adequate for Endangered Species Act purposes, and asking "why would Washington support an effort to remove TDG constraints that allow[] more spill?").

the 115% forebay TDG water quality standard then in effect in both Washington and Oregon to aid salmon recovery efforts. In response, Ecology and Oregon DEQ convened an Adaptive Management Team ("AMT") to assess the need for the 115% forebay TDG requirement during fish passage spill. *See* AR 1840.18-1840.19.[8] As the culmination of this assessment, the AMT published a final report in January 2009. *See* AR 1840 ("AMT Report"). The AMT Report summarizes and evaluates the technical information presented during the AMT process, and describes three separate literature reviews conducted by Ecology, NMFS, and a private consulting firm, Parametrix, on the effects of TDG on aquatic life. *See* AR 1962 (Parametrix); AR 1856 (Ecology); AR 1711 & 1943 (NMFS). Each literature review examined the effects of TDG, the benefits to salmon from increased spill, and took special notice of effects to aquatic life species other than salmon. NMFS and Parametrix both concluded that any negative effects on aquatic life from removing the 115% forebay monitoring requirement would be negligible. *See* AR 1840.60. Ecology's Literature Review, in contrast, concluded that the admittedly small potential for risk to other aquatic life deserved substantial

[8] Petitioners withdrew this first petition after Ecology and Oregon DEQ proposed to convene the Adaptive Management Team. *See* AR 2161.

weight and outweighed the benefits of increased spill to salmon survival. *Id. See also* AR 1840.62.

On the basis of the evidence presented to the AMT, Oregon concluded that "removal of the forebay monitoring requirement will not cause excessive harm to the beneficial use – aquatic species in the Columbia River – during fish passage spill," and so removed its 115% forebay standard. AR 1840.10.[9] In contrast, Ecology decided to retain the 115% forebay limit based on its determination that "[t]he weight of all the evidence from available scientific studies clearly points to detrimental effects on aquatic life near the surface when TDG approaches 120%." AR 1840.62. Ecology stated that its conclusion differed from Oregon's because Oregon has a shallow water TDG standard while Washington does not, and Ecology's TDG standard is more difficult to change than Oregon's waiver. AR 1840.10; *see also* AR 1840.62-63 (explaining that

[9] Because the Columbia River flows through both Washington and Oregon, Ecology's refusal to change its 115% forebay criterion undermines Oregon's more beneficial standard. The U.S. Army Corps of Engineers, which operates the dams, manages spill to meet Washington's more restrictive 115% forebay standard and does not provide the additional spill permitted by Oregon's standard. *See* AR 1753.25 (Corps 2009 spill plan); AR 1753.20 (petition explaining this problem). The record demonstrates that spill is restricted to varying degrees by the 115% requirement at all four of the dams in the portion of the Columbia River shared by Washington and Oregon. *See* AR 1840.25- 1840.29.

changing Ecology's TDG rule would involve "additional administrative procedure requirements").

After Ecology's refusal to change its standard at the culmination of the AMT process, Petitioners again asked the agency to initiate rulemaking on June 19, 2009. AR 1914. Ecology denied the petition on August 10, 2009. AR 1912.1.

On March 8, 2010, petitioners filed the petition at issue in this case, which presented new information and specifically addressed the expanded statement of reasons Ecology presented in its 2009 denial. *See* AR 1753 & 1863. That petition argued that Ecology to date had not addressed a wealth of in-river monitoring studies demonstrating that TDG levels at or below 120% would not harm salmon, invertebrates, resident fish, or other aquatic life in the Snake and Columbia Rivers, and instead had inappropriately focused on only a few studies done under laboratory conditions in concluding that invertebrates and other non-salmonid aquatic life might be harmed. AR 1753.5-1753.11. The petition also explained that Ecology had not considered the benefits of increased spill on Pacific lamprey (another highly imperiled anadromous species), and that the benefits to juvenile salmon from even small increases in spill would be significant. AR 1753.11-1753.14.

In its May 7, 2010 denial of that petition, Ecology stated that it continued to rely on its own 2008 Literature Review and its previous conclusions. *See* AR 1754.1. Ecology cited and relied upon four specific studies that allegedly demonstrate that "aquatic life such as frogs, sturgeon larvae, and juvenile steelhead trout" may be harmed at TDG levels between 115% and 120%. AR 1754.7 & n.15 to n.18.

Petitioners filed this action challenging that denial in Thurston County Superior Court on June 3, 2010. CP 3-79. Northwest RiverPartners' unopposed motion to intervene as a Respondent was granted on June 22, 2010. CP 80-83. The Superior Court denied Intervenors' subsequent motion to dismiss on April 1, 2011. CP 144-146. That ruling is not at issue in this appeal. After oral argument on the merits of Petitioners' challenge, the Court denied the petition for review in a telephonic hearing on May 20, 2011 and entered a written order on June 14, 2011. CP 148-189. The Court deferred to Ecology and found that each of the agency's reasons for denying the petition were not arbitrary and capricious. CP 150-155. Petitioners filed a timely notice of appeal on July 13, 2011. CP 190-201.

On appeal to this Court, Petitioners seek an order reversing the Superior Court and remanding Ecology's decision to the agency to initiate

rulemaking to alter or eliminate the 115 percent forebay TDG standard in WAC 173-201A-200(1)(f)(ii).

## ARGUMENT

### I. STANDARD OF REVIEW

Under the Washington APA, Ecology's denial of a petition for rulemaking must be set aside if it is arbitrary or capricious. RCW 34.05.570(4)(c)(iii); *Rios v. Dept. of Labor & Indus.*, 145 Wash. 2d 483, 39 P.3d 961 (2002). In making this determination, the Court of Appeals "'sits in the same position as the superior court, applying the standards of the WAPA directly to the record before the agency.'" *Washington Indep. Tel. Ass'n v. Washington Utilities & Transp. Comm'n,* 149 Wash. 2d 17, 24, 65 P.3d 319, 322 (2003) (quoting *Tapper v. Employment Sec. Dep't,* 122 Wash.2d 397, 402, 858 P.2d 494 (1993)).[10]

Ecology's petition denial is arbitrary and capricious if it was "willful and unreasoning and taken without regard to the attending facts or circumstances." *Hillis v. Dept. of Ecology*, 131 Wash. 2d 373, 383, 932 P.2d 139, 144 (1997); *Puget Sound Harvesters Ass'n v. Dept. of Fish & Wildlife*, 239 P.3d 1140, 1145 (2010) (same). Under this standard, "'the

[10] Because the Superior upheld Ecology's petition denial by deferring to Ecology's determinations on each of the issues raised in the petition, *see* CP at 150-155, and because this Court reviews Ecology's decision de novo based on the administrative record, Petitioner-Appellants focus their arguments in this appeal on Ecology's petition denial.

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.'" *Neah Bay Chamber of Commerce v. Dep't of Fisheries*, 119 Wash. 2d 464, 470-71, 832 P.2d 1310, 1313-14 (1992) (quoting *Motor Vehicle Mfrs. Ass'n of U.S., Inc. v. State Farm Mut. Auto. Ins. Co.*, 463 U.S. 29, 43 (1983)) (internal citations omitted).

While a Court's review under this standard is deferential to an agency's decision reached after due consideration of the relevant facts, a determination of whether Ecology's denial was arbitrary and capricious does not shield the agency decision from a "'thorough, probing, in-depth review.'" *Neah Bay Chamber of Commerce*, 832 P.2d at 1313-14 (citing and quoting *Citizens to Preserve Overton Park, Inc. v. Volpe*, 401 U.S. 402, 415, (1971)).[11] Whether Ecology's underlying reasoning is supported

[11] While *Washington Indep. Tel. Ass'n v. Washington Utilities & Transp. Comm'n*, 148 Wash. 2d 887, 906, 64 P.3d 606, 616 (2003), invalidated *Neah Bay*'s three-part test for the APA's previous "rational decision-maker" standard – which was replaced by the legislature's subsequent adoption of the arbitrary and capricious standard – the Supreme Court did not reject *Neah Bay*'s articulation of the arbitrary and capricious standard itself or its reliance on federal case law. Indeed, the Washington APA is intended specifically "to achieve greater consistency with other states and the federal government in administrative procedure," and directs that "the courts should interpret provisions of this chapter consistently with decisions of other courts interpreting similar provisions of other states, the federal government, and model acts." RCW 34.05.001. *See also Washington Indep Tel.*, 148 Wash. 2d at 906 (noting that "[o]ther principles noted in *Neah Bay* continue to apply, however, as the APA

by the facts in the record requires "a hard look" at Ecology's decision. William R. Andersen, *The 1988 Washington Administrative Procedure Act—An Introduction*, 64 Wash. L. Rev. 781, 841 (1989) (citing *Citizens to Preserve Overton Park*, 401 U.S. at 420). The reviewing court must "'consider whether the decision was based on a consideration of the relevant factors and whether there has been a clear error of judgment.'" *Motor Vehicle Mfrs. Ass'n.*, 463 U.S. at 43.[12]

These fundamental tenets of arbitrary and capricious review are not attenuated or altered where a court is reviewing an agency's denial of a rulemaking petition. Rather, to survive scrutiny, Ecology's petition denial must be "blessed with an articulated justification that makes a 'rational connection between the facts found and the choice made,' and follows upon a 'hard look' by the agency at the relevant issues." *WWHT, Inc. v. FCC,* 656 F.2d 807, 817 (D.C. Cir. 1981) (citations omitted) (discussing standards applicable to review of agency's refusal to initiate

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continues to contain most of the same provisions existing at the time the case was decided.").

[12] The declarations of Liz Hamilton, Bill Sedivy, and Glen Spain, CP 121-140, describe petitioners' standing. Each of these declarants and their organizations' members use, enjoy, or otherwise depend on salmon and steelhead, have been harmed by Ecology's refusal to alter the TDG standard, and these harms would be redressed by a court order in this case.

rulemaking).[13] *See also Rios*, 39 P.3d at 965-66, 972 (standard of review for the denial of the rulemaking petitions was "very similar to the standard of review governing the challenge to the 1993 rule," and that petitioners were entitled to relief if they demonstrated that "the Department's failure to initiate rulemaking in 1997 violated a duty under [Washington law] or was otherwise arbitrary and capricious.").[14]

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[13] In reviewing petition denials, courts "consider whether the agency's decisionmaking was 'reasoned[]'... and the court must assure itself that the agency considered the relevant factors, that it explained the 'facts and policy concerns' relied on, and that the facts have some basis in the record." *Am. Horse Prot. Ass'n, Inc. v. Lyng*, 812 F.2d 1, 5 (D.C. Cir. 1987) (citation omitted). "In other words, we look to see whether the agency employed reasoned decisionmaking in rejecting the petition." *Defenders of Wildlife v. Gutierrez*, 532 F.3d 913, 919 (D.C. Cir. 2008).

[14] Washington law requires Ecology to "use credible information and literature for developing and reviewing a surface water quality standard," RCW 90.48.580(1), and to set water quality standards that protect the most sensitive designated uses established for its waters, RCW 90.48.035; WAC 173-201A-310; WAC 173-201A-200(1)(a)(ii)-(iv). *See supra* at 3-5. The agency's violations of these mandatory duties provides an alternative, additional basis for relief. RCW 34.05.570(4)(c)(ii) As a practical matter, however, whether Ecology has acted outside its statutory authority is reviewed under a the same standard. *Rios*, 39 P.3d at 972 & n. 15 ("If our review reveals that the Department's 1997 decision was "arbitrary or capricious," then the Department's denial of the pesticide handlers' request will have contravened the mandatory language of WISHA and will have provided another basis for relief under the APA's judicial review statute as an action "'[o]utside the statutory authority of the agency or the authority conferred by a provision of law.'")

## II. ECOLOGY'S DECISION WAS ARBITRARY AND CAPRICIOUS AND WAS NOT BASED ON CREDIBLE DATA.

Ecology has a legal duty to set water quality standards that protect the most sensitive uses of State waterways and to use credible information to perform that duty. 40 C.F.R. § 131.11(a)(1); RCW 90.48.580(1). The evidence in support of amending the TDG rule to protect the "key" sensitive uses of salmon migration, spawning, and rearing is overwhelming and one-sided. WAC 173-201A-200(1)(a)(iii)-(iv). Years of field research and monitoring by NMFS and others specifically in the Columbia and Snake Rivers has established that TDG levels of 120% protect resident fish, invertebrates, and other aquatic life, and provide substantial benefits to imperiled salmon populations. These empirical studies over the past fifteen years alone have evaluated more than 200,000 salmon, over 40,000 resident fish, and almost 20,000 invertebrates at a range of different in-river TDG levels. Of those more than 250,000 individual samples, researchers found (often very minor and non-lethal) signs of GBD at TDG levels at or above 120% (often much higher than 120%) in less than 2% of the salmon and steelhead, AR 276.18, less than 4% of resident fish, AR 2093.5, 2093.10, and in only 12 individual invertebrates, AR 2093.10; AR 2091.67-2091.70; AR 2101.8. *See also* AR 2287-2290 (NMFS biological opinion summarizing studies and

finding effects to aquatic life were rare at TDG levels at or below 120%). While harm to all aquatic life is rare at 120% TDG, large numbers of juvenile salmon are currently killed passing through the federal dams, and this mortality would be reduced by increasing spill. This data and experience is why fisheries biologists from federal agencies, Native American Tribes, and the States unanimously supported either removing the 115% forebay requirement or raising it to 120%. *See supra* at 10-12 (citing comments from these agencies, including WDFW and NMFS).

Ecology failed to address or rationally consider this evidence in its petition denial. Instead, the agency manufactured an artificial tension between Ecology's duty to protect the key aquatic life use of salmon migration, spawning, and rearing and Ecology's more general duty to protect all aquatic life. Ecology insisted that it must elevate any perceived risk to "other aquatic life" over the needs of threatened and endangered salmon. This lacks support in the record and misinterprets the law. Ecology's decision to elevate a hypothetical harm to unspecified aquatic life over the undisputed and real harm to salmon caused by Ecology's current limited TDG standard was arbitrary and capricious and violated Ecology's duty to use credible information in setting its water quality standards to protect aquatic life, including "key" salmon uses.

A. Ecology's Decision Hinges on its Erroneous Finding of Harm to Aquatic Life Other than Salmon.

In denying the petition, Ecology characterized its decision not to modify the 115% forebay TDG standard as a trade-off between what it viewed as a small benefit to threatened and endangered salmon and a small risk of harm to other aquatic life such as insects and frogs. See AR 1754.2, 1754.3. While Ecology admits that changing the standard would benefit salmon, the agency attempts to minimize the benefits by focusing on only the lowest-end salmon survival estimates. *See* AR 1754.7-.8.[15] The overall degree of those survival increases are irrelevant to Ecology's duty to protect "key" sensitive salmon uses under state and federal law. *See supra* at 3-5 (discussing Ecology's duty to protect "key" salmon uses). *See also supra* at 10-12 (discussing uniform support among state tribal

[15] While Ecology characterizes the 1-9% survival improvements to salmon as "small," *see* AR 1754.2, these increases in survival are greater than or equal to those from many other actions that – with Washington's vigorous support and a significant amount of funding – are being undertaken throughout the Columbia River Basin. *See* AR 1753.11-1753.12. Moreover, the smaller estimates that Ecology highlights are based on the mistaken assumptions that (1) the dams will be operated under a 2008 biological opinion to provide less spill than they do currently, *see* AR 1907.2; and (2) that power use in the region will not increase. *But see Nat'l Wildlife Fed'n v. Nat'l Marine Fisheries Serv.*, 2011 WL 3322793 at *12 (invalidating that 2008 biological opinion and enjoining agencies to spill at levels above those in biological opinion); AR 1840.9 (AMT Report stating that power use is expected to increase and noting that if the biological opinion operations and power use change, "removal of the 115% forebay requirement" would allow up to 60% more spill in some years).

agencies and federal fisheries biologists for changing the standard). Moreover, mathematical precision is not the real issue. As the Director of Washington's Department of Fish and Wildlife noted in comments on the AMT Report, while "there are a range of analyses and estimates . . . . The primary point is that each method provides a positive expectation that increased spill from changing the gas cap from 115 to 120 will provide increases in salmon survival." AR 1741.1. *See also* AR 1741.1-.2 (WDFW comments on draft AMT report highlighting that no matter which method is used to estimate benefits of increased spill from removal of 115% criterion, the "increased spill .... will provide increases in salmon survival" and that the potential for negative impacts other fish are "small").

Because even Ecology admits that changing the standard would be beneficial, its decision to deny the petition necessarily rests entirely on the validity of its findings that "[t]he evidence presented in Ecology's literature review shows the potential for a small increase in harm to aquatic life" from TDG levels of 120%, AR 1754.1, and that "some studies show harmful effects to aquatic life such as frogs, sturgeon larvae, and juvenile steelhead trout between 115 and 120% saturation," AR 1754.7. *See also* AR 1840.62 (summarizing Ecology Literature Review finding that "[t]he weight of all the evidence from available scientific

studies clearly points to detrimental effects on aquatic life near the surface when TDG approaches 120%."). *See also* 1754.2 (denying petition based on potential "detrimental effects to other aquatic life"). Those findings, however, are not supported by the record.

Specifically, Ecology's finding of harm to aquatic life other than salmon – and thus its decision to deny the petition – is faulty for two reasons: 1) Ecology ignored or misinterpreted the best available data from relevant empirical studies conducted in the Snake and Columbia Rivers AR 1840.48, 1754.1; and 2) it relied exclusively on studies done in controlled experimental settings, not the more relevant and extensive set of field studies done in the real-world setting of the Columbia and Snake Rivers, to support its finding of harm to other aquatic life. Ecology's failure to "'consider[] the relevant factors and articulate[] a rational connection between the facts found and the choice made,'" led Ecology to deny the petition without regard to the attending facts or circumstances. *Pac. Coast Fed'n of Fishermen's Ass'n, Inc. v. Nat'l Marine Fisheries Serv.*, 265 F.3d 1028, 1034 (9th Cir. 2001).

B. Ecology Arbitrarily Failed to Consider or Inexplicably Downplayed Relevant Evidence.

Even though the petition cited and discussed numerous field studies demonstrating that aquatic life is unharmed even at 120%

saturation, Ecology's petition denial, and the Literature Review it relies on for support, either failed to discuss or inexplicably downplayed the numerous field studies discussed in the petition that demonstrate that resident fish and invertebrates are not harmed by TDG levels up to 120%.

For example, in an extensive field study conducted between 1994 and 1997, NMFS scientists sampled over 39,924 resident fish (from 27 non-salmonid species) and collected 5,434 invertebrates (from 27 species) in the Columbia and Snake rivers. *See* AR 2093 (Ryan et al.); *see also* AR 1753.6-1753.7 (petition summarizing this study). The study period covered heavy run-off years such as 1997, when TDG levels ranged from 120% to 135%. AR 2093.5-2093.7. Over the course of this four-year study, only 3.9% of all fish displayed GBD signs and signs of GBD were rare when TDG was less than 120%. AR 2093.5, 2093.10. Of the 5,434 invertebrates collected, only 7 individuals showed any signs of GBD. *Id.*[16] Significantly, the invertebrates were collected at depths of no more than 0.6 meters – the very top of the water column where TDG levels are highest. AR 2093.3. Ecology did not mention or analyze this study in its petition denial. Moreover, the summary of this study in Ecology's Literature Review superficially notes only that the authors developed a

[16] Notably, the study's authors found that effects to invertebrates predicted by laboratory studies were "rarely observed" in the field. AR 2093.11. *See infra* at 33-41 (discussing limited utility of laboratory studies).

model that "[s]uccessfully predicted certain GBD signs at levels greater than 120%." AR 1856.80. While that summary is accurate as far as it goes, it fails to disclose any of the study's most relevant findings, including its finding of little or no harm at TDG levels up to 120% for large sample sizes of many indigenous fish and non-fish species from sites on the Columbia and Snake Rivers.

In another study funded by the U.S. Army Corps of Engineers, researchers examined resident fish and invertebrates in the Snake and Columbia Rivers during a period of high spill in 1995. *See* AR 1753.7 (petition summarizing Schrank (1997), included as AR 2197). Despite the fact that TDG levels at some locations were above 130% for many weeks, few signs of GBD were observed among any of the 1,303 invertebrates examined. AR 2197.2. The researchers also concluded that GBD in fish species was rare except for an area downstream of one dam where levels hovered at 130% for six weeks. AR 2197.2-2197.3. *See also* AR 2197.48 (except where TDG exceeded 120%, "we observed low prevalence of GBD signs in fish sampled in this study"). Neither Ecology's petition denial nor its Literature Review discuss this study at all. *See* AR 1856.82 (noting that Ecology needed to "obtain or see if this is a duplicate").

Ecology's petition denial also did not address the results of a three-year study of over 5,000 resident fish in the Clark Fork River in Montana

(a tributary to the Columbia River). *See* 1753.8 -.9 (petition discussion of this study). Moreover, its Literature Review inaccurately summarizes this study as concluding that GBD increased above 120% TDG. AR 1856.87. Ecology's general characterization omits the more significant and specific conclusions that "intermittent exposure to relatively high TDG (120-130%) … appears to pose little risk of GDB" and that even with "continuous exposure to 120-130% TDG for more than a month in 1999, the effect on the fish population appears to have been slight" even when the sampled fish were near the surface and were the "most likely to be exposed to TDG supersaturation." AR 2103.10-.11.

Ecology's Literature Review also inaccurately portrays another large study of 9,885 invertebrates in the Columbia River, including those within top meter where TDG concentrations are highest, that found only 2 individual invertebrates with signs of GBD. AR 2091.67-2091.70. Instead, Ecology's Literature Review inaccurately states that this study sampled only 1,303 invertebrates and summarizes that 9.1% of the mayflies sampled showed signs of GBD. AR 1856.78 (Literature Review inaccurately characterizing this study). But the Literature Review does

not disclose that "9.1% of the mayflies sampled" represented a single individual insect. AR 1753.8 (petition discussing this study).[17]

Both the NMFS and Parametrix literature reviews included these field studies and discussed them at length. *See, e.g.*, AR 1962.27 - 1962.30; AR 1943.6 - 1943.11. Accordingly, both NMFS and Parametrix concluded that any additional negative effects on aquatic life where TDG is at 120% or lower are negligible. AR 1962.49; AR 1943.5; *see also* AR 1840.61. Likewise, when Oregon removed its 115% TDG forebay standard, it specifically based its decision to remove the 115% forebay standard on "the impacts of TDG based on gas bubble trauma monitoring conducted over the past 14 years," along with evidence of the benefits of spill to salmon survival. AR 1840.64. *See also* AR 276.10-276.18 (Joint federal and state fishery agencies' comments summarizing many of these studies and concluding that managing spill to 120% tailrace standard "best protects the sensitive fishery existing and designated use of the Columbia River").

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[17] Ecology also overlooked substantial evidence that salmon are more sensitive to elevated TDG levels than other resident fish or invertebrates. *See, e.g.*, AR 1943.6, 1943.13 (NMFS Literature Review concluding that if anything, salmon are more sensitive to TDG than other aquatic life); AR 2197.47 (in contrast to lab studies, finding no substantive GBD signs in invertebrates even in areas "where fish suffered severely"); AR 2090.1 (study finding that all sampled insects were more tolerant of TDG than fish).

Ecology, on the other hand, concluded that there was "little information on free-floating and surface dwelling organisms such as larvae of fish, crustaceans, and mollusks," AR 1840.52, and on that basis recommended a wide margin of safety, AR 1840.48. *But see* AR 2093.7, 2093.11 (NMFS study including these same organisms and concluding that they are not harmed by TDG levels of 120% or lower); AR 2197.2 (Schrank study sampling 1,303 invertebrates representing 18 species and finding "few signs of GBD among invertebrates"); AR 2101.18 (Toner study of nearly 4,000 invertebrates with only 3 showing any signs of GBD).

In response to the petition's demonstration that Ecology had inappropriately overlooked or mischaracterized these studies, Ecology's petition denial states only that "[s]ome of the studies identified in the petition were not intended to analyze the effect to aquatic organism[s] below 120% TDG levels. Therefore, Ecology did not consider them in the 'weight of the evidence' that the petitioners describe." AR 1754.4; *see also id.* ("We agree that Ecology can clarify some result summaries to include information provided in the petition."). This response fails to explain why studies showing that aquatic life experienced no significant adverse effects at TDG levels above 120% should be excluded from the "weight of the evidence" in assessing whether levels between 115% and

120% are detrimental. If a study shows that TDG causes no harm to an organism at 120% saturation, it logically follows that effects are equally harmless at levels below that number.

In a similar case, this Court rejected as arbitrary an agency's decision that ignored relevant, available evidence. *Puget Sound Harvesters*, 239 P.3d 1140. In that case, WDFW set fish allocations for two groups of fishermen employing different types of fishing gear based solely on the amount of time each could spend on the water. The court found that "[o]pportunity to catch a share of the fish depends primarily on two factors: time on the water and gear efficiency." *Id.* at 1147. WDFW, however, ignored evidence related to gear efficiency. *Id.* In rejecting this decision as arbitrary and capricious, the court found "that WDFW possessed information regarding catch rates from previous seasons," *id.* that could provide information on gear efficiency and held that "it is not rational for WDFW to ignore the considerable information that it does have to estimate likely harvests." *Id.*[18]

[18] In *Am. Horse Prot. Ass'n, Inc. v. Lyng*, 812 F.2d at 7, the Court found an agency's petition denial arbitrary because the agency failed to explain why it ignored a single significant study supporting the petitioned action. Here, Ecology has failed to account for a multitude of reliable studies in the very rivers at issue demonstrating that changing the TDG standard would benefit salmon without harming other aquatic life.

Similarly, here there is no evidence in the petition denial or the record that the agency considered or addressed numerous relevant field studies. *See* AR 1456.2 (Ecology staff noting in response to points raised in petition that "I relied on our literature review during the AMT process and didn't read the individual studies.").[19] Instead, Ecology denied the petition based largely on its Literature Review and previous conclusions and its unexplained statement that unspecified evidence makes "clear" the threat to other aquatic life. AR 1754.1-.2, 1754.8. Without considering the substantial evidence to the contrary before denying the petition – or rationally explaining why it chose to reject this evidence or assign it less weight – Ecology could not "make[] a 'rational connection between the facts found and the choice made'" after taking a "'hard look' ... at the relevant issues." *WWHT, Inc.*, 656 F.2d at 817. Ecology's failure to adequately consider highly relevant and available evidence renders its decision arbitrary and capricious.

[19] While Ecology asserts that these studies were listed in its Literature Review, AR 1754.4, merely cataloguing these studies – instead of considering and applying their results – violates Ecology's duty to "use credible information and literature" RCW 90.48.580(1) (emphasis added), when determining whether to revise a water quality standard.

C. Ecology Irrationally Favored Non-Representative Laboratory Studies.

Despite the evidence from field studies conducted in the Columbia River Basin demonstrating rare effects to invertebrates, resident fish, and other aquatic life near the surface – and sometimes at levels exceeding 120% TDG – Ecology's petition denial relies almost entirely on laboratory studies conducted under experimental conditions where fish or invertebrates are held in shallow water with constant, high levels of TDG for extended periods of time. As the petition demonstrated, AR 1753.9 - 1753.11, these types of studies are vastly different from the actual conditions faced by aquatic life around dams where higher levels of TDG are often intermittent, depth compensation is available (i.e., the organism is able to swim to a lower depth away from high levels of TDG), and where TDG levels fluctuate substantially in different parts of the river.

Yet in denying the petition, Ecology relied exclusively on only four specific laboratory studies to support its assertion that evidence shows detrimental effects to some aquatic organisms from TDG levels between 115% and 120%. AR 1754.4; (citing AR 1754.7 & n.15 to n.18). Two of these four studies examine the effects of multi-day exposure to high levels of TDG on bullfrogs (*rana catesbeiana*), an invasive species that Ecology has no duty to protect. *See* AR 2192 (laboratory study on adult bullfrogs

obtained in California); AR 2191 (laboratory study on bullfrog tadpoles obtained in California).[20] Moreover, contrary to Ecology's conclusions, both studies support a conclusion that bullfrogs will not be harmed by removing the 115% forebay TDG standard, because both explicitly conclude that "the bullfrog is not as sensitive to gas supersaturation as fish." AR 2192.4; *see also* AR 2191.9 (same). Ecology's heavy reliance on the other two laboratory studies is equally misplaced. *See* AR 2193 (laboratory study on white sturgeon larvae finding mortality after 13-day exposure to 131% TDG but no mortality at 118% TDG)[21]; AR 2088 (early laboratory study on steelhead – a species that even Ecology concluded would benefit from increased spill)[22]; *but see* AR 276.10-276.15 (discussing extensive field studies showing little impact to steelhead and

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[20] Ecology's water quality standards must protect "all *indigenous* fish and nonfish aquatic species." WAC 173-201A-200(1)(a) (emphasis added). As a non-indigenous species, Ecology has no duty to set water quality standards that protect bullfrogs.

[21] While this study did find some adverse, but non-lethal effects at 118% TDG, the study also noted that "the depth distribution of dispersing white sturgeon larvae in the Columbia River currently is unknown. Thus, our results may represent a worse-case scenario . . . " AR 2193.6.

[22] Ecology does not qualify its reliance on this 1978 steelhead laboratory study even though its own Literature Review cautioned that studies "before 1980 should be assigned a larger margin of error for TDG measurements" because they relied on outdated technology and methods. AR 1856.8.

other salmon and benefits from increased spill); 1742.1 (WDFW comment emphasizing "large benefits" to adult steelhead from increased spill).

Ecology's discussion in the AMT Report likewise gives unexplained and irrational weight to outdated laboratory studies and overlooks numerous relevant and recent field studies. Summarizing its Literature Review, Ecology cites to 31 studies to support its conclusion that aquatic life will be harmed at TDG levels between 115% and 120%. AR 1840.48-1840.50. Of these 31 studies, only 4 are in-river field studies,[23] each of which strongly supports the conclusion that aquatic life will not be harmed if TGD levels are 120% or below. *See supra* at 25-30 (discussing Ecology's inaccurate summaries of these studies). The remaining 27 studies, some of which found adverse effects from levels of TDG below 120% after prolonged exposure, are all laboratory studies or controlled experiments, many of which tested effects on species not native to, or even present in, the Columbia River Basin.[24] Moreover, nearly a

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[23] *See* AR 1856.50. (Parametrix (2002)); AR 2091 (Parametrix (2003)); AR 2092 (Richter (2006)); and AR 2103 (Weitcamp (2003)).

[24] *See, e.g.*, AR at 1962.34 (summary of Colt, 1984b, studying non-native striped bass larvae showing mortality in lab tests, but "no observations of larval mortality in field conditions were reported."); AR 1856.31 (noting that study of striped bass, native to the east coast, may not apply to species in Columbia River). *id.* at 1962.39 (summary of Cornacchia, 1984, another lab study of striped bass larvae, cautioning that these larvae "have been identified to be more susceptible than most species to TDG."); *id.* at 1856.76 (summarizing study exposing fish in cages held at a fixed depth

third of these 31 studies are from 1979 or earlier – even though Ecology cautioned that such outdated studies should be discounted. AR 1856.8.

The record demonstrates that laboratory studies consistently overestimate the risk TDG poses to aquatic life. For example, as Ecology itself recognized, TDG levels in shallow water close to the shore are lower than TDG levels in the middle of the river. AR 1840.52; *see also* AR 2101.35-2101.36; 276.13. Migrating salmon and other shallow-water aquatic life tend to be found in this shallow shore water habitat and not in the surface water in the middle of the river. *Id.*[25] Aquatic life in the middle of the river, in contrast, is protected from higher TDG levels by the ability to access deeper water. AR 1840.52. Such real-life distribution patterns are not accounted for in laboratory studies.

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where TDG was greater than 122%); *id.* at 1962.7, 1962.14 (citing Mesa, 2000, a lab study of juvenile chinook salmon held at less than a foot deep); *id.* at 1856.25 (summarizing 1976 lab study of salmon and non-native bass); *id.* at 1856.61 (lab study of fish held in 6 inches of water to gauge effects of different ratios of nitrogen and oxygen exposure).

[25] Ecology's attempt in its petition denial to assign significance to the fact that Oregon has a lower TDG limit for shallow water fails for two reasons. AR 1754.8. First, as this evidence demonstrates, TDG is naturally lower in these shallow-water areas where most aquatic life lives, regardless of whether a different standard applies. Second, the argument that Oregon's shallow-water TDG standard is meaningful begs the question why Washington could not similarly adopt that standard if Ecology believes that it offers necessary protection.

For this and other reasons, federal scientists and others have routinely concluded that laboratory studies, while informative, are not representative of how aquatic life responds to elevated TDG levels in the Columbia and Snake Rivers. *See, e.g.*, AR 1962.49 (Parametrix literature review finding that "[r]eview of the substantial literature now available from field investigations makes it obvious that the GBD incidence and severity observed in shallow laboratory and cage conditions is not representative of field or river conditions."); AR 1962.12; 1962.18; 1962.6 – 1962.7; *see also* AR 1688.8 (NMFS concluding that laboratory studies "are not representative of the conditions experienced by migrating juveniles" in the Columbia River), AR 1943.11 (discussing recent studies); AR 1831.5 (Tribal fish manager comments noting that the lab studies Ecology relied on in the Literature Review "are not likely representative of conditions in the lotic, Columbia River").

Indeed, laboratory studies and field studies in the Columbia River have reached dramatically different conclusions regarding the effects of elevated levels of TDG on the same species. For example, a laboratory study which Ecology cites as finding "50 percent mortality for daphnia in 93 hours" at 120% TDG, *see* AR 1840.49, is directly contradicted by the NMFS in-river field study that Ecology failed to consider, which sampled 1,514 specimens of *Cladocera* (a taxa that includes daphnia) using the

exact same methods and showed only 0.5 percent prevalence of GBD, even when TDG levels often exceeded 120%. AR 2093.3. *See also* AR 2093.11 (finding that effects predicted in lab studies were "rarely observed"); AR 2197.47 (in contrast to lab studies, finding no substantive GBD signs in invertebrates even in high TDG areas "where fish suffered severely").[26]

Rather than address any of this evidence and the recognized limitations of laboratory studies, Ecology in its petition denial simply stated that "data and information from experimental studies are routinely used by EPA and the states to develop water quality standards." AR 1754.5. That explanation side-steps the problem with Ecology's exclusive reliance on these laboratory studies. This is not a case where Ecology had only laboratory studies to consider; here, there is a wealth of additional, credible, and reliable data and literature specific to the Columbia and Snake Rivers that Ecology has not discussed, distinguished, or rationally

[26] Moreover, even in investigations where resident fish are held in in-river pens allowing for some depth compensation, GBD levels in captive fish are still substantially higher than those observed in free-swimming fish. *See, e.g.*, AR 2103.9 (noting need for caution in using results of laboratory and live-cage investigations to interpret conditions in the natural environment because of this discrepancy); *see also* AR 2093.11; AR 2197.5 ("The disparity between GBD signs in the river and the net-pen negated the use of mortality data from the net-pen as a direct index of mortality in the river, even for those locations where [TDG] was the highest.").

explained why it chose to disregard. Where the scant laboratory evidence that Ecology relied on to deny the petition is contradicted by specific and relevant data regarding many of the same species in these same rivers, compliance with APA's requirement that Ecology rationally explain how it weighed all of this evidence and reached its decision is paramount.

In *Puget Sound Harvesters*, 239 P.3d 1140, the Court rejected as arbitrary a similar unexplained preference for one set of data and one methodology. *See also id.* at 1147 (holding that agency "should consider reasonable factors .... [and] must not act cursorily in considering the facts and circumstances surrounding its actions."). This case is no different: Ecology relied on only one type of information – laboratory studies of captive aquatic life that routinely document higher levels of GBD compared with levels observed in the wild – to the exclusion of more specific and reliable data from field studies. Ecology has not rationally explained why the laboratory studies it chose to rely upon are due more weight than the field studies with larger sample sizes and which are specific to the Columbia River basin, especially in the face of substantial evidence that laboratory studies are not representative of real-world effects.

While an agency may be due deference in making scientific judgments, its decision will be upheld only where a court can reasonably

discern a path that led to its conclusion.[27] *Pac. Coast Fed'n of Fishermen's Ass'ns v. U.S. Bureau of Reclamation*, 426 F.3d 1082, 1091 (9th Cir. 2005) ("we cannot infer an agency's reasoning from mere silence. Rather, . . . 'an agency's action must be upheld, if at all, on the basis articulated by the agency itself.'") (citing *Motor Vehicle Mfrs. Ass'n*, 463 U.S. at 43). Whether Ecology's explanation is rational and based on the record does not turn on the fact that some explanation was offered. Rather, the Court must examine the record and the agency's explanation in sufficient detail "to be able to comprehend the agency's handling of the evidence cited or relied upon. . . . [and to] determin[e] whether the agency's conclusions are rationally supported." *Nw. Coal. for Alternatives to Pesticides v. U.S. EPA*, 544 F.3d 1043, 1057 n.7 (9th Cir. 2008) (internal citations and quotation marks omitted) (explaining difference between

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[27] Ecology cannot escape in-depth review of its decision by relying on "'reminders that its scientific determinations are entitled to deference' in the absence of reasoned analysis. . . ." *NRDC v. Daley*, 209 F.3d 747, 755 (D.C. Cir. 2000); *see also Brower v. Evans*, 257 F.3d 1058, 1067 (9th Cir. 2001) ("The presumption of agency expertise can be rebutted when its decisions, while relying on scientific expertise, are not reasoned."). It is well-settled that even where an agency with "technical expertise" acts "within its area of competence," a reviewing court "need not defer to the agency when the agency's decision is without substantial basis in fact, and there must be a rational connection between the facts found and the determinations made." *Ariz. Cattle Growers' Ass'n v. Salazar*, 606 F.3d 1160, 1163 (9th Cir. 2010).

narrow scope and detailed depth of arbitrary and capricious review).[28] Put another way, the agency must show its work. Such an explicit account of how Ecology reached its decision is of the utmost importance here, where the agency ignored highly relevant data that every other agency to consider the issue has found to be compelling. It is impossible to conclude that there is a rational basis for Ecology's concerns where the agency has failed to identify specific, reliable studies to support its contrary conclusion or to explain why it chose to weight those over the other evidence in the record. Ecology's failure to explain its decision is arbitrary and capricious.

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In sum, the evidence in the record unequivocally demonstrates that removing or amending the 115% forebay TDG standard will increase salmon survival and will not harm other aquatic life. Ecology reached a contrary conclusion only by ignoring or misrepresenting extensive field

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[28] "The mere fact that an agency is operating in a field of its expertise does not excuse us from our customary review responsibilities. ... [W]here the agency's reasoning is irrational, unclear, or not supported by the data it purports to interpret, we must disapprove the agency's action." *Nw. Coal. for Alternatives to Pesticides*, 544 F.3d at 1057 & n.7. *See also Rios*, 39 P.3d at 972-74 (rejecting agency protest that rulemaking would be "challenging and complex," and set aside the agency's denial because it was irrational in light of evidence in the record).

evidence and arbitrarily emphasizing unrepresentative, outdated laboratory studies. Accordingly, Ecology's denial of the petition was arbitrary, capricious, and contrary to law and must be set aside.

At this stage in the process, Ecology has considered the issue through the AMT and two petition denials and provided its sole reason (protection of aquatic life other than salmon) for denying the petition. If this Court determines, as it should, that Ecology's refusal to change a standard that harms endangered salmon is not rational or supported by the record, there is nothing more for the agency to do except to initiate rulemaking. This Court should therefore order Ecology to initiate rulemaking to modify or eliminate the 115 percent forebay TDG standard in WAC 173-201A-200(1)(f)(ii). *See Rios*, 39 P.3d at 974 (holding that agency's denial of petition for rulemaking was arbitrary and "order[ing] the Department to initiate rulemaking").

## III. PETITIONERS ARE ENTITLED TO AN AWARD OF COSTS AND ATTORNEYS' FEES.

A party is entitled to attorney fees on appeal if a contract, statute, or recognized ground of equity permits recovery of attorney fees at trial and the party is the prevailing party. *Leingang v. Pierce County Med. Bureau, Inc.*, 131 Wash.2d 133, 143, 930 P.2d 288 (1997). As qualified parties under the EAJA, CP 4-5, and because for the reasons stated above

Ecology's decision was not substantially justified, Petitioners are entitled to costs and attorneys' fees for work before this and the Superior Court, should Petitioners prevail on appeal. RCW 4.84.340-.360.

## CONCLUSION

For the foregoing reasons, Petitioners ask this Court to find Ecology's May 7, 2010 denial of their March 10, 2010 petition for rulemaking arbitrary and capricious and outside the statutory authority of the agency and to remand the matter to Ecology to initiate rulemaking to alter or eliminate the 115% forebay TDG standard in WAC 173-201A-200(1)(f)(ii).

Respectfully submitted this 7th day of November, 2011.

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No. 42364-2-II
Thurston County Cause No.: 10-2-01236-0

COURT OF APPEALS FOR THE STATE OF WASHINGTON
DIVISION II

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NORTHWEST SPORTFISHING INDUSTRY ASSOCIATION, ASSOCIATION OF NORTHWEST STEELHEADERS, PACIFIC COAST FEDERATION OF FISHERMEN'S ASSOCIATIONS, INSTITUTE FOR FISHERIES RESOURCES, and IDAHO RIVERS UNITED,

Appellants,

v.

WASHINGTON DEPARTMENT OF ECOLOGY,

Respondents.

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# CERTIFICATE OF SERVICE

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I am a citizen of the United States and a resident of the State of Washington. I am over 18 years of age and not a party to this action. My business address is 705 Second Avenue, Suite 203, Seattle, Washington.

On November 7th, 2011, I served a true and correct copy of the following documents on the parties listed below:

1. Opening Brief of Appellants, and
3. Certificate of Service.

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I, Cheryl McEvoy, declare under penalty of perjury that the foregoing is true and correct. Executed on this 7th day of November, 2011, at Seattle, Washington.

Cheryl McEvoy