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ERIN L. LENNON
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IN THE SUPREME COURT OF THE STATE OF WASHINGTON

WILD FISH CONSERVANCY; CENTER)
FOR FOOD SAFETY; CENTER FOR)
BIOLOGICAL DIVERSITY; and FRIENDS)
OF THE EARTH,)

No. 99263-1

En Banc

Appellants,)

v.)

WASHINGTON DEPARTMENT OF FISH)
AND WILDLIFE,)

Respondent,)

and)

COOKE AQUACULTURE PACIFIC, LLC,)

Intervenor-Respondent.)

Filed: January 13, 2022

JOHNSON, J.—This case involves a challenge brought under chapter 34.05 RCW, the Washington Administrative Procedure Act (APA), to a marine finfish aquaculture permit issued by the Washington Department of Fish and Wildlife (WDFW), allowing Cooke Aquaculture Pacific LLC to change fish species to

commercially farm steelhead trout in Puget Sound.¹ The Wild Fish Conservancy (WFC)² filed an appeal with King County Superior Court, challenging WDFW's approval of the permit that allows Cooke to transition from farming Atlantic salmon to steelhead trout. The WFC alleges (1) WDFW's conclusion that an environmental impact statement (EIS) was not required was clearly erroneous and (2) WDFW violated the State Environmental Policy Act (SEPA), ch. 43.21C RCW, by failing to consider and disclose appropriate alternatives to the proposal under RCW 43.21C.030(2)(e). The WFC urges this court to reverse the permit approval and order WDFW to complete an EIS.³

The King County Superior Court found WDFW's SEPA analysis was not clearly erroneous and the steelhead permit application did not trigger RCW 43.21C.030(2)(e). We affirm.

¹ The Swinomish Indian Tribal Community submitted briefing as amicus curiae on behalf of the appellants, as did the Washington State Department of Ecology and the Jamestown S'Klallam Tribe on behalf of the respondents.

² The WFC is joined by the Center for Food Safety, Center for Biological Diversity, and Friends of the Earth as appellants in this action.

³ The WFC filed a motion for judicial notice, requesting this court take judicial notice of the Washington State Department of Ecology's *State Environmental Policy Act Handbook* (2018 Updates) and Ecology's *SEPA Environmental Checklist* (WAC 197-11-960) (July 2016). Ecology is required by statute to adopt rules interpreting and implementing SEPA. RCW 43.21C.110(1); ch. 197-11 WAC. As a part of its statutory obligation to provide guidance on compliance with SEPA, Ecology is further required to "publish an annual state environmental policy act handbook or supplement." RCW 43.21C.300. Though the WFC's motion for a judicial notice is not necessary for the court to consider these materials issued as part of Ecology's statutory duty to promulgate rules and guidance to implement SEPA, we nonetheless grant the motion.

FACTS AND PROCEDURAL HISTORY

This case is a challenge to a specific permit: an approval to cultivate all-female, sterile steelhead trout in existing marine aquaculture net-pen facilities. WDFW's decision to approve this permit was based on an environmental assessment of the specific and limited proposal to rear steelhead in existing net-pen facilities where Atlantic salmon were previously reared. This action does not challenge the siting of the net pens nor does this action challenge lawful fish farming operations in existing marine-based facilities.

Our limited role in this case is to determine whether WDFW's environmental assessment of steelhead fish farming in existing net-pen facilities was clearly erroneous. We are also asked to interpret subsection RCW 43.21C.030(2)(e) of SEPA and determine whether WDFW was required to perform an alternatives analysis under subsection (2)(e).

I. General Overview

Cooke owns several commercial salmonid farming operations that have operated in Puget Sound for over 30 years. Most recently, Cooke has reared nonnative finfish Atlantic salmon in its various marine-based net-pen facilities.

On August 19, 2017, one of Cooke's Cypress Island net pens collapsed, releasing an estimated 263,000 nonnative Atlantic salmon into Puget Sound. Understandably, this net pen failure generated widespread public concern.

Community stakeholders pushed the legislature to reassess marine-based finfish aquacultures in Washington.

In response, the legislature enacted a new statute prohibiting the Washington Department of Natural Resources (DNR) from further issuing aquatic-land leases where the use includes nonnative marine finfish aquaculture. One of the intended aims of this law was to phase out nonnative fish farming in Washington waters. RCW 79.105.170; RCW 77.125.050. The statutory changes do not ban marine finfish farms altogether but do ban the rearing of nonnative finfish and impose an additional requirement on the relevant administrative agencies to design statewide guidance to eliminate fish escapes from marine net pens and eliminate any negative impacts to water quality and native fish, shellfish, and wildlife.

ENGROSSED H.B. (EHB) 2957, 65th Leg., Reg. Sess. (Wash. 2018).

II. Cooke's Permit Application

In January 2019, Cooke submitted two marine finfish aquaculture permit applications to WDFW: one application requested renewal of an existing permit to farm nonnative Atlantic salmon and the other application was a proposal to

transition its finfish aquaculture operations from farming Atlantic salmon to farming native steelhead trout.⁴

The new permit application to farm steelhead presented a change in Cooke's operations and required an environmental assessment under SEPA. Between March and September 2019, Cooke worked with WDFW to develop the required documentation, including a SEPA environmental checklist. *See* WAC 197-11-960. After evaluating Cooke's initial submission, WDFW required Cooke submit an updated environmental checklist with additional requested information and data. The agency also required Cooke hire independent experts to review and update the 1990 programmatic environmental impact statement (PEIS)—the most recent EIS on marine net-pen aquaculture in Puget Sound. The agency spent approximately 10 months reviewing the materials and information submitted by Cooke, the 1990 PEIS and its update, and additional scientific reports.

On October 1, 2019, WDFW announced its decision to issue a mitigated determination of nonsignificance (MDNS) and a five-year marine aquaculture permit to Cooke to farm all-female, sterile steelhead trout in Cooke's existing

⁴ WDFW approved Cooke's renewal application to continue its Atlantic salmon farming operations for the duration of its valid DNR leases. The agency determined it was not required to perform an environmental assessment under SEPA because the renewal request did not establish a material change from Cooke's current activities. WAC 197-11-800(13)(i) ("The renewal or reissuance of a [business] license regulating any present activity or structure [requires no SEPA action] so long as no material changes are involved."). It is unclear, based on the record, whether Cooke continues to farm Atlantic salmon in any of its net pens.

marine net pens. The MDNS included a 12-page summary of the key issues that WDFW considered in its decision-making process. It also included 22 mitigating provisions that the agency imposed on Cooke's steelhead permit. WDFW then invited the public, affected tribes, and other agencies to comment on the MDNS. Generally, an agency that issues an MDNS is required to open the comment period for 14 days. WDFW, however, initially opened the comment period for 21 days and extended it twice for a total of 53 days, closing it on November 22, 2019.⁵ After the close of the comment period, the agency held a government-to-government meeting with representatives of the Swinomish Indian Tribal Community to discuss the MDNS.

The final MDNS included a 19-page summary of the submitted comments, a 34-page document explaining the scientific basis for its determination and providing substantive responses to the comments, and modifications to the mitigating provisions in response to some of the public's voiced concerns. The agency imposed an additional seven mitigating provisions to the final steelhead permit.

The WFC prepared and submitted a report during the comment period in which it raised concerns that it continues to advance in this action. The

⁵ WDFW reported they received 3,578 comments, 884 of which were unique comments. The remaining comments were identical or nearly identical or submitted more than once by the same author.

organization argued that WDFW erroneously arrived at the conclusion that the steelhead net pens will not have a probable, significant adverse impact on the environment, and therefore, WDFW should have prepared an EIS under SEPA. Appellants' Opening Br. at 36-49. The WFC critiqued WDFW's analysis, stating that the agency relied on an "insufficient [] update [to] an entirely stale EIS," thereby ignoring the best available science developed over the last 30 years. Administrative Record (AR) at 3701. It also raised several "reasonable, safer alternatives" to raising steelhead trout that in its opinion, WDFW should have considered. AR at 3701. Its comment called for an EIS that includes a "no-action alternative" based on the "cessation of operation of the pens (and cessation of any environmental risk) after the legislative non-native aquaculture phaseout takes effect in 2022." AR at 3703. The WFC argues that WDFW was required to evaluate and disclose alternatives to the steelhead permit but failed to do so.

WDFW imposed 29 mitigating provisions on the final steelhead aquaculture permit. A comparison of the Atlantic salmon renewal permit and the steelhead trout permit reveals the relative extent to which WDFW imposed conditions on Cooke's steelhead permit aimed at mitigating any potential environmental impacts. Both permits require Cooke adhere to the requirements set out in its (1) plan of operation, (2) fish escape prevention, response, and reporting plan, and (3) regulated finfish pathogen reporting plan. Similar to the Atlantic salmon permit,

the steelhead permit requires Cooke update these three plans annually in consultation with, and to be approved by, WDFW. Also, the steelhead permit, unlike the Atlantic salmon permit, requires Cooke draft its fish escape prevention, response, and reporting plan in consultation with DNR, Department of Ecology, and “[a]ffected treaty tribes.” AR at 4534.

ANALYSIS

I. Statutory Background

The Washington Legislature enacted SEPA in 1971 as the State’s analog to the National Environmental Policy Act of 1969 (NEPA), 42 U.S.C. § 4321. It passed SEPA with the express purpose

(1) To declare a state policy which will encourage productive and enjoyable harmony between humankind and the environment; (2) to promote efforts which will prevent or eliminate damage to the environment and biosphere; (3) and [to] stimulate the health and welfare of human beings; and (4) to enrich the understanding of the ecological systems and natural resources important to the state and nation.

RCW 43.21C.010 (alteration in original). In passing SEPA, the legislature expressed “the clear aim of injecting environmental awareness into all levels of governmental decision-making.” *Columbia Riverkeeper v. Port of Vancouver USA*, 188 Wn.2d 80, 104, 392 P.3d 1025 (2017) (Stephens, J., dissenting).

The legislature delegated to Ecology the responsibility of adopting and amending rules of interpretation and implementation of SEPA for the purpose of

providing statewide uniform rules and guidelines to all branches of government. RCW 43.21C.110(1); ch. 197-11 WAC. Accordingly, Ecology promulgated the SEPA regulations in accordance with the APA rule making procedures. Ch. 34.05 RCW; ch. 197-11 WAC. Under SEPA, Ecology is also required to “publish an annual state environmental policy act handbook or supplement” to assist others in complying with the statute. RCW 43.21C.300. WDFW adopted Ecology’s regulations and relies on Ecology’s SEPA handbook to guide its own SEPA procedures and analyses. *See* WASH. STATE DEP’T OF ECOLOGY, STATE ENVIRONMENTAL POLICY ACT HANDBOOK (2018) (SEPA Handbook).

When a proposed agency action requires SEPA environmental review, the relevant agencies will identify the “lead agency” responsible for the environmental analysis and procedural steps under SEPA. The lead agency must evaluate the proposal’s likely environmental impacts through a series of specified procedures created by Ecology. SEPA Handbook at 8. Part of this process includes the “threshold determination” of whether the action will result in “probable significant adverse environmental” impacts. WAC 197-11-330(1)(b); RCW 43.21C.031. If the agency determines the proposal is not likely to have significant adverse impacts on the environment, it will issue a determination of nonsignificance (DNS), and no further environmental review is required. WAC 197-11-340. If the agency finds the proposal will likely have significant adverse impacts on the environment, it will

issue a determination of significance (DS) and the process of preparing an EIS begins. RCW 43.21C.031. An EIS is an impartial discussion and analysis of the proposal's probable, significant adverse environmental impacts and the reasonable alternatives that would avoid or minimize adverse impacts or enhance environmental quality. WAC 197-11-400, -402; RCW 43.21C.031.

Washington regulations allow for a third threshold determination. An agency may issue an MDNS when the proposal can be conditioned to have no probable, significant adverse impacts by imposing specific mitigation measures. WAC 197-11-350. When an agency makes an MDNS threshold determination, it is not finding that the proposal will not have probable, significant adverse environmental effects. Rather, the agency determines that by requiring certain specific mitigations,⁶ it can reduce the environmental impacts to a level acceptable under SEPA. An MDNS does not function to evade environmental review or undermine SEPA's purpose. The requirement of an EIS may be "superseded by the MDNS";

⁶ Ecology's SEPA regulations define "mitigation" as
 “(1) Avoiding the impact altogether by not taking a certain action or parts of an action;
 “(2) Minimizing impacts by limiting the degree or magnitude of the action and its implementation, by using appropriate technology, or by taking affirmative steps to avoid or reduce impacts;
 “(3) Rectifying the impact by repairing, rehabilitating, or restoring the affected environment;
 “(4) Reducing or eliminating the impact over time by preservation and maintenance operations during the life of the action;
 “(5) Compensating for the impact by replacing, enhancing, or providing substitute resources or environments; and/or
 “(6) Monitoring the impact and taking appropriate corrective measures.” WAC 197-11-768.

and the imposition of numerous mitigation measures that specifically target a proposal's potential adverse impacts "may provide more effective environmental protection than promulgation of an EIS, since an EIS does not automatically result in substantive mitigation." *Anderson v. Pierce County*, 86 Wn. App. 290, 305, 936 P.2d 432 (1997).

II. Whether WDFW violated RCW 43.21C.030(2)(e) by failing to study, develop, and describe appropriate alternatives to the proposal

Both parties request this court interpret RCW 43.21C.030(2)(e). First, the WFC requests we "give effect" to the subsection (2)(e) requirement to study alternatives by concluding the subsection applies to proposals with any adverse environmental impact. Appellants' Opening Br. at 22. WDFW agrees that subsection (2)(e)'s alternatives analysis "potentially" applies to proposals that do not require an EIS but disagrees that a proposal with any amount of adverse impact triggers the subsection. WDFW's Corrected Resp. Br. at 35.

Second, the WFC requests that we conclude the permit here presented the types of unresolved conflicts that trigger subsection (2)(e) and that we hold that WDFW violated SEPA by failing to study and disclose appropriate alternatives to the permit. Appellants' Opening Br. at 20-22. WDFW contends the permit did not trigger subsection (2)(e) and asks this court adopt and apply the Washington Pollution Control Hearings Board's interpretation of the subsection. *See Marine*

Envtl. Consortium v. State (Marine Env'tl. Consortium II), Nos. 96-257 through 96-266 & 97-110, 1998 WL 933353, at *21 (Wash. Pollution Control Hr'gs Bd. Nov. 30, 1998); WDFW's Corrected Resp. Br. at 35-42.

Third, WDFW reasons that even if the permit did trigger subsection (2)(e), the imposed mitigation measures should be treated as appropriate alternatives to satisfy SEPA. WDFW's Corrected Resp. Br. at 35-42. The WFC disagrees with this interpretation of subsection (2)(e) and suggests we hold the subsection (2)(e) alternatives analysis requires that an agency consider a "no action" alternative to the proposal. Appellants' Reply Br. at 9; Appellants' Answer to Ecology's Amicus Curiae Br. at 17-18.

Before addressing the merits of the subsection (2)(e) issue, we consider Cooke's argument that the WFC's subsection (2)(e) argument contains a procedural issue fatal to its argument. Cooke argues the WFC's allegation that WDFW violated subsection (2)(e) is actually a challenge to the SEPA regulations promulgated by Ecology, and therefore, the WFC was required to join Ecology as a party in this action. Cooke's Resp. Br. at 2-3. In response, the WFC argues it is not challenging the validity of a rule; rather, it challenges "[W]DFW's failure to comply with a statutory mandate." Appellants' Reply Br. at 11.

The APA requires the agency who promulgated the rule "be made a party to the proceeding" in an "action challenging the validity of a rule." RCW

34.05.570(2)(a). Here, Ecology promulgated the rules that implement SEPA; however, Ecology is not a party to this action. Therefore, if the WFC's subsection (2)(e) argument is a challenge to the validity of the regulations, its action must be dismissed for failing to comply with the APA requirements.

The WFC's initial argument, both at the trial court level and in its opening brief, asserts a statutory violation. At the trial court level, WDFW argued that Ecology's rules do not require an evaluation of alternatives outside of a DS that leads to an EIS. The WFC noted this same fact in its opening brief before this court by highlighting that "agencies throughout the [s]tate do not conduct alternatives analyses where a DNS is made, but instead only study alternatives for proposals that require an EIS." Appellants' Opening Br. at 22. The WFC therefore argues it is merely pointing out the absence of any Ecology regulation interpreting when subsection (2)(e) requires alternatives independent of an EIS.

But by emphasizing that Ecology has not issued guidance on subsection (2)(e), the WFC's argument could be viewed as challenging the insufficiency of Ecology's regulations with respect to subsection (2)(e). The WFC is effectively arguing that Ecology has failed to exercise its "authority and responsibility for full and appropriate independent adoption of rules, assuring consistency with [SEPA]." RCW 43.21C.110(1). Pointing out that Ecology has not issued a regulation or guidance on how to interpret subsection (2)(e) shows the importance of having the

agency joined below. Because of Ecology's expertise in interpreting SEPA, to which we accord substantial deference, Cooke's argument that Ecology should have been joined has some force. Whether subsection (2)(e) applies to Cooke's permit and, if it does, whether WDFW complied with (2)(e) are questions that implicate the extent to which Ecology's existing regulations sufficiently address subsection (2)(e)'s alternatives requirement. *See, e.g.*, Appellants' Opening Br. at 22, 26 (noting that WAC 197-11-960, providing a checklist for making the threshold determination of whether EIS is required, does not contain an alternatives consideration requirement); WDFW's Corrected Resp. Br. at 35-42 (arguing that Ecology's rules requiring mitigation measures for an MDNS satisfy subsection (2)(e)'s alternatives consideration requirement); Br. of Amicus Curiae Ecology at 10 (same). Nonetheless, it is not necessary to resolve the procedural issue in this case where the WFC's challenge under subsection (2)(e) clearly fails under a statutory analysis.

We review questions of law, such as the interpretation of a statute, *de novo*. Generally, where the statute is ambiguous and within the agency's specialized expertise, we accord great weight to the agency's interpretation. *Postema v. Pollution Control Hr'gs Bd.*, 142 Wn.2d 68, 77, 11 P.3d 726 (2000). However, this deference is accorded to the agency charged with the administration and enforcement of the relevant, ambiguous statute. *Cowiche Canyon Conservancy v.*

Bosley, 118 Wn.2d 801, 813-14, 828 P.2d 549 (1992). Ecology, not WDFW, was designated by the legislature to interpret and implement SEPA. SEPA mandates we give substantial deference to rules adopted under RCW 43.21C.110, which outlines the required content of the SEPA rules. The legislature expressly authorized Ecology to adopt and amend the rules of interpretation of SEPA to provide statewide guidance on how to comply with the statute's requirements. RCW 43.21C.095, .110. WDFW, like many other state entities, adopted the rules promulgated by Ecology and relies on Ecology's interpretation of SEPA to ensure its own compliance. While the legislature directs us to accord substantial deference to Ecology's interpretation of SEPA, the agency's regulations are silent regarding subsection (2)(e). The regulations do not expressly require an alternatives analysis for proposals that involve the types of "unresolved conflicts" that fall under subsection (2)(e) nor do the regulations provide specific guidance on how to interpret or apply subsection (2)(e). *See generally* ch. 197-11 WAC. Therefore, we conduct our statutory interpretation de novo without special deference to WDFW's proposed interpretation of subsection (2)(e).

WDFW proposes we adopt the Washington Pollution Control Hearings Board's (PCHB) interpretation of subsection (2)(e). The PCHB is a quasi-judicial administrative agency created by the legislature to hear and decide appeals from certain enumerated decisions of various departments and government entities,

including WDFW and Ecology. RCW 43.21B.110. We have consistently noted that the “apparent and desirable goal of [ch. 43.21B RCW]” was to achieve “[u]niformity in administering the vast powers granted under our strong environmental and pollution control laws.” *State ex rel. Martin Marietta Alum., Inc. v. Woodward*, 84 Wn.2d 329, 333, 525 P.2d 247 (1974). Therefore, while we do not provide deference to WDFW’s proposed interpretation, we do consider PCHB’s interpretation of subsection (2)(e) helpful in our own interpretation.

When engaging in statutory interpretation, our primary objective is to ascertain the intent of the legislature. Absent a statutory definition, we give effect to the statute’s plain and ordinary meaning as an expression of the legislature’s intent unless a contrary intent appears. *Cowiche Canyon Conservancy*, 118 Wn.2d at 814.

The legislature, through SEPA, “authorize[d] and direct[ed] . . . to the fullest extent possible . . . [that] all branches of government . . . shall . . . [s]tudy, develop, and describe appropriate alternatives to recommended courses of action in any proposal which involves unresolved conflicts concerning alternative uses of available resources.” RCW 43.21C.030(2)(e). In addition to the subsection (2)(e) provision, SEPA requires every EIS include a “detailed statement” on “alternatives to the proposed action.” RCW 43.21C.030(2)(c)(iii).

While Washington's appellate courts have not weighed in on the proper interpretation of SEPA's subsection (2)(e) provision, the PCHB has considered the meaning of the subsection. The PCHB held RCW 43.21C.030(2)(e) "may, depending on the circumstances, mandate an alternatives analysis outside of the EIS process." *Marine Env'tl. Consortium v. State (Marine Env'tl. Consortium I)*, Nos. 96-257 through 96-266, 1997 WL 394651, at *8 (Wash. Pollution Control Hr'gs Bd. May 27, 1997). The PCHB reasoned:

If subsection (2)(e) is co-extensive with subsection (2)(c)(iii), then the qualifying language of subsection (2)(e) is superfluous. The qualifying clause only has meaning if the alternatives analysis mandated by subsection (2)(e) exists independent of the alternatives analysis required for EIS preparation by subsection (2)(c)(iii). "Statutes should be construed as a whole, all language used should be given effect, and related statutes should be considered in relation to each other and whenever possible harmonized." The qualifying language of subsection (2)(e) evinces a legislative intent to require alternatives analysis outside of the EIS process under special circumstances involving resource conflicts.

Marine Env'tl. Consortium I, 1997 WL 394651, at *8 (citation omitted) (quoting *State v. Walter*, 66 Wn. App. 862, 870, 833 P.2d 440 (1992)).

The PCHB seems correct that the subsection (2)(e) alternatives analysis is independent of the alternatives requirement under an EIS. Therefore, an agency may be required to assess alternatives to a proposal that is not likely to result in significant adverse environmental impacts.

If subsection (2)(e) applies to proposals that do not require an EIS, the relevant inquiry asks, When does a situation involve “unresolved conflicts concerning alternative uses of available resources”? The WFC maintains the permit proposal here triggered the subsection (2)(e) alternatives analysis as demonstrated by the submitted comments that raised concerns regarding the adverse impacts fish farming has on the environment. Appellants’ Opening Br. at 29. It also argues we should follow NEPA’s interpretation of the identical subsection under 42 U.S.C. § 4332(e)(2)(E). The NEPA regulations, unlike SEPA’s regulations, expressly require every environmental assessment to discuss alternatives as required by § 4332(e)(2)(E). 40 C.F.R. § 1508.9(b) (2020).

Alternatively, WDFW argues the steelhead permit did not involve the type of unresolved conflicts that would require a subsection (2)(e) analysis under SEPA. WDFW’s Corrected Resp. Br. at 38. WDFW instead directs us to the PCHB decision in *Marine Environmental Consortium I*. In that case, the PCHB noted the subsection (2)(e) alternatives analysis “may never have been performed to date during SEPA’s twenty-six year history.” *Marine Env’tl. Consortium I*, 1997 WL 394651, at *8. Nevertheless, the PCHB engaged in its own interpretation of the subsection in a case that mirrors the present action.

In *Marine Environmental Consortium II*, the appellants challenged the approval of a water permit for the same net-pen facilities involved in the present

action. The PCHB was asked to determine whether the water permit for existing net-pen facilities triggered the subsection (2)(e) alternatives analysis. PCHB held it did not. It considered whether the activities authorized under the permit created “unresolved conflicts concerning alternative uses of available resources.” *Marine Env'tl. Consortium II*, 1998 WL 933353, at *21. It based its analysis on the question of whether the existence of the net-pen facilities “have impacts which effectively exclude other beneficial uses of available resources of Puget Sound.” *Marine Env'tl. Consortium II*, 1998 WL 933353, at *21. It further inquired whether the facilities “present an ‘either/or’ choice between salmon farming and other uses or resources.” *Marine Env'tl. Consortium II*, 1998 WL 933353, at *21.

The PCHB considered whether the farmed salmon posed an unacceptable risk to native salmonids, thereby threatening them with extinction. It reasoned that if the farmed salmon threatened wild salmonid with extinction, then that would constitute an “unresolved conflict” because it would create an “either/or” scenario between farmed salmon and wild salmonid. The PCHB concluded the measures undertaken by Ecology and WDFW were “reasonably calculated” to prevent or reduce these risks to an acceptable degree under SEPA. *Marine Env'tl. Consortium II*, 1998 WL 933353, at *22. Therefore, the net-pen facilities did not involve the type of unresolved conflicts that would trigger subsection (2)(e). The PCHB

performed a similar analysis on the impacts to water quality, shellfish harvesting, recreational activities, and sport fishing. It held that

[t]he existence of commercial salmon farms as permitted uses does not preclude other beneficial uses in Puget Sound, such as shellfish harvesting, commercial or sport fishing, navigation or recreational boating. Likewise, the existence of the salmon farms does not operate to the exclusion of available resources, such as native salmon runs, sediment and water quality, or marine mammals. In short, salmon farming in Puget Sound does not present the citizens of the State of Washington with an “either/or” choice with respect to other beneficial uses and important resources.

Marine Envtl. Consortium II, 1998 WL 933353, at *22.

Focusing on the words in RCW 43.21C.030(2)(e), the PCHB’s interpretation of the provision is sensible. The plain and ordinary meaning of the statute’s language supports the PCHB’s interpretation. A situation is “unresolved” when it is left “undecided” or “unsolved.” WEBSTER’S THIRD NEW INTERNATIONAL DICTIONARY 2508 (2002). A “conflict” is a type of “competition” or “clash” between “opposing or incompatible forces.” WEBSTER’S, *supra*, at 476. And an “alternative” is the “offering [of] a choice between two things wherein if one thing is chosen the other is rejected.” WEBSTER’S, *supra*, at 63. In other words, either option may be chosen but not both. An *alternative* use necessarily entails rejecting the other available use. Finally, a resource is “available” when it is “capable of use for the accomplishment of a purpose.” WEBSTER’S, *supra*, at 150.

Therefore, an alternatives analysis is appropriate when a proposal involves a competition over the use of a resource whereby selecting one manner of using the resource will preclude all other uses. These competing uses cannot be theoretical. The choice is between different uses of *available* resources. The competing options for how to use the resource must concern a resource that is actually capable of being used to accomplish its relative purpose. Finally, this competition must be unsolved, unsettled, or, in other words, actively in dispute. The steelhead permit did not involve this type of conflict.

During the comment period for the steelhead permit, the majority of submissions that proposed some type of alternative suggested alternatives related to siting, i.e., the location of the net pens. But the WDFW permit does not implicate the siting of the already existing net-pen infrastructure. Similarly, the other alleged conflicts the WFC raises are beyond the scope of the steelhead permit proposal. Because the permit authorizes Cooke only to transition its current fish farming activities from Atlantic salmon to steelhead trout, it does not present a situation involving a choice between uses where the selection of one option would preclude the other.

This interpretation does not foreclose the possibility that a proposal with a DNS or MDNS might trigger subsection (2)(e). For instance, subsection (2)(e) may conceivably be triggered by a permit to expand an applicant's existing net-pen

facilities because an expansion of infrastructure might result in the exclusion of other uses of the available resources, such as the use of the physical location of the new net pens. This hypothetical proposal may require a subsection (2)(e) alternatives analysis even if the agency determined that as mitigated, the permit would not have probable, significant environmental impacts. Similarly, subsection (2)(e) may be triggered by an application that is one of multiple proposals, competing to use the same available resource, regardless of whether the proposal results in a DNS, MDNS, or DS. Nevertheless, the challenged steelhead permit, regardless of its MDNS classification, does not involve the type of unresolved conflicts concerning alternative uses of available resources that triggers a subsection (2)(e) analysis.

The trial court declined to find WDFW erroneously interpreted RCW 43.21.C.030(2)(e). For reasons stated above, we affirm and conclude the steelhead permit did not trigger subsection (2)(e).

III. Whether WDFW's finding that the permit to farm steelhead would not have probable, significant adverse environmental impacts was clearly erroneous

This court's review of the steelhead permit is governed by the APA, RCW 34.05.570, and SEPA, RCW 43.21C.090. "The burden of demonstrating the invalidity of agency action" rests with the WFC. *See* RCW 34.05.570(1)(a). Additionally, we review the agency action at the time the action was taken. RCW

34.05.570(1)(b). Thus, we “stand[] in the same position as the superior court” during our review. *Wenatchee Sportsmen Ass'n v. Chelan County*, 141 Wn.2d 169, 176, 4 P.3d 123 (2000).

In any action challenging a governmental agency's determination, SEPA requires the court give substantial weight to the agency's decision. RCW 43.21C.090. We also recognize and defer to the administrative agency's environmental expertise. *Pease Hill Cmty. Grp. v. County of Spokane*, 62 Wn. App. 800, 809, 816 P.2d 37 (1991).

We apply the “clearly erroneous” standard of review when reviewing an agency's decision to issue an MDNS and not require an EIS. We look beyond whether substantial evidence exists to support the agency's decision. Rather, we review the entire record and determine whether, based on the entirety of the evidence, we are “left with the definite and firm conviction that a mistake has been committed.” *PT Air Watchers v. Dep't of Ecology*, 179 Wn.2d 919, 926, 319 P.3d 23 (2014) (internal quotation marks omitted) (quoting *Ancheta v. Daly*, 77 Wn.2d 255, 259-60, 461 P.2d 531 (1969)). When reviewing a SEPA action, “the court is required to consider the public policy and environmental values of SEPA as well.” *Sisley v. San Juan County*, 89 Wn.2d 78, 84, 569 P.2d 712 (1977). A review of the record must show that “environmental factors were considered in a manner sufficient to amount to prima facie compliance with the procedural

requirements of SEPA.” *Chuckanut Conservancy v. Dep't of Nat. Res.*, 156 Wn. App. 274, 286-87, 232 P.3d 1154 (2010) (quoting *Juanita Bay Valley Cmty. Ass'n v. City of Kirkland*, 9 Wn. App. 59, 73, 510 P.2d 1140 (1973)).

In enacting EHB 2957, Washington made it unlawful to farm nonnative finfish in Washington waters. The act outlined a phase-out process, prohibiting the issuance of nonnative finfish aquaculture permits after existing DNR leases expire. RCW 77.125.050. Cooke's DNR leases expire in November 2022, at which point the company will not be able to farm Atlantic salmon.

The WFC argues that WDFW's MDNS determination was clearly erroneous because it failed to account for the reality that absent agency action, Cooke must cease all fish farming operations in Puget Sound. WDFW contends it properly conducted its analysis by assessing the environmental impacts of both Atlantic salmon and steelhead farming.

The WFC asserts that WDFW's MDNS determination was clearly erroneous, in part, because it measured the impacts of steelhead farming against the impacts of continuing Atlantic salmon farming, and therefore, it relied on a “fictitious” environmental baseline. Appellants' Opening Br. at 29. And as a result, the agency erroneously limited its analysis and public disclosure of impacts to the differences between rearing Atlantic salmon and rearing steelhead trout. Appellants' Opening Br. at 30. The WFC raises three main arguments in support of

its position. First, the baseline is inconsistent with legally authorized uses because Cooke is permitted to rear Atlantic salmon in only four of its net-pen facilities; Cooke does not hold valid leases from the DNR for its other facilities. Appellants' Opening Br. at 35. Second, the WFC argues that the baseline fails to account for the enactment of EHB 2957, which effectively makes it unlawful for Cooke to farm Atlantic salmon in Puget Sound after its final DNR lease expires in 2022. Appellants' Opening Br. at 35. Finally, the WFC argues the baseline fails to account for the fact that Cooke, as a practical matter, cannot continue farming Atlantic salmon past its 2020 harvest. Appellants' Opening Br. at 35. The WFC concludes that this "fictional environmental baseline" resulted in the erroneous finding that steelhead farming is not likely to have a significant adverse impact because the baseline assumes continued risks posed by Atlantic salmon farming. Appellants' Reply Br. at 11-12.

In response, WDFW denies that it compared the impacts of farming Atlantic salmon with those of farming steelhead in order to overlook, hide, or otherwise minimize the potential adverse impacts of steelhead farming on the environment. WDFW's Corrected Resp. Br. at 13-15. The agency argues it relied on 30-plus years of scientific data to find that farming Atlantic salmon has not been shown to cause significant adverse environmental impacts. WDFW's Corrected Resp. Br. at 15. The agency also contends that it did not need to pretend that the baseline for

Cooke's steelhead application is a "no-operations" scenario nor must it ignore the fact that these net-pen facilities already exist and are in operation. WDFW's Corrected Resp. Br. at 16. The agency concludes that it properly analyzed all reasonable potential impacts of the proposal and carefully designed mitigating conditions to minimize or avoid adverse environmental impacts. WDFW's Corrected Resp. Br. at 16. It further concluded that with the imposed mitigation provisions, neither Atlantic salmon farming nor steelhead farming will have probable, significant adverse effects on the environment.

The WFC relies on *Chuckanut Conservancy*, 156 Wn. App. 274, and NEPA case law to assert that WDFW should have compared the impacts of steelhead farming with the impacts of no fish farming. It does so by first invoking the term "baseline," which comes from NEPA jurisprudence. A "baseline" is a practical tool used in environmental analysis to identify the possible consequences of a proposed agency action. The basic idea is that establishing baseline environmental conditions is necessary to determine the effect a proposal will have on the environment. *Chuckanut Conservancy*, 156 Wn. App. at 284 n.8 (citing *Am. Rivers v. Fed. Energy Regulatory Comm'n*, 201 F.3d 1186, 1195 n.15 (9th Cir. 1999)).

The WFC asks us to find that WDFW clearly erred by not establishing a "no action" or "no operations" scenario as its environmental baseline. We find no case authority that this type of baseline is required in an agency's analysis prior to

making a threshold determination. To the extent that SEPA and its regulations require a “no action” analysis, it is required only after the agency has made its threshold determination that an EIS is required. WAC 197-11-440(5) (requiring a “no action” analysis during preparation of an EIS). However, under the heightened scrutiny of an EIS, an agency needs only to establish “baseline environmental data on the ‘existing environment’” in order to “identify and describe the extent of a proposal’s environmental impacts.” RICHARD L. SETTLE, *THE WASHINGTON STATE ENVIRONMENTAL POLICY ACT: A LEGAL AND POLICY ANALYSIS* § 14.01[2][a] at 14-57 (2021).

In arriving at its conclusion that a “no action” baseline is appropriate, the WFC states that an agency must “analyze the proposal’s impacts against existing uses, not theoretical uses.” Appellants’ Opening Br. at 30 (quoting *Chuckanut Conservancy*, 156 Wn. App. at 290). And, according to the WFC, the continuation of Atlantic salmon farming is a “theoretical use” because it will soon be unlawful for Cooke to continue its Atlantic salmon operations. The organization further supports its position by explaining that an action will not significantly affect the environment when a proposal “change[s] neither the actual current uses to which the land was put nor the impact of continued use on the surrounding environment.” *Chuckanut Conservancy*, 156 Wn. App. at 285 (alteration in original) (quoting *ASARCO Inc. v. Air Quality Coal.*, 92 Wn.2d 685, 706, 601 P.2d

501 (1979)); Appellants' Opening Br. at 30. This logic flows from the judicially created definition of "significantly" within the context of SEPA:

"[T]he term 'significantly' has been defined to include the examination of at least two relevant factors: (1) the extent to which the action will cause adverse environmental effects *in excess of those created by existing uses in the area*, and (2) the absolute quantitative adverse environmental effects of the action itself, including the cumulative harm that results from its contribution to *existing adverse conditions or uses in the affected area*."

ASARCO, 92 Wn.2d at 705 (some emphasis added and omitted) (quoting *Narrowsview Pres. Ass'n v. City of Tacoma*, 84 Wn.2d 416, 423, 526 P.2d 897 (1974)).

In *Chuckanut Conservancy*, the Court of Appeals reviewed a lead agency's SEPA determination of nonsignificance involving a proposal to continue logging within a specific forest. The court anchored its analysis on the definition of "significantly" within the SEPA context to assist in its assessment of the proposal's environmental impacts. It borrowed from the definition in *ASARCO* to reason that an agency must analyze a proposal's impacts against the impact of existing uses of the affected area. *See Chuckanut Conservancy*, 156 Wn. App. 274.

However, in relying on this definition from case law, *Chuckanut Conservancy* did not seem to consider that after the decision in *ASARCO* and the cases that it relied on, Ecology issued a regulation outlining the various factors that an agency must use in determining whether a proposal's impacts will be

“significant.” See WAC 197-11-330(3).⁷ Here, the factor most relevant to this case states that “[t]he absolute quantitative effects of a proposal are also important [in determining a proposal’s significance], and may result in a significant adverse impact *regardless of the nature of the existing environment*.” WAC 197-11-330(3)(b) (emphasis added). It follows that an assessment of the “nature of the *existing environment*” is relevant to a threshold determination analysis. Similarly, Professor Richard L. Settle, author of *The Washington State Environmental Policy Act: A Legal and Policy Analysis*, reasons that “a proposal must degrade the existing condition of the environment to have significant adverse impact. Mere failure to restore or improve environmental quality is not a significant adverse impact under SEPA.” SETTLE, *supra*, § 13.01[1], at 13-22 (citing *Thornton Creek*

⁷ “In determining an impact’s significance (WAC 197-11-794), the responsible official shall take into account the following, that:

“(a) The same proposal may have a significant adverse impact in one location but not in another location;

“(b) The absolute quantitative effects of a proposal are also important, and may result in a significant adverse impact regardless of the nature of the existing environment;

“(c) Several marginal impacts when considered together may result in a significant adverse impact;

“(d) For some proposals, it may be impossible to forecast the environmental impacts with precision, often because some variables cannot be predicted or values cannot be quantified.

“(e) A proposal may to a significant degree:

“(i) Adversely affect environmentally sensitive or special areas, such as loss or destruction of historic, scientific, and cultural resources, parks, prime farmlands, wetlands, wild and scenic rivers, or wilderness;

“(ii) Adversely affect endangered or threatened species or their habitat;

“(iii) Conflict with local, state, or federal laws or requirements for the protection of the environment; and

“(iv) Establish a precedent for future actions with significant effects, involves unique and unknown risks to the environment, or may affect public health or safety.” WAC 197-11-330(3).

Legal Def. Fund v. City of Seattle, 113 Wn. App. 34, 59, 52 P.3d 522 (2002)

(assessing whether a proposal would “adversely impact existing environmental conditions”).

While it is undeniably useful to establish a baseline environmental condition with which to compare a proposal’s impact, nothing in SEPA’s statute, regulations, or cases requires a “no action” baseline analysis in arriving at a threshold determination. Rather than establishing the baseline on the current *uses* of the land (as the WFC suggests), the appropriate baseline to compare the proposal’s environmental impacts is the *condition* of the existing environment. To the extent that WDFW compared the impacts of Atlantic salmon farming to steelhead farming, WDFW’s assessment of the potential impact of the steelhead permit on the quality of the Puget Sound environment, as it exists now after decades of finfish farming, was appropriate. Therefore, we hold WDFW’s threshold determination was not clearly erroneous when it compared the impacts of steelhead farming to the current, existing condition of the environment of Puget Sound, which has been subject to commercial salmonid farming for over three decades.

The WFC, again relying on NEPA jurisprudence, asserts WDFW failed to take a “hard look” at the adverse impacts of rearing steelhead trout in Puget Sound. Appellants’ Opening Br. at 36-49. The “hard look” doctrine was first introduced by the District of Columbia Court of Appeals in 1972 and recognized by the United

States Supreme Court in 1976. *Kleppe v. Sierra Club*, 427 U.S. 390, 410 n.21, 96 S. Ct. 2718, 49 L. Ed. 2d 576 (1976) (“The only role for a court is to insure that the agency has taken a ‘hard look’ at environmental consequences; it cannot ‘interject itself within the area of discretion of the executive as to the choice of the action to be taken.’” (quoting *Nat. Res. Def. Council, Inc. v. Morton*, 458 F.2d 827, 838 (D.C. Cir. 1972))). Generally, in taking a “‘hard look’” at an agency’s decision, the Ninth Circuit Court of Appeals has considered whether the decision was “‘fully informed and well-considered.’” *Blue Mountains Biodiversity Project v. Blackwood*, 161 F.3d 1208, 1211 (9th Cir. 1998) (quoting *Or. Nat. Res. Council v. Lowe*, 109 F.3d 521, 526 (9th Cir. 1997); *Save the Yaak Comm. v. Block*, 840 F.2d 714, 717 (9th Cir. 1988)).

Similar to NEPA, “SEPA does not demand any particular substantive result in governmental decision making.” *Stempel v. Dep't of Water Res.*, 82 Wn.2d 109, 118, 508 P.2d 166 (1973). Instead, SEPA “‘is an attempt by the people to shape their future environment by deliberation, not default.’” *Sisley*, 89 Wn.2d at 89 (quoting *Stempel*, 82 Wn.2d at 118). SEPA demands a “‘thoughtful decision-making process” where government agencies “‘conscientiously and systematically consider environmental values and consequences.” *ASARCO*, 92 Wn.2d at 700; *SETTLE*, *supra*, § 3.01[2], at 3-4.

We assess the validity of an agency's threshold determination by determining whether the environmental factors were "evaluated to such an extent as to constitute prima facie compliance with SEPA procedural requirements." *Hayden v. City of Port Townsend*, 93 Wn.2d 870, 880, 613 P.2d 1164 (1980), *overruled on other grounds by Save a Neighborhood Env't (SANE) v. City of Seattle*, 101 Wn.2d 280, 676 P.2d 1006 (1984). We also consider whether the decision to issue an MDNS was "based on information sufficient to evaluate the proposal's environmental impact." *Anderson*, 86 Wn. App. at 302. However, "[a]n agency does not have to consider every conceivable environmental impact when making its threshold SEPA determination." *PT Air Watchers*, 179 Wn.2d at 932; WAC 197-11-060(4)(a) (SEPA requires consideration of environmental impacts, "with attention to impacts that are likely, not merely speculative.").

To make a threshold determination, an agency must determine whether the proposal will have a probable, significant adverse impact on the environment. A "significant" impact means a "reasonable likelihood" exists that the proposal will have "more than a moderate adverse impact on environmental quality." WAC 197-11-794. The regulations also direct decision-makers to consider a variety of factors in determining an impact's significance. WAC 197-11-330(3). "Still, a precise and workable definition is elusive because judgments in this area are particularly subjective—what to one person may constitute a significant or adverse effect on

the quality of the environment may be of little or no consequence to another.”

Norway Hill Pres. & Prot. Ass'n v. King County Council, 87 Wn.2d 267, 277, 552 P.2d 674 (1976).

WDFW considers an action to have a significant adverse environmental impact, thereby requiring an EIS, “if a review of the scientific literature, including any existing regulatory documents, including prior EISs, supplemented by data analysis and consultation with experts,” suggests that the proposal will “produce a more than moderate adverse effect.” AR at 4505. In considering the environmental impacts of approving the steelhead permit, WDFW (1) evaluated the results from and the update to the 1990 PEIS on Washington fish farms in marine net pens, (2) considered over 460 relevant scientific studies and reports from as recent as 2020, and (3) assessed the information and data provided during the public comment period and the information it acquired from consultations with experts within and outside of WDFW, including unpublished data and analyses. AR at 4507, 4707-40 (full bibliography), 4741-13140.

The WFC argues WDFW did not sufficiently assess the adverse impacts that farmed fish pose to wild salmonid in Puget Sound. Specifically, the WFC states that WDFW’s analysis is faulty regarding genetic and disease risks to wild salmonid and the bycatch of wild fish.

WDFW published a justification report,⁸ detailing how it arrived at its determination to issue an MDNS. This 34-page report details the possible adverse environmental impacts of farming steelhead in net pens by comparing available data on steelhead trout with the substantial amount of scientific data available on Atlantic salmon and other salmonids. WDFW considered both the likelihood and significance of potential adverse effects on the environment. In its report, the agency explained how the mitigating provision requirements function to lessen the probability and to reduce the impact of potential consequences steelhead farming poses to the environment. The report also includes the agency's response to concerns raised during the public comment period and its assessment of the scientific studies cited to in some comments. We find this justification report to be more than sufficient.

The WFC argues WDFW failed to adequately assess the genetic risk that farmed steelhead pose to wild salmonid in Puget Sound. It raises a few specific concerns, including the impact of low-level fish escapes, the consequences of a tsunami, and the inadequacy of the sterilization procedure in reducing these risks. WDFW addressed these concerns in its justification report.

First, WDFW acknowledged that “gradual, low-level leakage” can have a greater genetic impact on wild native fish than the rarer, large-scale escape events.

⁸ The full justification report can be found in the AR at 4501-46.

AR at 4574. Despite the WFC's claim that WDFW "fail[ed] to evaluate the risks to wild Puget Sound steelhead from [gradual escape]," WDFW's report addresses the impacts of escapes generally and explains how the proposal is crafted to reduce these risks to an acceptable level, i.e., below "significant" level. Appellants' Opening Br. at 38; *see* AR at 4522-31. To reduce the risk of escapes generally, WDFW conditioned the permit on specific mitigating provisions. It required the continuation of the video monitoring protocol of net pens with the DNR. It also requires Cooke conduct a load analysis of the mooring and cage systems using environmental condition data that is consistent with the Norwegian aquaculture standard NS 9415. The Norwegian standard has proved effective in reducing the number of escaped Atlantic salmon from Norwegian fish farms. AR at 4524-25.

WDFW also addressed how using sterilized, all-female steelhead will reduce genetic risks to wild salmonid in the event that an escape does occur. Citing eight scientific studies from 1999 to 2019, WDFW concluded that "[t]he use of triploid fish is recognized as normal aquaculture procedure that mitigates for the potential risks to the genetic structure and viability of wild populations from escaped farmed fish." AR at 4526. Furthermore, the agency explained that available data suggests that triploid, i.e., sterilized, finfish have lower survival rates compared to their diploid, i.e., fertile, siblings, thereby reducing genetic risk to the wild population. AR at 4524.

The WFC argues that the use of all-female, sterile fish insufficiently reduces genetic risk to wild salmonid because the sterilization process is less than 100 percent effective, which is compounded by the possibility that Cooke could rear up to 3.5 million steelhead. AR at 82. In addition to using sterilized fish, WDFW highlights that the steelhead permit is for *all-female*, triploid trout. Multiple studies from 1992 to 2017 support WDFW's conclusion that the most effective strategy to mitigate the risk of large- or small-scale escapes is to use sterile, *all-female* fish. AR at 4526.

Also, Cooke will receive its steelhead from Troutlodge, a Washington company based out of Bonney Lake, which has a 99.83 percent success rate in sterilizing its fish. AR at 4527. Additionally, WDFW imposed a mitigating provision to address the triploidy error rate in Cooke's steelhead trout. Cooke is required to employ a sampling method and statistical design, as approved by WDFW, to better estimate the triploidy error rate of the steelhead Cooke will receive. Cooke must sample and test every lot that is to be transported to its marine net-pen facilities. AR at 4436.

Despite WDFW's conclusion that all-female, triploid steelhead, with the various mitigating conditions, would not have a probable, significant adverse impact on the environment, the WFC argues that WDFW's analysis is inadequate because it failed to identify levels of genetic introgression that would be

unacceptable. Appellants' Opening Br. at 39. However, the agency estimated the genetic risk to native steelhead based on a worst-case scenario escape and concluded that the genetic risks did not raise a probable, significant adverse impact on wild salmonid.

The WFC also raises concerns regarding the risks that earthquake-induced tsunamis pose to the integrity of net pens. Appellants' Opening Br. at 39-40; AR at 3212-13. The WFC cited to the DNR and National Oceanic and Atmospheric Administration to show that these agencies have examined the general possible impacts of an earthquake-induced tsunami in Washington. Appellants' Opening Br. at 39-40. However, the WFC does not cite to any evidence supporting its conclusion that "[a] substantial tsunami is likely to occur during the life of these pens." AR at 3212. WDFW claims it adequately addressed the impacts of a tsunami-caused escape by analyzing the impacts of a worst-case scenario escape, regardless of the cause of that escape. WDFW's Corrected Resp. Br. at 24. According to WDFW, the estimation of the risk of introgression was "worst case scenario" because it considered a scenario where all 1,000,000 fish in Cooke's largest facility escape. AR at 4527. The WFC points out that in the event of a tsunami, the worst-case scenario is that all the net pens would fail and 3.5 million steelhead would escape. Appellants' Reply Br. at 17. In its report, WDFW explains its analysis is based on the highly unlikely scenario that all 1,000,000 fish survive

the net pen failure. It also reemphasizes the various mitigation measures specifically designed to eliminate the negative impacts of a potential fish escape.

WDFW further considered the various risks that different pathogens, diseases, and infections pose to farmed salmonid and wild salmonid. The WFC raised four major critiques of WDFW's disease risk assessment.

First, it raised the concern that high density net pens allow for rapid transmission of disease and the amplification of pathogen levels, which can impact nearby wild fish populations. The WFC also highlighted that disease transmission is more likely for fish within the same species. Appellants' Opening Br. at 40-41. In its risk assessment, outlined in its report, WDFW acknowledged and factored the disease risks that net-pen aquaculture presents to wild populations. It detailed the specific factors that lead to high risk of infection and disease outbreak in net-pen aquacultures, and it made no claim that net pens pose no risk to wild fish. However, it noted that these disease risks may have a negative effect on wild populations when "[l]eft unmitigated." AR at 4510. As WDFW noted, Norway saw successful results in reducing its net-pen aquaculture disease risk by implementing a variety of mitigating measures, including vaccinations, early pathogen detection programs, and veterinarian prescribed treatments. AR at 4510. Based on this, WDFW imposed numerous mitigating provisions on Cooke's permit that implement similar preventative and responsive disease-management procedures.

WDFW noted that its disease management procedures are focused primarily on prevention; it starts at “the source material.” AR at 4508. These procedures focus on the health of the broodstocks (parents), embryos, and fish. The WDFW permit requires Cooke to sample and test its embryos and fish at various stages of the fish life. AR at 4508, 4436-37. Specifically, Cooke must receive a finfish transport permit from WDFW before it can transport its embryos from a spawning facility (Troutlodge) to its freshwater facilities. The same permit is required to transfer its fish from freshwater hatcheries to marine net pens and to transport fish between farm sites. AR at 4514, 4435-36. WDFW will deny a permit, and thereby prevent transport, if any samples test positive for pathogens on the Washington regulated pathogens list. Ch. 220-370 WAC; AR at 4437. Cooke’s permit is conditioned on their compliance with WDFW finfish transport permit requirements. AR at 4435.

WDFW imposed additional testing requirements on Cooke as a condition of its steelhead permit to account for piscine orthoreovirus (PRV) testing. The permit requires pre-marine smolts be tested, prior to transfer from Cooke’s freshwater facilities to its marine net pens, for both regulated and reportable pathogens. The various PRV variations are listed as reportable pathogens. AR at 4436. This accounts for the lack of PRV testing under the finfish transport permit for any transport from freshwater to marine net pens. Additionally, WDFW imposed an

annual testing requirement of Cooke's broodstock of embryos or fish that are transported from the spawning facility to Cooke's freshwater facility within three months of transfer. Finally, for both of these additional testing requirements, WDFW modified the proposed permit's mitigating provisions by increasing the sample size that must be tested for pathogens.

In addition to complying with the various pathogen testing procedures, Cooke will use a locally derived steelhead trout broodline to stock its marine net pens. Troutlodge will supply Cooke with a steelhead broodline derived from the Puyallup River. WDFW reasoned that using this native broodline will reduce the risk of introduction of nonnative pathogens to net pens and in turn reduce the risk to wild salmonid.

Furthermore, Cooke is required to annually review and update its regulated finfish pathogen reporting plan in consultation with, and to be approved by, WDFW. WDFW also reserved the right to conduct facility inspections at its discretion. WDFW committed to conducting facility inspections at least once a year and to sampling the fish for both regulated pathogens and PRV, in addition to the standard sampling and testing.

WDFW noted that it has seen success in the reduction of disease risk with Cooke's Atlantic salmon operations via the implementation of single generation net pens, 30-day fallow periods, and use of vaccinations and antibiotic treatments

as prescribed and recommended by a veterinarian. As part of the steelhead permit, Cooke must continue to maintain single generation stocking of net pens to reduce risk of pathogen transmission by breaking pathogen transmission chain. It also must fallow its net pens for at least 42 days after harvest to allow for net pen cleaning and repair and to break any potential pathogen chain.

In comments, the WFC raised a concern that novel viruses were found in endangered salmon in British Columbia, and one study appeared to find evidence that these novel viral infections “may originate from farmed salmonids.” AR at 3711 (citing Gideon J. Mordecai et al., *Endangered Wild Salmon Infected by Newly Discovered Viruses*, eLIFE (Sept. 3, 2019), <https://elifesciences.org/articles/47615>). WDFW considered the Mordecai study, assessed its relevance and weight, and reached the conclusion that the study “provide[d] no evidence for either pathogen amplification within farmed fish and disease transmission from farm fish to wild fish, or viral evolution (virulence or new species) associated with net-pen aquaculture.” AR at 4513. Based on studies from 2011, 2015, and 2017, WDFW reasoned that the incidence of disease in wild fish was “either extremely low or non-existent in the wild populations.” AR at 4511. And even for transmissions that are associated with disease outbreaks in net pens, there is limited evidence that these transmissions result in disease in the wild population. WDFW thoroughly considered a study raised by the WFC in its comment.

The second major complaint by the WFC is the prevalence and risk of transmission of the infectious hematopoietic necrosis virus (IHNV). The WFC reasons that IHNV presents a risk to steelhead to a higher degree than WDFW determined. IHNV presents in three different genogroups in North America (U, M, and L). The WFC, and WDFW, note that the M-genogroup is associated with high mortality and infects primarily steelhead. The WFC acknowledged the accuracy of WDFW's assertion that the M-group is not currently present in Puget Sound. However, the WFC argued that "no reason [exists] to assume" that this M-group will not return to Puget Sound waters. Appellants' Opening Br. at 41. We disagree.

WDFW found the M-group is dominant only in the lower Columbia River and appeared on Washington's outer coast between 2007 and 2013. No evidence in the record suggests, nor does the WFC assert, the M-group has been found in Sound waters. AR at 4514, 13770-72 (e-mails between Kenneth Warheit of WDFW and Hugh Mitchell of AquaTactics Fish Health discussing M-group prevalence in Sound). Nevertheless, Cooke vaccinates its Atlantic salmon, and will use the same vaccines for its steelhead, for multiple variations of the IHNV, including the M-group.

The WFC implied that WDFW did not provide sufficient information regarding the effectiveness of the IHNV vaccine. To support its argument, the WFC cites to a 2006 study that found a mortality rate of 20 to 35 percent in fish

that were exposed to IHNV 6 months and 13 months after vaccination. Appellants' Opening Br. at 41-42. While it does not appear that WDFW addressed that specific data point in its justification report, WDFW did detail the specific DNA-vaccine used by Cooke to protect against IHNV. Citing to five different studies, WDFW reasoned this specific vaccine is "highly efficacious" in steelhead trout, and it "appears efficacious in Atlantic salmon where Cooke's Puget Sound net-pens have tested negative" for IHNV since 2012 when there was an outbreak among unvaccinated Atlantic salmon. AR at 4515. WDFW also states that no evidence exists that the IHNV was transmitted from the unvaccinated farmed Atlantic salmon to the wild fish. AR at 4515.

Finally, IHVN is a regulated pathogen under WAC 220-370-050(20)(a)(i), and as noted above, WDFW will not issue a finfish transport permit for any lot that tests positive for a regulated pathogen, and WDFW imposed additional testing requirements with a higher sample size. AR at 4508, 4513, 4435-36 (mitigating provisions imposing requirements to sample and test broodstock and smolts prior to transfer to freshwater facilities and marine net pens).

The WFC's third major concern regarding disease risk is PRV. The WFC points to the 2017 Morton study to support its assertion that salmon fish farms increase PRV infection rates for wild Pacific salmon. Appellants' Opening Br. at 43 (citing Alexandra Morton et al., *The Effect of Exposure to Farmed Salmon on*

Piscine Orthoreovirus Infection and Fitness in Wild Pacific Salmon in British Columbia, Canada, PLOS ONE (Dec. 13, 2017),

<https://journals.plos.org/plosone/article?id=10.1371/journal.pone.0188793>); AR at 9984-10001. Relying on this study, the WFC asserts that PRV-1 infections in Cooke's steelhead farms could have significant adverse impacts on the wild salmonid populations by reducing the wild salmon's fitness for survival and reproduction, "even though the PRV infection does not progress to a disease." Appellants' Opening Br. at 43. The WFC claims the 2017 Morton findings "remain[] the best available science" on this issue, and therefore, WDFW should have given its findings deeper consideration.⁹ Appellants' Opening Br. at 43.

The record shows WDFW considered the 2017 Morton article in detail and compared its findings to those of several other recent studies. AR at 4518-19. WDFW summarized the 2017 Morton findings regarding the possibility that a PRV infection may lower the fitness of wild fish by negatively impacting their ability to complete a migration. It also cited to the 2019 Zhang study, which found that a

⁹ The authors of the Morton study "stress[ed] the correlational nature of the present findings, but believe, in keeping with the Precautionary Principle, that they warrant further research attention." AR at 9992. Based on the existence of various other scientific articles and studies within the record and the 2017 Morton authors' own concession, we do not agree that the 2017 Morton article is the "best available science" on the issue of how PRV affects wild salmonid populations. "The evidence, based solely on molecular screening tests from this observational study, and constrained by limited access to farmed Atlantic salmon samples of known provenance, cannot be definitive. Nonetheless, we view it as providing an early warning sign of a potentially serious problem that warrants immediate and ongoing research." AR at 9997.

high PRV viral load “had no effect on the oxygen affinity and carrying capacity of the red blood cells even for individuals with minor heart pathology.” AR at 4519 (citing Yangfan Zhang et al., *High-Load Reovirus Infections Do Not Imply Physiological Impairment in Salmon*, FRONTIERS IN PHYSIOLOGY (Mar. 13 2019), <https://www.frontiersin.org/articles/10.3389/fphys.2019.00114/full>). The WFC alleges that WDFW uses the 2019 Zhang study to “summarily discount[]” the 2017 Morton article. Appellants’ Opening Br. at 43. The WFC essentially argues that the reliance on the Zhang finding is misplaced in WDFW’s analysis because that study focused solely on PRV impacts to Atlantic salmon, not Pacific salmon. The WFC states that the Zhang finding is “inapposite to the [2017 Morton] finding that PRV-1 reduces fitness in wild Pacific salmon” because anemia and jaundice, both PRV-associated diseases, impact only Pacific salmon. Appellants’ Opening Br. at 43. The WFC also reasons that because anemia and jaundice impact only Pacific salmon, it follows that the Zhang study found PRV-1 did not adversely impact Atlantic salmon’s blood oxygen levels. Appellants’ Opening Br. at 43. While it is true that the 2019 Zhang study conducted its testing only on Atlantic salmon, WDFW did not base its conclusion on the Zhang article nor does the record show it failed to assess the impact of jaundice and anemia on Pacific salmon. WDFW explained that “neither jaundice/anemia (Atlantic, sockeye, and Chinook salmon) nor HSMI [heart and skeletal muscle inflammation] (Atlantic and sockeye salmon)

developed” in fish that were infected with PRV-1 from the eastern North Pacific. AR at 4518 (citing to four different studies that conducted these laboratory experiments). WDFW further noted that in British Columbia, only 0.05 percent of farmed Pacific salmon deaths are associated with jaundice. AR at 4518.

The WFC asserted that the 2018 Di Cicco study is consistent with the findings of the 2017 Morton article. The WFC quotes the Di Cicco article’s abstract, alleging that the study “conclud[es] that ‘migratory [Pacific] chinook salmon may be at more than a minimal risk of disease from exposure to the high levels of [PRV-1] occurring in salmon farms.’” Appellants’ Opening Br. at 43-44 (alterations in original) (quoting Emiliano Di Cicco et al., *The Same Strain of Piscine Orthoreovirus (PRV-1) Is Involved in the Development of Different, but Related, Diseases in Atlantic and Pacific Salmon in British Columbia*, 3 FACETS 1 (June 18, 2018), <https://www.facetsjournal.com/doi/10.1139/facets-2018-0008>); AR at 6431. The authors of the Di Cicco study suggest that Chinook salmon may face this risk, but a deeper reading of the study reveals that it sought to “resolve whether Strain PRV-1 is likely to play a causative role in the development of jaundice/anemia in [British Columbia] [C]hinook salmon.” AR at 6433. It concluded that its findings in British Columbia “suggest[] that PRV1, the only PRV strain detected in [British Columbia] salmon, likely causes both diseases, HSMI and jaundice/anemia, in Atlantic and Pacific salmon respectively.” AR at

6464. WDFW thoroughly considered the possible risks that PRV-1 and associated diseases, like jaundice and anemia, pose to both Atlantic salmon and Pacific salmonids.

Based on its comparison and assessment of over a dozen studies on the prevalence of PRV-1, WDFW concluded the “disease is rare and the pathogenicity of the virus is low or non-existent in net-pen aquaculture in the eastern North Pacific.” AR at 4519. In addition to relying on numerous recent scientific studies of PRV, WDFW included its own relevant data derived from its PRV-1 surveillance program at selected hatcheries in Washington. This surveillance program was established in 2018 after Cooke’s predecessor’s net pen failure in 2017. It was established that a high likelihood exists that more or all of the farmed Atlantic salmon were positive with a PRV-1 strain from Iceland. (WDFW concluded that the PRV-1 was most likely from the broodstock the company received from Iceland.) Since 2018, WDFW has analyzed 648 samples from various salmonids, including steelhead trout; 87 percent tested negative for PRV-1. WDFW found no evidence existed to establish that the 2017 net pen failure resulted in the transmission of the Icelandic PRV-1 to wild salmonid populations in Washington. AR at 4520.

The WFC argues that at minimum, there exists scientific uncertainty regarding PRV-1 related impacts to Pacific salmon, requiring WDFW to describe a

worst-case scenario per WAC 197-11-080(3)(b), which provides that an agency shall “generally indicate . . . its worst case analysis and the likelihood of occurrence, to the extent this information can reasonably be developed.” But the “worst-case scenario” analysis is required only when “there [is] . . . scientific uncertainty concerning significant impacts” and “information relevant to adverse impacts is important to the decision and the means to obtain it are speculative or not known.” WAC 197-11-080(2), (3)(b). WDFW, supported by the scientific studies in the record, explained in its justification report that PRV-1 impacts both Atlantic salmon and Pacific salmon, but it is rare that the fish contract the disease. While the associated diseases and infections may pose a risk to salmonids, Pacific salmon are known to be susceptible only to PRV-1-related jaundice or anemia, and available data shows that jaundice/anemia in Pacific salmon is exceptionally rare.

Finally, WDFW highlighted that the prevalence of PRV in wild steelhead trout is low (1 out of 375 samples); however, it did not rely on the low prevalence within wild steelhead to reach its conclusion that there is a low risk of PRV-1 transmission from farmed Atlantic salmon and steelhead to wild salmonid populations. Rather, WDFW explained that it anticipates that PRV-1 prevalence among all-female, triploid steelhead trout in Cooke’s net pens will be more similar to that of farmed Atlantic salmon in Puget Sound. Based on its analysis of PRV-1 prevalence and transmission among varying salmonid populations, including

Atlantic and Pacific salmon and steelhead, WDFW concluded that the transmission from farmed Atlantic salmon to wild salmonid populations presents a low risk and the transmission from farmed steelhead presents the same or even lower risk.

The WFC's fourth and final major disease concern is the impact of sea lice on wild salmonid. WDFW concluded that sea lice in Puget Sound net-pen facilities are monitored and do not reach a level of concern. The WFC argues that WDFW's assessment of the prevalence of sea lice is clearly erroneous because it relied on 2006 data rather than "more current information" that allegedly undermines the 2006 data. Appellants' Opening Br. at 44. However, the WFC does not point us in the direction of this new data. In its assessment, WDFW pointed to multiple studies, including two published in 2011, showing that surface water salinity in Puget Sound remained at or below a specified level, which results in the high mortality of sea lice. The WFC, claiming that more current information exists, cites to a DNR comment explaining that low summer stream flows may temporarily increase the salinity in Puget Sound, thereby making it more favorable for sea lice. To support its assertion, the DNR cited a study published in 2003. Whereas, WDFW relied on two studies published in 2011 that examined 2006 data. *Compare* AR at 2926, *with* AR at 4521. The WFC's argument that WDFW relied on outdated reports in the face of more current information is without merit. The other evidence the WFC cites is a comment from an individual who found a wild

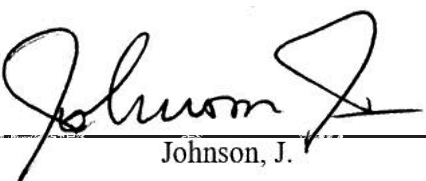
salmonid with sea lice near Cooke's Hope Island facility. The discovery of one fish with sea lice does not refute WDFW's findings based on scientific data nor does it establish the agency's conclusion was clearly erroneous.

Finally, the WFC argues WDFW's threshold determination was clearly erroneous because the record does not show the agency adequately considered the harm posed by bycatch and other ecological interactions. "Bycatch" refers to the inadvertent "catching" of wild fish during harvest. The WFC alleges WDFW "failed to require Cooke to monitor or report this bycatch" during harvest operations. Appellants' Opening Br. at 45. This allegation is unsupported in the record. As a condition of the permit, Cooke must report the number and species of bycatch caught during harvesting every time it harvests. Also, WDFW, the DNR, and Ecology retained the right to monitor Cooke's harvesting activities at the agencies' request. The WFC also revisits the ecological impacts of escaped steelhead on wild salmonid. As noted before, WDFW imposed numerous mitigation measures to reduce the likelihood of an escape and to reduce the environmental impact in the event of an escape.

After careful review of the record, WDFW's justification report, mitigating provision requirements, and concerns raised by the WFC, we conclude WDFW evaluated the relevant environmental factors sufficiently to constitute *prima facie*

compliance with SEPA. Therefore, WDFW's threshold determination was not clearly erroneous.

We affirm the trial court's order and uphold the steelhead permit.



Johnson, J.

WE CONCUR:



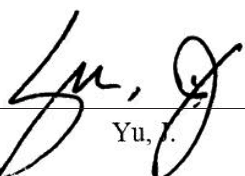
González, C.J.



Gordon McCloud, J.



Madsen, J.



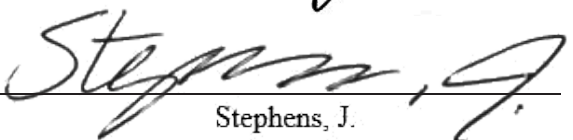
Yu, J.



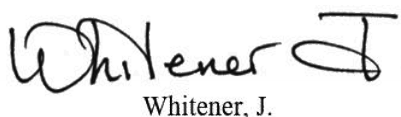
Owens, J.



Montoya-Lewis, J.



Stephens, J.



Whitener, J.