ALASKA'S PUBLIC TRUST FAILURES IN SUSTAINABLE WILD SALMON MANAGEMENT

BY

ABIGAIL A. DODD*

Alaska's constitution embeds a fiduciary public trust obligation to manage wild salmon for the benefit of present and future generations through the common use and sustained yield mandates of Article VIII. This Note argues that the Alaska Department of Fish & Game (ADF&G) and the Board of Fisheries have breached those duties by 1) authorizing and subsidizing large-scale ocean-release hatchery programs—especially in Prince William Sound—that dilute wild genetics and depress productivity; 2) permitting harvest levels that chronically miss escapement targets; and 3) declining to timely designate and rebuild "stocks of concern." Synthesizing independent, peer-reviewed science with Alaska Supreme Court precedent on "best available information," precautionary management, and hard-look review, this Note shows that ADF&G's selective treatment of hatchery and overharvest evidence cannot be squared with constitutional trust responsibilities. This Note further explains why recent decisions recognizing agency discretion do not insulate ADF&G when the withheld or discounted science is materially relevant to sustained yield regulation.

This Note's doctrinal contribution is twofold: first, reframing sustained yield as an enforceable fiduciary standard that requires conservative action amid uncertainty, and second, clarifying avenues for judicial enforcement under the self-executing provisions of Article VIII and the Alaska Administrative Procedure Act (APA), including broad standing for subsistence users, tribes, non-governmental organizations (NGOs), and commercial stakeholders. This Note concludes by outlining targeted remedies—declaratory relief, precautionary caps on hatchery releases, scientifically defensible escapement goals, and time-bound hard-look reassessments—that realign management with constitutional trust duties and safeguard Alaska's wild salmon, ecosystems, and communities.

---

* J.D. Candidate '26, Lewis & Clark Law School. I am deeply grateful to Professor Michael C. Blumm for his guidance and supervision, and to Kate Glover, Charisse Arce, and Hannah Payne Foster for continuously inspiring my commitment to protecting Alaska's wild salmon and the communities who depend on them.

I. INTRODUCTION

Wild salmon are the lifeblood of Alaska and its people, sustaining the State's cultural identity, economic vitality, and biodiverse ecosystems, and forming the foundation of food security in many communities.[1] Alaska's Bristol Bay alone is home to the world's largest wild sockeye

[1] *See* THE SALMON PROJECT, CONNECTIONS TO THE WILD SALMON RESOURCE IN SOUTHWEST ALASKA 1–2 figs. 1–2 (2013), https://salmonproject.org/wp-content/uploads/2016/06/Alaskans-and-Salmon-in-the-Southwest-Region.pdf [https://perma.cc/R9P9-6RGK] (finding that nine in ten Alaskans viewed their connection to wild salmon as important, three-quarters as very important, and three-quarters of the statewide population said they felt connected to wild salmon); MCKINLEY RESEARCH GROUP, THE ECONOMIC VALUE OF ALASKA'S SEAFOOD INDUSTRY 12 (2022), https://www.alaskaseafood.org/wp-content/uploads/MRG_ASMI-Economic-Impacts-Report_final.pdf [https://perma.cc/YZR3-TKXX] (reporting that, in 2019, Alaska's salmon first wholesale value totaled $1.73 billion); Guido Rahr, *Why Protect Salmon*, WILD SALMON CTR., https://wildsalmoncenter.org/why-protect-salmon/ [https://perma.cc/6VEV-UMDF] (last visited Nov. 5, 2025) ("From orcas to grizzly bears, at least 137 different species depend on the marine-rich nutrients that wild salmon provide[.]"); DOMINICK A. DELLASALA, WILD HERITAGE, PROTECTING THE TONGASS RAINFOREST, OLDER FORESTS, AND LARGE TREES NATIONWIDE FOR THE U.S. NATIONALLY DETERMINED CONTRIBUTION TO THE PARIS CLIMATE AGREEMENT 2–3 (2021), https://roar-assets-auto.rbl.ms/documents/35723/Tongasssclimaterelevance-dellasala-3-30-21.pdf [https://perma.cc/H9F2-G47T] (last visited Nov. 5, 2025) (explaining that, on a global scale, Alaska's salmon fisheries play a key role in climate change mitigation as a vital nutrient conveyor belt to key carbon sinks including the Tongass National Forest, which stores the equivalent of 44% of the total ecosystem carbon for the entire national forest system).

salmon run, producing more wild salmon than anywhere else on Earth; in 2023, over fifty-four million wild salmon migrated to the Bristol Bay region, supporting an annual value of $2.2 billion.[2] Most importantly, indigenous Alaskan groups understand salmon as sentient beings that willingly offer themselves to fishers, creating an obligation of reciprocal care and respect.[3]

Alaska's constitution imposes a fiduciary duty on the State to protect salmon under the public trust doctrine, mandating sustainable use and conservation measures. The Alaska Constitution assigns the state government as the trustee responsible for managing fish, wildlife, and other natural resources for the benefit of the people.[4] The Alaska Constitution safeguards salmon fisheries in two ways. First, the constitution reserves fish, wildlife, and waters for common use by the people.[5] Second, the constitution requires that all replenishable resources, including fish, be managed on the sustained yield principle.[6]

This Note explains how extensive independent, peer-reviewed scientific studies show that current Alaska Department of Fish & Game (ADF&G) regulations, which rely on outdated and inaccurate science, are causing declining population effects. This Note focuses on three regulatory issues caused by ADF&G's policies that result in the long-term decline of wild salmon populations and violate the constitutional public trust. First, ADF&G overlooks highly accessible and widely accepted scientific evidence that hatchery programs, like those in Prince William Sound (PWS), reduce wild salmon genetic and phenotypic diversity;[7]

---

[2] *What You Should Know About Alaska's Bristol Bay*, THE NATURE CONSERVANCY (Nov. 18, 2022), https://www.nature.org/en-us/about-us/where-we-work/united-states/alaska/stories-in-alaska/bristol-bay-conservation/ [https://perma.cc/HD98-64AY].

[3] *Social and Cultural Dimensions of Salmon Systems Working Group*, STATE OF ALASKA'S SALMON AND PEOPLE, https://alaskasalmonandpeople.org/working-group/social-and-cultural-dimensions-of-salmon-systems/ [https://perma.cc/QJ76-UZ2F] (last visited Dec. 29, 2025) (gathering over 800 published sources of data on people-salmon relationships and finding Alaskan indigenous worldviews that understand "[t]o show respect is to follow appropriate practices, to maintain good social relations, to care for the salmon who come properly").

[4] Owsichek v. State, 763 P.2d 488, 495 (Alaska 1988) (concluding that the Alaska Constitution "impos[es] upon the state a trust duty to manage the fish, wildlife[,] and water resources of the state for the benefit of all the people").

[5] ALASKA CONST. art. VIII, § 3 (establishing the "Common Use" clause, which provides that "[w]herever occurring in their natural state, fish, wildlife, and waters are reserved to the people for common use").

[6] *Id.* § 4 (establishing the "Sustained Yield" clause, which announces that "[f]ish, forests, wildlife, grasslands, and all other replenishable resources belonging to the State shall be utilized, developed, and maintained on the sustained yield principle").

[7] *See, e.g.*, Ingerid J. Hagen et al., *Evaluation of Genetic Effects on Wild Salmon Populations from Stock Enhancement*, 78 ICES J. MARINE SCI. 900 (2021) (providing empirical evidence that high hatchery contribution on spawning grounds reduces the recipient population's effective genetic diversity, with the mechanism and strength of effect quantified across cohorts); Samuel A. May et al., *Salmon Hatchery Strays Can Demographically Boost Wild Populations at the Cost of Diversity: Quantitative Genetic Modelling of Alaska Pink Salmon*, ROYAL SOC'Y OPEN SCI., July 2024, at 13 (reporting a multi-generational study of hatchery-wild interactions showing loss of phenotypic variation

ADF&G further breaches its trust obligations by permitting and subsidizing these hatcheries in PWS.[8] Second, ADF&G allows for salmon harvest beyond sustainable yield by promulgating regulations that permit overharvest and cause depletion of wild salmon at unsustainable rates. Third, ADF&G has failed to promptly designate affected wild stocks as "stocks of concern" in accordance with the Policy for the Management of Sustainable Salmon Fisheries (SSFP).[9] Together, these actions demonstrate how ADF&G actively jeopardizes the future of Alaska's fish, forests, and people. This Note analyzes ADF&G's constitutional violations in its role as a fiduciary in the management of salmon populations across the state.

The Alaska Constitution and statutory regime delegate public trust duties to the ADF&G and ADF&G's Board of Fisheries (the Board) to ensure salmon stocks are managed according to sustained yield

---

from hatchery-origin pinks on wild populations). *See generally* Kyle R. Shedd et al., *Reduced Relative Fitness in Hatchery-Origin Pink Salmon in Two Streams in Prince William Sound, Alaska*, 15 EVOLUTIONARY APPLICATIONS 429 (2022) (discussing reduced fitness of hatchery-origin pinks in Prince William Sound).

[8] Alaska's hatchery programs were created in the 1970s as a response to severely depleted wild salmon runs. The Alaska Legislature established the Division of Fisheries Rehabilitation, Enhancement, and Development (FRED) in 1971 to develop hatcheries, and by 1974, authorized private nonprofit corporations to operate hatcheries under state oversight. MARK STOPHA, ALASKA DEP'T OF FISH & GAME, ALASKA SALMON FISHERIES ENHANCEMENT ANNUAL REPORT 2017, at 3 (2017), https://www.adfg.alaska.gov/FedAidPDFs/RIR.5J.2018.02.pdf [https://perma.cc/J9NF-PWLG] (explaining the origins of Alaska's modern hatchery program and noting that in order to allow limited entry to state fisheries and permitted salmon harvests for broodstock and hatchery cost recovery, in 1972 "Alaska voters approved an amendment to the state Constitution (Article 8, section 15), providing for an exemption to the 'no exclusive right of fishery' clause"). ADF&G distributed $3.6 million in 2021, $3.8 million in 2022, $5.6 million in 2023, and $682,107 in 2024 to Southeast Alaska stakeholders for salmon hatchery enhancement programs. *Southeast Alaska Chinook Fishery Mitigation Program: 2021 Projects*, ALASKA DEP'T OF FISH & GAME, https://www.adfg.alaska.gov/index.cfm?adfg=fisherymitigation.2021projects [https://perma.cc/JA7D-QRYU] (last visited Nov. 5, 2025); *Southeast Alaska Chinook Fishery Mitigation Program: 2022 Projects*, ALASKA DEP'T OF FISH & GAME, https://www.adfg.alaska.gov/index.cfm?adfg=fisherymitigation.2022projects [https://perma.cc/R2PU-T6AL] (last visited Nov. 5, 2025); *Southeast Alaska Chinook Fishery Mitigation Program: 2023 Projects*, ALASKA DEP'T OF FISH & GAME, https://www.adfg.alaska.gov/index.cfm?adfg=fisherymitigation.2023projects [https://perma.cc/4S86-35Q4] (last visited Nov. 5, 2025); *Southeast Alaska Chinook Fishery Mitigation Program: 2024 Projects*, ALASKA DEP'T OF FISH & GAME, https://www.adfg.alaska.gov/index.cfm?adfg=fisherymitigation.2024projects [https://perma.cc/28Q2-57S2] (last visited Nov. 5, 2025).

[9] *See infra* Part IV.B (explaining, in part, how ADF&G must provide the Board of Fisheries with updated management plans that take a precautionary approach considering the "lack of evidence that maximum sustained yield can be easily attained"). The Policy for the Management of Sustainable Salmon Fisheries (SSFP) directs ADF&G to report to the Board on the status of salmon stocks and identify any stocks that present a concern related to yield, management, or conservation during "regular [board] meetings." ALASKA ADMIN. CODE tit. 5, § 39.222(d)(1)(D)(ii) (2024) (requiring the department, "[a]t regular meetings of the board," to provide stock-status reports that include identification of stocks presenting yield, management, or conservation concerns).

principles.[10] The Alaska Supreme Court has concluded that the Board must consider the best available information when adopting fisheries regulations, and that failure to do so is a violation of trust duties.[11] This requirement places a burden on ADF&G to provide all information necessary for regulatory decision-making because the Board relies almost entirely on ADF&G staff for scientific information, research, and recommendations in order to adopt regulations.[12] Recently, however, the Alaska Supreme Court determined that ADF&G did not have a constitutional duty to provide all relevant information to the Board when reviewing scientific reports if those reports are not directly relevant to the proposed regulatory changes.[13] This Note re-emphasizes the court's reliance on the "hard look" doctrine, and demonstrates that the court's narrow ruling cannot insulate ADF&G from accountability when it withholds pivotal hatchery and overharvest data that goes to the heart of sustained yield management.

This Note demonstrates that ADF&G and the Board have violated their constitutional public trust obligations by continuing to authorize and subsidize large-scale, ocean-release hatchery programs and by adopting salmon-fishery regulations that ignore the best available science, permit overharvest, and undermine the sustained yield management of Alaska's wild stocks. Part II of this Note provides an overview of Alaska's robust public trust doctrine and the trust duties delegated to ADF&G and the Board. Part III collects peer-reviewed independent science showing the declining populations and declining health of Alaskan fisheries due to hatchery salmon interference and overharvesting. Having laid the factual and doctrinal groundwork, Part IV turns to concrete evidence of the regulatory violations of the trust obligations under the sustained yield clause. The Note concludes that current fishing regulations violate the state's trust obligations by failing

---

[10] ALASKA CONST. art. VIII, § 2 ("The legislature shall provide for the utilization, development, and conservation of all natural resources belonging to the State, including land and waters, for the maximum benefit of its people."); ALASKA STAT. § 16.05.020(2) (2024) (the ADF&G Commissioner shall "manage, protect, maintain, improve, and extend the fish, game and aquatic plant resources of the state in the interest of the economy and general well-being of the state").

[11] Native Vill. of Elim v. State, 990 P.2d 1, 7–9 (Alaska 1999) (explaining that the Board satisfied its constitutional sustained yield management duties by consideration of all the available information, including commissioning and reviewing scientific studies prior to adopting sustainable salmon policies).

[12] *Understanding the Alaska Board of Fisheries: Or…Do You Know How Fishing Regulations Are Made?*, ALASKA DEP'T OF FISH & GAME, https://www.adfg.alaska.gov/static/regulations/regprocess/fisheriesboard/pdfs/forms/bof_ process.pdf [https://perma.cc/ESG5-TYVU] (last visited Nov. 5, 2025) ("ADF&G biologists provide information to the advisory committees and provide biological information about the fisheries to the board. ADF&G also submits proposals to the board.")

[13] Sitka Tribe of Alaska v. Alaska Dep't of Fish & Game, 540 P.3d 893, 901, 903 (Alaska 2023) (holding that the withheld independent scientific analysis was not directly relevant to the Board's considerations of changes at issue and thus the decision to withhold the analysis was not "arbitrary, capricious, or unreasonable" because it was not "an important factor in decision making").

to protect the long-term health of both fisheries and marine ecosystems as required by the Alaska Constitution.

II. THE ALASKA PUBLIC TRUST DOCTRINE IN FISHERY MANAGEMENT

Article VIII of the Alaska Constitution and the corresponding statutory framework entrusts the ADF&G with the management, protection, maintenance, improvement, and extension of the state's fish, game, and aquatic plant resources, and delegates to ADF&G duties to manage resources according to constitutional public trust principles.[14] The legislature has designated separate authority to the commissioner of the ADF&G (proposing rules) and the Board (adopting rules).[15] Separation of authority allows the Board to speak on behalf of the beneficiaries of the trust, the people of Alaska, while the Commissioner of the ADF&G speaks on behalf of the resource, the fish.[16] But, in practice, the Board often prioritizes production and industry profits over resource conservation.[17]

---

[14] ALASKA CONST. art. VIII, § 2 ("The legislature shall provide for the utilization, development, and conservation of all natural resources belonging to the State, including land and waters, for the maximum benefit of its people."); ALASKA STAT. § 16.05.020(2) (2024) (the ADF&G Commissioner shall "manage, protect, maintain, improve, and extend the fish, game and aquatic plant resources of the state in the interest of the economy and general well-being of the state").

[15] *Alaska's Fisheries and Game Board Process,* ALASKA DEP'T OF FISH & GAME, https://www.adfg.alaska.gov/index.cfm?adfg=process.main#:~:text=The%20Board%20of%20Fisheries%20is,making%20allocative%20and%20regulatory%20decisions [https://perma.cc/MM69-J7CV] (last visited Nov. 5, 2025).

[16] The Legislature expressly divides authority between the Commissioner, the Board of Game, and the Board of Fisheries. The Board is empowered to adopt regulations for the conservation and development of resources, allocating the fisheries or wildlife among the various users and thus speaking on behalf of the beneficiaries—the people of Alaska. *See* ALASKA STAT. §§ 16.05.221, 16.05.251, 16.05.255 (2024) (outlining the Board's power to set allocative policies and adopt regulations to manage resources for public benefit). By contrast, the Commissioner is responsible for managing, protecting, maintaining, improving, and extending the fish, game, and aquatic plant resources of the state "in the interest of the economy and general well-being[.]" *Id.* §§ 16.05.010, 16.05.020.

[17] The Alaska Board of Fisheries' hatchery regulations prioritize production over science-based safeguards for wild salmon. ALASKA ADMIN. CODE tit. 5, chs. 40–41 (2025). For example, Title 5, Commercial and Subsistence Fishing and Private Nonprofit Salmon and Shellfish Hatcheries, Chapter 40, Private Nonprofit Salmon and Shellfish Hatcheries, 40.220(b)(1)(A) of the Alaska Administrative Code relies on vague language requiring only that hatchery operations not "unreasonably or adversely affect" natural stocks, without setting measurable limits on stray rates, genetic mixing, or ecological impacts. *Id.* § 40.220(b)(1)(A). Annual management plans focus on production and harvest goals, not genetic or ecological monitoring. *See Annual Planning: Annual Management Plans*, ALASKA DEP'T OF FISH & GAME, https://www.adfg.alaska.gov/index.cfm?adfg=fishingHatcheriesPlanningAnnual.main [https://perma.cc/N85F-NKTU] (last visited Nov. 5, 2025) (outlining each hatchery's planned production for 2025).

A. Alaska's Constitutional Public Trust Doctrine

The Alaska Constitution is the primary legal basis for the state's public trust doctrine. Article VIII, dedicated to natural resources, establishes the state government as the trustee responsible for managing fish, wildlife, and other natural resources for the benefit of the people.[18] Two Article VIII clauses impose a fiduciary duty to manage state resources in trust for the people of Alaska. First, section three of Article VIII establishes the "common use" clause, which provides that "wherever occurring in their natural state, fish, wildlife, and waters are reserved to the people for common use."[19] The Alaska Supreme Court has construed this provision to "impose upon the state a trust duty to manage the fish, wildlife and water resources of the state for the benefit of all the people."[20] The court has concluded that ADF&G's statutory responsibilities "mirror[] the constitutional mandate[]" in Article VIII of the Alaska Constitution.[21] Second, section four of Article VIII, the "sustained yield clause," announces that "fish, forests, wildlife, grasslands, and all other replenishable resources belonging to the State shall be utilized, developed, and maintained on the sustained yield principle[.]"[22] Ultimately, the Board's actions must affirm the State's role as trustee, honoring Article VIII's public trust doctrine by ensuring fish and wildlife resources remain available and sustainable for all Alaskans.

The Alaska Supreme Court has repeatedly recognized ADF&G's duty, imposed by the sustained yield clause, to manage fish resources based on the best available science to ensure sustained populations for future generations.[23] In *Baxley v. State*,[24] the court recognized the state's fiduciary duty to manage its resources for the benefit of the public under the public trust doctrine imposed by the state constitution.[25] The court has also repeatedly explained that the sustained yield clause reflects the framers' intent that natural resources should be managed according to scientific principles to ensure that resources are available in the future.[26]

---

[18] ALASKA CONST. art. VIII, § 2 ("The legislature shall provide for the utilization, development, and conservation of all natural resources belonging to the State, including land and waters, for the maximum benefit of its people.")

[19] *Id.* § 3.

[20] *Owsichek*, 763 P.2d 488, 495 (Alaska 1988).

[21] Mesiar v. Heckman, 964 P.2d 445, 449 (Alaska 1998) (citing ALASKA STAT. § 16.05.092(1) (1997)).

[22] ALASKA CONST. art. VIII, § 4.

[23] *See, e.g.*, Baxley v. State, 958 P.2d 422, 434 (Alaska 1998); *see also Native Vill. of Elim,* 990 P.2d 1, 7–9 (Alaska 1999) (reading Alaska Const. art. VIII's sustained yield clause to require the State, including ADF&G, to base management and allocation decisions on scientific evidence to conserve fish stocks for future use).

[24] 958 P.2d 422 (Alaska 1998).

[25] *Baxley*, 958 P.2d at 434.

[26] *Native Vill. of Elim*, 990 P.2d at 7 (Alaska 1999) (explaining that "[t]he plain language of the provision requires resource managers to apply sustained yield principles; it does not mandate the use of a predetermined formula, quantitative or qualitative[,]' and when "the term 'sustained yield principle' is used in connection with management of such resources …

The framers stated that the purpose of adding the sustained yield clause was—at least in part—"the conservation of fisheries."[27] They also discussed how "biological studies" would be central to implementing sustained yield principles in fisheries management.[28]

In *Native Village of Elim v. State*,[29] the Alaska Supreme Court made clear that Alaska's sustained yield clause is not a command to fix a numeric harvest but rather a mandate that the Board—and by extension its scientific advisor ADF&G—consider "the best available information presented to the Board" before regulating salmon fisheries.[30] The court stressed that fulfilling sustained yield duties requires balancing "economic, ecological, cultural, international, and other policy concerns" in the face of uncertainty, and that constitutional fitness turns on reasoned decision-making, not on adherence to any pre-set formula.[31] By emphasizing the importance of a thorough, science-grounded record, *Native Village of Elim* supports the conclusion that ADF&G's withholding of peer-reviewed studies on hatchery impacts or overharvest data undermines the state's public-trust responsibilities. Thus, when ADF&G excludes or minimizes scientific findings that bear directly on salmon sustainability, it frustrates the Board's duty to analyze and weigh all the best available science that *Native Village of Elim* demands.[32]

---

it denotes conscious application insofar as practicable of principles of management intended to sustain the yield of the resource being managed. That broad meaning is the meaning of the term as used in the Article"); Forrer v. State, 471 P.3d 569, 583 (Alaska 2020) (quoting Hickel v. Cowper, 874 P.2d 922, 926 (Alaska 1994)) ("[W]hen we interpret the constitution, we first 'look to the plain meaning and purpose of the provision and the intent of the framers.'").

[27] ALASKA CONSTITUTIONAL CONVENTION, DECEMBER 19, 1955, FORTY-SECOND DAY, *in* ALASKA CONSTITUTIONAL CONVENTION 1955–1956, at 1108 (1978) (In response to Peratrovich asking "[n]ow this sustained yield, did the Committee take under consideration the conservation of fisheries, etc., under this section?" Riley responded, "[t]hat was certainly our purpose, Mr. Peratrovich, in tying this language to all replenishable resources.").

[28] *Id.* (articulating their envisionment of an administrative agency to "conduct biological studies and meet with the fishermen in the establishment of regulations, seasons, and that sort of thing").

[29] *Native Vill. of Elim*, 990 P.2d at 1.

[30] *Id.* at 7–9 (explaining that the Board satisfied its constitutional sustained yield management duties by consideration of all the available information, including commissioning and reviewing scientific studies prior to adopting sustainable salmon policies).

[31] *Id.*

[32] *Id.* (reaffirming that agencies must consider all relevant scientific information in fishery management decisions); *see also* Fishery Conservation and Management Act of 1976, 16 U.S.C. § 1801(c)(3) (2018) (explaining the policy of Congress is "to assure that the national fishery conservation and management program utilizes, and is based upon, the best scientific information available"); Agreement for the Implementation of the Provisions of the United Nations Convention on the Law of the Sea of 10 December 1982 Relating to the Conservation and Management of Straddling Fish Stocks and Highly Migratory Fish Stocks, art. 5, *opened for signature* Aug. 4, 1995, 2167 U.N.T.S. 3 (entered into force Dec. 11, 2001) (requiring coastal states to "ensure that such measures are based on the best scientific evidence available and are designed to maintain or restore stocks at levels capable of producing maximum sustainable yield").

B. Statutory Delegation to ADF&G and the Board of Fisheries

Alaska statutes delegate trust duties to the ADF&G and the Board.[33] The Board is "the state's regulatory authority that passes regulations to conserve and develop Alaska's fisheries resources."[34] The seven-member board has the authority to adopt regulations including: establishing open and closed seasons and areas for taking fish; setting quotas, bag limits, harvest levels, and limitations for taking fish; establishing the methods and means for the taking of fish; and making allocation decisions among competing fisheries user groups (commercial, sport, and subsistence).[35] ADF&G implements the Board's regulations and carries out day-to-day fisheries management consistent with its regulatory, statutory, and constitutional duties.[36] ADF&G and the Board both retain delegated common use clause and sustained yield clause trust duties to manage fish.[37] In assigning complementary roles to the Board and ADF&G, Alaska's statutes affirm the constitutionally grounded Public Trust Doctrine, preserving salmon stocks for current and future generations.[38]

ADF&G staff serve as the principal advisors to the Board. ADF&G submits staff comments on regulatory proposals, fisheries status reports, scientific research and data, and expert advice directly to the Board.[39] The Policy for the Management of Sustainable Salmon Fisheries (SSFP) directs ADF&G to report to the Board on the status of salmon stocks and identify any stocks that present a concern related to yield, management, or conservation during "regular [board] meetings."[40] The Board then

---

[33] ALASKA CONST. art. VIII, § 2 ("The legislature shall provide for the utilization, development, and conservation of all natural resources belonging to the State, including land and waters, for the maximum benefit of its people."); ALASKA STAT. § 16.05.020(2) (2024) (the ADF&G Commissioner shall "manage, protect, maintain, improve, and extend the fish, game and aquatic plant resources of the state in the interest of the economy and general well-being of the state").

[34] *Alaska's Fisheries and Game Board Process*, *supra* note 15; *see also* ALASKA STAT. § 16.05.221(a) (2024) (establishing the Board of Fisheries "[f]or purposes of the conservation and development of the fishery resources of the state").

[35] ALASKA STAT. § 16.05.251(a)(1)–(17) (2024) (listing the Board's authority to adopt regulations).

[36] *See id.* § 16.05.020(2) (explaining the role of the commissioner of the ADF&G is to "manage, protect, maintain, improve, and extend the fish . . . resources of the state").

[37] Mesiar v. Heckman, 964 P.2d 445, 449 (Alaska 1998) (determining that ADF&G's statutory responsibilities "mirror[] the constitutional mandates" in Article VIII of the Alaska Constitution).

[38] *See id.*

[39] *Welcome to the Alaska Board of Fisheries: About the Board*, ALASKA DEP'T OF FISH & GAME, https://www.adfg.alaska.gov/index.cfm?adfg=fisheriesboard.main [https://perma.cc/33WD-CPVL] (last visited Dec. 5, 2025) ("The board uses biological and socioeconomic information provided by the Alaska Department of Fish and Game, public comment received from people inside and outside of the state, and guidance from the Alaska Department of Public Safety and Alaska Department of Law when creating regulations that are sound and enforceable.").

[40] ALASKA ADMIN. CODE tit. 5, § 39.222(d)(1)(D)(ii) (2024) (requiring the department, "[a]t regular meetings of the board," to provide stock-status reports that include identification of stocks presenting yield, management, or conservation concerns).

adopts regulations after reviewing proposals, comments, and testimony.[41] The Board has no independent authority to commission studies or collect scientific information; it relies almost entirely on ADF&G for scientific information, research, and recommendations.[42] ADF&G thus bears a heavy burden to provide the Board with the totality of information necessary for regulatory decision-making.

Because the framers of Alaska's constitution intended the sustained yield clause to play a meaningful and direct role in resource management, which requires the use of the best available science and sustained yield management, the Board must consider the best available science and the sustained yield principle when adopting fisheries regulations.[43] At the constitutional convention, "sustained yield principle" was used to "denote[] conscious application insofar as practicable of principles of management intended to sustain the yield of the resource being managed."[44] Courts have interpreted the clause consistently with that understanding.[45]

1. ADF&G's Duty to Take a "Hard Look" at Best Available Salmon Stock Information

The Board recognized in the SSFP that the use of "the best available information" is required for sustained yield fisheries management.[46] The Board expects ADF&G to provide it with "the best available information," as well as unbiased recommendations based on all the relevant

---

[41] ALASKA STAT. § 16.05.251(a) (2024); *Welcome to the Alaska Board of Fisheries: About the Board*, *supra* note 39.

[42] Alaska Dep't of Fish & Game, *Reviewer Letter, 2022/2023 Meeting Cycle Proposal Book* (Sep. 2022), https://www.adfg.alaska.gov/index.cfm?adfg=fisheriesboard.main [https://perma.cc/M6G3-PAHY] ("Public comment, in combination with advisory committee recommendations and ADF&G staff presentations, provide[s] the board with useful biological and socioeconomic information."); *see also* ALASKA STAT. § 16.05.241 (2024) ("The boards have regulation-making powers as set out in this chapter, but do not have administrative, budgeting, or fiscal powers.").

[43] *Native Vill. of Elim*, 990 P.2d 1, 7 (Alaska 1999); *Sitka Tribe of Alaska*, 540 P.3d 893, 900 (Alaska 2023).

[44] Terms of the Committee on Resources of the Alaska Constitutional Convention, 1955–1956, Alaska State Legislature (n.d.) (on file with Alaska State Legislature, Constitutional Convention Files, Folder 210).

[45] The Alaska Supreme Court has interpreted the clause to require the "conscious application insofar as practicable of principles of management intended to sustain the yield of the resource being managed." *Sitka Tribe of Alaska*, 540 P.3d at 899–900 (declining to adopt a tribe's contention that Alaska Constitution Article VIII section 4 required ADF&G to provide all relevant information to the Board, especially since the hard look standard already required ADF&G to consider relevant information and engage in reasoned decision-making).

[46] *See, e.g.*, Policy for the Management of Sustainable Salmon Fisheries (SSFP), ALASKA ADMIN. CODE tit. 5, § 39.222(d) (2025) ("The principles and criteria for sustainable salmon fisheries shall be applied, by the department and the board using the best available information . . . .").

information.[47] The "best available science" standard prevents an agency from basing its action on speculation and surmise.[48] When an ADF&G decision "involves 'administrative expertise as to either complex scientific subject matter or fundamental policy formulations,'" the reviewing court must determine whether the decision had a "reasonable basis" and was not "arbitrary, capricious, or unreasonable." [49] An agency decision is arbitrary if the agency "fails to consider an important factor in making its decision."[50] ADF&G must take a "hard look" at "all factors material and relevant to the public interest" when reviewing the best available science in managing a fish stock of concern.[51]

The "hard look" doctrine requires the Board to consider all relevant information and engage in reasoned decision-making.[52] But in *Native Village of Elim*, the Alaska Supreme Court clarified that the sustained yield clause "does not require . . . a specific level of yield for each fish stock" and "does not mandate the use of a predetermined formula, quantitative or qualitative," as the framers "believed that calculating a specific numerical yield for fisheries would be impossible."[53] Instead, courts review ADF&G decisions, such as which scientific reports to provide to the Board, "with particular vigilance" to ensure that the agency has taken a "hard look" at the relevant information.[54] This means that courts will carefully scrutinize the administrative record to confirm that the agency has genuinely considered all pertinent scientific evidence and used reasoned judgment in its decisions affecting the sustainable management of Alaska's fisheries.[55]

---

[47] *Id.* § 39.222(c)(3)(N) ("[C]onservation and management decisions for salmon fisheries should take into account the best available information on biological, environmental, economic, social, and resource use factors[.]").

[48] *See* Metlakatla Indian Cmty., Annette Island Rsrv. v. Egan, 362 P.2d 901, 915 (Alaska 1961), *aff'd*, 369 U.S. 60 (1962), *and vacated on other grounds*, 369 U.S. 45 (1962) (recognizing the state's "obligation and authority to equitably and wisely regulate the harvest" of fisheries); *cf.* Alaska Ctr. for the Env't v. Rue, 95 P.3d 924, 933 (Alaska 2004) ("[W]e reconfirm our prior decisions holding that agencies making regulatory decisions need only consider information that is submitted or is otherwise readily available."); Kanuk *ex rel.* Kanuk, 335 P.3d 1088, 1098 (Alaska 2014) ("The underlying policy choices are not [the courts'] to make in the first instance.").

[49] Denali Citizens Council v. State, 318 P.3d 380, 385 (Alaska 2014) (quoting Hammond v. N. Slope Borough, 645 P.2d 750, 758 (Alaska 1982)); *id.* (quoting Ninilchik Traditional Council v. Noah, 928 P.2d 1206, 1213 (Alaska 1996)).

[50] Sagoonick v. State, 503 P.3d 777, 803 (Alaska 2022) (quoting Se. Alaska Conservation Council, Inc. v. State, 665 P.2d 544, 548–49 (Alaska 1983)).

[51] *See Sitka Tribe of Alaska*, 540 P.3d 893, 900 (Alaska 2023) (quoting *Sagoonick*, 503 P.3d at 788) (explaining that the "hard look" doctrine applies "[w]hen an executive agency decision about natural resources is challenged under Article VIII[,]" and "[i]n such cases we review the decision to ensur[e] that the agency has taken a hard look at all factors material and relevant to the public interest") (internal quotations omitted).

[52] *Id.* at 899–901.

[53] *Native Vill. of Elim*, 990 P.2d 1, 7–8 (Alaska 1999) (acknowledging that "much scientific uncertainty exists in fisheries management").

[54] *Sagoonick*, 503 P.3d at 788.

[55] *Id.*

Using the "hard look" doctrine to review the Department of Natural Resources' decisions first appeared in *Hammond v. North Slope Borough*,[56] when the Alaska Supreme Court referenced a United States Supreme Court statement that the "court cannot substitute its judgment as to environmental consequences, but should only ensure that the agency has taken a 'hard look.'"[57] One year later, in *Southeast Alaska Conservation Council, Inc. v. State*,[58] the court stated that its role is to "ensure that the agency has given reasoned discretion to all the material facts and issues."[59] As the court explained, "[t]he court exercises this aspect of its supervisory role with particular vigilance if it becomes aware, especially from a combination of danger signals, that the agency has not really taken a hard look at the salient problems and has not genuinely engaged in reasoned decision making."[60] The Alaska Supreme Court has likely resisted deciding "hard look" issues on constitutional grounds since the "hard look standard already requires the Department to consider relevant information and engage[] in reasoned decision making."[61]

2. ADF&G's Duty to Use a Precautionary Salmon Management Approach

When the best available information is insufficient to make informed determinations about the sustained yield of salmon stocks, ADF&G and the Board are required to use a precautionary management approach to preserve stocks.[62] Alaska's statewide salmon management, the SSFP, directs ADF&G to provide the Board with reports on the status of salmon stocks and identify any salmon stock that presents a concern to ensure the long-term conservation of salmon.[63] The SSFP mandates the use of a

---

56 Hammond v. N. Slope Borough, 645 P.2d 750, 759 (Alaska 1982).

57 *Id.* (citing Kleppe v. Sierra Club, 427 U.S. 390, 410 n.21 (1976)); *see also* Kachemak Bay Conservation Soc'y v. State, 6 P.3d 270, 275 (Alaska 2000) ("[O]ur duty is to ensure that DNR has taken a hard look at the salient problems and has genuinely engaged in reasoned decision making.") (internal quotations omitted).

58 Se. Alaska Conservation Council, Inc. v. State, 665 P.2d 544 (Alaska 1983).

59 *Id.* at 549 (internal quotations omitted).

60 *Id.* (internal quotations omitted) (emphasis in original) (quoting Harold Leventhal, *Environmental Decision Making and the Role of the Courts*, 122 U. PA. L. REV. 509, 511 (1974)).

61 *Sitka Tribe of Alaska*, 540 P.3d 893, 901 (Alaska 2023) (internal quotations omitted) (quoting *Sagoonick*, 503 P.3d 777, 803 (Alaska 2022)).

62 ALASKA ADMIN. CODE tit. 5, § 39.222(c)(5), (c)(5)(A) (2025) (explaining how "in the face of uncertainty, salmon stocks, fisheries, artificial propagation, and essential habitats shall be managed conservatively . . . [using] a precautionary approach," and how a precautionary approach should be applied to the regulation of activities that affect essential salmon habitat).

63 *Id.* § 39.222(b), (d)(1)(D)(ii) ("The goal of the policy . . . is to ensure conservation of salmon and salmon's required marine and aquatic habitats, protection of customary and traditional subsistence uses and other uses, and the sustained economic health of Alaska's fishing communities" and require ADF&G's "identification of any salmon stocks, or populations within stocks, that present a concern related to yield, management, or conservation[.]").

precautionary approach because the policy advises that in the face of uncertainty, salmon stocks should be managed conservatively to avoid potentially irreversible changes.[64]

The SSFP explains that "in the face of uncertainty, salmon stocks . . . shall be managed conservatively" using a "precautionary approach" to avoid "potentially irreversible changes," and it explicitly states "that where the impact of resource use is uncertain, but likely presents a measurable risk to sustained yield, priority should be given to conserving the productive capacity of the resource."[65] The SSFP instructs ADF&G to prioritize natural, precautionary measures over artificial, reactive techniques (like the co-mingling of hatchery-born salmon to supplement wild populations).[66] This precautionary, ecologically-grounded instruction is rooted in the fundamental understanding that "Alaska's salmon fisheries are healthy and sustainable largely because of abundant pristine habitat and the application of sound, precautionary, conservation management practices . . . ."[67] By embracing precautionary, science-based safeguards, ADF&G and the Board must honor their public trust responsibilities and prioritize the long-term sustainability of Alaska's salmon stocks for the benefit of all Alaskans.

Sustained yield duties are enshrined in the SSFP at every level. Broadly, the goal of the policy is to ensure salmon and salmon's required marine and aquatic habitats are conserved in accordance with sound precautionary conservation management practices.[68] The SSFP assigns the Board to "formulat[e] fishery management plans designed to achieve maximum or optimum salmon production."[69] The SSFP outlines a nonexhaustive list of factors that the Board and ADF&G must consider when formulating plans "to effectively assure sustained yield and habitat protection for wild salmon stocks . . . ."[70] These factors include "environmental change, habitat loss or degradation, data uncertainty, limited funding for research and management programs, existing harvest patterns, and new fisheries or expanding fisheries . . . ."[71] The SSFP outlines the specific requirements of the precautionary approach the Board and ADF&G must follow. ADF&G and Board management decisions within the precautionary approach ("decisions") must consider "the needs of future generations and avoidance of potentially irreversible

---

64 *See id.* §§ 39.222(a)–(c).

65 *Id.* § 39.222(c)(5), (c)(5)(A), (c)(5)(A)(i)–(iv).

66 *Id.* § 39.222(c)(1)(A)(i) ("[S]almon habitats should not be perturbed beyond natural boundaries of variation"); *id.* § 39.222(c)(1)(D) ("[E]ffects and interactions of introduced or enhanced salmon stocks on wild salmon stocks should be assessed; wild salmon stocks and fisheries on those stocks should be protected from adverse impacts from artificial propagation and enhancement efforts[.]").

67 *Id.* § 39.222(a)(1).

68 *Id.* § 39.222(c)(5)(A), (d)(2)(E).

69 *Id.* § 39.222(a)(2).

70 *Id.* § 39.222(a)(2)–(3).

71 *Id.* § 39.222(a)(2).

changes . . . ."[72] Decisions require "prior identification of undesirable outcomes and of measures that will avoid undesirable outcomes or correct them promptly . . . ."[73] When correcting undesirable outcomes, decisions must initiate "any necessary corrective measure without delay and prompt achievement of the [decision]'s purpose, on a time scale not exceeding five years."[74]

The Alaska Supreme Court has recognized that the precautionary approach called for in the SSFP is an imperative aspect of ADF&G and the Board's mandate to conserve wild salmon in *Stepovak-Shumagin Set Net Ass'n v. State*.[75] In 1991, the Alaska Board of Fisheries adopted a regulation—ALASKA ADMIN. CODE tit. 5, § 09.366 (1991)—that delayed the post-June commercial set net fishing season in the Shumagin Islands from July 6 to July 20.[76] A local set net association, the Stepovak-Shumagin Set Net Association, sued, arguing the rule was unnecessary and arbitrary, failed to provide a fair fishing opportunity, and did not properly balance conservation goals with economic impacts.[77] The Board countered that the two-week delay was needed to protect migrating sockeye and coho salmon (destined for other fisheries) and to address concerns over harvesting immature salmon—all in line with the state's statutory mandates for conservation and allocation.[78]

The court upheld the Board's precautionary approach to coho and sockeye stock management within the Shumagin Islands section of the Southern Alaska Peninsula.[79] The court emphasized that the Board's conservative approach was both reasonable and necessary—in light of sustained yield duties—to manage the salmon stocks at issue in the face of scientific uncertainty.[80] The court supported the Board's decision to impose restrictions to prevent potential overharvesting even though definitive data on the stock composition of coho and sockeye salmon was lacking;[81] the Board lacked definitive data because ADF&G was unable

---

[72] *Id.* § 39.222(c)(5)(A)(i).

[73] *Id.* § 39.222(c)(5)(A)(ii).

[74] *Id.* § 39.222(c)(5)(A)(iii) (noting that five years is approximately the generation time of most salmon species).

[75] Stepovak-Shumagin Set Net Ass'n v. State, 886 P.2d 632, 638 (Alaska 1994) (upholding a regulation after finding that the regulation was "reasonably necessary to carry out the purposes of conserv[ing]" fish resources in the state).

[76] *Id.* at 636 (citing ALASKA ADMIN. CODE tit. 5, § 09.366 (2025)) (explaining how, under title 5, section 09.366 of the Alaska Administrative Code, "certain areas will open for commercial salmon fishing on the traditional July 6 date while other areas will open two weeks later on July 20[,]" including but not limited to portions of the Shumagin Islands Section of the Southeastern District).

[77] *Id.* at 635, 638.

[78] *Id.* at 638–39 (reciting testimony from Board Member Edfelt).

[79] *Id.* at 635, 638.

[80] *Id.* at 642, 647–48 (upholding the Board's "more conservative approach . . . to ensure sustained yield of Nushagak and Togiak cohos" which "attempted to allow as much fishing time to harvest targeted inks and chums as it could, consistent with its allocation and conservation concerns[,]" and concluding that "the regulation does not unnecessarily deprive any group of the fair and reasonable opportunity to fish" under Alaska Stat. § 16.05.251(d)).

[81] *Stepovak-Shumagin*, 886 P.2d at 638, 641–43.

to complete and obtain population data from a tagging study before the season opener.[82] The court rejected the Chignik Seiners Association's arguments that the restrictions were unreasonable, instead stating there is no statutory or common law requirement that ADF&G must conduct a tagging study before the Board can conserve or allocate salmon.[83] The court determined that the Board's inability to complete the tagging study, combined with the best available science that showed a high likelihood that the stocks at issue were experiencing decline, was sufficient evidence to support a precautionary approach and adopt the conservation measures.[84] In making its determination, the court relied on testimony from six of the Board members supporting the restrictions, which reflected the Board's concerns that failure to take such precautionary measures could pose a risk to already declining stocks.[85] *Stepovak-Shumagin* therefore confirms that under Alaska's sustained yield mandate, the Board may impose harvest restrictions before definitive stock-composition data is available so long as 1) the decision rests on the best information then obtainable, and 2) the agency explains why a precautionary measure is necessary to avert a plausible risk to declining runs.[86] The court held that such conservation-minded action is neither arbitrary nor an abuse of discretion, and it rejected the notion that the Board must first complete time-consuming studies (e.g., tagging programs) before acting.[87] In short, scientific uncertainty triggers—rather than precludes—the Board's lawful authority to adopt precautionary regulations.

---

[82] *Id.* at 641–43.

[83] *Id.* at 641 ("[Chignik Seiners Association] correctly counters that there is no statutory or common law requirement that ADF&G must conduct a costly tagging study before the Board can conserve or allocate salmon.").

[84] *Id.* at 638.

[85] *Id.* at 642–45 (noting one board member's testimony that Nushagak, once one of Alaska's largest coho producers, averaged over 200,000 fish in its commercial catch a decade ago, but that number has now dropped to just 5,000).

[86] *Id.* at 640–43 (upholding the fishing closure despite unknown exact stock composition where the Board 1) relied on the "best available scientific evidence," including ADF&G confirmation of the presence of non-local stocks, a dramatic increase in harvest effort, and biological studies showing local systems could not account for the total catch; and 2) justified the precautionary measure by citing the "potential for a conservation problem," the need to avoid a "major disruption in the allocation," and the legitimate conservation concern for declining runs in other districts, with Board members explicitly stating they would "err on the side of conservation" rather than wait for unobtainable perfect data).

[87] *Id.* at 641–42 (concluding that a fishing closure was not arbitrary where, despite the lack of precise stock composition data, evidence of increased harvest effort and biological studies reasonably indicated a conservation and allocation problem and confirming that agencies need not conduct costly tagging studies before taking necessary conservation action).

III. ANTHROPOGENIC DRIVERS OF WILD SALMON DECLINE

Independent, peer-reviewed science confirms the unsustainable decline of salmon populations, genetic diversity, and fish size across Alaska.[88] Extensive research has uncovered a multitude of anthropogenic causes for these declines, including overharvesting, ocean hatchery programs, and climate change.[89] While the independent, peer-reviewed science concludes anthropogenic interference is causing salmon decline, ADF&G and the Board have repeatedly failed to base their regulations and salmon management programs on these findings.[90] Part IV will explore ADF&G regulations and programs that—in violation of trust duties—rely on outdated and inaccurate science.

A. Hatchery Salmon Interference

This section explains how Alaska's industrial-scale, ocean-release hatchery farming of pink salmon has catastrophically altered the North Pacific ecosystem through the dilution of genetic diversity and body size of wild salmon stocks. Hatcheries are central to Alaska's flawed salmon management approach that prioritizes artificial hatchery fish boosting to offset wild declines over habitat conservation and rebuilding resilient

---

[88] *See* Megan L. Feddern et al., *Body Size and Early Marine Conditions Drive Changes in Chinook Salmon Productivity Across Northern Latitude Ecosystems*, 30 GLOB. CHANGE BIOLOGY, Oct. 8, 2024, at 1 (finding declining Chinook salmon productivity over ten years with smaller spawner body size across most of the twenty-six Chinook populations studied in the Yukon-Kuskokwim (YK) region and cross-referencing more than thirty years of climate data from the United States and Canada with twenty-six different Chinook salmon populations in the region confirming similar patterns).

[89] *See, e.g.*, Carla Rosch, *Warming Rivers and Over-Fishing Leave Native Alaskans Facing 'Salmon Scarcity'*, BRIT. BROAD. CORP. (Aug. 12, 2024), https://www.bbc.com/future/article/20240806-native-alaskans-facing-salmon-scarcity [https://perma.cc/6HA9-YL8A] (explaining how industrial fishing practices, including excessive bycatch, contribute to 'salmon scarcity' across Alaskan salmon populations, especially highly migratory populations); *Frequent Questions—Snow Crab and Salmon Declines in Alaska*, NOAA FISHERIES (June 7, 2023), https://www.fisheries.noaa.gov/alaska/bycatch/frequent-questions-snow-crab-and-salmon-declines-alaska [https://perma.cc/DNB8-59XS] (explaining how early season warming water temperatures lead to decreased fat stores in fish and how Yukon River fall stock bycatch ranged from 1,044 to 28,061, averaging 9,448); Kerry Slack, *Spiraling Salmon Populations Ignite Calls for Urgent Revisions as Alaskan Fisheries Continue to Overfish*, APTN NEWS (May 7, 2024), https://www.aptnnews.ca/national-news/spiraling-salmon-populations-ignite-calls-for-urgent-revisions-as-alaskan-fisheries-continue-to-overfish/ [https://perma.cc/4K69-NRDB] (discussing Watershed Watch Salmon Society's claims that Alaska's extensive commercial "interception" fisheries have caused British Columbia's salmon populations to plummet in the past decades).

[90] *See generally* May et al., *supra* note 7 (presenting a multi-generational study of hatchery-wild interactions and demonstrating loss of genetic variation in wild pink salmon populations from hatchery-origin strays); Shedd et al., *supra* note 7, at 429 (discussing reduced fitness of hatchery-origin pinks in Prince William Sound); *see also* sources cited *supra* note 8 (showing how ADF&G distributed $3.6 million in 2021, $3.8 million in 2022, $5.6 million in 2023, and $682,107 in 2024 to Southeast Alaska stakeholders for salmon hatchery enhancement programs).

natural systems to achieve higher yields.[91] Permitted ocean-release hatchery programs are commonly referred to as "stock enhancement" programs, as they fall under the "enhancement" exemption for otherwise prohibited fish farming.[92] This definition is extremely misleading because, although these ocean-release hatchery programs are intended to supplement wild-born fish populations with hatchery-born fish, they have largely failed at that goal.[93] Hatchery releases now operate as a 'zero-sum' game, as annual increases in hatchery releases result in loss of growth and productivity of wild salmon.[94]

---

[91] In Alaska, hatcheries have come to play a central role in the state's salmon-management strategy. Rather than prioritizing habitat restoration, watershed connectivity, and the revitalization of fully resilient natural spawning systems more generally, the emphasis has been on scaling up artificial production of hatchery fish to offset declines in wild stocks. *See Economic Impact of Alaska Salmon Hatcheries*, ALASKA DEP'T OF FISH & GAME, https://www.adfg.alaska.gov/static/fishing/PDFs/hatcheries/50th_year_alaska hatchery_economic_impact_report.pdf [https://perma.cc/4YGS-RX9R] (last visited Nov. 3, 2025) (reporting that Alaska's twenty-six private nonprofit hatcheries generated an average of $576 million in annual economic output and supported approximately 4,200 jobs between 2018 and 2023, reflecting the significant economic role hatchery production occupies in the state's salmon management framework).

[92] *See* Rick Merizon, *Fish and Wildlife Management in the United States Article 3: Engage and Affect Change Today*, ALASKA DEP'T OF FISH & GAME: ALASKA FISH & WILDLIFE NEWS (Mar. 2020), https://www.adfg.alaska.gov/index.cfm?adfg=wildlifenews.view _article&articles_id=946 [https://perma.cc/XG7M-UFCS] (explaining that under Alaska's public trust framework, the Board of Fisheries acts as trustee while ADF&G, through its commissioner and biologists, serves as trust manager responsible for monitoring resources and providing the best available scientific information and recommendations to the Board for regulatory decision-making); *see also* Draft Letter from Member Carlson VanDort, Alaska Bd. of Fisheries, to Senator Gary Stevens and Representative Bryce Edgmon, Alaska Legislature (Mar. 15, 2025), https://www.adfg.alaska.gov/static/regulations/regprocess /fisheriesboard/pdfs/2024-2025/sws/rcs/RC077_Member_Carlson-Van_Dort_Draft_letter_to _AK_Legislature.pdf [https://perma.cc/N88H-NYPY] (explaining that the Board was established by the Legislature under section 16.05.221 of the Alaska Statutes "[f]or purposes of the conservation and development of the fishery resources of the state" and operates through a public process within its delegated authority); *see also* ALASKA ADMIN. CODE tit. 5, §§ 40.005–40.990 (2025) (Alaska regulations on hatchery permits).

[93] HEATHER SCANNELL & JEREMY BOTZ, ALASKA DEP'T OF FISH & GAME, 2024 PRINCE WILLIAM SOUND SALMON SEASON SUMMARY 3 (2024) (reporting The Prince William Sound Aquaculture Corporation (PWSAC) hatchery "pink salmon run of 3.08 million fish was 70% below the forecast of 10.20 million" and the Prince William Sound "wild pink salmon harvest of 1.42 million fish was 75% below the forecast of 5.66 million fish"); *see generally* Michael C. Blumm, *Salmon Hatcheries as Fish Factories: Forgetting the Lessons of Leopold*, 4 SEATTLE J. ENV'T L. 409 (2014) (discussing the adverse effects of salmon hatcheries on wild stocks of salmon).

[94] Peter S. Rand & Gregory T. Ruggerone, *Biennial Patterns in Alaskan Sockeye Salmon Ocean Growth Are Associated with Pink Salmon Abundance in the Gulf of Alaska and the Bering Sea*, 81 ICES J. MARINE SCI. 701, 707 (2024), https://doi.org/10.1093/icesjms/fsae022 [https://perma.cc/68B6-W8UF]; Alex Baumhardt, *Analysis of Northwest, Other Salmon Hatcheries Finds Nearly All Hurt Wild Salmon Populations*, IJPR (Dec. 19, 2023, 6:02 AM PST), https://www.ijpr.org/environment-energy-and-transportation/2023-12-19/analysis-of-northwest-other-salmon-hatcheries-finds-nearly-all-hurt-wild-salmon-populations [https:// perma.cc/7U22-8GP3] (providing both empirical evidence (global meta-analysis showing widespread harm) and causal reasoning (oceanic competition for plankton and food scarcity) showing that increases in hatchery releases reduce wild salmon growth, survival, and

Prince William Sound is home to the world's largest pink salmon ocean-release hatchery program.[95] The Prince William Sound (PWS) hatchery program, which began in the mid-1970s, was driven by a desire to rebuild pink salmon populations for commercial fishing following the major declines in wild salmon stocks; stock declines accelerated after the Exxon Valdez oil spill in 1989.[96] The program is primarily funded through state cost-recovery operations and a two percent salmon enhancement tax.[97] Between 2021 and 2024, ADF&G distributed a total of approximately $13.7 million to Southeast Alaska stakeholders for salmon hatchery enhancement programs.[98]

"From 1960 to 1976, before enhancement, [Prince William Sound] produced approximately 6–7 million pink salmon, with harvests of approximately 4 million."[99] "In contrast, between 2010 and 2019, harvest rose to approximately 50 million annually, over 80% of which was of hatchery-produced salmon."[100] "In 2023, hatchery production accounted

productivity); Hagen et al., *supra* note 7 (providing empirical evidence that high hatchery contribution on spawning grounds reduces the recipient population's effective genetic diversity, with the mechanism and strength of effect quantified across cohorts).

95 *Pink Salmon and Herring Interactions*, PRINCE WILLIAM SOUND SCI. CTR., https://pwssc.org/pink-salmon-and-herring/ [https://perma.cc/SY4Y-ZHT8] (last visited Nov. 3, 2025) ("Currently, PWS is home to the largest pink salmon hatchery program in the world[.]").

96 Mark Stopha, *Alaska's Private Non-Profit Hatchery Program*, ALASKA DEP'T OF FISH & GAME: ALASKA FISH & WILDLIFE NEWS (May 2016), https://www.adfg.alaska.gov/index.cfm?adfg=wildlifenews.view_article&articles_id=775 [https://perma.cc/G37V-86VC]; *Delayed Effects of Oil Spill Compromise Long-term Fish Survival*, NOAA FISHERIES (Sep. 8, 2015), https://www.fisheries.noaa.gov/feature-story/delayed-effects-oil-spill-compromise-long-term-fish-survival [https://perma.cc/2LXF-N93H].

97 MCDOWELL GROUP, ECONOMIC IMPACT OF THE PRINCE WILLIAM SOUND AQUACULTURE CORPORATION 24 (Apr. 2010) (noting that PWSAC hatcheries are primarily funded through internal cost recovery operations, and that cost recovery operations, along with other miscellaneous sources of income, accounted for eighty-four percent of PWSAC funding in 2008, while enhancement tax proceeds accounted for sixteen percent); *see also Salmon Enhancement Areas: Commercial Fisheries*, ALASKA DEP'T OF FISH & GAME, https://www.adfg.alaska.gov/index.cfm?adfg=CommercialByFisherySalmon.salmonmaps_enhancement [https://perma.cc/HG7X-HVLZ] (last visited Nov. 3, 2025) (explaining that salmon harvested within commercial hatchery regions are subject to a salmon enhancement tax that is deposited in a general fund); Prince William Sound Aquaculture Corp., *Study Examining the Impact of Prince William Sound Aquaculture Corporation on Alaska's Economy Found Significant Return-on-Investment and Opportunities for Growth*, PR NEWSWIRE (Dec. 4, 2012, 12:00 PM ET), https://www.prnewswire.com/news-releases/study-examining-the-impact-of-prince-william-sound-aquaculture-corporation-on-alaskas-economy-found-significant-return-on-investment-and-opportunities-for-growth-182026831.html [https://perma.cc/6AXC-YE4H].

98 *See* sources cited *supra* note 8 (showing how between 2021 and 2024, ADF&G distributed $3.6 million in 2021, $3.8 million in 2022, $5.6 million in 2023, and $682,107 in 2024 to Southeast Alaska stakeholders for salmon hatchery enhancement programs).

99 May et al., *supra* note 7, at 3.

100 *Id.*

for 81% of the commercial fisheries harvest in [Prince William Sound], 39% in Kodiak, and 24% in [Southeast Alaska]."[101]

This large-scale artificial propagation of pink salmon has led to significant declines in the genetic diversity of wild pink salmon in Prince William Sound and has contributed to declines in wild sockeye and pink salmon populations as hatchery fish compete for resources and interbreed with wild stocks, weakening their genetic resilience.[102] Two recent peer-reviewed studies, led primarily by the College of Fisheries and Ocean Sciences at the University of Alaska Fairbanks in Prince William Sound, underscore a trade-off between artificial population enhancement and preservation of natural population diversity.[103] Findings in Prince William Sound of growing hatchery fish populations show that while hatchery pinks bolstered natural population sizes toward local carrying capacities, hatchery pinks reduced genetic variation in adult return timing by up to 20%.[104] Findings also show a consistent pattern of lower growth of sockeye salmon in odd years when pinks are at maximum abundance.[105] Specifically, the hatchery-inflated number of pink salmon has twice the effect as the number of sockeye on how many sockeye will return to the streams of their origin to be caught by fishermen or to spawn.[106] These findings draw attention to the trajectory for long-term demographic and evolutionary consequences arising from specific hatchery–wild interactions, emphasizing the need for management strategies that balance artificial population enhancement with the conservation of natural diversity.[107] Alaska's constitutional public trust duties demand a careful, ecologically-grounded approach to hatchery operations—one that preserves wild salmon genetics and the broader public interest.

Several Ninth Circuit opinions acknowledge that hatchery salmon can harm wild populations via genetic introgression, competition, and ecological disruption. In *National Wildlife Federation v. National Marine Fisheries Service*,[108] the court recognized that factors such as hatchery

---

[101] *Alaska Salmon Hatcheries Contributing to Fisheries and Sustainability: PNP Hatchery Program*, ALASKA DEP'T OF FISH & GAME: DIV. OF COM. FISHERIES (Mar. 29, 2024), https://www.adfg.alaska.gov/static/fishing/PDFs/hatcheries/2024_ak_hatcheries.pdf [https://perma.cc/3NBC-XWNU].

[102] May et al., *supra* note 7, at 12–13 (showing loss of genetic variation from hatchery-origin pinks on wild populations); Shedd et al., *supra* note 7, at 439–42 (discussing reduced fitness of hatchery-origin pinks in PWS).

[103] *See* May et al., *supra* note 7, at 10, fig. 3 (using models parameterized with empirical data from an intensive multi-generational study of hatchery–wild interactions); Shedd et al., *supra* note 7, at 441 (discussing reduced fitness of hatchery-origin pinks in PWS).

[104] Shedd et al., *supra* note 7, at 441.

[105] *Id.* at 438, fig. 3.

[106] Rand & Ruggerone, *supra* note 94, at 706.

[107] *See* May et al., *supra* note 7, at 13 ("While wild salmon populations are diverse and resilient, it is crucial to consider how management strategies might modulate mechanisms underlying pHOS and temporal segregation to mitigate for risks of introgression and homogenization.").

[108] Nat'l Wildlife Fed'n v. Nat'l Marine Fisheries Serv., 524 F.3d 917 (9th Cir. 2008).

operations must be considered under the Endangered Species Act because they can adversely affect survival and recovery of listed salmon stocks.[109] Likewise, in *Trout Unlimited v. Lohn*,[110] the court cited agency findings that hatchery fish—while included within certain listed Distinct Population Segments—pose genetic risks to wild populations and may undermine their overall fitness.[111] These decisions reinforce broader scientific concerns about hatchery-driven genetic dilution, disease transmission, and displacement of wild stocks.

B. Overharvest and Escapement Shortfalls

Since 2008, subsistence harvests of chinook and chum salmon across Alaska have consistently fallen below ADF&G escapement goals.[112] For example, ADF&G reported that 1) in the summer and fall of 2021 chum and chinook salmon runs in the Yukon River Drainage were the lowest on record since 1981, with a combined fall and summer chum salmon run size under 250,000 fish, and 2) no escapement goals were met in 2021 or 2022, despite ADF&G setting historically low annual escapement goals and significant closures and restrictions in both years.[113]

In 2022, no commercial periods occurred "[d]ue to very poor Chinook and summer chum salmon abundance and subsistence fishery closures

---

[109] *Id.* at 925, 935–36 (explaining that section 7 analyses—in which federal agencies are required to ensure their actions do not jeopardize the continued existence of a listed threatened or endangered species or adversely modify its critical habitat—must evaluate effects on both survival and recovery, and faulting NMFS for relying on hatchery production without assessing recovery impacts because prolonged hatchery dependence risks domestication and loss of genetic diversity).

[110] 559 F.3d 946 (9th Cir. 2009).

[111] *Id.* at 958–60.

[112] Liz Ruskin, *Salmon Are Disappearing on The Yukon and Kuskokwim. Here's What to Know About The Crisis This Summer*, ALASKA PUB. MEDIA (June 8, 2023), https://alaskapublic.org/news/2023-06-08/salmon-are-disappearing-on-the-yukon-and-kuskokwim-heres-what-to-know-about-the-crisis-this-summer [https://perma.cc/7G2E-YVRT]; *see also Fish and Numbers—Four Goals Used To Manage Alaska Salmon Stocks*, ALASKA DEP'T OF FISH & GAME, ALASKA FISHERIES SONAR, https://www.adfg.alaska.gov/index.cfm%3Fadfg%3Dsonar.escapementgoals [https://perma.cc/27U7-3Q7C] (last visited Nov. 3, 2025).

[113] DEENA JALLEN & CHRISTY GLEASON, ALASKA DEP'T OF FISH & GAME, DIV. OF COM. FISHERIES, 2023 YUKON RIVER SALMON SUMMER FISHERY ANNOUNCEMENT NO. 2 YUKON RIVER SALMON FISHERIES OUTLOOK 1 (May 8, 2023) (estimating, in part, a 2023 "drainage wide Chinook salmon outlook is for a run size of 62,000 to 104,000 fish." ADF&G reasoned that "[b]ecause of the poor projected run size, salmon fishing closures are required."); DEENA JALLEN, ALASKA DEP'T OF FISH & GAME, DIV. OF COM. FISHERIES, 2021 YUKON RIVER SUMMER SEASON SUMMARY 4 tbl.1 (Oct. 26, 2021) ("Closures began on June 2 in the Coastal District and District 1 and progressed upriver based on run timing[.]"); DEENA JALLEN, ALASKA DEP'T OF FISH & GAME, DIV. OF COM. FISHERIES, 2022 YUKON RIVER SALMON SUMMER FISHERY ANNOUNCEMENT #19: 2022 YUKON RIVER SUMMER SEASON SUMMARY 5 tbl.3 (Nov. 21, 2022) [hereinafter JALLEN, 2022 YUKON RIVER SUMMER SEASON SUMMARY] ("Closures began on June 2 in the Coastal District and District 1 and progressed upriver based on run timing[.]").

. . . ;"[114] 2022 marked the fourteenth consecutive year of "no commercial periods targeting Chinook salmon . . . allowed in the Yukon Management Area."[115] After the shortened season occurred and all closures were in place, "[t]he Eagle sonar operated from July 1 to October 6" and estimated passage of 12,025 chinook salmon to spawning grounds, which was 80% lower than the historical average.[116] Based on the recent 10-year average commercial harvest of 380,016 summer chum salmon, the 2022 Yukon River commercial fishing closure represented a loss of $1.4 million dollars to the region.[117]

NOAA fisheries have identified only two significant contributors to chum and chinook salmon decline in Alaskan waters: warming water temperatures from climate change and pollock trawler bycatch.[118] However, NOAA's explanation of the impacts of warming water temperatures on chum and chinook populations and bycatch do not fully account for salmon population numbers so dramatically below historical levels.[119] While NOAA has discussed new goals of furthering scientific studies to understand and track population patterns—notably specific population declines such as those in the Yukon drainage area—it has not released any comprehensive scientific reports on the recent declines.[120]

While Alaskan long-term studies on overharvesting are still ongoing, two Canadian environmental groups—Watershed Watch Salmon Society (Watershed Watch) and SkeenaWild Conservation Trust (SkeenaWild)—point to severe overfishing by Alaskan fisheries to explain recent Canadian-bound population declines.[121] Watershed Watch reported that in 2021, Alaskan fishers harvested over 650,000 Canada-bound sockeye while across the border from British Columbia (B.C.) at the same time that Canadian commercial fleets suffered closures and subsistence goals were not met due to all-time historic lows.[122] Watershed Watch further

---

114 JALLEN, 2022 YUKON RIVER SUMMER SEASON SUMMARY, *supra* note 113, at 5.

115 *Id.*

116 *Id.* at 3.

117 *Id.* at app. A1, B1.

118 For NOAA Fisheries, bycatch refers to "discarded catch of marine species and unobserved mortality due to a direct encounter with fishing vessels and gear." *Frequent Questions—Snow Crab and Salmon Declines in Alaska*, *supra* note 89 (defining "bycatch").

119 *Id.* (explaining how early season warming water temperatures lead to decreased fat stores in fish and how Yukon River fall stock bycatch ranged from 1,044 to 28,061, averaging 9,448).

120 *Id.* (discussing new goals to conduct core research, including "field and laboratory studies on age and growth, diet, genetics, and reproduction" in response to the question: "What is NOAA Fisheries going to do to respond to these [climate] changing conditions?").

121 Slack, *supra* note 89 (explaining how Watershed Watch Salmon Society and SkeenaWild Conservation Trust are calling for significant amendments to the Pacific Salmon Treaty to address these dwindling salmon populations in Alaskan and Canadian waters).

122 *Get the Facts*, ALASKA'S DIRTY SECRET, https://www.alaskasdirtysecret.com/get_the_facts [https://perma.cc/V4AQ-ETYT] (last visited Nov. 3, 2025); Slack, *supra* note 89 (discussing Watershed Watch Salmon Society's claims that Alaska's extensive commercial "interception" fisheries have caused British Columbia salmon populations to plummet in the past years).

claims that in 2022 over 200,000 chinook were caught, 97% of which were bound for rivers in B.C., Washington, and Oregon.[123]

In January of 2022, Watershed Watch and SkeenaWild released a 236-page technical report that indicated that significant Alaskan commercial exploitation of B.C. stocks was causing the decline of many salmon species in B.C.[124] During Canada's Standing Committee on Fisheries and Oceans in May of 2024, Greg Taylor, the president of Fish First Consulting claimed that Alaska—and thus ADF&G—is "choosing to ignore what's mandated in the[ ] constitution in the management and operation of their fisheries intercepting Canadian fish."[125] Although some of this fishing is in federally-managed waters and is not subject to ADF&G oversight, ADF&G can and must be held constitutionally responsible for taking action inconsistent with its trust duties to manage wild salmon stocks where it retains jurisdiction in state-managed waters.

IV. ADF&G AND BOARD OF FISHERIES VIOLATIONS OF THE SUSTAINED YIELD CLAUSE

Although both the common use clause and the sustained yield clause are at issue when discussing fishery management, only a few constitutional challenges have been brought regarding "common use" violations by ADF&G and the Board of Fisheries;[126] these challenges have largely affirmed the broad scope of Alaska's public trust doctrine.[127] For example, in *Pullen v. Ulmer*,[128] the Alaska Supreme Court concluded that the common use clause "impose[s] upon the state a trust duty to manage the fish, wildlife and water resources of the state for the benefit of all the people[,]" and therefore "naturally occurring fish[,]" including "salmon migrating in state and inland waters[,]" are "assets of the state which may not be appropriated by initiative."[129] The court therefore determined

---

123 *See Get the Facts*, *supra* note 122.

124 *See generally* ANDREW ROSENBERGER ET AL., ALASKAN INTERCEPTIONS OF BC SALMON: STATE OF KNOWLEDGE: REPORT SERIES SUMMARY (Jan. 2022) (collecting dozens of independent studies from British Columbia, Washington, and Oregon scientists showing decreasing stocks migrating from Alaska and attributing these decreases to overexploitation of salmon stocks by Alaskan commercial vessels).

125 Greg Taylor, Testimony Before the Standing Comm. on Fisheries and Oceans, *House of Commons Committees*, 44th Parl., 1st Sess., Evidence No. 108, at 4 (May 2, 2024) (Can.), https://publications.gc.ca/collections/ collection_2024/parl/xc51-1/XC51-1-2-441-108-eng.pdf [https://perma.cc/7V3U-MFAC].

126 *See Owsichek*, 763 P.2d 488, 496 (Alaska 1988) (concluding "that exclusive guide areas and joint use areas fall within the category of grants prohibited by the 'common use' clause").

127 *See Metlakatla Indian Cmty., Annette Island Rsrv.*, 362 P.2d 901, 914 (Alaska 1961), *aff'd*, 369 U.S. 60 (1962), *and vacated on other grounds*, 369 U.S. 45 (1962) (rejecting a challenge to the state's authority to prohibit fish traps and determining it was a valid exercise of the state's police power for conservation).

128 Pullen v. Ulmer, 923 P.2d 54, 60 (Alaska 1996).

129 *Id.* (explaining how the framers incorporated common law principles in the common use clause to impose a trust duty on the state) (citing *Metlakatla Indian Cmty., Annette Island Rsrv.*, 362 P.2d at 914–15 ("[M]igrating schools of fish, while in inland waters, are

that the "obligation and authority to equitably and wisely regulate the harvest" of these migrating schools in inland waters "is that of the state."[130]

In a recent challenge to the sustained yield clause, however, the Alaska Supreme Court concluded in *Sitka Tribe of Alaska v. Alaska Dep't of Fish & Game*[131] that ADF&G's and the Board's duties to integrate all best available science when making precautionary "sustained yield" decisions are "discretionary," reinforcing ADF&G's unilateral advisory role to the Board.[132] This section emphasizes that the *Sitka Tribe of Alaska* "discretionary" holding should be construed narrowly because prior Alaska Supreme Court precedent explains that ADF&G must take a "hard look" at the best available science in order to correct undesirable ADF&G outcomes.

A. Ignoring Best Available Science

ADF&G and the Board are aware of the scientific community's concern regarding hatchery interference on wild populations (for example, genetic dilution, competitive displacement, and ecosystem-wide effects) but have failed to take a "hard look" at peer-reviewed research. ADF&G and the Board have instead prioritized short-term commercial interests by funding and permitting hatchery programs, violating their trust duties under the Alaska Constitution. Since the beginning of state-funded hatchery programs, the Alaska legislature has understood the potential of hatchery-salmon to deteriorate wild salmon stocks.[133] At the same time, the Alaska legislature articulated a preference for artificial stock production over natural resource protection.[134] The state of Alaska banned the net-pen farming of salmon in 1990, citing, among other risks,

---

the property of the state, held in trust for the benefit of all the people of the state, and the obligation and authority to equitably and wisely regulate the harvest is that of the state.")).

130 *Id.*

131 540 P.3d 893 (Alaska 2023).

132 *See id.* at 901–02 (concluding that "[d]eciding what information is relevant and how it is shared is within [ADF&G's] discretion," leading the court to determine ADF&G acted reasonably in withholding a study from the Board that did not relate to regulations at issue).

133 *See* FAIRBANKS FISH AND GAME ADVISORY COMMITTEE, Fairbanks AC Narrative Preface in Support of Proposal 156, FAC 9 (part of ALASKA BOARD OF FISHERIES, Southeast and Yakutat Finfish and Shellfish Ketchikan, Jan. 28–Feb. 9, 2025) (quoting Terry Ellison, Development of Public and Private Hatcheries in Alaska, Alaska Department of Fish and Game, FRED Division (June 1–3, 1992) (in 1976, the Alaska Legislature passed legislation creating the Regional Aquaculture Associations to fund "comprehensive planning" programs "on the regional level," rationalizing "careful hatchery site selection [to] help mitigate potential problems such as intermingling of hatchery and wild stocks.")).

134 *See id.* (discussing how the Alaska Legislature, prompted by dramatic drops on commercial salmon harvests, created the Division of Fisheries Rehabilitation Enhancement and Development (FRED Division) of the ADF&G "modeled after the agriculture industry" and directed the division "through rehabilitation, enhancement, and development programs to do all things necessary to insure perpetual and increasing production and use of food resources of Alaska waters").

"genetic intermingling of wild fish stocks with genetically manipulated farmed fish, degradation of water quality near finfish farms[.]"[135] A recent influx of peer-reviewed science studying the harmful effects of ocean-released hatchery salmon on wild populations through population sampling and modeling shows hatchery programs do not achieve sustained yield of healthy wild salmon populations.[136]

In December 2022, a panel of ADF&G scientists reported findings from a working quantitative genetic model that examined the effects of hatchery-origin fish on the genetic makeup of wild populations.[137] The report indicated that the long-term effect could weaken the genetic health of wild populations because consistent hatchery-origin salmon straying into wild populations reduces genetic diversity and resilience.[138] The report also highlighted that hatchery-origin pink salmon in two streams in PWS had reduced reproductive fitness compared to their wild counterparts.[139] This means that hatchery-origin fish were less successful at passing on their genes, which could affect the overall health and viability of wild populations.[140]

Although no constitutional challenges have been brought regarding ADF&G's failure to take a "hard look" at scientific findings on hatchery interference, claims should not be chilled by the Alaska Supreme Court's recent holding in *Sitka Tribe of Alaska*. *Sitka Tribe of Alaska* challenged ADF&G's decision to withhold a scientific report on herring biomass forecasting when making regulatory decisions regarding management of the Sitka herring fishery, specifically title 5 section 27.160(g) of the Alaska Administrative Code,[141] which sets harvest levels based off of herring spawning biomass.[142] The court concluded that ADF&G had fulfilled its duty to take a "hard look" at scientific data because ADF&G had the discretionary power to withhold the scientific report to the Board because the report was "highly technical mostly" and "concerned with computer coding fixes to the biomass forecasting program."[143] The court

---

135 1990 ALASKA SESS. LAWS ch. 91, § 16.40.

136 May et al., *supra* note 7, at 10–12; Shedd et al., *supra* note 7, at 442.

137 MILO ADKISON ET AL., ALASKA DEP'T OF FISH & GAME, ALASKA HATCHERY RESEARCH PROGRAM SCIENCE PANEL MEETING DECEMBER 14, 2022: SUMMARIZED MEETING NOTES AND DECISION POINTS 7–9 (2022), https://www.adfg.alaska.gov/static/fishing/PDFs/hatcheries/research/2022.12.14_ahrp_science_panel_summary.pdf [https://perma.cc/G2VG-BDTN] (while the model was in its early stages, the group discussed further improving this tool to simulate the recognized impacts of hatchery straying, run timing differences, and overall fitness consequences of pink salmon enhancement projects in Prince William Sound).

138 *Id.* at 8.

139 *Id.* at 4–5.

140 *See id.* ("Reduced relative fitness in hatchery-origin Pink Salmon in two streams in Prince William Sound, Alaska"). *See generally* Shedd et al., *supra* note 7 (explaining reduced relative fitness in hatchery-origin Pink Salmon in PWS).

141 *See* ALASKA ADMIN. CODE tit. 5, § 27.160(g) (2025).

142 *Sitka Tribe of Alaska*, 540 P.3d 893, 900–01 (Alaska 2023).

143 *Id.* at 901–02 (finding ADF&G's decision to not provide a report analyzing the Department's current method of forecasting abundance of spawning herring stock to the Board was not arbitrary and capricious).

explained that the report was "not particularly relevant and helpful" information for "the Board's consideration[ ] of changes to [title 5, section 27.160(g) of the Alaska Administrative Code]."[144]

Unlike the report at issue in *Sitka Tribe of Alaska*, the December 2022 scientific report shared by ADF&G regarding hatchery interference relates directly to annual hatchery management decisions and therefore must directly inform the Board's future annual project funding, smolt allowances, season openers and closures, commercial harvest shares, and gear allowances.[145] Beyond sharing these reports with the Board to inform decision-making regarding seasonal salmon management, the ADF&G must also take a "hard look" at these findings when accepting proposals from Southeast Alaska stakeholders for salmon hatchery enhancement programs.[146] Between 2021 and 2024, ADF&G distributed a total of approximately $13.7 million to Southeast Alaska stakeholders for salmon hatchery enhancement programs.[147] The December 2022 report, in combination with the University of Alaska (UAF) studies and other independent studies on hatchery interference, show how hatchery programs in Prince William Sound (PWS) pose severe phenotypic and genetic risks for wild salmon.[148] Given the extensive findings by ADF&G and independent scientists explaining the potential long-term effects of hatcheries in PWS weakening the genetic health of wild populations, ADF&G has failed to uphold its trust obligations by permitting and subsidizing these hatcheries in PWS.

---

144 *Id.* at 901 (further stating that the report "urged changes to the age-structured analysis model to more accurately forecast biomass and better inform the Department's implementation of 5 AAC 27.160(g), which defines the formula for calculating the guideline harvest level; it did not suggest changes to the formula itself").

145 ADKISON ET AL., *supra* note 137, at 8 (concluding, in part, that hatchery straying "[c]auses rapid introgression of hatchery-origin genes into wild populations, [i]ncreases synchrony among populations, [r]educes portfolio effects and therefore resilience, [and] [d]ecreases genetic diversity among populations"); *see also* Shedd et al., *supra* note 7, at 442 (finding hatchery-origin alleles introgression into wild populations in Prince William Sound lowered natural population resilience and diminished phenotypic diversity); Rand & Ruggerone, *supra* note 94, at 707 (finding hatchery-origin releases exhibited competitive dominance and led to loss of growth and resilience of wild population).

146 *Sitka Tribe of Alaska*, 540 P.3d at 900 (citing Sagoonick v. State, 503 P.3d 777, 782 (Alaska 2022)) (explaining that "the hard look doctrine applies [w]hen an executive agency decision about natural resources is challenged under Article VIII[,]" and "[i]n such cases we review the decision to ensur[e] that the agency has taken a hard look at all factors material and relevant to the public interest") (internal quotations omitted).

147 *See* sources cited *supra* note 8 (showing how between 2021 and 2024, ADF&G distributed $3.6 million in 2021, $3.8 million in 2022, $5.6 million in 2023, and $682,107 in 2024 to Southeast Alaska stakeholders for salmon hatchery enhancement programs).

148 *See, e.g.*, Hagen et al., *supra* note 7 (providing empirical evidence that high hatchery contribution on spawning grounds reduces the recipient population's effective genetic diversity, with the mechanism and strength of effect quantified across cohorts); May et al., *supra* note 7, at 2, 13 (a multi-generational study of hatchery–wild interactions showing loss of phenotypic variation from hatchery-origin pinks on wild populations); Shedd et al., *supra* note 7, at 430–31 (discussing reduced fitness of hatchery-origin pinks in PWS).

Beyond their violation of hatchery permitting, ADF&G has also violated its trust duty to consider this best available science regarding hatchery interference, and to take a precautionary approach to management when designating and managing stock declines of wild chum salmon in PWS. Despite ADF&G's understanding of sustained yield principles, discussed below, ADF&G has failed to address stock declines of salmon populations in PWS. Under the SSFP, a "management concern" exists when, despite use of specific management measures, there is a chronic or anticipated inability to maintain salmon escapements within the bounds of an established goal over approximately one salmon generation (four to five years).[149] When such conditions arise, the Board is required to adopt a "stock of concern" designation and develop an action plan with measurable objectives and responsive fishery management measures.[150] ADF&G clarifies that a "stock of concern" designation does not imply risk to the viability of the stock because escapement goals are set at "levels of escapement that support sustained yield, well above levels for which a stock has consistently demonstrated its ability to sustain itself."[151] Despite mounting evidence of wild salmon population declines and genetic introgression from hatchery strays in PWS that put the long-term viability of wild salmon stocks at risk, no PWS salmon populations are currently designated as "stocks of concern."[152] By failing to designate these stocks as "stocks of concern," ADF&G 1) contributes to the decline of wild salmon populations by allowing for massive hatchery salmon output and interference without reviewing independent, peer-reviewed

---

[149] ALASKA ADMIN. CODE tit. 5, § 39.222(f)(5), (f)(21) (2025) (defining a "management concern" as "a concern arising from a chronic inability, despite use of specific management measures, to maintain escapements for a salmon stock within the bounds" of the established escapement goal, and "chronic inability" as "continuing or anticipated inability to meet escapement thresholds over a four to five year period, which is approximately the generation time of most salmon species").

[150] ALASKA ADMIN. CODE tit. 5, § 39.222(f)(35) (2025) (defining "stock of concern" as "a stock of salmon for which there is a yield, management, or conservation concern"). After the Board determines a stock of concern, the Board sets a Biological Escapement Goal (BEG) or Sustainable Escapement Goal (SEG), the number of salmon needed to escape to spawn to provide for sustained yields in the future. BEGs are the primary management objective for the escapement. ALASKA ADMIN. CODE tit. 5, § 39.222(f)(3) (2025). BEGs are to provide for the greatest potential for maximum sustained yield based on the best available biological information. *Id.* SEGs are the secondary management objective for escapement, used in situations where ADF&G cannot estimate a BEG due to the absence of a stock-specific catch estimate. ADF&G determines SEGs by an index or an escapement estimate that is known to provide for sustained yield over a five-to-ten year period. *See* ALASKA ADMIN. CODE tit. 5, § 39.222(a)(3), (f)(36) (2025).

[151] Memorandum from Forrest R. Bowers & Israel Payton, Divs. of Com. Fisheries & Sport Fish, Alaska Dep't of Fish & Game (Sep. 27, 2024), https://www.adfg.alaska.gov/static/regulations/regprocess/fisheriesboard/pdfs/2024-2025/ws/se-soc-memo-2024.pdf [https://perma.cc/TZZ9-WDZZ] (further concluding that "a stock of management concern designation does not imply risk to the viability of the stock").

[152] *Id.*

data documenting declining genetic diversity, and 2) contravenes the State's constitutional fiduciary duties.[153]

Beyond PWS and the Copper River Drainage, farther north in Alaska, ADF&G and the Board have also continuously promulgated fishery regulations that violate the sustained yield clause of the Alaska Constitution by failing to adopt a regulatory action plan to rebuild depleted wild salmon stocks.[154] The Susitna River Drainage king and Little Susitna River coho populations have declined far below sustained yield thresholds.[155] Although ADF&G is well-informed of population numbers and dynamics, it has refused to recommend the Board designate additional Susitna River drainage stocks as "stocks of concern" after reviewing data for Susitna River drainage king salmon stocks prior to the 2024 Upper Cook Inlet (UCI) board meeting.[156] Consequently, these failures constitute a breach of ADF&G's and the Board's public trust responsibilities to manage and conserve Alaska's salmon resources for the benefit of present and future generations.

B. Failure to Raise Escapement Goals

ADF&G has repeatedly violated the sustained yield clause by refusing to take a precautionary approach in managing declining chum salmon populations in PWS. In April 2024, the ADF&G Divisions of Sport Fish and Commercial Fisheries committee released a memorandum reviewing ADF&G's PWS 2024–2025 escapement goals.[157] The ADF&G

---

153 May et al., *supra* note 7, at 2, 13 (a multi-generational study of hatchery–wild interactions showing loss of genetic variation from hatchery origin pinks on wild populations); Shedd et al., *supra* note 7, at 442–43 (discussing reduced fitness of hatchery-origin pinks in Prince William Sound).

154 ALASKA ADMIN. CODE tit. 5, § 39.222(c)(5)(A)(iii) (2025) (noting that when correcting undesirable outcomes, decisions must initiate "any necessary corrective measure without delay and prompt achievement of the measure's purpose, on a time scale not exceeding five years," as five years is "approximately the generation time of most salmon species").

155 *See, e.g.*, *Fish Count Data Search: Deshka Chinook for 2025*, ALASKA DEP'T OF FISH & GAME, https://www.adfg.alaska.gov/sf/FishCounts/index.cfm?ADFG=main.displayResults&COUNTLOCATIONID=17&SpeciesID=410 [https://perma.cc/N2FB-MPBJ] (last visited Nov. 3, 2025) (reporting cumulative coho salmon escapement of 1,690 fish in 2025, compared to 3,445 in 2024, 3,741 in 2023, 5,436 in 2022, 18,583 in 2021, 15,409 in 1998, 35,587 in 1997, 14,349 in 1996, and 10,048 in 1995).

156 ALASKA DEP'T OF FISH & GAME, *ACR 2 – Designate Susitna River King Salmon a Stock of Yield Concern and Adopt a Regulatory Action Plan (5 AAC 61.XXX)*, *in* REGIONAL INFORMATION REPORT NO. 5J24-07: STAFF COMMENTS ON AGENDA CHANGE REQUESTS FOR ALASKA BOARD OF FISHERIES MEETING 2 (2024), https://www.adfg.alaska.gov/static/regulations/regprocess/fisheriesboard/pdfs/2024-2025/ws/adfg-comments.pdf [https://perma.cc/F3CH-BWGT] (last visited Nov. 3, 2025) (requesting that the Alaska Board of Fisheries designate Susitna River Drainage king salmon a Stock of Yield Concern and adopt a regulatory action plan to rebuild the stock).

157 *See* Memorandum from James Savereide, Div. of Sport Fish, Jack W. Erickson, Div. of Com. Fisheries, & Tim McKinley, Div. of Sport Fish, to Israel Payton, Div. of Sport Fish, & Sam Rabung, Div. of Com Fisheries (Apr. 1, 2024), https://www.adfg.alaska.gov/static/regulations/regprocess/fisheriesboard/pdfs/2024-2025/ws/pws-eg-memo-2024.pdf [https://

committee refused to raise any escapement goals for chum salmon for the 2024–2025 period despite declining stocks, citing two problems.[158] First, the committee cited "high measurement error" in ADF&G's aerial survey assessment due to the high abundance of pink salmon in streams obscuring chum salmon.[159] Second, the committee claimed there is a "lack of evidence that maximum sustained yield can be easily attained given the complicated nature of management in this mixed-stock fishery."[160] The complicated nature of fishery management does not excuse trust duties, including the Board's obligation to take a "hard look" at the best available science.[161]

Instead of taking a precautionary approach to revive declining chum populations, the committee left all chum sustainable escapement goals unchanged while promising to prioritize aerial survey coverage of chum salmon streams for the 2024–2025 board regulatory cycle.[162] In order to correct these undesirable outcomes, ADF&G must provide the Board with updated management plans that take a precautionary approach in light of the "lack of evidence that maximum sustained yield can be easily attained . . . ."[163] With ADF&G's breach of the public-trust duty established, the critical issue becomes how to secure enforcement of that duty in a judicial forum.

V. PATHWAYS TO CONSTITUTIONAL ENFORCEMENT

The most direct route to judicial enforcement of Alaska's fisheries-related public-trust duties is a constitutional action brought under the self-executing provisions of Article VIII. Sections 3 (the "common use" clause) and 4 (the "sustained yield" clause) expressly reserve fish, wildlife, and waters to the people and require that replenishable

perma.cc/27NJ-2BR3] (summarizing the ADF&G review of Prince William Sound, including the Copper River drainage, escapement goals and associated committee findings for escapement goals).

158 *Id.* at 3–4.

159 *Id.* at 3.

160 *Id.* ("Inconsistent survey coverage coupled with an increase in wild pink salmon stream abundance, particularly in odd years, has led to uncertainty in the ability to accurately apportion chum salmon and pink salmon in streams.").

161 *See Hammond*, 645 P.2d 750, 759 (Alaska 1982) (quoting N. Slope Borough v. Andrus, 642 F.2d 589, 605 (D.C. Cir. 1980)) ("The Secretary (of the Department of Interior) plainly cannot be expected or required to wait until the totality of environmental effects is known."); *see also* Kleppe v. Sierra Club, 427 U.S. 390, 410 n.21 (1976) (noting that "[t]he only role for a court is to insure that the agency has taken a 'hard look' at environmental consequences."); *Kachemak Bay Conservation Soc'y*, 6 P.3d 270, 275 (Alaska 2000) (quoting Trs. for Alaska v. State, 865 P.2d 745, 747 (Alaska 1993)) ("[O]ur duty is to ensure that DNR has taken a 'hard look at the salient problems and has genuinely engaged in reasoned decision making.'").

162 *See* Memorandum from James Savereide, Div. of Sport Fish, Jack W. Erickson, Div. of Com. Fisheries, & Tim McKinley, Div. of Sport Fish to Israel Payton, Div. of Sport Fish & Sam Rabung, Div. of Com Fisheries, *supra* note 157, at 2–4.

163 *Id.* at 3.

resources be "utilized, developed, and maintained on the sustained yield principle."[164] Alaska courts have long interpreted these clauses as imposing fiduciary obligations on the State, obligating its managers to ground decisions in the best available science and to act conservatively when the data are uncertain.[165] By characterizing ADF&G's hatchery subsidies, selective science intake, and chronically low escapement goals as breaches of those constitutional duties, would-be plaintiffs can bypass statutory hurdles and proceed directly on a public-trust theory.

Alaska's liberal standing doctrine arguably allows a wide range of parties to bring claims challenging ADF&G regulations under the Alaska Administrative Procedure Act (APA) and Article VIII.[166] An emerging strand of standing jurisprudence—crystallized in *Bittner v. Board of Game*[167]—has further lowered the barrier for those seeking to enforce Article VIII through the courts.[168] In *Bittner*, the Alaska Supreme Court held that a non-consumptive wildlife observer who frequently visited Katmai National Park could show the requisite interest-injury simply by testifying to a perceptible decline in bear sightings.[169] *Bittner* also clarified that one need not have submitted public comments on a regulation to qualify as an "interested person" under the Alaska APA.[170] A credible allegation of future harm—in *Bittner*, diminished opportunity

---

164 ALASKA CONST. art. VIII, § 3 (establishing the "common use" clause, which provides that "[w]herever occurring in their natural state, fish, wildlife, and waters are reserved to the people for common use"); *id.* § 4 (establishing the "sustained yield" clause, which announces that "[f]ish, forests, wildlife, grasslands, and all other replenishable resources belonging to the State shall be utilized, developed, and maintained on the sustained yield principle").

165 *Owsichek*, 763 P.2d 488, 495 (Alaska 1988) (concluding that the Alaska Constitution "impos[es] upon the state a trust duty to manage the fish, wildlife and water resources of the state for the benefit of all the people"); *Native Vill. of Elim*, 990 P.2d 1, 5–6 n.15, 8 (Alaska 1999) (explaining that the Board satisfied its constitutional sustained yield management duties by consideration of all the available information, including commissioning and reviewing scientific studies prior to adopting sustainable salmon policies).

166 Trs. for Alaska v. State, 736 P.2d 324, 327 (Alaska 1987) (explaining that Alaska courts have interpreted standing broadly, departing from restrictive interpretations in favor of increased accessibility to judicial forums).

167 *See generally* Bittner v. Bd. of Game, 563 P.3d 1123 (Alaska 2025) (developing the liberal "interest injury" standing approach that can establish standing when an interest is adversely affected, even minorly, through a liberal reading of the complaint and the application of the Alaska Administrative Procedure Act "interested person" standard).

168 *Id.* at 1127 (reversing a dismissal of a complaint challenging ADF&G regulations under the common use clause of the Alaska Constitution and finding an entitlement to declaratory judgment as an "interested person" under the Alaska APA).

169 *Id.* at 1129–30 (holding that Bittner was "an interested person entitled to a declaratory judgment on the validity of [the proposed regulations]").

170 *Id.* at 1130 (rejecting the argument that the petitioner's "failure to submit comments—in the extremely short window between the time notice was provided and the Board acted—prevents her from being an 'interested person' where she has otherwise alleged sufficient facts to demonstrate interest-injury standing").

to enjoy Alaska's wildlife—is enough to endow a plaintiff with standing to seek a declaratory judgment.[171]

This expansion of standing doctrine dovetails neatly with a public-trust challenge to ADF&G's salmon policies. Subsistence fishers, tribal harvesters, sport anglers, and environmental groups need only show that low escapement goals and unchecked hatchery releases have materially impaired their ability to fish, to participate in cultural practices, or simply to observe healthy wild runs.[172] Even if they did not engage in ADF&G's regulatory notice process, *Bittner* confirms plaintiffs can qualify as "interested persons" under the APA,[173] thereby invoking both the self-executing fiduciary duties of Article VIII and the APA's arbitrary-and-capricious review provisions. Subsistence fishers can point to closed seasons and lost harvests; tribes can allege cultural and economic harms tied to declining wild runs; commercial fishers can demonstrate income losses and permit devaluation; and environmental groups can show diversion of organizational resources to monitor and publicize the State's mismanagement.

The substantive claim would allege that ADF&G and the Board have breached their fiduciary duties by withholding or disregarding peer-reviewed evidence of hatchery-induced genetic dilution, failing to raise escapement goals despite multi-year shortfalls, and continuing to allocate public funds to expand ocean-release hatcheries in the face of mounting scientific concern. In *Native Village of Elim v. State* and *Stepovak-Shumagin Set Net Ass'n v. Board of Fisheries*, the Alaska Supreme Court held that cherry-picking or ignoring science, or refusing to act conservatively amid uncertainty, violates Article VIII.[174] Although *Sitka Tribe of Alaska v. Alaska Department of Fish & Game* allowed ADF&G to withhold a narrowly technical coding memo, that holding turned on the memo's marginal relevance to the regulation at issue—the court's holding

---

171 Credible allegations of diminished opportunity to enjoy Alaska's wildlife are sufficient to establish interest-injury standing. The court reversed a dismissal for lack of standing where the plaintiff alleged that the Board of Game's predator control program had reduced the number of brown bears she could view at Katmai National Park. The court emphasized that Alaska's doctrine requires only an "identifiable trifle" of harm and that the "threat of future injury confers standing to seek judicial aid to forestall a possible harm." *Id.* at 1128–31 (explaining that "the degree of injury to the interest need not be great" and that "an identifiable trifle is enough for standing to fight out a question of principle").

172 *Id.* at 1127–28 (concluding that aesthetic and environmental injuries satisfy the "interest-injury" requirement).

173 *Id.* at 1126, 1128–30 (clarifying that "[w]hen a party has interest-injury standing to challenge the validity of a regulation . . . that party is also an interested person within the meaning of the APA and is entitled to a declaratory judgment on that regulation's validity").

174 *Native Vill. of Elim*, 990 P.2d 1, 7–11; *Sagoonick*, 503 P.3d 777, 788 (explaining that courts review ADF&G decisions, such as which scientific reports to provide to the Board, "with particular vigilance" to ensure that the agency has taken a "hard look" at the relevant information).

does not insulate the agency when the suppressed data bears directly on escapement, allocation, and hatchery authorization.[175]

The relief sought should echo the fiduciary nature of the wrong. A declaratory judgment would solidify the State's obligations and establish that current hatchery funding, permitting, and escapement targets violate the public-trust mandate. A tailored injunction could temporarily cap hatchery smolt releases, require ADF&G to raise escapement goals for chronically depleted stocks to a scientifically defensible level, and compel completion—within a fixed period—of a "hard-look" review that fully incorporates the December 2022 ADF&G report, the University of Alaska Fairbanks studies, and other peer-reviewed findings.[176]

Several defenses are predictable and manageable. The State will likely invoke *Sitka Tribe of Alaska* to argue that its disclosure duty is discretionary; the materiality distinction described above, however, renders that precedent inapposite.[177] The State may also contend that judicial supervision of escapement targets intrudes on executive discretion. The requested injunction, however, is process-oriented—demanding a precautionary, science-driven framework—rather than outcome-oriented in the sense of dictating precise quotas.[178] Finally, the State may warn of economic disruption to processors and fleet owners. Plaintiffs can rebut that claim with expert testimony showing the far greater long-term economic harm that follows stock collapse.

VI. CONCLUSION

The ADF&G and the Board have repeatedly failed to meet their constitutional trust duties under the Alaska public trust doctrine by putting the lifeblood of Alaska at risk of long-term collapse from hatchery interference and overharvesting of wild salmon populations. The Alaska Supreme Court has concluded that the Alaska Constitution and the corresponding statutory scheme assign ADF&G and the Board as trustees for wild salmon in state waters. ADF&G and the Board have instead neglected their duties and prioritized short-term commercial gains over the long-term sustainability of wild salmon populations. ADF&G's annual funding of PWS Hatcheries and allowance of overharvesting has resulted in genetically diluted and declining wild salmon populations. The

---

[175] *Sitka Tribe of Alaska*, 540 P.3d 893, 901–02 (Alaska 2023) ("The Department's decision to not provide the report to the Board was not arbitrary because it was a highly technical report mostly concerned with computer coding fixes to the biomass forecasting program.").

[176] *Stepovak-Shumagin Set Net Ass'n*, 886 P.2d 632, 638, 643 (Alaska 1994) (approving precautionary harvest restrictions in the face of scientific uncertainty).

[177] *Sitka Tribe of Alaska*, 540 P.3d at 901–02 (holding that the withheld independent scientific analysis was not directly relevant to the Board's considerations of changes at issue and thus the decision to withhold the analysis was not "arbitrary, capricious, or unreasonable" because it was not "an important factor in decision making.").

[178] *See, e.g., Hammond*, 645 P.2d 750, 763 (Alaska 1982) (holding that courts may ensure procedural compliance without substituting their policy judgments for agency discretion).

artificial, reactive technique of co-mingling hatchery-born salmon with wild populations is not based on the Board's best available science or precautionary measures, and instead contributes to the decline of wild salmon and risks wiping out wild salmon populations for future generations through genetic dilution. To protect Alaska's fisheries and fulfill their constitutional mandate, ADF&G and the Board must take a "hard look" at their own scientific findings, including the December 2022 report, as well as the most recent independent, peer-reviewed and widely accepted science presented by U.S. and Canadian biologists when reviewing hatchery-related proposals and harvest management decisions. Anything less constitutes a failure of the sustained yield clause and the public trust doctrine. Absent this, ADF&G and the Board continue to threaten the long-term survival of Alaska's wild salmon fisheries, Alaska's ecosystems, and Alaskan communities by causing irreversible harm from genetically diluted, declining wild salmon populations.