An Act relating to the protection of wild salmon in Prince William Sound; establishing limits on hatchery-origin salmon straying into natural spawning streams; designating wild salmon sanctuaries; requiring monitoring and reporting; and amending provisions related to salmon hatchery permits under AS 16.12.010.

Prince William Sound Wild Salmon Protection Act

This Act may be cited as the Prince William Sound Wild Salmon Protection Act, Alaska Stat. §§ 16.11.010 – 16.11.100.

Section I. Legislative Findings and Intent

§ 16.11.010.

(a) The Legislature finds that:

(1) Wild salmon are a fundamental natural resource of the State of Alaska, essential to the state's economy, cultural identity, subsistence traditions, and ecological integrity.

(2) Article VIII, Section 4 of the Alaska Constitution requires that fish be utilized, developed, and maintained on the sustained yield principle, obligating the State to ensure long-term conservation and equitable allocation of wild salmon resources.

(3) Peer-reviewed scientific research demonstrates that hatchery-origin pink salmon in Prince William Sound exhibit reduced reproductive success when spawning in wild streams compared to natural-origin salmon, raising concerns about long-term genetic fitness.

(4) Hatchery-origin salmon have comprised up to 98 percent of spawners in certain Prince William Sound streams, creating a measurable risk of displacement and reduced productivity of wild stocks.

(5) The Gulf of Alaska ecosystem shows evidence of density-dependent competition between hatchery-origin and wild salmon, with hatchery production potentially reducing survival rates of wild salmon during years of high abundance.

(6) Alaska's Policy for the Management of Sustainable Salmon Fisheries (5 AAC 39.222) establishes that conservation of wild salmon populations and their habitats is the highest priority in management, and requires action when sustained yield is threatened.

(7) It is in the public interest to establish clear statutory standards for limiting hatchery straying, safeguarding Priority Conservation Streams, and requiring transparent monitoring and

enforceable penalties to protect the genetic diversity and long-term viability of Alaska's wild salmon.

(8) This Act is intended to complement, and not diminish, the authority of the Board of Fisheries and the Department of Fish and Game under existing law, while ensuring that conservation measures are adequate to meet constitutional and statutory mandates.

(9) The intent of this Act is to:

(i) preserve the long-term genetic diversity, fitness, and sustainability of wild salmon populations in Prince William Sound;

(ii) ensure hatchery production is managed within limits that protect wild stocks;

(iii) establish Priority Conservation Streams where wild salmon conservation is paramount; and

(iv) provide transparent monitoring, enforceable standards, and meaningful penalties to guarantee compliance with Alaska's sustained yield principle.

Section II. Definitions

§ 16.11.020.

(b) In this section, and in implementing this Act:

(1) "Hatchery-origin salmon" means salmon descended from broodstock propagated or incubated in a hatchery facility.

(2) "Natural spawning streams" means streams, rivers, tributaries, and their connecting waters where salmon spawn naturally (i.e., not artificially directed or confined).

(3) "Priority Conservation Streams" means salmon-bearing streams in Prince William Sound designated by the Board of Fisheries, acting through its Hatchery Committee or other designated subcommittee during its regular regulatory cycle, as requiring heightened protection to preserve wild genetic diversity, reproductive fitness, or ecosystem function. In making designations, the Board must consider the best available scientific information, including but not limited to:

(i) evidence of high hatchery-origin straying rates (pHOS exceeding 5% in any year within the past 10 years);

(ii) documented importance as a core wild salmon production area, measured through historical escapement data, genetic studies, or habitat assessments;

(iii) ecological importance for maintaining salmon-dependent wildlife populations or watershed health; and

(iv) cultural and subsistence significance for Alaska Native communities or local fishing communities.

(4) "Proportion of Hatchery-Origin Spawners (pHOS)" means the proportion (percentage) of total spawners in a given stream in a given year that are hatchery-origin salmon, as determined through genetic or otolith analysis conducted under Section VI.

(5) "Proportionate Natural Influence (PNI)" means the proportion of natural-origin spawners contributing to hatchery broodstock.

(6) "Salmon" means any anadromous species of the genus *Oncorhynchus*.

(7) " Stock of concern" means a concern arising from a chronic inability, despite the use of specific management measures, to maintain specific yields, or harvestable surpluses, above a stock's escapement needs. 5 AAC 39.222(f)(42).

(8) "Wild salmon" means salmon originating from naturally spawning, non-propagated parents, without hatchery broodstock in their recent lineage.

Section III. Hatchery Stray Caps

§ 16.11.030.

(c) For all wild salmon natural spawning streams in Prince William Sound:

(1) For Priority Conservation Streams, pHOS must not exceed 5% in any year.

(2) For all other natural spawning streams, pHOS must not exceed 10% in any year.

(3) If thresholds are exceeded for two consecutive years, for purposes of reducing pHOS to mandated percentages, the Commissioner of Fish and Game must:

(i) order a 25% reduction in hatchery releases the following season; and

(ii) require hatchery operators to implement stray removal measures (weirs, selective harvest).

Section IV. Designation of Priority Conservation Streams

§ 16.11.040.

(d) The Board of Fisheries, acting through its Hatchery Committee or other designated subcommittee during its regular regulatory cycle under AS 16.05.251, must adopt regulations to designate Priority Conservation Streams consistent with Section II(b)(3).

(1) At least 20 streams must be designated as Priority Conservation Streams.

(2) Designations must be reviewed at least once every 2 years, aligned to the Board's regional regulatory cycle, or sooner if new best-available scientific information becomes available to the Board, ADF&G, or the Commissioner of Fish and Game.

(3) The Board must provide public notice, opportunity for comment, and formal consultation with federally recognized tribes, tribal consortia, and Alaska Native organizations with ties to Prince William Sound, and must consider traditional ecological knowledge alongside scientific data when designating or reviewing Priority Conservation Streams.

Section V. Protections for Priority Conservation Streams

§ 16.11.050.

(e) For all designated Priority Conservation Streams:

(i) Hatchery-origin salmon may not be released within 10 miles upstream or downstream of the stream;

(ii) Hatchery-origin spawners (pHOS) must not exceed 5% in any year;

(iii) Mandatory annual monitoring of pHOS and genetic diversity must be conducted at the operator's expense under Section VI; and

(iv) Active stray removal measures must be implemented whenever hatchery-origin fish are detected in excess of allowable levels.

Section VI. Monitoring & Transparency

§ 16.11.060.

(f) *Sampling design and methods.* Hatchery operators must fund and implement monitoring sufficient to estimate pHOS and genetic diversity in all major Prince William Sound streams, using methods approved by ADF&G and consistent with the following minimum standards:

(1) pHOS estimation.

(i) Otolith thermal mark recovery and reading to identify hatchery contributions by release group; and/or
(ii) Genetic stock identification (GSI) using validated baseline panels for hatchery versus natural-origin fish; and

(iii) Quality assurance/quality control (QA/QC): double reads for otolith marks on ≥10% of samples, blind re-reads on a random subset, and concordance checks between otolith and genetic assignments where both are used.

(2) Genetic diversity monitoring (wild component). For natural-origin spawners in each monitored stream, the operator, in coordination with ADF&G, must estimate annually, at minimum:

(i) Expected heterozygosity (He) and allelic richness across the approved genetic marker set;

(ii) Effective population size (Ne) or effective number of breeders (Nb) using a standard estimator (e.g., linkage-disequilibrium method) suitable for salmonid life histories; and

(iii) Temporal genetic change (e.g., FST or related metric) at multi-year intervals to detect introgression signals.

(3) Independent verification. Laboratory analyses must be performed by an ADF&G laboratory or by an independent laboratory approved by ADF&G. ADF&G may conduct random audits and replicate analyses.

(4) Sampling adequacy. Minimum annual sample sizes must be sufficient to estimate pHOS with a 95% confidence interval width ≤ ±2 percentage points in Priority Conservation Streams and ≤ ±3 percentage points in other streams, unless ADF&G approves an alternative design achieving equivalent precision.

(5) Data & code availability. Raw assignment data, marker metadata, QA/QC results, and analytical code used to produce estimates must be submitted to ADF&G. Proprietary methods may not be used to evade reproducibility.

(g) Publication deadlines. The Commissioner of Fish and Game must publish a public, stream-by-stream report of pHOS and genetic metrics within 90 days of data collection and no later than December 31 of each year, whichever occurs first.

Section VII. Stocks of Concern Trigger

§ 16.11.070.

(h) For purposes of AS 16.05.258 and 5 AAC 39.222:

(1) If pHOS exceeds 10% in any year in a stream designated as a Priority Conservation Stream under this Act, the salmon stock in that stream must be designated a stock of concern.

(2) Upon such designation, the Board of Fisheries must adopt and implement a conservation management plan for the affected stock, which may include but is not limited to:

(i) reductions in hatchery releases contributing to straying;

(ii) additional monitoring requirements;

(iii) limitations on hatchery proximity to the affected stream; and

(iv) any other measures necessary to restore the wild stock to compliance with sustained yield principles.

(3) The Commissioner of Fish and Game must publish notice of the designation and the corresponding conservation management plan within 60 days of the pHOS exceedance.

Section VIII. Enforcement & Penalties

§ 16.11.080.

(h) Permits issued under AS 16.12.010 must be conditioned on compliance with this Act.

(1) The Commissioner of Fish and Game must immediately suspend a hatchery operator's permit for a period of one year if the operator fails to meet the requirements of this Act.

(2) Each year a permittee is noncompliant constitutes a separate violation.

(3) In addition to suspension under subsection (1), the Commissioner of Fish and Game must impose graduated civil penalties as follows:

(i) For a first violation: a civil fine not to exceed $50,000, in addition to the one-year permit suspension.

(ii) For a second consecutive violation: a civil fine not to exceed $100,000.

(iii) For a third or subsequent consecutive violation: a civil fine not to exceed $250,000, and the permit must be suspended or revoked.

(4) Reinstatement of Suspended Permits. A hatchery operator whose permit is suspended under subsection (3)(iii) may petition the Commissioner of Fish and Game for reinstatement after the

suspension period if the operator demonstrates to the satisfaction of the Commissioner that:

(i) all corrective measures ordered by the Commissioner have been fully implemented;

(ii) independent genetic and otolith testing confirms compliance with pHOS thresholds for two consecutive seasons; and

(iii) the operator has established monitoring and reporting systems sufficient to ensure ongoing compliance.

(5) The Commissioner of Fish and Game may require additional corrective measures as a condition of reinstatement.

(6) Any Alaska fisher, federally recognized tribe, or nonprofit conservation organization may bring a civil action in superior court to enforce this Act, including seeking declaratory or injunctive relief.

(7) In any successful action brought under subsection (6), the court may award reasonable attorneys' fees and costs to the prevailing party.

Section IX. Implementation & Fiscal Provisions

§ 16.11.090.

(j) The department may adopt regulations necessary to implement this Act.

(k) The Commissioner may require hatchery operators to pay permit fees sufficient to cover the department's reasonable costs of monitoring, independent verification, reporting, and enforcement under this Act.

Section X. Effective Date

§ 16.11.100.

This Act takes effect immediately upon its enactment into law.