(Revised November 23, 2021)

PROPOSAL 54 – 5 AAC 24.370. Prince William Sound Management and Salmon Enhancement Allocation Plan.

PROPOSED BY: Virgil Umphenour.

WHAT WOULD THE PROPOSAL DO? This reduces hatchery salmon production to 24% of the level permitted in 2000 by setting the permitted capacity of each hatchery in regulation.

WHAT ARE THE CURRENT REGULATIONS? The *Prince William Sound Management and Salmon Enhancement Allocation Plan* defines area and time management for a fair and reasonable allocation of the harvest of enhanced salmon among the drift gillnet, seine and set gillnet commercial fisheries and to reduce conflict between the user groups.

Current regulations have no provision specifying what the production levels are for given hatcheries. Production levels are currently proposed by hatchery operators, reviewed, and recommended for approval by Regional Planning Teams and approved by the commissioner of the Alaska Department of Fish and Game. Additionally, each area has a Comprehensive Salmon Enhancement Plan that outlines production goals for species and areas. There are interrelated statutory authorities relating to hatchery production levels. Primary authority over issuance of hatchery permits and regulation of hatchery operations is vested in the commissioner and department. The board's authority over hatchery production has previously been outlined by the Alaska Department of Law in an informal Attorney General Opinion (Nov. 6, 1997; 661-98-0127). The informal attorney general opinion notes that the board "may exercise indirect authority over hatchery production by regulating the harvest of hatchery released fish in the common use fishery," by regulating "hatchery brood stock and cost recovery harvests," and by regulatory action "amending those portions of hatchery permits relating to the source and number of salmon eggs, hatchery harvests, and designation of special harvest areas." The opinion also noted that "Board action that effectively revokes or prevents the issuance of a hatchery permit is probably not authorized."

WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED? This scale of reduction would have a negative financial impact on permit holders that target enhanced salmon and associated local economies. Because the production decreases will affect the commercial fisheries at various times, due to the different life histories of salmon species, the allocative impact on specific gear groups is hard to quantify.

Because the proposed production decrease of chum salmon would not affect the commercial fishery until 2025 it is not possible to determine which gear group will have access to Port Chalmers or Esther subdistricts at that time. Assuming that neither purse seine or drift gillnet gear groups are experiencing an allocation shortfall at that time, and assuming an even distribution of the proposed reduction among all enhanced chum salmon

fisheries, both gear groups would bear the loss proportionately. If either gear group is entitled to a "piggy bank" area because of an allocation shortfall, then that gear group would bear a disproportionate share of the loss. The proposed reduction may result in the elimination of one or both remote release chum salmon fisheries. Additionally, a reduction of this scale may render the allocation plan obsolete as the drift gillnet gear group derives a higher proportion of their allocation from enhanced chum salmon than the purse seine gear group.

Fishery management considerations would include wild and hatchery stock issues related to effort. Currently, hatchery chum salmon attract a large proportion of purse seine and drift gillnet fishing effort. This serves to reduce effort on other hatchery and wild stocks and to spread the fleets. A reduction of hatchery chum salmon could increase effort on other wild and enhanced salmon stocks and possibly result in more conservative management of those fisheries. An additional effect would be a potential increase in the proportion of the total return required for cost recovery.

BACKGROUND: Hatchery salmon production was originally started in PWS in the 1970s to mitigate the natural high and low return rates of wild salmon stocks. Production levels were selected to allow for an economically viable fishery during years of poor natural runs. Hatchery production levels are specified in the operating permit written for each hatchery. The current production levels are based on criteria in the *Prince William Sound /Copper River Phase 3 Comprehensive Salmon Plan*. The purpose of the Phase 3 Plan is to achieve optimum production of wild and enhanced salmon stocks on a sustained yield basis. The plan establishes three fishery goals: 1) increase fishing opportunities for salmon resource users, 2) achieve equitable allocation of the harvestable surplus of wild and enhanced salmon while minimizing impacts to historic wild stock fisheries, and 3) achieve an economically self-sustaining fishery. Additionally, the Phase 3 Plan recommends that five biological and economic criteria be employed to achieve an optimum production level including: 1) wild stock escapement goals must be achieved over the long term, 2) the proportion of hatchery salmon straying into wild-stock streams must remain below 2% of the wild-stock escapement over the long term, 3) the growth rates of juvenile salmon during the early marine period must be density independent over the long term, 4) the abundance of juvenile salmon predators must be independent of juvenile salmon abundance over the long term, and 5) the long-term average cost of hatchery operation, management, and evaluation must remain below 50% of the value of hatchery production.

Chum salmon permitted green egg numbers in PWS averaged around 130 million eggs from the early 1980s to the early 2000s and varied between 148 million to 165 million eggs from the mid-2000s to the present. Chum salmon smolt originating from these eggs are released onsite at WNH and through remote releases at AFK and Port Chalmers (NW Montague Island).

DEPARTMENT COMMENTS: The department is **NEUTRAL** on this proposal. In permitting hatchery operations, the department considers many of the concerns raised in this proposal, including the need to minimize negative interactions between hatchery-produced and wild salmon, minimize straying, and the need to ensure harvest practices

targeting hatchery-produced salmon do not negatively impact wild fish. As new information becomes available through sources such as Alaska Hatchery Research Project, the department will consider this information during review of hatchery permits on a case-by-case basis and consider permit alterations, if appropriate. This proposal runs counter to AS 16.05.092 that directs the department to 'through rehabilitation, enhancement, and development programs do all things necessary to ensure perpetual and increasing production and use of the food resources of state waters and continental shelf areas'.

COST ANALYSIS: Approval of this proposal is not expected to result in an additional direct cost for a private person to participate in this fishery. Approval of this proposal will not result in an additional cost for the department.

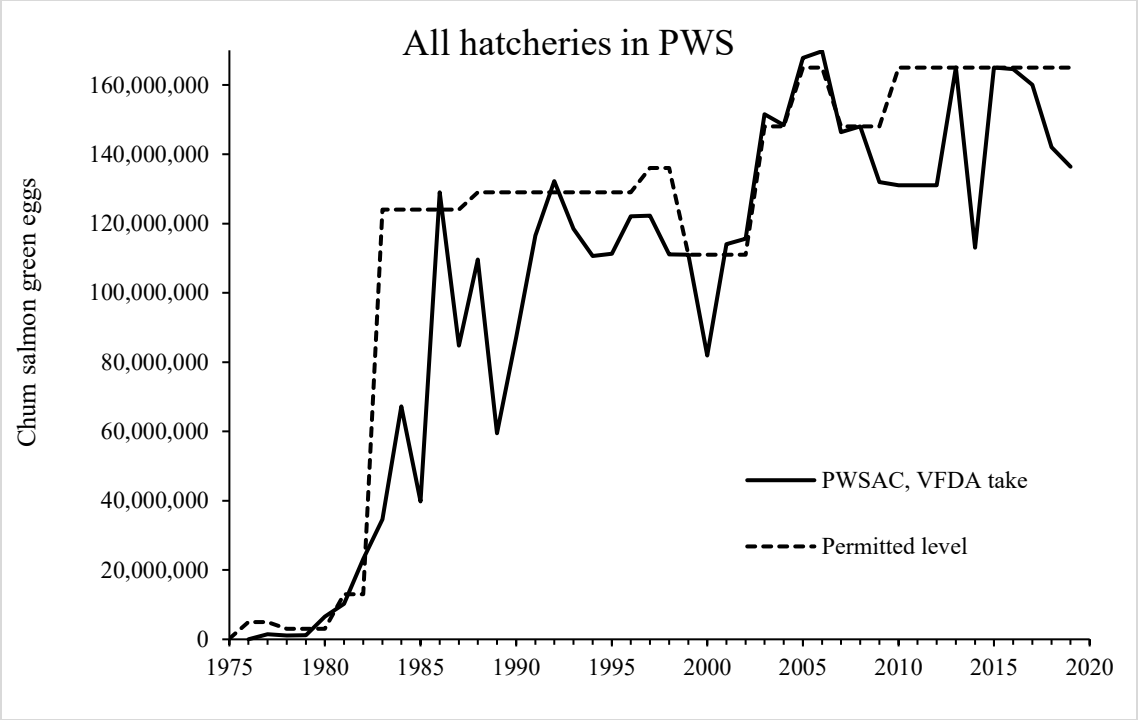

Figure 112-1.–All hatcheries chum salmon permitted capacity and reported egg take by year.

(Revised November 23, 2021)

PROPOSAL 55 – 5 AAC 40.XXX. New Section.

PROPOSED BY: Virgil Umphenour.

WHAT WOULD THE PROPOSAL DO? This reduces hatchery salmon production to 25% of the level permitted in 2000 by setting permitted capacity of each hatchery in regulation.

WHAT ARE THE CURRENT REGULATIONS? Current regulations have no provision specifying what the production levels are for given hatcheries. Production levels are currently proposed by hatchery operators, reviewed, and recommended for approval by Regional Planning Teams and approved by the commissioner of the Alaska Department of Fish and Game. Additionally, each area has a Comprehensive Salmon Enhancement Plan that outlines production goals for species and areas. There are interrelated statutory authorities relating to hatchery production levels. Primary authority over issuance of hatchery permits and regulation of hatchery operations is vested in the commissioner and department. The board's authority over hatchery production has previously been outlined by the Alaska Department of Law in an informal Attorney General Opinion (Nov. 6, 1997; 661-98-0127). The informal attorney general opinion notes that the board "may exercise indirect authority over hatchery production by regulating the harvest of hatchery released fish in the common use fishery," by regulating "hatchery brood stock and cost recovery harvests," and by regulatory action "amending those portions of hatchery permits relating to the source and number of salmon eggs, hatchery harvests, and designation of special harvest areas." The opinion also noted that "Board action that effectively revokes or prevents the issuance of a hatchery permit is probably not authorized."

WHAT WOULD BE THE EFFECT IF THE PROPOSAL WERE ADOPTED? This scale of reduction would have a negative financial impact on permit holders that target enhanced salmon and associated local economies. Because the production decreases will affect the commercial fisheries at various times, due to the different life histories of salmon species, the allocative impact on specific gear groups is unknown.

Fishery management considerations would include wild and hatchery stock issues related to effort. Currently, hatchery salmon attract a large proportion of purse seine and drift gillnet fishing effort. This serves to reduce effort on other hatchery and wild stocks and to spread the fleets. A reduction of hatchery salmon could increase effort on other wild and enhanced salmon stocks and possibly result in more conservative management of those fisheries.

BACKGROUND: Hatchery salmon production was originally started in Prince William Sound (PWS) in the 1970s to mitigate the natural high and low return rates of wild salmon stocks. Production levels were selected to allow for an economically viable fishery during years of poor natural runs. Hatchery production levels are specified in the operating permit written for each hatchery. The current production levels are based on criteria in the *Prince William Sound/Copper River Phase 3 Comprehensive Salmon Plan*. The purpose of the Phase 3 plan is to achieve optimum production of wild and enhanced salmon stocks on a sustained yield basis. The plan establishes three fishery goals: 1) increase fishing opportunities for salmon resource users, 2) achieve

equitable allocation of the harvestable surplus of wild and enhanced salmon while minimizing impacts to historic wild stock fisheries, and 3) achieve an economically self-sustaining fishery. Additionally, the Phase 3 plan recommends that five biological and economic criteria be employed to achieve an optimum production level including: 1) wild stock escapement goals must be achieved over the long term, 2) the proportion of hatchery salmon straying into wild-stock streams must remain below 2% of the wild-stock escapement over the long term, 3) the growth rates of juvenile salmon during the early marine period must be density independent over the long term, 4) the abundance of juvenile salmon predators must be independent of juvenile salmon abundance over the long term, and 5) the long-term average cost of hatchery operation, management, and evaluation must remain below 50% of the value of hatchery production.

DEPARTMENT COMMENTS: The department is **NEUTRAL** on this proposal. In permitting hatchery operations, the department considers many of the concerns raised in this proposal, including the need to minimize negative interactions between hatchery-produced and wild salmon, minimize straying, and the need to ensure harvest practices targeting hatchery-produced salmon do not negatively impact wild fish. As new information becomes available through sources such as Alaska Hatchery Research Project, the department will consider this information during review of hatchery permits on a case-by-case basis and consider permit alterations, if appropriate. This proposal runs counter to AS 16.05.092 that directs the department to 'through rehabilitation, enhancement, and development programs do all things necessary to ensure perpetual and increasing production and use of the food resources of state waters and continental shelf areas'.

COST ANALYSIS: Approval of this proposal is not expected to result in an additional direct cost for a private person to participate in this fishery. Approval of this proposal will not result in an additional cost for the department.