

# Overview of salmon stock enhancement in southeast Alaska and compatibility with maintenance of hatchery and wild stocks

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Modern salmon hatcheries in Southeast Alaska were established in the 1970s when wild runs were at record low levels. Enhancement programs were designed to help rehabilitate depressed fisheries and to protect wild salmon stocks through detailed planning and permitting processes that included focused policies on genetics, pathology, and management. Hatcheries were located away from significant wild stocks, local sources were used to develop hatchery broodstocks, and juveniles are marked so management can target fisheries on hatchery fish. Initially conceived as a state-run system, the Southeast Alaska (SEAK) program has evolved into a private, non-profit concept centered around regional aquaculture associations run by fishermen and other stakeholders that pay for hatchery operations through landing fees and sale of fish. Today there are 15 production hatcheries and 2 research hatcheries in SEAK that between 2005 and 2009 released from 474 to 580 million (average 517 million) juvenile salmon per year. During this same period commercial harvest of salmon in the region ranged from 28 to 71 million salmon per year (average 49 million). Contributions of hatchery-origin fish to this harvest respectively averaged 2%, 9%, 19%, 20%, and 78% for pink, sockeye, Chinook, coho, and chum salmon. Both hatchery and wild salmon stocks throughout much of Alaska have experienced high marine survivals since the 1980s and 1990s resulting in record harvests over the past two decades. Although some interactions between hatchery salmon and wild salmon are unavoidable including increasing concerns over straying of hatchery fish into wild salmon streams, obvious adverse impacts from hatcheries on production of wild salmon populations in this region are not readily evident.

Keywords: Alaska, Salmon hatcheries, Straying, Wild stocks, Aquaculture associations