

NOOKSACK/SAMISH - SAMISH/MAINSTEM NOOKSACK CHINOOK

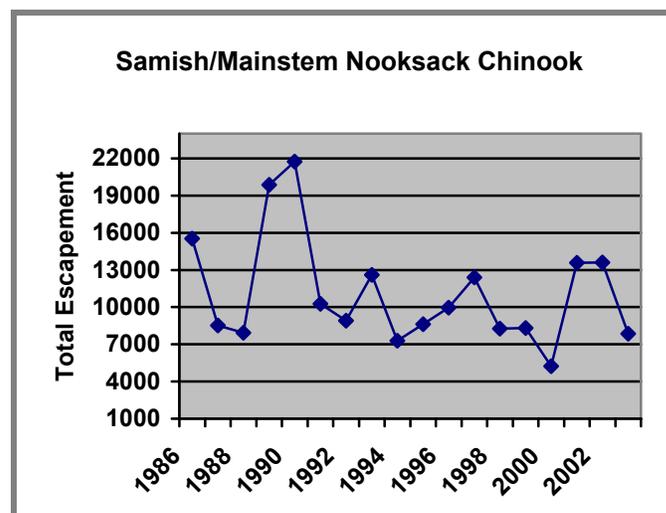
STOCK STATUS

1992 STATUS Unknown	2002 STATUS Unknown
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STOCK STATUS RATING DATA

USEFULNESS FOR RATING STOCK STATUS: *Good*

YEAR	TOTAL ESCAPEMENT
1986	15,535
1987	8,512
1988	7,938
1989	19,860
1990	21,739
1991	10,279
1992	8,899
1993	12,604
1994	7,293
1995	8,629
1996	9,970
1997	12,392
1998	8,259
1999	8,325
2000	5,248
2001	13,573
2002	13,593
2003	7,864



Data are estimates of total escapement based on redd counts from RM 8.2 to 10.5 in the Samish River plus counts of Chinook passed above the Samish Hatchery. We do not have escapement estimates for the Nooksack basin.

Natural spawning does occur in the Samish River, but the spawning population is composed predominantly of hatchery-origin Chinook. This stock is not enumerated in the Nooksack watershed, although substantial spawning occurs there. Consequently status remains **Unknown** in 2002.

STOCK DEFINITION

Samish/Mainstem Nooksack Chinook were identified as a stock based on their distinct spawning distribution and spawning timing.

SPAWNING DISTRIBUTION: Spawning takes place in the mainstem Samish River below and above the Samish Hatchery. In the Nooksack system, spawning occurs in the mainstem and in tributaries including Bertrand, Fishtrap, Tenmile, and Smith and Anderson creeks, in all three forks of the Nooksack River and in numerous tributaries.

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SPAWNING TIMING: Spawning generally occurs from early September through mid-November.

GENETIC ANALYSIS: Samish Hatchery Chinook were derived mainly from Soos Creek (Green River) Hatchery Chinook (Marshall et al. 1995). Allozyme analysis showed that Samish Hatchery and Kendall Creek Hatchery (North Fork Nooksack basin) fall-timed Chinook were similar to other Puget Sound hatchery Chinook stocks, such as Deschutes and Hoodspout hatchery Chinook, which were also at least partially derived from Soos Creek Hatchery fish (WDFW and PSTIT 1994). However, DNA analysis of Green River-origin fall-timed Chinook released from the Kendall Creek Hatchery showed that they had diverged significantly from the Soos Creek Hatchery stock (Jim Shaklee, WDFW, personal communication). DNA analysis of Samish Hatchery Chinook has not been conducted. DNA analysis of Chinook smolts collected in 1999 and 2000 throughout the Nooksack basin assigned all smolts to the North Fork Nooksack stock, the South Fork Nooksack stock or the Kendall Creek Hatchery fall Chinook stock. There was no evidence for any other stock origin (e.g., a native fall Chinook stock) among the collections analyzed.

STOCK ORIGIN

This is a **non-native** stock with **composite** production. This stock was introduced from Soos Creek Hatchery (Green River) to the Samish Hatchery, although native fall Chinook formerly occupied the Nooksack watershed (Ned Currence, Nooksack Tribe, personal communication). This stock is spawning successfully in the Nooksack watershed. Fall-timed Chinook are no longer released from the Kendall Creek Hatchery. Instead, the Lummi Nation releases Samish Hatchery Chinook into Lummi Bay and into the lower Nooksack River.