

LOWER COLUMBIA – KALAMA FALL CHINOOK

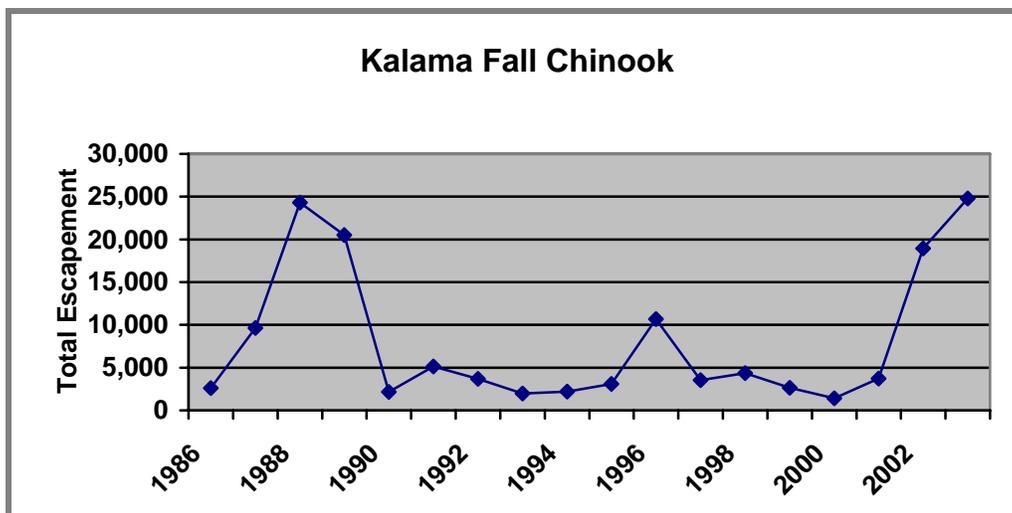
STOCK STATUS

1992 STATUS Healthy	2002 STATUS Healthy
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STOCK STATUS RATING DATA

USEFULNESS FOR RATING STOCK STATUS: Good

YEAR	TOTAL ESCAPEMENT	YEAR	TOTAL ESCAPEMENT
1986	2,601	1995	3,094
1987	9,651	1996	10,676
1988	24,549	1997	3,548
1989	20,495	1998	4,355
1990	2,157	1999	2,655
1991	5,152	2000	1,420
1992	3,683	2001	3,714
1993	1,961	2002	18,952
1994	2,190	2003	24,782



Data are total escapement estimates expanded from annual peak live plus dead spawner counts from Italian Creek (RM 10) downstream to the I-5 bridge (RM 1.3), a distance of 8.7 miles.

Stock status is rated **Healthy** in 2002 because escapements have usually exceeded the escapement goal of 2,000 adults. Natural spawning abundance has exceeded 20,000 spawners, but escapement levels normally range from 2,000 to 4,000.

STOCK DEFINITION

Kalama fall Chinook were identified as a stock based on their distinct spawning distribution.

SPAWNING DISTRIBUTION: Most spawning takes place from the I-5 bridge upstream to Italian Creek. Lower Kalama Falls (RM 10.5) is the natural limit to upstream migration.

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SPAWNING TIMING: Spawning generally occurs from late September to mid-November.

GENETIC ANALYSIS: No genetic analysis has been done on naturally spawning Kalama fall Chinook. Allozyme analysis of Kalama hatchery fall Chinook sampled in 1988 and 1989 showed that they were genetically distinct from most other lower Columbia tule fall Chinook but not significantly different from Abernathy Creek fall Chinook (Myers et al. 2002). This result may reflect genetic drift in these two populations, which are otherwise dissimilar (Marshall et al. 1995)

STOCK ORIGIN

This is a **mixed** stock with **composite** production and is similar in life history to other tule fall Chinook stocks in the lower Columbia. Hatchery fish, largely from the Kalama basin, have been released into the watershed since Fallert Creek Hatchery was completed in 1895. In 1959, Kalama Falls Hatchery went into production. Broodstock for both facilities has been taken from a temporary rack near Modrow Bridge. There have been relatively few introductions of out-of-basin Chinook into the hatchery programs (Myers et al. 2002). The present annual release goal is 3.5 million sub-yearling Chinook. Surplus hatchery fall Chinook are released below the falls. It is probable that a significant number of natural spawners are hatchery strays.