

LOWER COLUMBIA – KALAMA SPRING CHINOOK

STOCK STATUS

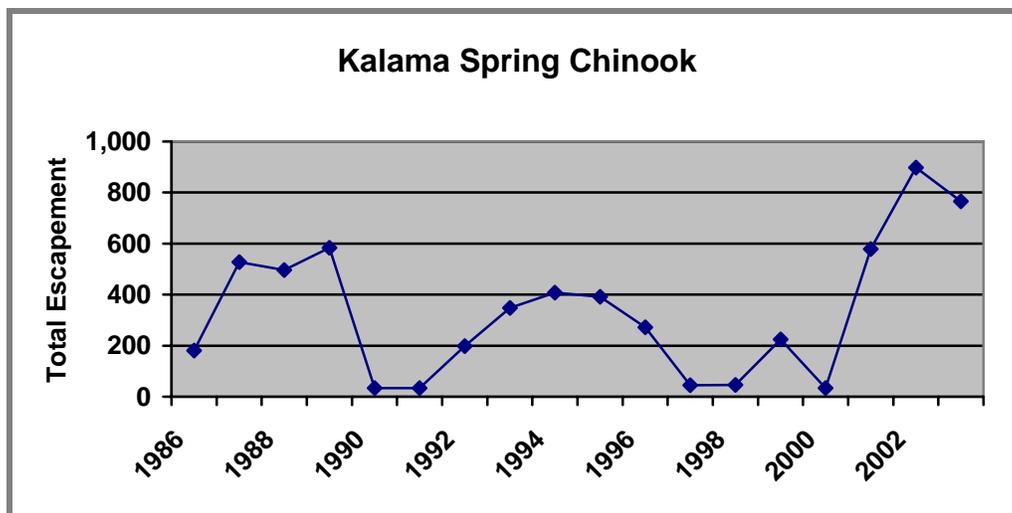
1992 STATUS
Healthy

2002 STATUS
Depressed

STOCK STATUS RATING DATA

USEFULNESS FOR RATING STOCK STATUS: Good

| YEAR | TOTAL ESCAPEMENT | YEAR | TOTAL ESCAPEMENT |
|------|------------------|------|------------------|
| 1986 | 181 | 1995 | 392 |
| 1987 | 527 | 1996 | 272 |
| 1988 | 496 | 1997 | 45 |
| 1989 | 584 | 1998 | 46 |
| 1990 | 34 | 1999 | 244 |
| 1991 | 34 | 2000 | 34 |
| 1992 | 198 | 2001 | 578 |
| 1993 | 348 | 2002 | 898 |
| 1994 | 408 | 2003 | 766 |



Data are total escapement estimates expanded from annual peak live plus dead spawner counts from lower Kalama Falls (RM 10.6) downstream to the sinkhole at RM 5.2.

Stock status is rated **Depressed** in 2002 because of **chronically low** escapements.

STOCK DEFINITION

Kalama spring Chinook were identified as a stock based on their distinct spawning distribution, spawning timing, and genetic composition.

SPAWNING DISTRIBUTION: Most spawning occurs between the Fallert Creek Hatchery and lower Kalama Falls. Since the completion of the Kalama Falls Hatchery (1959) at the lower falls, some spring Chinook are now passed above the lower falls into the upper watershed. Most spawning in the upper watershed occurs from the Kalama Falls Hatchery to about RM 20, although some spawners go as far as upper Kalama Falls (RM 36.8).

LOWER COLUMBIA – KALAMA SPRING CHINOOK

SPAWNING TIMING: Spawning generally occurs from late August through early October.

GENETIC ANALYSIS: No analysis has been done on naturally spawning Kalama spring Chinook. Allozyme analysis of Kalama Hatchery spring Chinook sampled in 1990 showed that they are relatively similar to, but genetically distinct from, Cowlitz Hatchery and Lewis spring Chinook and are distinct from all other Columbia Basin spring Chinook (Marshall et al. 1995)

STOCK ORIGIN

This is a **mixed** stock with **composite** production. The current stock is composed of fish that are surplus to the needs of hatchery production. Hatchery broodstock has been released into the Kalama from a variety of lower Columbia River sources including Eagle Creek (Oregon), Willamette (Oregon), Cowlitz and Little White Salmon rivers, although the hatchery broodstock is still about 88% native (Myers et al. 2002), and genetic analysis has shown them to be distinct from Willamette and other lower Columbia spring Chinook stocks.