

LOWER COLUMBIA – COWLITZ COHO

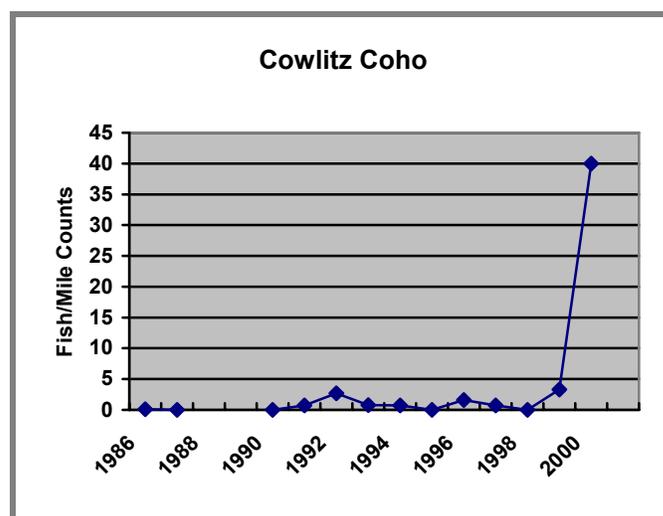
STOCK STATUS

1992 STATUS Depressed	2002 STATUS Depressed
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STOCK STATUS RATING DATA

USEFULNESS FOR RATING STOCK STATUS: Fair

YEAR	FISH/MILE COUNTS
1986	0.1
1987	0.0
1988	No data
1989	No data
1990	0.0
1991	0.7
1992	2.7
1993	0.8
1994	0.7
1995	0.0
1996	1.6
1997	0.7
1998	0.0
1999	3.3
2000	40.0
2001	No data



Data are peak fish/mile values based on live plus dead fish counts and redd counts. Fish are counted in Olequa, North Fork and South Fork Olequa creeks in the lower Cowlitz drainage.

Data collected from 1986 to the present demonstrate **chronically low** cumulative fish/mile values, thus stock status is rated **Depressed** in 2002.

A program to annually transport adult Cowlitz Salmon Hatchery stock above Cowlitz Falls Dam was initiated in the early 1990s. Increasing numbers of out-migrating smolts produced from a mix of natural production and juvenile out-planting has been observed each year at the Cowlitz Falls smolt trap. Trap efficiency has typically been in the 50 to 60 percent range, so the numbers observed represent approximately half of the total annual smolt production from the basin upstream of this point. Because there are no data yet on the number of successful adult recruits being generated by the observed smolt production, and because the recovery program for the watershed is still evolving, this information was not used in the current stock rating for Cowlitz natural coho production. Eventually separating lower river and upper river coho into separate stocks may be warranted, given the geographical isolation between the upper and lower rivers because of the dams.

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STOCK DEFINITION

Cowlitz coho were identified as a stock based on their distinct spawning distribution, run timing and genetic composition. They are a Type N stock characterized by late run timing and by turning north in the ocean after leaving the Columbia River.

Late coho (Type N) are informally considered synonymous with Cowlitz River stock coho. Columbia River late stock hatchery programs were developed utilizing the Cowlitz River stock, their derivatives or native late runs.

SPAWNING DISTRIBUTION: Most spawning below Mayfield Dam takes place in the mainstem Cowlitz River and in Lacamas, Brights, Ostrander, Blue, Otter, Mill, Arkansas, Foster, Stillwater, Campbell, Hill and Salmon creeks.

SPAWNING TIMING: Spawning generally occurs from late October through January.

GENETIC ANALYSIS: Allozyme analysis of Cowlitz hatchery coho has shown them to be genetically distinct from other Washington coho stocks examined (David Teel, NMFS, personal communication).

STOCK ORIGIN

This is a **mixed** stock with **composite** production. Hatchery coho have been planted in the sub-basin since at least 1915 when the Tilton River Hatchery operated downstream of Morton until 1921. Most coho in the Cowlitz River sub-basin are of hatchery origin. Devore (1987) accounted for the 1982 brood hatchery release and concluded wild/natural production was minor. Currently broodstock is collected via hatchery rack returns. Mixing of stocks very likely began to occur as far back as 1915, with the first releases.