Southern Oregon/Northern California Coast Coho Salmon *Oncorhynchus kisutch*

chances for survival: *poor* **2**

1 **2** 3 4 5

SALMON

PHOTO: TOM WESELOH

Southern Oregon/Northern California coast coho salmon is one of two kinds of coho in California which look alike, but are genetically different. For this reason they are placed in different ESUs for management. Spawning adults are dark green on the head and back, maroon on the sides, and grey on the belly. Males are characterized by a bright red stripe, hooked jaw, and slightly humped back. Spawners are typically 20 to 30 inches long and weigh six to 13 pounds. Most spawning adults are three years old with some two year olds. In the ocean, they are bright silvery in color and are voracious predators on fish and shrimp. The young rear for one to two years in streams and require cold water year around with abundant protective cover, often provided by fallen trees. These coho require dense rainforests and cold water for their survival.

DISTRIBUTION: Southern Oregon/Northern California coast coho salmon are found from Cape Blanco in Oregon south to the Mattole River, just north of Punta Gorda. In California, they occupy small coastal basins where high quality habitat is located in lower tributaries and in the headwaters. Major California river systems with Southern Oregon/Northern California coast coho include the Smith, Klamath, Trinity, Mad, Eel, and Mattole Rivers, plus Redwood Creek. In the Klamath and Trinity Rivers, their upstream limits are determined by Iron Gate and Lewiston dams, respectively. In the Klamath River they were once especially abundant in the Scott and Shasta Rivers because of the presence of cold water and diverse habitats created by beavers.

CATEGORY	SCORE	EXPLANATION
Range	2	These coho populations are mainly in California with some in Oregon
Population size	3	Most populations are isolated, live independently and are less than 100 fish
Intervention needs	3	All populations require intervention to survive
Tolerance	1	Coho are among the most sensitive of salmon to environmental conditions.
Genetic risk	1	See Bucklin et al. (2007)
Climate change	1	Coho are vulnerable in all watersheds
Overall status	2	
Reliability	4	Populations have been well studied

ABUNDANCE: Probably 200,000 to one million wild coho once spawned in California streams; however these numbers had been reduced to about 100,000 by the 1960s. By 1990, this number had fallen to about 31,000 fish per year, about 80% of which were Southern Oregon/Northern California coast coho. Approximately 50% to 60% of these fish were of hatchery origin. Total wild Southern Oregon/Northern California coast coho spawners in California each year is currently between 3,000 and 30,000 fish, probably more often closer to the lower estimate. These fish comprise about 250 isolated populations that show evidence of genetic and demographic problems likely to lead to extinction.

FACTORS AFFECTING STATUS: Major factors affecting coho salmon include, (1) dams, (2) water diversions, (3) logging, (4) grazing and agriculture, (5) mining, (6) estuary alteration, (7) pollution, (8) alien species, and (9) hatcheries. In particular, coho streams suffer from the effects of intense logging dating back to the 19th and 20th centuries. Because of their long residence time in fresh water, coho salmon populations are strongly affected by negative changes in water flows and by water and habitat quality.

STATUS 2: These coho salmon are vulnerable to extinction within the next 50 to 100 years. Most or all populations in small coastal streams will likely disappear in the next 25 to 50 years. Southern Oregon/Northern California coastal coho are listed as threatened by both state and federal agencies. Conservation of the species requires protecting spawning streams, restoring damaged habitat, and improving water quality. There are hundreds of actions needed, many of which are often watershed-specific. In particular, there is a need for improved management of the Trinity and Iron Gate hatcheries to reduce the influence of hatchery fish on wild coho populations.

CONSERVATION RECOMMENDATIONS: Key to stopping the decline of coho salmon is to protect their spawning and rearing streams, to restore damaged habitat, and to improve water quality. This can be difficult because it may mean reforming commercial timber harvesting practices, farming, and road construction activities in dozens of coastal drainages and implementing habitat restoration plans along hundreds of miles of streams. In many streams it means that major reconstruction projects must be funded, completed, and monitored. Keeping sport and commercial fisheries for coho closed or greatly restricted is also a necessity. Given the large scale of problems facing coho salmon, innovative approaches to stream restoration must be tried, working with landowners, timber companies, and gravel miners. Where population augmentation is deemed necessary, small-scale, on-stream hatchery operations using local wild stock could be used as temporary measures but must be used with extreme caution, with firm closure dates.

Lower Klamath River. PHOTO: TOM WESELOH

Possible Historic Distribution Of Southern Oregon/Northern California Coast Coho Salmon

California Trout is There for the Fish!

As a member of the Salmon and Steelhead Recovery Coalition, California Trout served as a team member that developed the 2004 Recovery Strategy for California Coho Salmon Plan. Goals of the Plan are to remove coho salmon from the California endangered species list and to restore tribal, commercial and recreational coho salmon fisheries.