

SMITH RIVER CHINOOK STUDY

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In the fall of 1980, a chinook salmon spawning escapement study was started on the West Branch Mill Creek, a major fall chinook salmon (*Oncorhynchus tshawytscha*) spawning tributary of the Smith River, Del Norte County, California. The purpose of the study was to determine the relative abundance of spawning fall chinook salmon in a defined study section over a 20-year period as habitat changes occur. The reason for implementing this research was the lack of any historic long-term spawning escapement estimate for the Smith River system.

The 1.7 mile (river miles) study section is located on private land owned by the Stimson Lumber Company. The private land is adjacent to the California State Park and Redwood National Park on the north and south boundaries. At the inception of the study in 1980, the West Branch Mill Creek watershed encompassed mostly uncut old growth redwood stands. From 1986 through 1994, small sections of old growth redwoods have been clear cut each year.

The long-term monitoring of the chinook salmon spawning population over a 20-year period may reflect some of the present habitat changes in the system. However, there have also been severe long-term drought effects and poor ocean habitat conditions during this same study period that are fluctuating chinook adult returns. The following database has been established within the defined study section during the past sampling years.

The continuation of the research project will provide a long-term database to guide fishery managers on the Smith River system. The designation of the Smith River as a National Recreational Area in 1991 created a situation for in-river fishing regulations that help protect this unique and pristine watershed. Without long-term fishery data, unwise management decisions may be made.

West Branch Mill Creek (Smith River): Spawning Surveys

Year	# Adult Chinook	% Hatchery Fish	Coho Salmon	Chum Salmon
1980	128	-	11	0
1981	107	17	2	0
1982	155	18	4	0
1983	110	21	3	0
1984	111	37	6	4
1985	185	3	28	2
1986	180	4	11	8
1987	153	0	27	1
1988	249	4	5	5
1989	57	4	13	0
1990	31	0	2	0
1991	93	3	7	0
1992	144	0	7	0
1993	95	0	22	0
1994	148	2	9	0
1995	170	0	21	2
1996	112	0	11	1
1997	162	0	3	0
1998	150	1	3	1
1999	118	0	8	0