

Appendix 5. Female chinook salmon pre-spawning mortality rates observed during mainstem Trinity River spawner surveys from 1942 through 1989.

Study year	Reference	Spring-run chinook			Fall-run chinook			Total chinook		
		Spawned	Unspawned	Percent unspawned	Spawned	Unspawned	Percent unspawned	Spawned	Unspawned	Percent unspawned
1942-1945 a/	Moffett/Smith (1950)									
1955 b/	Gibbs (1956)						2,076	32	1.5	
1956 b/	Weber (1965)						3,438	219	6.0	
1963 b/	LaFaunce (1965)						4,953	328	6.2	
1968 b/	Rogers (1970)						1,494	124	7.7	
1969 b/	Smith (1975)						1,889	23	1.2	
1970 b/	Rogers (1973)						632	34	5.1	
1971 a/	" (1982)									
1972 b/	Miller (1972)						791	110	12.2	
1973 b/ c/	" (1973)								12.0	
1974 b/ c/	" (1974)								9.1	
1976 b/ c/	" (1976)								8.4	
1978 b/ c/	" (1978)								7.2	
1979 b/ c/	" (1979)								6.0	
1980 b/ c/	" (1980)								36.5	
1981 b/ c/	" (1981)								2.6	
1982 b/ c/	" (1982)								1.5	
1984 a/	" (1984)									
1985 a/	" (1985)									
1987 b/	Stempel (1 988)			49.9			18.8			30.8
1988	Zuspan (1991a)	11	27	71.1	479	372	43.7	490	399	44.9
1989	Current study	194	327	62.8	1,546	464	23.1	1,740	791	31.3

a/ Pre-spawning mortality rate was not reported during these years.

b/ Spring-run and fall-run chinook salmon were not separated during these years.

c/ Overall pre-spawning mortality rates were reported but not individual counts.