

Appendix D. Escapements and numbers of redds of summer/fall chinook salmon counted during aerial surveys on tributaries of the upper mid-Columbia River, Washington, 1963-1993. Aerial counts were expanded by multiplying them by a mean adjustment factor (bias), which is the aerial counts to ground counts, calculated from the 1987 to 1993 surveys. Escapement to the tributaries (ET) is total numbers of redds times 3.1 fish/redd. Wells count (WC) is the number of salmon passing over Wells Dam less Indian harvest. ET/WC is the quotient of escapement to the tributaries to counts at Wells Dam.

Year	Methow redds (x1.46)	Okanogan redds (x1.22)	Similkameen redds (x1.63)	Total number of redds	Escapement to the tribs (ET)	Wells Dam count (WC)	ET/WC
1963	441	11	28	480	1488		
1964	1177	137	83	1397	4331		
1965	832	133	109	1074	3329		
1966	1887	475	251	2613	8100		
1967	1085	182	126	1393	4318	14798	0.29
1968	975	283	174	1432	4439	11107	0.40
1969	487	126	135	748	2319	5337	0.25
1970	1043	800	582	2425	7518	11953	0.63
1971	832	378	342	1552	4811	7580	0.63
1972	481	222	90	793	2458	6122	0.40
1973	542	168	104	814	2523	7264	0.35
1974	330	138	212	680	2108	5243	0.40
1975	639	333	328	1300	4030	11890	0.34
1976	283	131	300	714	2213	11306	0.20
1977	540	337	227	1104	3422	10349	0.33
1978	750	238	437	1425	4418	7317	0.60
1979	921	211	225	1357	4207	10750	0.39

Appendix D. Concluded.

Year	Methow redds (x1.48)	Okanogan redds (x1.22)	Similkameen redds (x1.63)	Total number of redd	Escapem int to the tribs(ETI)	Wells Dam count (WC)	ET/WC
1980	511	144	280	935	289E	5205	0.56
1981	289	67	197	553	171E	4630	0.37
1982	210	28	96	334	103E	5111	0.20
1983	96	44	93	233	72E	3530	0.20
1984	240	287	491	1018	315E	7414	0.42
1985	243	168	504	915	283E	6073	0.47
1986	250	240	489	979	303E	4354	0.70
1987	312	245	267	824	255E	5855	0.44
1988	182	138	311	631	195E	4338	0.45
1989	186	163	370	719	222E	4408	0.51
1990	409	107	147	663	205E	3673	0.56
1991	153	64	91	308	95E	2423	0.39
1992	107	53	57	217	67E	3150	0.21
1993 <i>low-#s</i>	154	182	288	604	187E	4621	0.41
1994	300	300	777	1377			

*Current
20 years
of
data*

777

11550

B.W.
3 Pgs

**SUMMER/FALL CHINOOK SALMON
SPAWNING GROUND SURVEY IN THE
METHOW AND OKANOGAN RIVER BASINS,
1993**

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QL
639.2
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1993
partial

March 1994