Table 19

EFFECT OF RESERVOIR REGULATION ON FLOOD PEAKS AND DAMAGES
Columbia River Basin

Water Year	Max Annual Mean Daily Peak[1] The Dalles (kcfs)		Damages Prevented ($1 million)		Water Year	Max Annual Mean Daily Peak[1] The Dalles (kcfs)		Damages Prevented ($1 million)	
	Unreg	Obs	Lwr Col[2]	Col Bsn[3]		Unreg	Obs	Lwr Col[2]	Col Bsn[3]
1948	1010	1010	*	*	1976	637	419	15.65	43.08
1949	660	624	0.67	*	1977	276	183	0.00	0.00
1950	823	744	9.80	*	1978	565	313	6.00	30.61[4]
					1979	482	306	1.50	4.65
1951	672	602	0.80	*	1980	544	341	5.16	15.26R
1952	579	561	0.34	*					
1953	672	612	1.18	*	1981	579	436	10.91	45.26R
1954	590	560	0.26	*	1982	759	422	15.22	78.62
1955	614	551	0.62	*	1983	732	400	18.48	131.00R
					1984	628	376	10.71	107.29
1956	940	823	25.00	37.67	1985	550	274	10.45	23.46
1957	820	705	6.60	11.11					
1958	735	593	3.55	7.83	1986	719	388R	0.24R	72.06R
1959	642	555	0.88	2.6	1987	439	284	0.00	9.09
1960	493	470	0.08	0.58	1988	342	236	0.00	2.74
					1989	512	312	6.30	37.10
1961	789	699	6.50	7.7	1990	511	372	1.66	15.75
1962	503	460	0.09	1.79					
1963	481	437	0.03	0.65	1991	568	348	2.64	101.16
1964	764	662	7.60	22.91	1992	328	232	0.00	0.71
1965	669	520	1.44	7.18	1993	602	382R	0.00R	81.37
					1994	381	224	0.00	11.74
1966	455	396	0.00	0.43	1995	552	296	0.03	61.54
1967	781	622	14.21	20.80					
1968	533	404	0.26	1.07	1996	719	456	4.32R	227.03R
1969	628	449	2.61	5.51	1997	898	571	48.33	378.64
1970	634	429	1.16	6.34	1998	617	442	1.44	88.09
					1999	715	379	0.17	95.97
1971	740	557	8.49	25.76					
1972	1053	618	213.10	260.49					
1973	402	221	0.00	0.52					
1974	1010	590	239.73	306.36					
1975	669	423	9.41	40.97					

[1] Observed discharges are preliminary values calculated from project data.   [2] Damages are for the Columbia River below McNary Dam. [Dollar values are for the year of the flood. Willamette excluded.]   [3] Totals are damages prevented by major projects above The Dalles during the spring and summer runoff. Damages prevented in Canada and/or by levees and channel improvements are not included.   [4] Damages are based on the flood of December 1977.   R Revised