Appendix E: Coho Juvenile Capacity Estimates for Select Methow River Tributaries

Capacity estimates were determined from EDT (Mobrand 1997) and Zillges (1977)

Capacity estimates formed the basis for NPIP release numbers (maximum value)

Stream Name	RKm	Est Smolt Capacity	Mean egg-emigrant survival [1]	Fecundity[2]	Pre-spawn Mortality Rate	Females	Sex Ratio	Adult Escapement to seed habitat	Adjusted Adult Escapement	Smolt to adult hatchery survival rate[5]	Max NPIP Release Number
Chewuch River	0.0-19.11	127,269	0.094	2600	0.1	579	0.43	1346	1346	0.004	336,396
Total for Chewuch River		**127,269**				**579**			**1346**		**336,396**
Early Winters Creek	0.0-3.06	13,763	0.094	2600	0.1	63	0.43	146	146	0.004	36,378
Total for Early Winters Creek		**13,763**				**63**			**146**		**36,378**
Gold Creek	0.0-5.3	14,946	0.0964	2600	0.1	66	0.43	154	154	0.004	38,522
Total for Gold Creek		**14,946**				**66**			**154**		**38,522**
Lost River	0.0-8.68	26,118	0.094	2600	0.1	119	0.43	276	276	0.004	69,035
Total for Lost River		**26,118**				**119**			**276**		**69,035**
Methow River	0.0-64.7	195,278	0.094	2600	0.1	888	0.43	2065	2065	0.004	516,156
Total for Methow River		**195,278**				**888**			**2065**		**516,156**
Twisp River	0.0-8.52	98,509	0.094	2600	0.1	448	0.43	1042	1042	0.004	260,378
Total for Twisp River		**98,509**				**448**			**1042**		**260,378**
Wolf Creek	0.0-2.41	10,592	0.094	2600	0.1	48	0.43	112	112	0.004	27,995
Total for Wolf Creek		**10,592**				**48**			**112**		**27,995**
Beaver Creek	0.0-14.15	16,718	0.0964	2600	0.1	74	0.43	172	172	0.004	43,089
		16,718				**74**			**172**		**43,089**
Methow River Est. Coho Carry Capacity (smolt)		**503,193**									
Spawning Escapement		**5,312**									

[2] Mean fecundity for Bys 2000-2003

[3] Sex ratio for coho observed at Dryden Dam for Brood years 2000-2003

[4] Hatchery domestication factor to adjust for potentially lower spawning success of domesticated coho stocks used in the reintroduction effort

[5] Smolt to Adult survival rate for 2003 return (2000 BY), may need to be adjusted as more data is collected, broodstock development progresses, or ocean conditions change.

Appendix E: Coho Juvenile Capacity Estimates for Select Wenatchee River Tributaries

Capacity estimates were determined from EDT (Mobrand 1997) and Zillges (1977)

Capacity estimates formed the basis for NPIP release numbers (maximum value)

Stream Name	Estimated Smolt Capacity	Mean egg-emigrant survival [1]	Fecundity[2]	Pre-spawn Mortality Rate	Females	Sex Ratio	Adult Escapement to seed habitat	Smolt to adult hatchery survival rate[5]	0% Nat. Prod. Returns
Nason Ck.	59,067	0.094	2600	0.1	269	0.43	625	0.004	156,125
Total for Nason Creek	**59,067**				**269**				**156,125**
Chiwawa	125,341	0.094	2600	0.1	570	0.43	1325	0.004	331,300
Total for Chiwawa River	**125,341**				**570**				**331,300**
Little Wenatchee	35,459	0.0964	2600	0.1	157	0.43	366	0.004	91,391
Total for Little Wenatchee	**35,459**				**157**				**91,391**
White River	59,730	0.094	2600	0.1	272	0.43	632	0.004	157,878
Total for White River	**59,730**				**272**				**157,878**
Icicle Creek not blocked at hatchery	11,726	0.094	2600	0.1	53	0.43	124	0.004	30,994
Total for Icicle Creek	**11,726**				**53**				**30,994**
Peshastin Creek	27,761	0.094	2600	0.1	126	0.43	294	0.004	73,378
Total	**27,761**				**126**				**73,378**
Mission Creek	22,907	0.094	2600	0.1	104	0.43	242	0.004	60,547
Total	**22,907**				**104**				**60,547**
Wenatchee River	44,500	0.0964	2600	0.1	197	0.43	459	0.004	114,693
Total	**44,500**				**197**				**114,693**

Wen. River Est. Coho Carry Capacity (smolt)	**386,491**
Spawning Escapement: Females	**1,748**
Spawning Escapement: Total	**4,065**

[2] Mean fecundity for Bys 2000-2003

[3] Sex ratio for coho observed at Dryden Dam for Brood years 2000-2003

[4] Hatchery domestication factor to adjust for potentially lower spawning success of domesticated coho stocks used in the reintroduction effort

[5] Smolt to Adult survival rate for 2003 return (2000 BY), may need to be adjusted as more data is collected, broodstock development progresses, or ocean conditions change.

Appendix E: NPIP Smolt release numbers needed for spawning escapement and continued hatchery supplementation

Location	Hatchery Release to reach capacity	Broodstock No. for release size to seed habitat	Total Run Size (escp + broodstock)	Release Size needed for Total Return
Chewuch River	**336,396**	425	1771	590,182
Early Winters	**36,378**	46	191	63,823
Gold Creek	**38,522**	49	203	67,583
Lost River	**69,035**	87	363	121,116
Methow River	**516,156**	652	2717	905,558
Twisp River	**260,378**	329	1370	456,813
Wolf Creek	**27,995**	35	147	49,116
Beaver Creek	**43,089**	54	227	75,596

Location	Hatchery Release to achieve carry capacity goals	Broodstock No. for release size to seed habitat	Total Run Size to Nason Creek (escp + broodstock)	Release Size needed for Total Return to Nason Ck*
Nason Creek	**156,125**	197	822	205,432
Chiwawa River	**331,300**	419	1744	435,931
Little Wenatchee River	**91,391**	115	481	120,255
White River	**157,878**	199	831	207,738
Icicle Creek	**30,994**	39	163	40,783
Peshastin Creek	**73,378**	93	386	96,552
Mission Creek	**60,547**	76	319	79,670
Wenatchee River	**114,693**	145	604	150,916