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JOINT CHINOOK TECHNICAL COMMITTEE REPORT

2017 Exploitation Rate Analysis and Model Calibration
Volume Two: Appendix Supplement

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Note: Product names used in this publication are included for completeness but do not constitute product endorsement.

**APPENDIX A: RELATIONSHIP BETWEEN EXPLOITATION RATE INDICATOR STOCKS,
ESCAPEMENT INDICATOR STOCKS, MODEL STOCKS, AND ADDITIONAL
MANAGEMENT ACTION STOCKS IDENTIFIED IN THE PACIFIC SALMON TREATY
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Appendix A1– Indicator stocks for Transboundary Rivers, Southeast Alaska, Northern BC, and WCVI.

Region	Run ¹	Attachment					Annex Stock Group	Annex Indicators	Escapement Indicator (CTC Goal)	Exploitation Rate Indicator/Acronym		Smolt Age	Model Stock (Model Esc) /Acronym	
		I	II	III	IV	V								
Yakutat	Sp						"SEAK fisheries will be managed to achieve escapement objectives for Southeast Alaska and Transboundary River Chinook stocks."	Situk (500-1000)						
TBR								Taku (19000-36000)	Taku	TAK	1			
								Stikine (14K-28K)	Stikine	STI	1			
								Elsek (3500-5300)						
SEAK Inside									AK Hatcheries ²	AKS	1	Alaska SE (9,110)	AKS	
									Chilkat (1750-3500)	Chilkat (N Inside)	CHK	1		
									Unuk (1800-3800)	Unuk (S Inside)	UNU	1		
							Chickamin (450-900)							
NBC Area 1	S						North/Central British Columbia	Yakoun	Yakoun	Kitsumkalum (Deep Cr H)	KLM	1	North/Central BC (117,500)	NTH
NBC Area 3								Nass	Nass					
NBC Area 4								Skeena	Skeena					
CBC Area 8		Sp							Atnarko	Atnarko (Snootli H)	ATN	0		
CBC Area 9	Sp/F							Rivers Inlet						
WCVI	F						West Coast Vancouver Island Falls	Artlish	WCVI Aggregate	Robertson Cr H	RBT	0	WCVI Natural ³ (42,734)	RBT
								Burman						
								Gold						
								Kaouk						
								Tahsis						
								Tashish						
								Marble						
											WCVI H (6,472)	RBH		

¹Sp=Spring, S=Summer, F=Fall

² Little Port Walter, Neets Bay, Whitman Lake, Deer Mountain, Crystal Lake

³The WCVI Natural model stock is the WCVI Hatchery indicator adjusted for differential terminal fishery impacts.

Appendix A2– Indicator stocks for Fraser River and Strait of Georgia.

Region	Run ¹	Attachment					Annex Stock Group	Annex Indicators	Escapement Indicator (CTC Goal)	Exploitation Rate Indicator/Acronym		Smolt Age	Model Stock (Model Esc) /Acronym					
		I	II	III	IV	V												
Fraser River	Sp	■	■	■	■	■	Fraser Early ²	Fraser Sp 1.2	Nicola (Spius Cr H)	NIC	1	Fraser Early (93,700)	FRE					
								Fraser Sp 1.3	Dome (Penny Cr H)	DOM	1							
	Fraser S 0.3							Lower Shuswap (Shuswap Falls H)	SHU	0								
								Middle Shuswap (Shuswap Falls H)	MSH	0								
	S						Fraser S 1.3			1								
							F	■	■	■	■	Fraser Late	Harrison R	Harrison R (75,100-98,500)	Chilliwack H	CHI	0	Fraser Late (75,100)
Harrison (Chehalis H)	HAR																	
Upper Strait of Georgia	F	■	■	■	■	Upper Strait of Georgia	Upper Strait of Georgia	Klinaklini	Quinsam H	QUI	0	Upper Strait of Georgia (23,300)	GSQ					
								Kakwiekan										
								Wakeman										
								Kingcome										
								Nimpkish										
Lower Strait of Georgia	F	■	■	■	■	Lower Strait of Georgia	Lower Strait of Georgia	Cowichan	Lower Strait of Georgia (6500)	COW	0	LGS Natural (21,935)	GST					
								Nanaimo						NAN	0			
	S						■	■	■	■	■	Lower Strait of Georgia		Big Qualicum H	BQR	0	LGS Hatchery (5,318)	GSH
														Puntledge H	PPS	0		

¹Sp=Spring, S=Summer, F=Fall

²The three annex indicators for Fraser Early have been split into four escapement indicators representing life history types rather than geographic areas.

³Production and tagging discontinued.

Appendix A3– Indicator stocks for Puget Sound.

Region	Run ¹	Attachment					Annex Stock Group	Annex Indicators	Escapement Indicator	Exploitation Rate Indicator/Acronym		Smolt Age	Model Stock (Esc.) /Acronym	
		I	II	III	IV	V								
N Puget Sound	Sp						N Puget Sound Natural Springs	Nooksack	Nooksack	Nooksack Sp Fing. (Kendall Cr H)	NSF	0	Nooksack Spring (4000)	NKS
										Nooksack Sp Year. (Kendall Cr H)	NKS	1		
								Skagit ²	Skagit ²	Skagit Sp Fing. (Marblemount H)	SKF	0		
										Skagit Sp Year. (Marblemount H)	SKS	1		
		S/F							Samish H. F Fingerling.	SAM	0	Nooksack Fall (11923)	NKF	
		S					Puget Sound Natural Summer/Falls	Skagit ²	Skagit ²	Skagit S Fingerling (Marblemount H)	SSF	0	Skagit (9778)	SKG
		F						Stillaguamish ²	Stillaguamish ²	Stillaguamish Tribal H F Fing.	STL	0	Stillaguamish (2000)	STL
		S						Snohomish ²	Snohomish ²	Skykomish Fing. (Wallace H)	SKY	0	Snohomish (5250)	SNO
						Lk Washington Green		Lk Washington Green				PS Natural Fing. (16966)	PSN	
Central PS														
Hood Canal									George Adams H Fall Fingerling	GAD	0	PS Hatchery Fingerling ³ (24769)	PSF	
S Puget Sd	F									S PS F Fingerling ³	SPS ³	0	Puget Sound Hatchery Yearling (9136)	PSY
										S PS F Yearling (Tumwater H)	SPY	1		
										Squaxin Pens F Yearling	SQP			
										UW Accelerated ⁴	UWA			
		Sp								White R H Sp Yr.	WRY	1		
	F								Nisqually F Fing. (Clear Cr H)	NIS	0			

¹Sp=Spring, S=Summer, F=Fall

²Management objective designated as exploitation rate, rather than escapement.

³SPS is aggregate from Soos Creek (Green R), Grovers, and Issaquah hatcheries. The Soos Creek (GRN tag group) are included in the SPS ER indicator.

⁴Production and tagging discontinued.

Appendix A5– Indicator stocks for Columbia River and Oregon Coast.

Region	Run ¹	Attachment					Annex Stock Group	Annex Indicators	Escapement Indicator (CTC Goal)	Exploitation Rate Indicator/Acronym		Smolt Age	Model Stock (Model Esc) /Acronym					
		I	II	III	IV	V												
Columbia River	Sp												Cowlitz Sp H (2500)	CWS				
										Willamette Spring (H Complex)	WSH	1	Willamette R H (13500)	WSH				
								Columbia Upriver Sp										
	S						Columbia River Summers	Mid-Columbia Summers	Mid-Columbia Summers (12143)	Columbia Summers (Wells H)	SUM	0/1	Columbia R Summers (17857)	SUM				
	F							Columbia River Falls		Upriver Brights	Upriver Brights (40000)	Columbia Upriver Brights (Priest Rapids H)	URB	0	Columbia Upriver Brights (40000)	URB		
			Hanford Wild	HAN	0													
													Mid-Columbia Brights	MCB	0	Mid-Col. Brights (12500)	MCB	
													Lyons Ferry Fingerling	LYF	0	Lyons Ferry H (3430)	LYF	
													Lyons Ferry Year.	LYY	1			
												Deschutes	Deschutes (4532)					
												Lewis	Lewis (5700)	Lewis R Wild	LRW	0	Lewis R (5700)	LRW
														Cowlitz H Fall Tule	CWF	0	Cowlitz H (8800)	CWF
										Spring Creek NFH	SPR	0	Spring Cr (7000)	SPR				
										Lower River H (Big Creek H)	LRH	0	Bonneville H (26200)	BON				
N Oregon Coast	F						Far North Migrating OR Coastal Falls	Nehalem	Nehalem (6989)	Salmon R Hatchery	SRH	0	Salmon R (62382)	SRH				
		Siletz	Siletz (2944)															
		Siuslaw	Siuslaw (12925)															
Mid-OR Coast									South Umpqua	Elk River Hatchery	ELK	0						
							Coquille											

¹Sp=Spring, S=Summer, F=Fall

APPENDIX B: ISBM INDICES

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Appendix B1–ISBM Indices for all British Columbia ISBM fisheries based on CWT-based exploitation rate analysis (1999-2016). The stock groups correspond to Annex 4, Chapter 3, Attachment IV of the 2009 PST Agreement.

Stock Group	Stock (CTC agreed goal year)	Base Per. Data ¹	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
North/Central B.C.	Yakoun, Nass, Skeena, Atmarko, Dean (no goal)	-	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
WCVI Falls	Artlish, Burman, Kauok, Tahsis, Tashish, Marble, Gold (no goal)	16	0.707	0.126	0.100	0.396	0.459	0.558	0.287	0.433	0.493	0.523	0.489	0.207	0.635	0.619	0.328	0.290	0.653	0.392
L. Georgia Strait	Cowichan (2005)	0	0.475	0.25	0.376	0.537	0.386	0.265	0.184	0.275	0.271	0.372	0.461	0.372	0.182	0.412	0.375	0.436	0.269	0.319
	Nanaimo (no goal)	0	0.163	0.154	0.260	0.247	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
U. Georgia Strait	Klinaklini, Kakweikan, Wakeman, Kingcome, Nimpkish (no goal)	16	0.243	0.102	0.053	0.125	0.073	0.115	0.211	0.121	0.185	0.087	0.202	0.372	0.092	0.142	0.070	0.047	0.190	0.209
Fraser Late	Harrison (2001)	0	0.137	0.066	0.123	0.054	0.038	0.053	0.085	0.076	0.037	0.053	0.06	0.107	0.091	0.132	0.149	0.274	0.168	0.167
Fraser Early (spring & summers)	Upper Fraser, Mid-Fraser, Thompson	-	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
Puget Sound Spring	Nooksack (no goal) ¹	0	0.034	0.089	0.042	0.02	0.06	0.059	0.109	0.068	0.06	0.122	0.148	0.029	0.135	0.057	0.059	0.084	0.059	NC
	Skagit (no goal)	-	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Puget Sound Falls	Skagit (no goal)	-	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Stillaguamish (no goal) ²	1	0.135	0.088	0.124	NC	NC	0.079	0.068	0.135	0.252	0.121	0.22	0.147	0.21	0.257	0.2	0.588	0.682	NC
	Snohomish (no goal)	-	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Lake Wash. (no goal)	-	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Green River (no goal) ²	9	0.185	0.109	0.188	0.298	0.223	0.197	0.274	0.185	0.142	0.158	0.270	0.130	0.261	0.300	0.277	0.406	0.970	NC

Key: Cases wherein the fishery met the obligation are colored in green whereas cases where the obligation was exceeded are colored in red. Cells are not colored in cases where a stock-year ISBM statistic cannot be calculated. The ISBM performance metrics reflect the combination of presence of an escapement goal and if so, whether or not it was met, and the CWT-based evaluation of exploitation rate as compared to the base years.

Note: NA means not available because of insufficient data (lack of stock specific tag codes, base period CWT recoveries, etc.). NC means not yet calculated.

¹This column contains the percentage of the maximum possible age-year combinations available for calculating the 1979–1982 base period average total mortality (landed catch and incidental mortality) which is the denominator of the postseason ISBM index. The base period average total mortality is based on data contributed from four possible age classes in each year of 4 possible base period years for a total of 16 possible age-year combinations. In practice, the postseason ISBM index is calculated for a CWT indicator stock when fewer than the maximum number of age-year combinations with data are available (<16). When actual CWT data are not available for the majority of ages in all of the base period years (0–1), the base period average is calculated from values found in the PSC Chinook Model’s STK input file for the Model stock corresponding to the CWT indicator stock; in these cases, the ISBM index should be interpreted judiciously (see TCChinook (11)-04 for details).

- ² An inconsistency was discovered between the approaches used to calculate the model-based and CWT-based indices. The former included harvest rates for terminal sport while the latter did not. Terminal sport harvest rates are now included in the calculation of both indices starting 2003. Further review is yet required to determine whether the base period terminal sport harvest rates obtained from analyses of Big Qualicum CWT recoveries adequately represent impacts that would have occurred on Cowichan Chinook salmon.
- ³ Indices for the Nanaimo stock are calculated from CWT recoveries for Cowichan; differences between Nanaimo and Cowichan stock indices are due to differences in terminal harvest.
- ⁴ Several problems have been identified in the approach previously used to calculate the CWT-based indices for Nanaimo Chinook salmon; indices for this stock will not be reported starting 2003 as their utility is questionable.
- ⁵ Stock or stock group with an agreed CTC escapement goal.
- ⁶ The terminal sport harvest rates for Chilliwack Hatchery Chinook salmon, the indicator stock, were removed from the calculation for the Harrison River naturals starting 2003 because sport harvest has been essentially zero on the natural population.
- ⁷ An error was detected in the Nooksack ISBM index estimate for 2011 as reported in TCChinook (14)-01; the corrected value appears here.
- ⁸ A review of the approach used to calculate both the CWT-based and model data-based indices for the WCVI naturals was carried out in 2008. A similar approach was adopted for both indices but due to modifications to the formerly used procedures, the historical time series of values was updated starting 2003.

Appendix B2–ISBM Indices for all southern US fisheries based on CWT-based exploitation rate analysis (1999–2016). The stock groups correspond to Annex 4, Chapter 3, and Attachment V of the 2009 PST Agreement.

Stock Group	Stock (CTC agreed goal in year)	Base Per. Data ¹	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	
Fraser Late	Harrison (2001)	0	0.662	0.210	0.384	0.369	0.348	0.473	0.360	0.398	0.147	0.467	0.134	0.295	0.285	0.351	0.441	0.379	0.255	0.212	
Puget Sound Spring	Nooksack (no goal)	0	0.257	0.117	0.328	0.225	0.443	0.434	0.476	0.812	0.935	1.482	0.585	0.758	0.890	1.866	0.872	1.298	0.547	NC	
	Skagit (no goal)	-	NA	NA	NA	1.120	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Puget Sound Fall	Skagit (no goal)	-	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
	Stillaguamish (no goal)	1	0.107	0.074	0.612	NC	NC	0.047	0.240	0.132	0.133	0.411	0.219	0.198	0.218	0.170	0.299	1.211	0.765	NC	
	Snohomish (no goal)	-	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Lake Wash. (no goal)	-	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Green (no goal)	9	0.276	0.322	0.460	0.542	0.581	0.720	0.353	0.518	0.656	0.536	0.483	0.285	0.408	0.514	0.299	0.400	0.598	NC	
WA Coast Falls	Hoko (no goal)	-	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Grays (2014)	10	0.332	0.796	1.090	0.534	0.229	0.518	0.270	0.514	0.651	0.311	0.692	0.619	0.740	0.939	0.771	0.760	0.895	NC	
	Queets (2004)	10	0.180	0.052	0.459	0.524	0.275	0.256	0.421	0.465	0.684	0.544	0.545	0.522	0.530	0.801	0.706	0.437	0.427	NC	
	Hoh (2004)	10	1.487	1.344	1.546	0.974	1.306	1.194	0.973	1.508	1.588	0.956	1.011	0.828	1.754	1.590	2.598	1.254	1.359	NC	
	Quillayute (2004)	10	1.206	0.844	1.235	1.448	0.908	1.539	0.973	1.091	1.136	1.205	1.835	1.361	1.692	1.957	1.762	2.597	2.094	NC	
Columbia Fall	Brights (2002)	15	1.397	2.303	1.458	1.737	1.574	1.651	1.730	2.903	3.163	1.823	2.668	1.669	2.616	2.713	2.227	1.931	1.541	NC	
	Deschutes (2010)	0	0.453	0.569	0.417	0.590	0.495	0.631	0.637	0.553	0.599	0.652	0.821	0.696	0.768	0.775	0.796	0.758	0.685	NC	
	Lewis (1999)	9	0.045	0.333	0.333	0.312	0.533	0.183	0.745	1.288	0.663	0.551	0.217	0.554	1.374	0.870	1.106	0.793	0.472	NC	
Columbia Summers	Summers (1999)	9	1.390	0.987	3.550	4.851	7.887	4.784	12.064	5.802	10.331	6.206	5.230	6.958	12.439	7.888	8.717	13.993	10.374	NC	
N. Oregon Coast	Nehalem (1999)	13	2.103	1.600	3.447	2.330	2.305	3.342	2.271	3.838	1.195	1.835	0.234	1.950	1.861	1.690	2.525	3.668	3.759	NC	
	Siletz (1999)	13	1.879	1.252	1.294	1.193	1.708	4.123	1.684	2.040	1.037	1.068	0.871	0.372	1.719	1.178	2.076	1.570	2.681	NC	
	Siuslaw (1999)	13	1.611	2.721	2.019	1.972	1.876	1.771	1.395	2.429	2.506	1.882	1.869	1.773	2.646	1.830	2.831	2.132	3.099	NC	

Key: Cases wherein the fishery met the obligation are colored in green whereas cases where the obligation was exceeded are colored in red. Cells are not colored in cases where a stock-year ISBM statistic cannot be calculated. The ISBM performance metrics reflect the combination of presence of an escapement goal and if so, whether or not it was met, and the CWT-based evaluation of exploitation rate as compared to the base years.

Note: NA means not available because of insufficient data (lack of stock specific tag codes, base period CWT recoveries, etc.). NC means not yet calculated.

¹ This column contains the percentage of the maximum possible age-year combinations available for calculating the 1979–1982 base period average total mortality (landed catch and incidental mortality) which is the denominator of the postseason ISBM index. The base period average total mortality is based on data contributed from four possible age classes in each year of 4 possible base period years for a total of 16 possible age-year combinations. In practice, the postseason ISBM index is calculated for a CWT indicator stock when fewer than the maximum number of age-year combinations with data are available (<16). When actual CWT data are not available for the majority of ages in all of the base period years (0–1), the base period average is calculated from values found in the PSC Chinook Model’s STK input file for the Model stock corresponding to the CWT indicator stock; in these cases, the ISBM index should be interpreted judiciously (see TCChinook (11)-04 for details).

² Stock or stock group with an agreed CTC escapement goal.

APPENDIX C: PERCENT DISTRIBUTION OF LANDED CATCH AND TOTAL MORTALITY AMONG FISHERIES AND ESCAPEMENT FOR EXPLOITATION RATE INDICATOR STOCKS BY CALENDAR YEAR WITH ANALOGOUS MODEL STOCKS LISTED IN PARENTHESES

Mortality distribution tables show the percent of estimated landed catch or total mortality for individual stocks attributed to specific fisheries. Landed catch mortalities are calculated from catch estimation and CWT sampling programs. Total mortality includes landed catch and incidental mortality (i.e., release mortality) which occurs in both retention and nonretention fisheries; incidental mortalities are estimated based on sampling data and/or internal algorithms (i.e., size-at-age vulnerability algorithms and gear-specific mortality rates). Mortality distribution within a calendar year sums to 100%.

Minimum criteria for reporting of distributions were applied to each calendar year and data that did not meet the minimum criteria (at least 3 ages and 105 estimated CWT recoveries) were either omitted or shaded. If only 1 age class was present in a calendar year, data from that year were omitted. If 2 age classes or less than 105 estimated CWTs were present in a calendar year, data from that year were shaded, but excluded from the calculation of the time period averages found at the bottom rows of the table. Where relevant, escapement includes interdam loss mortalities (i.e. Columbia River stocks).

Note that substantive changes have been made to the format of mortality distribution tables from previous reports (i.e., TCChinook (15)-1 V. 2). These changes include:

1. CWT database. A large number of changes have been made to the CWT database. The terminal fishery strays category was removed. These recoveries are now associated to the terminal fishery in which they occurred. A new freshwater fishery was created for Canadian terminal fishery impacts on the Taku and Stikine stocks.
2. Definition of strays. The Strays column in the mortality distribution layout was moved under escapement. Previously, strays included both escapement and terminal fisheries strays, but now it only includes escapement strays.
3. Revised table layout for AABM, ISBM, and terminal fisheries. The terminal fishery columns have been separated from the ISBM designation and by country. Impacts occurring in US and Canadian terminal fisheries include both marine and freshwater impacts. For the transboundary stocks (Taku and Stikine), the terminal fisheries (both US and Canada) are those under specific management provisions covered under Chapter 1. For all stocks, fishery impacts occurring in southern US terminal fisheries include freshwater impacts covered under the ISBM management framework. A small number of estimated recoveries of non-Alaskan hatchery stocks have occurred in Alaskan terminal fisheries and these recoveries are covered under the AABM management framework. For all stocks, fishery impacts occurring under Canadian terminal fisheries include freshwater impacts covered under the ISBM management framework for all CWT indicator stocks.
4. New organization for Canadian ISBM fisheries. These are now presented by gear type in two regional groupings (southern BC and north/central BC).
5. New fishery. A new column for Washington Coast Net was included. Previous reports had placed Washington Coast Net as part of Puget Sound Net.

6. New stock. Tables for the Phillips River Fall CWT indicator stock have been included for the first time.
7. To conserve space the 1979–1984 average is provided in lieu of annual data prior to 1985. These annual data are available in Appendix C of previous reports (i.e., TCChinook (15)-1 V. 2).

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Catch Year	Est # of CWT	Ages	AABM Fishery									ISBM Fishery											Terminal Fishery									Escapement			
			SEAK			NBC			WCVI			NBC & CBC			Southern BC			N Falcon		S Falcon		WAC	Puget Sd			SEAK			Canada		Southern US			Stray	Esc.
			T	N	S	T	S		T	S		T	N	S	T	S	T	S	N	N	S	T	N	S	N	S	T	N	S						
79-84	5687		33.5	2.7	8.9	1.1	0.0	0.0	0.0	0.0	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	47.8		
1985	19034	3,4,5,6	28.3	10.3	9.4	1.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	45.6			
1986	19610	3,4,5,6	26.5	11.9	9.2	0.6	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	45.1				
1987	18800	3,4,5,6	33.8	4.9	5.8	0.4	0.0	0.0	0.0	0.0	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	45.9				
1988	17182	3,4,5,6	31.3	4.8	8.6	1.2	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	44.9				
1989	14248	3,4,5,6	23.3	15.2	6.4	0.6	0.1	0.0	0.0	0.0	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.8	41.5				
1990	17196	3,4,5,6	36.5	6.2	7.4	2.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	34.6					
1991	15883	3,4,5,6	37.2	6.2	8.2	0.6	0.2	0.0	0.0	0.0	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	33.8					
1992	10188	3,4,5,6	18.9	32.0	6.6	0.4	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.4	30.1					
1993	6770	3,4,5,6	21.5	7.2	10.4	0.1	0.0	0.0	0.0	0.0	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0	46.1					
1994	8256	3,4,5,6	14.7	34.6	8.0	0.4	0.1	0.0	0.0	0.0	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.1	33.4					
1995	6909	3,4,5,6	28.5	7.8	8.9	0.3	0.3	0.0	0.0	0.0	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0	33.2					
1996	6838	3,4,5,6	24.3	5.9	11.7	0.1	0.0	0.0	0.0	0.0	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.6	32.3					
1997	6007	3,4,5,6	25.0	5.5	10.0	0.0	0.0	0.0	0.0	0.0	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	33.2					
1998	4229	3,4,5,6	25.8	10.3	7.8	0.0	1.3	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.2	30.3					
1999	6551	3,4,5,6	21.2	3.2	10.7	0.0	0.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.9	41.0						
2000	7048	3,4,5,6	24.0	3.9	6.8	0.0	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	44.5						
2001	7830	3,4,5,6	16.2	2.4	8.6	0.2	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	54.0						
2002	6829	3,4,5,6	12.2	2.2	9.2	1.2	0.6	0.1	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	58.3						
2003	6625	3,4,5,6	16.6	2.0	8.0	0.7	0.2	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	55.5						
2004	9742	3,4,5,6	16.9	6.5	8.5	0.5	0.5	0.0	0.0	0.0	0.1	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	52.8						
2005	9794	3,4,5,6	24.5	6.6	13.2	0.4	0.4	0.0	0.0	0.0	0.0	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	31.0						
2006	12093	3,4,5,6	33.1	4.4	8.8	0.7	0.1	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	38.2						
2007	11881	3,4,5,6	29.7	6.8	8.8	0.2	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.8	41.4						
2008	11104	3,4,5,6	19.9	4.2	6.0	0.0	0.3	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	50.9						
2009	8053	3,4,5,6	17.4	4.4	2.6	0.5	0.2	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.1	62.9						
2010	6133	3,4,5,6	18.1	4.6	7.2	0.2	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	56.9						
2011	6368	3,4,5,6	13.1	8.7	3.8	0.4	0.2	0.0	0.0	0.0	0.0	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.7	57.3							
2012	4027	3,4,5,6	26.9	9.6	4.1	0.5	0.3	0.0	0.0	0.0	0.0	1.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.1	35.6							
2013	6274	3,4,5,6	15.3	13.6	2.2	0.2	0.5	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.0	47.1							
2014	5181	3,4,5,6	24.8	8.1	2.5	0.4	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	53.6							
2015	6044	3,4,5,6	25.2	13.0	2.6	0.1	0.1	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.4	40.6							
2016	3944	3,4,5,6	26.9	8.3	3.4	0.4	0.6	0.0	0.0	0.0	0.0	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.9	38.2							
85-95	14007		27.3	12.8	8.1	0.7	0.1	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.9	39.5							
96-98	5691		25.0	7.3	9.8	0.0	0.4	0.0	0.0	0.0	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.1	31.9							
99-08	8950		21.4	4.2	8.8	0.4	0.4	0.0	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	46.8							
09-16	5753		21.0	8.8	3.6	0.3	0.3	0.0	0.0	0.0	0.0	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.9	49.0							

Appendix C2—Percent distribution of Atnarko River (North/Central BC) total fishing mortalities among fisheries and escapement.

Catch Year	Est # of CWT	Ages	AABM Fishery									ISBM Fishery											Terminal Fishery						Escapement							
			SEAK			NBC			WCVI			NBC & CBC			Southern BC			N Falcon		S Falcon		WAC	Puget Sd			SEAK			Canada		Southern US			Stray	Esc.	
			T	N	S	T	S	T	S	T	N	S	T	N	S	T	S	T	S	N	N	S	T	N	S	N	S	T	N	S						
79–84	NA		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
1985	NA		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
1986	NA		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
1987	NA		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
1988	5	2	Failed Criteria									-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1989	35	2,3	17.1	40.0	0.0	17.1	2.9	0.0	0.0	0.0	22.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
1990	144	2,3,4	20.1	3.5	0.0	2.1	0.7	0.7	0.0	4.9	14.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	50.7	
1991	784	2,3,4,5	6.8	0.0	0.0	1.3	1.1	0.4	0.0	0.4	19.9	0.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	62.9	
1992	968	2,3,4,5	9.0	0.0	0.0	1.9	1.9	0.3	0.0	5.4	17.9	1.9	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	56.2	
1993	1333	2,3,4,5	9.8	0.8	0.6	4.6	2.1	0.5	0.0	1.2	12.9	1.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	61.6	
1994	1691	2,3,4,5	7.5	0.2	0.2	1.5	1.8	0.0	0.0	2.6	18.1	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	64.5	
1995	2325	2,3,4,5	4.5	0.1	1.2	1.1	2.8	0.0	0.0	0.3	15.1	0.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	65.7	
1996	2071	2,3,4,5	2.6	0.0	0.5	0.2	0.6	0.0	0.0	0.0	11.1	1.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	72.9	
1997	1142	2,3,4,5	4.4	0.0	1.6	0.2	3.2	0.0	0.0	0.4	9.5	0.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	67.3	
1998	1070	2,3,4,5	7.3	0.0	0.4	0.0	4.9	0.0	0.0	0.0	13.0	1.1	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	59.7	
1999	1431	2,3,4,5	5.8	0.0	2.5	0.0	2.9	0.0	0.0	0.0	7.1	1.3	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	72.3	
2000	1046	2,3,4,5	6.4	0.1	0.0	0.0	3.5	0.0	0.0	0.0	7.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	71.3	
2001	683	2,3,4,5	6.6	0.0	2.2	0.0	2.2	0.3	0.0	0.0	12.9	0.9	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	62.1	
2002	746	2,3,4,5	5.0	0.1	0.4	10.2	4.0	0.8	0.0	0.0	15.5	2.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	52.9	
2003	612	2,3,4,5	5.1	0.2	0.0	2.9	5.9	0.0	0.0	0.0	23.7	8.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	42.2	
2004	709	2,3,4,5	9.9	0.0	0.0	3.4	5.8	0.0	0.0	0.0	19.9	5.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	46.8	
2005	936	3,4,5	13.0	0.1	1.7	4.5	6.0	0.0	0.0	0.0	15.4	9.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	40.6	
2006	1417	4,5	8.7	0.0	1.4	2.3	2.4	0.0	0.0	0.0	8.7	5.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	64.6	
2007	397	2,5	11.3	0.0	5.5	1.3	3.8	0.5	0.0	0.0	16.4	5.3	0.0	0.0	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	47.4	
2008	154	2,3	6.5	0.0	3.2	1.9	0.0	0.0	0.0	0.0	8.4	1.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	74.0	
2009	683	2,3,4	9.4	0.0	0.0	3.2	3.4	0.0	0.0	0.0	22.8	2.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	45.7	
2010	824	2,3,4,5	11.3	0.1	0.6	2.9	1.7	0.0	0.0	0.0	13.2	6.2	0.0	0.0	0.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	50.6	
2011	568	2,3,4,5	14.1	0.0	0.5	8.5	3.2	0.0	0.0	0.0	21.7	7.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	36.6	
2012	872	2,3,4,5	12.6	0.6	0.8	2.3	2.2	0.0	0.0	0.0	16.2	2.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	50.0	
2013	3021	2,3,4,5	4.4	0.4	0.4	1.5	1.4	0.0	0.0	0.0	9.1	1.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	67.4	
2014	3276	2,3,4,5	6.2	0.5	0.4	2.7	1.3	0.2	0.2	0.0	7.0	4.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	63.4	
2015	8465	2,3,4,5	3.8	0.0	0.5	1.0	2.5	0.2	0.0	0.0	7.8	3.4	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	73.5	
2016	4686	3,4,5	4.5	1.1	0.6	1.0	2.0	0.3	0.0	0.0	3.3	4.5	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	66.7	
85–95	1208		9.6	0.8	0.3	2.1	1.7	0.3	0.0	0.0	2.5	16.4	0.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	60.3	
96–98	1428		4.7	0.0	0.8	0.1	2.9	0.0	0.0	0.0	0.1	11.2	1.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	66.6	
99–08	880		7.4	0.1	1.0	3.0	4.3	0.2	0.0	0.0	0.0	14.5	4.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	55.5	
09–16	2799		8.3	0.3	0.5	2.9	2.2	0.1	0.0	0.0	0.0	12.6	4.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	56.7	

Appendix C3—Percent distribution of Atnarko River (North/Central BC) 5-age ERA output total fishing mortalities among fisheries and escapement.

Catch Year	Est # of CWT	Ages	AABM Fishery									ISBM Fishery										Terminal Fishery						Escapement									
			SEAK			NBC			WCVI			NBC & CBC			Southern BC			N Falcon		S Falcon		WAC	Puget Sd			SEAK			Canada		Southern US			Stray	Esc.		
			T	N	S	T	S	T	S	T	N	S	T	N	S	T	S	T	S	N	N	S	T	N	S	T	N	S	T	N	S						
79-84	NA		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1985	NA		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
1986	NA		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
1987	NA		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
1988	5	2	Failed Criteria									-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
1989	35	2,3	17.1	40.0	0.0	17.1	2.9	0.0	0.0	0.0	22.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
1990	145	2,3,4	20.7	3.4	0.0	2.1	0.7	0.7	0.0	4.8	14.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	50.3	
1991	771	2,3,4,5	7.4	0.1	0.0	1.7	1.3	0.5	0.0	1.0	20.1	0.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	60.4	
1992	981	2,3,4,5,6	8.9	0.0	0.0	1.8	1.8	0.3	0.0	5.3	18.1	1.7	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	56.4	
1993	1357	2,3,4,5,6	10.4	0.8	0.6	4.5	2.1	0.4	0.0	1.2	13.0	1.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	61.2	
1994	1697	2,3,4,5,6	7.5	0.2	0.2	1.5	1.8	0.0	0.0	2.5	18.0	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	64.6	
1995	2340	2,3,4,5,6	4.6	0.1	1.2	1.1	2.7	0.0	0.0	0.3	15.2	0.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	65.4	
1996	2056	2,3,4,5,6	2.6	0.0	0.5	0.2	0.6	0.0	0.0	0.0	11.4	1.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	72.3	
1997	1167	2,3,4,5,6	4.5	0.0	1.5	0.2	3.1	0.0	0.0	0.4	9.3	0.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	67.7	
1998	1059	2,3,4,5,6	7.4	0.0	0.4	0.0	4.9	0.0	0.0	0.0	13.1	1.1	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	59.3	
1999	1443	2,3,4,5,6	5.8	0.0	2.5	0.0	2.9	0.0	0.0	0.0	7.1	1.3	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	72.4	
2000	1044	2,3,4,5,6	6.4	0.1	0.0	0.0	3.5	0.0	0.0	0.0	7.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	70.9	
2001	682	2,3,4,5,6	6.6	0.0	2.2	0.0	2.2	0.3	0.0	0.0	12.9	0.9	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	61.9	
2002	751	2,3,4,5,6	4.9	0.1	0.4	10.0	4.0	0.8	0.0	0.0	15.6	2.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	52.7	
2003	635	2,3,4,5,6	4.9	0.2	0.0	2.8	5.7	0.0	0.0	0.0	23.1	10.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	41.7	
2004	685	2,3,4,5,6	10.2	0.0	0.0	3.5	5.8	0.0	0.0	0.0	20.9	5.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	44.7	
2005	940	3,4,5,6	13.0	0.1	1.7	4.5	6.0	0.0	0.0	0.0	15.5	9.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	40.6	
2006	1425	4,5,6	8.6	0.0	1.4	2.2	2.4	0.0	0.0	0.0	8.8	5.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	64.8	
2007	421	2,5,6	11.4	0.0	5.2	1.2	3.6	0.5	0.0	0.0	15.9	5.0	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	48.7	
2008	157	2,3,6	7.0	0.0	3.2	1.9	0.0	0.0	0.0	0.0	9.6	1.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	72.6	
2009	683	2,3,4	9.4	0.0	0.0	3.2	3.4	0.0	0.0	0.0	22.8	2.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	45.7	
2010	821	2,3,4,5	11.1	0.1	0.6	3.0	1.7	0.0	0.0	0.0	13.3	6.0	0.0	0.0	0.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	50.8	
2011	579	2,3,4,5,6	13.8	0.0	0.5	8.3	3.1	0.0	0.0	0.0	21.2	7.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	35.9	
2012	866	2,3,4,5,6	12.7	0.6	0.8	2.3	2.2	0.0	0.0	0.0	16.3	2.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	49.7	
2013	3019	2,3,4,5,6	4.3	0.3	0.4	1.4	1.4	0.0	0.0	0.0	9.1	1.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	67.6	
2014	3247	2,3,4,5,6	6.1	0.5	0.4	2.5	1.4	0.2	0.2	0.0	7.0	3.8	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	63.7	
2015	8416	2,3,4,5,6	3.5	0.0	0.5	1.0	2.4	0.2	0.0	0.0	7.9	3.2	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	73.8	
2016	4667	3,4,5,6	4.2	1.1	0.5	0.9	1.9	0.3	0.0	0.0	3.3	4.3	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	67.3	
85-95	1215		9.9	0.8	0.3	2.1	1.7	0.3	0.0	2.5	16.5	0.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	59.7	
96-98	1427		4.8	0.0	0.8	0.1	2.9	0.0	0.0	0.1	11.3	1.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	66.4	
99-08	818		7.9	0.0	1.7	2.6	3.6	0.2	0.0	0.0	13.6	4.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	57.1	
09-16	2787		8.1	0.3	0.5	2.8	2.2	0.1	0.0	0.0	12.6	3.9	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	56.8	

Appendix C4—Percent distribution of Atnarko Yearling (North/Central BC) total fishing mortalities among fisheries and escapement.

Catch Year	Est # of CWT	Ages	AABM Fishery									ISBM Fishery											Terminal Fishery									Escapement					
			SEAK			NBC			WCVI			NBC & CBC			Southern BC			N Falcon		S Falcon		WAC	Puget Sd			SEAK			Canada		Southern US			Stray	Esc.		
			T	N	S	T	S	T	S	T	N	S	T	N	S	T	S	T	S	N	N	S	T	N	S	T	N	S	T	N	S						
79–84	NA		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
1985	NA		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
1986	NA		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
1987	NA		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
1988	NA		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
1989	NA		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
1990	NA		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
1991	NA		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
1992	NA		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
1993	4	2,3	25.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	75.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
1994	57	2,3,4	1.8	10.5	0.0	0.0	1.8	0.0	0.0	0.0	21.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	64.9	0.0	
1995	339	2,3,4,5	7.7	0.0	0.0	3.2	3.5	0.0	0.0	0.0	24.5	1.5	0.0	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	52.5	0.0	
1996	649	3,4,5	4.8	0.5	0.2	0.3	0.6	0.0	0.0	0.0	13.7	1.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	64.1	0.0	
1997	510	4,5	6.1	0.0	0.6	0.4	2.5	0.0	0.0	0.0	12.9	1.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	64.7	0.0	
1998	739	5	Failed Criteria						-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1999	NA		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
2000	NA		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
2001	NA		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
2002	NA		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
2003	NA		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
2004	NA		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
2005	NA		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
2006	NA		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
2007	NA		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
2008	NA		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
2009	2	2	Failed Criteria						-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
2010	32	2,3	28.1	3.1	3.1	9.4	9.4	0.0	0.0	0.0	0.0	3.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	40.6	0.0	
2011	97	2,3,4	21.6	5.2	2.1	5.2	5.2	0.0	0.0	0.0	1.0	11.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	39.2	0.0	
2012	927	2,3,4,5	9.9	0.8	1.3	5.0	3.0	0.0	0.0	0.0	17.7	1.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	48.1	0.0	
2013	2941	2,3,4,5	3.5	0.2	0.5	1.6	2.3	0.2	0.0	0.0	9.3	1.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	73.2	0.0	
2014	1351	3,4,5	8.0	0.2	0.7	4.4	2.8	0.0	0.0	0.0	9.1	2.4	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	58.7	0.0	
2015	1922	4,5	2.9	0.2	0.6	0.3	2.6	0.0	0.0	0.0	9.0	3.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	73.9	0.0	
2016	411	5	Failed Criteria						-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
85–95	339		7.7	0.0	0.0	3.2	3.5	0.0	0.0	0.0	24.5	1.5	0.0	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	52.5	0.0	
96–98	649		4.8	0.5	0.2	0.3	0.6	0.0	0.0	0.0	13.7	1.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	64.1	0.0	
99–08	NA		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
09–16	1740		7.2	0.4	0.8	3.7	2.7	0.1	0.0	0.0	12.0	1.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	60.0	0.0	

Appendix C5—Percent distribution of Atnarko Yearling (North/Central BC) 5-age ERA output total fishing mortalities among fisheries and escapement.

Catch Year	Est # of CWT	Ages	AABM Fishery						ISBM Fishery										Terminal Fishery						Escapement								
			SEAK			NBC		WCVI	NBC & CBC			Southern BC			N Falcon		S Falcon		WAC	Puget Sd			SEAK			Canada		Southern US			Stray	Esc.	
			T	N	S	T	S	T	S	T	N	S	T	N	S	T	S	N	N	S	T	N	S	N	S	T	N	S					
79–84	NA		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1985	NA		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
1986	NA		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
1987	NA		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
1988	NA		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
1989	NA		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
1990	NA		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
1991	NA		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
1992	NA		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
1993	4	2,3	25.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	75.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
1994	57	2,3,4	1.8	10.5	0.0	0.0	1.8	0.0	0.0	0.0	21.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	64.9	
1995	303	2,3,4,5	8.6	0.0	0.3	2.6	4.3	0.0	0.0	0.0	27.4	2.0	0.0	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.0	3.6	0.0	0.0	0.0	0.0	0.0	46.9	
1996	689	3,4,5,6	4.9	0.4	0.1	0.3	0.6	0.0	0.0	0.0	13.4	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.1	10.0	0.0	0.0	0.0	0.0	0.0	0.0	65.2	
1997	514	4,5,6	6.2	0.0	0.6	0.4	2.5	0.0	0.0	0.0	13.4	1.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.4	8.4	0.0	0.0	0.0	0.0	0.0	0.0	60.9	
1998	735	5,6	3.8	0.8	1.8	0.3	5.6	0.0	0.0	0.0	10.1	2.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.0	2.9	0.0	0.0	0.0	0.0	0.0	0.0	66.5	
1999	63	6	Failed Criteria						-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2000	NA		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
2001	NA		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
2002	NA		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
2003	NA		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
2004	NA		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
2005	NA		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
2006	NA		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
2007	NA		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
2008	NA		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
2009	2	2	Failed Criteria						-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2010	34	2,3	26.5	2.9	5.9	8.8	8.8	0.0	0.0	0.0	0.0	5.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	38.2	
2011	97	2,3,4	20.6	5.2	2.1	5.2	5.2	0.0	0.0	0.0	2.1	11.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	9.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	39.2	
2012	928	2,3,4,5	9.8	0.8	1.4	4.8	3.0	0.0	0.0	0.0	17.7	1.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	12.0	0.9	0.0	0.0	0.0	0.0	0.0	0.0	48.0	
2013	2878	2,3,4,5,6	3.4	0.2	0.5	1.7	2.3	0.2	0.0	0.0	9.6	1.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.4	1.9	0.0	0.0	0.0	0.0	0.0	0.0	72.3	
2014	1425	3,4,5,6	7.9	0.2	0.7	4.1	2.8	0.0	0.0	0.0	8.6	2.7	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	7.9	6.0	0.0	0.0	0.0	0.0	0.0	0.0	58.9	
2015	1876	4,5,6	2.9	0.2	0.5	0.3	2.6	0.0	0.0	0.0	9.5	3.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.5	1.1	0.0	0.0	0.0	0.0	0.0	0.0	73.1	
2016	519	5,6	5.6	0.0	1.5	2.5	3.9	1.2	0.0	0.0	2.3	6.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	11.4	0.6	0.0	0.0	0.0	0.0	0.0	0.0	64.4	
85–95	303		8.6	0.0	0.3	2.6	4.3	0.0	0.0	0.0	27.4	2.0	0.0	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.0	3.6	0.0	0.0	0.0	0.0	0.0	0.0	46.9	
96–98	602		5.6	0.2	0.4	0.3	1.6	0.0	0.0	0.0	13.4	1.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.2	9.2	0.0	0.0	0.0	0.0	0.0	0.0	63.0	
99–08	NA		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
09–16	1777		6.0	0.3	0.8	2.7	2.7	0.1	0.0	0.0	11.4	2.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	8.2	2.4	0.0	0.0	0.0	0.0	0.0	0.0	63.1	

Appendix C7—Percent distribution of Chilliwack River Fall (Fraser Late) total fishing mortalities among fisheries and escapement.

Catch Year	Est # of CWT	Ages	AABM Fishery									ISBM Fishery										Terminal Fishery						Escapement								
			SEAK			NBC		WCVI		NBC & CBC			Southern BC			N Falcon		S Falcon		WAC	Puget Sd			SEAK			Canada		Southern US			Stray	Esc.			
			T	N	S	T	S	T	S	T	N	S	T	N	S	T	S	T	S	N	N	S	T	N	S	N	S	T	N	S						
79-84	NA		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1985	2351	2,3,4	1.0	0.1	0.0	0.3	0.0	32.6	0.0	2.2	0.7	0.0	6.0	5.5	21.4	3.7	0.4	0.1	0.0	0.0	3.3	4.2	0.0	0.0	0.0	0.0	1.0	0.0	0.3	0.0	4.8	12.5				
1986	2149	2,3,4,5	0.0	0.0	0.0	0.8	0.0	20.2	0.0	2.6	1.5	0.0	9.4	11.8	18.5	2.7	0.2	0.0	0.0	0.0	3.0	7.7	0.0	0.0	0.0	0.0	1.3	0.0	0.5	0.0	1.1	18.8				
1987	2709	2,3,4,5	0.0	0.0	0.0	0.8	0.0	18.6	0.5	0.4	0.3	0.0	15.6	2.7	18.6	3.8	0.1	0.1	0.0	0.0	2.8	2.7	0.0	0.0	0.0	0.0	1.1	0.0	0.4	0.0	1.9	29.3				
1988	2450	2,3,4,5	0.4	0.1	0.0	0.2	0.0	17.6	0.0	0.0	0.1	0.0	6.3	3.7	12.8	4.0	0.1	0.1	0.0	0.0	2.7	2.7	0.0	0.0	0.0	0.0	2.4	0.0	0.0	0.0	2.3	44.5				
1989	1304	2,3,4,5	0.2	0.0	0.0	0.0	0.0	23.1	0.0	0.0	0.5	0.0	1.7	3.1	20.4	4.4	0.2	1.2	0.0	0.0	2.8	1.3	0.0	0.0	0.0	0.5	0.0	0.3	0.0	2.1	38.3					
1990	1724	2,3,4,5	0.9	0.0	0.0	0.0	0.0	10.8	2.1	0.1	1.3	0.0	3.5	1.9	17.2	6.3	0.5	0.0	0.0	0.0	8.5	7.6	0.0	0.0	0.0	1.8	1.1	0.0	0.6	0.0	4.2	31.4				
1991	3103	2,3,4,5	0.2	0.1	0.0	0.4	0.0	19.4	0.5	0.2	0.8	0.0	9.1	1.8	16.1	12.9	0.2	0.4	0.0	0.0	3.6	5.2	0.0	0.0	0.0	2.4	1.5	0.0	0.6	0.0	1.0	23.5				
1992	4221	2,3,4,5	0.3	0.0	0.0	0.1	0.0	19.8	0.1	0.7	0.3	0.0	6.5	0.8	10.7	8.6	0.1	0.0	0.0	0.0	0.8	3.5	0.0	0.0	0.0	0.5	1.1	0.0	0.0	0.0	1.5	44.6				
1993	2027	2,3,4,5	0.2	0.0	0.0	0.0	0.0	13.0	0.3	0.0	0.0	0.0	8.0	0.1	7.2	7.2	0.0	0.2	0.0	0.0	0.0	1.1	0.0	0.0	0.0	1.3	2.0	0.0	0.0	0.0	2.1	57.4				
1994	718	2,3,4,5	0.4	0.3	0.0	0.7	0.0	8.5	0.0	0.4	1.7	0.0	3.3	4.2	10.2	1.5	0.0	0.0	0.0	0.0	2.8	6.1	0.0	0.0	0.0	1.5	5.8	0.0	0.4	0.0	0.0	52.1				
1995	2213	2,3,4,5	0.0	0.0	0.0	0.0	0.0	12.7	0.5	0.0	0.8	0.0	0.0	0.4	8.1	1.1	0.0	0.0	0.0	0.0	1.0	2.5	0.0	0.0	0.0	1.9	1.0	0.0	0.0	0.0	0.0	70.0				
1996	1769	2,3,4,5	0.2	0.0	0.0	0.0	0.0	2.0	0.4	0.0	1.1	0.0	0.0	0.2	21.8	2.9	0.2	1.2	0.0	0.0	0.6	4.4	0.0	0.0	0.0	0.8	2.5	0.0	0.3	0.0	0.1	61.3				
1997	2408	2,3,4,5	0.5	0.0	0.0	0.1	0.0	12.7	0.9	0.3	0.6	0.0	0.0	0.6	16.4	3.3	0.1	1.3	0.1	0.0	1.7	3.9	0.0	0.0	0.0	2.6	2.5	0.0	0.5	0.0	0.0	51.7				
1998	3196	2,3,4,5	0.5	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.3	0.0	0.0	4.3	2.1	0.0	1.2	0.0	0.0	0.2	0.9	0.0	0.0	0.0	0.2	1.3	0.0	0.0	0.0	0.5	88.4				
1999	3370	2,3,4,5	0.1	0.0	0.0	0.2	0.0	0.3	1.4	0.0	0.0	0.0	0.0	0.0	11.4	12.8	0.5	0.5	0.0	0.0	0.1	0.5	0.0	0.0	0.0	0.4	1.6	0.0	0.6	0.0	0.3	69.3				
2000	3582	2,3,4,5	0.1	0.0	0.0	0.0	0.0	4.4	1.9	0.0	0.0	0.3	0.0	0.0	3.7	3.3	0.1	0.0	0.0	0.0	0.0	0.7	0.0	0.0	0.0	0.0	1.8	0.0	0.4	0.0	0.0	83.3				
2001	3477	2,3,4,5	0.1	0.1	0.0	0.0	0.0	4.4	1.9	0.0	0.0	0.2	0.0	0.0	11.6	6.8	0.4	0.7	0.0	0.0	0.3	6.1	0.0	0.0	0.0	0.2	15.5	0.0	0.6	0.0	0.0	51.0				
2002	5138	2,3,4,5	0.3	0.0	0.0	0.1	0.0	8.2	4.3	0.0	0.1	0.2	0.0	0.0	4.8	7.4	1.2	0.6	0.0	0.0	0.1	2.0	0.0	0.0	0.0	0.6	5.2	0.0	0.2	0.0	0.0	64.7				
2003	4945	2,3,4,5	0.1	0.0	0.0	0.0	0.0	5.4	2.2	0.0	0.0	0.2	0.0	0.0	3.5	7.6	0.4	0.5	0.0	0.0	0.2	1.2	0.0	0.0	0.0	0.3	6.1	0.0	0.0	0.0	5.6	66.7				
2004	6874	2,3,4,5	0.1	0.0	0.0	0.2	0.0	5.2	2.3	0.0	0.0	0.0	0.0	0.0	2.2	6.7	0.2	0.1	0.0	0.0	0.1	1.1	0.0	0.0	0.0	0.7	4.6	0.0	0.0	0.0	0.4	76.2				
2005	4298	2,3,4,5	0.0	0.0	0.0	0.1	0.0	7.0	3.0	0.0	0.1	0.2	0.0	0.0	4.6	3.5	0.8	0.0	0.0	0.0	0.2	1.0	0.0	0.0	0.0	3.2	5.6	0.0	0.6	0.0	0.0	70.1				
2006	2743	2,3,4,5	0.0	0.0	0.0	0.5	0.0	7.8	2.2	0.0	0.0	0.0	0.0	0.0	2.4	2.9	0.3	0.1	0.0	0.0	0.1	1.7	0.0	0.0	0.0	0.6	4.8	0.0	0.1	0.0	1.0	75.5				
2007	2431	2,3,4,5	0.0	0.0	0.0	0.2	0.0	6.3	2.4	0.0	0.0	0.0	0.0	0.0	1.4	2.0	0.1	0.0	0.0	0.0	0.1	1.2	0.0	0.0	0.0	1.9	4.8	0.0	0.4	0.0	0.1	79.1				
2008	2860	2,3,4,5	0.3	0.0	0.0	0.0	0.0	10.9	3.8	0.0	0.0	0.0	0.0	0.1	3.2	4.7	1.6	0.0	0.1	0.0	0.2	2.0	0.0	0.0	0.0	0.9	9.5	0.0	0.6	0.0	0.6	61.4				
2009	2984	2,3,4,5	0.0	0.0	0.0	0.0	0.0	1.7	2.4	0.0	0.0	0.0	0.0	0.0	4.7	0.6	0.3	0.0	0.0	0.0	0.6	3.3	0.0	0.0	0.0	3.3	14.0	0.0	0.2	0.0	1.3	67.6				
2010	6393	2,3,4,5	0.3	0.0	0.0	0.0	0.0	2.6	2.4	0.0	0.0	0.0	0.0	0.0	6.2	3.1	1.0	0.4	0.0	0.0	0.4	1.5	0.0	0.0	0.0	1.4	6.2	0.0	0.4	0.0	0.6	73.5				
2011	5881	2,3,4,5	0.0	0.0	0.0	0.1	0.0	3.7	2.4	0.0	0.0	0.2	0.0	0.9	3.8	1.3	0.6	0.0	0.0	0.0	0.3	2.7	0.0	0.0	0.0	0.7	3.0	0.0	0.5	0.0	0.0	79.8				
2012	5612	2,3,4,5	0.0	0.0	0.0	0.0	0.0	1.0	1.4	0.0	0.0	0.0	0.0	0.2	11.5	5.1	0.7	0.1	0.1	0.0	0.1	7.4	0.0	0.0	0.0	0.3	5.4	0.0	0.4	0.0	0.0	66.2				
2013	12988	2,3,4,5	0.0	0.0	0.0	0.1	0.0	2.4	2.3	0.0	0.0	0.0	0.0	1.0	9.9	5.5	1.0	0.1	0.0	0.0	0.5	3.0	0.0	0.0	0.0	1.3	5.7	0.0	0.2	0.0	0.3	66.6				
2014	12001	2,3,4,5	0.1	0.0	0.0	0.0	0.0	1.4	1.3	0.0	0.0	0.0	0.1	2.3	11.6	3.5	0.6	0.1	0.0	0.0	0.6	2.0	0.0	0.0	0.0	1.4	3.9	0.0	0.2	0.0	0.3	70.6				
2015	6487	2,3,4,5	0.0	0.0	0.0	0.0	0.0	0.5	0.5	0.0	0.0	0.1	0.0	1.1	11.7	3.0	0.5	0.0	0.0	0.2	0.3	1.5	0.0	0.0	0.0	3.2	6.5	0.0	0.0	0.0	1.0	69.9				
2016	6898	2,3,4,5	0.1	0.0	0.0	0.0	0.0	1.1	1.8	0.0	0.0	0.0	0.0	0.2	11.7	1.9	0.4	0.1	0.0	0.0	0.7	1.1	0.0	0.0	0.0	0.8	5.8	0.0	0.0	0.0	0.3	74.1				
85-95	2270		0.3	0.1	0.0	0.3	0.0	17.9	0.4	0.6	0.7	0.0	6.3	3.3	14.6	5.1	0.2	0.2	0.0	0.0	2.8	4.0	0.0	0.0	0.0	0.9	1.7	0.0	0.3	0.0	1.9	38.4				
96-98	2458		0.4	0.0	0.0	0.0	0.0	5.0	0.4	0.1	0.6	0.1	0.0	0.3	14.2	2.8	0.1	1.2	0.0	0.0	0.8	3.1	0.0	0.0	0.0	1.2	2.1	0.0	0.3	0.0	0.2	67.1				
99-08	3972		0.1	0.0	0.0	0.1	0.0	6.0	2.5	0.0	0.0	0.1	0.0	0.0	4.9	5.8	0.6	0.2	0.0	0.0	0.1	1.7	0.0	0.0	0.0	0.9	6.0	0.0	0.3	0.0	0.8	69.7				
09-16	7406		0.1	0.0	0.0	0.0	0.0	1.8	1.8	0.0	0.0	0.0	0.0	0.7	8.9	3.0	0.6	0.1	0.0	0.0	0.5	2.8	0.0	0.0	0.0	1.5	6.3	0.0	0.2	0.0	0.5	71.0				

Appendix C8—Percent distribution of Chilkat River total fishing mortalities among fisheries and escapement.

Catch Year	Est # of CWT	Ages	AABM Fishery									ISBM Fishery									Terminal Fishery									Escapement					
			SEAK			NBC			WCVI			NBC & CBC			Southern BC			N Falcon		S Falcon		WAC	Puget Sd			SEAK			Canada		Southern US			Stray	Esc.
			T	N	S	T	S	T	S	T	N	S	T	N	S	T	S	T	S	N	N	S	T	N	S	N	S	T	N	S					
79–84	NA		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
1985	NA		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
1986	NA		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
1987	NA		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
1988	NA		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
1989	NA		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
1990	NA		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
1991	NA		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
1992	NA		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
1993	NA		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
1994	NA		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
1995	NA		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
1996	NA		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
1997	NA		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
1998	NA		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
1999	NA		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
2000	NA		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
2001	NA		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
2002	76	3	Failed Criteria									-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
2003	341	3,4	0.9	4.1	19.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	75.7	
2004	570	3,4,5	5.1	8.1	14.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	71.8		
2005	585	3,4,5,6	5.0	4.6	8.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	82.2		
2006	347	3,4,5,6	3.2	1.2	13.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	81.8		
2007	316	3,4,5,6	6.0	8.9	16.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	68.7		
2008	436	3,4,5,6	3.7	5.7	2.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	88.1		
2009	567	3,4,5,6	3.5	1.8	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	94.5		
2010	302	3,4,5,6	4.6	10.6	8.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	75.8		
2011	355	3,4,5,6	7.3	7.0	6.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	79.2		
2012	239	3,4,5,6	7.5	11.3	7.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	72.4		
2013	339	3,4,5,6	1.5	10.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	87.9		
2014	229	3,4,5,6	0.0	21.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	79.0		
2015	310	3,4,5,6	2.3	8.1	7.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	82.3		
2016	114	4,5,6	3.5	0.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	95.6		
85–95	NA		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
96–98	NA		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
99–08	451		4.6	5.7	11.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	78.5		
09–16	307		3.8	8.9	3.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	83.3		

Appendix C9—Percent distribution of Cowichan River Fall (Lower Strait of Georgia Natural) total fishing mortalities among fisheries and escapement.

Catch Year	Est # of CWT	Ages	AABM Fishery									ISBM Fishery									Terminal Fishery						Escapement									
			SEAK			NBC			WCVI			NBC & CBC			Southern BC			N Falcon		S Falcon		WAC	Puget Sd			SEAK			Canada		Southern US			Stray	Esc.	
			T	N	S	T	S	T	S	T	N	S	T	N	S	T	S	T	S	N	N	S	T	N	S	N	S	T	N	S						
79-84	NA		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
1985	NA		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
1986	NA		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
1987	116	2	Failed Criteria									-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
1988	311	3	Failed Criteria									-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1989	612	2,4	1.8	0.0	0.0	0.0	0.0	3.1	0.0	0.5	1.0	0.0	5.7	9.0	48.2	1.0	0.0	0.0	0.0	0.0	0.0	1.0	1.3	0.0	0.0	0.0	4.9	0.0	0.0	1.6	0.0	0.5	20.4			
1990	2032	2,3,5	0.0	0.0	0.0	0.1	0.0	2.2	0.0	1.1	2.8	0.0	13.2	7.3	57.4	0.6	0.2	0.0	0.0	0.0	0.0	1.4	2.0	0.0	0.0	0.0	0.7	0.0	0.0	0.3	0.0	0.3	10.2			
1991	4231	2,3,4	0.1	0.0	0.0	0.2	0.0	3.9	0.7	0.4	0.5	0.2	9.0	3.6	61.7	0.7	0.0	0.0	0.0	0.0	0.0	2.0	0.9	0.0	0.0	0.0	0.4	0.0	0.0	1.0	0.0	0.3	14.6			
1992	4594	2,3,4,5	0.0	0.1	0.0	0.4	0.0	8.6	0.8	1.0	0.9	0.1	17.8	3.1	53.1	0.2	0.0	0.0	0.0	0.0	0.0	0.6	1.3	0.0	0.0	0.0	0.9	0.0	0.0	0.4	0.0	0.4	10.2			
1993	4156	2,3,4,5	0.3	0.0	0.0	0.1	0.0	7.8	1.0	0.5	0.5	0.0	11.9	2.8	55.0	0.6	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.0	0.0	0.0	1.1	0.0	0.0	0.8	0.0	0.2	17.1			
1994	1325	2,3,4,5	0.5	0.0	0.0	0.4	0.0	3.9	0.2	0.2	2.1	0.0	4.9	5.5	43.2	0.3	0.0	0.0	0.0	0.0	0.0	0.8	0.7	0.0	0.0	0.0	4.2	0.5	0.0	2.4	0.0	0.6	29.5			
1995	1685	2,3,4,5	0.1	0.0	0.0	0.0	0.0	5.4	0.4	0.0	1.4	0.0	0.0	1.4	41.3	0.0	0.0	0.0	0.0	0.0	0.0	0.2	1.0	0.0	0.0	0.0	2.1	0.2	0.0	1.7	0.0	1.2	43.6			
1996	1362	2,3,4,5	0.2	0.0	0.0	0.0	0.0	0.3	1.0	0.0	0.4	0.0	0.0	0.4	51.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.9	0.0	0.0	0.0	4.7	0.5	0.0	0.8	0.0	1.2	34.2			
1997	917	2,3,4,5	1.0	0.0	0.0	0.0	0.0	3.3	0.9	0.0	0.3	0.4	0.0	1.0	27.5	0.0	0.0	0.0	0.0	0.0	0.0	1.7	3.5	0.0	0.0	0.0	0.3	0.4	0.0	0.9	0.0	0.8	58.0			
1998	488	2,3,4,5	3.9	0.0	0.0	0.0	0.0	0.4	1.6	0.0	0.0	0.8	0.0	0.4	34.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	8.6	0.0	0.0	2.9	0.0	3.7	43.6				
1999	577	2,3,4,5	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.0	0.0	0.5	0.0	0.0	53.0	0.9	0.5	0.0	0.0	0.0	0.0	0.3	0.0	0.0	0.0	1.2	1.6	0.0	6.2	0.0	3.5	31.7				
2000	793	2,3,4,5	0.9	0.4	0.0	0.0	0.0	1.3	4.8	0.0	0.0	0.0	0.0	0.0	25.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.3	0.0	0.0	0.5	0.5	0.0	4.2	0.0	1.3	59.0				
2001	781	2,3,4,5	0.3	0.0	0.0	0.0	0.0	9.6	0.0	0.0	0.0	0.0	0.0	0.0	33.3	0.1	0.0	0.0	0.0	0.0	0.0	0.1	2.8	0.0	0.0	6.5	0.0	0.0	10.6	0.0	4.2	32.4				
2002	711	2,3,4,5	1.5	0.0	0.0	0.0	0.0	3.5	1.5	0.0	0.0	1.0	0.0	0.0	38.0	0.3	0.0	0.3	0.0	0.0	0.0	0.4	6.2	0.0	0.0	8.0	2.4	0.0	3.2	0.0	2.7	30.9				
2003	374	2,3,4,5	1.9	0.3	0.0	2.7	0.0	8.6	2.9	0.3	0.0	0.0	0.0	0.0	38.2	0.5	0.0	0.0	0.0	0.0	0.0	0.0	3.2	0.0	0.0	4.8	1.6	0.0	7.8	0.0	2.4	24.9				
2004	353	2,3,4,5	0.0	0.3	0.0	0.8	0.0	12.5	6.8	0.0	0.0	2.0	0.0	0.0	30.9	2.5	0.0	0.0	0.0	0.0	0.0	0.0	2.3	0.0	0.0	1.7	0.0	0.0	9.3	0.0	7.4	23.5				
2005	337	2,3,4,5	0.0	0.3	0.0	1.2	4.2	20.2	2.1	0.0	1.5	0.0	0.0	0.0	7.1	0.3	0.6	0.0	0.0	0.0	0.0	3.3	1.8	0.0	0.0	8.3	0.0	0.0	11.9	0.0	11.0	26.4				
2006	278	3,4,5	0.0	0.0	0.0	0.7	0.0	21.6	2.2	0.0	0.0	0.0	0.0	0.0	21.2	2.9	0.7	0.0	0.0	0.0	0.0	0.7	5.4	0.0	0.0	6.8	0.0	0.0	4.7	0.0	4.7	28.4				
2007	250	2,4,5	0.0	0.0	0.8	0.0	0.0	8.8	1.6	0.0	1.6	0.0	0.0	0.0	16.8	0.4	0.8	0.0	0.0	0.0	0.0	0.8	0.0	0.0	0.0	6.0	0.0	0.0	7.6	0.0	2.0	52.8				
2008	275	2,3,5	0.0	0.0	0.4	0.0	0.0	12.0	4.4	0.0	0.0	0.0	0.0	0.0	38.2	1.1	0.0	0.0	0.0	0.0	0.0	0.0	0.7	0.0	0.0	5.8	0.0	0.0	5.1	0.0	4.4	28.0				
2009	596	2,3,4	0.0	0.0	0.5	0.0	0.0	5.9	6.0	0.0	0.0	0.0	0.0	0.0	42.4	0.7	0.0	0.0	0.0	0.0	0.0	0.0	5.2	0.0	0.0	5.7	0.0	0.0	4.2	0.0	11.4	18.0				
2010	1240	2,3,4,5	0.2	0.1	0.0	0.0	0.0	8.4	2.2	0.0	0.0	0.3	0.0	0.0	40.6	1.2	0.0	0.0	0.0	0.1	0.6	3.7	0.0	0.0	0.0	1.4	0.0	0.0	5.3	0.0	2.4	33.4				
2011	1942	2,3,4,5	0.7	0.2	0.0	0.2	0.2	5.4	3.8	0.0	0.0	1.3	0.0	0.0	20.9	1.4	0.3	0.0	0.0	0.0	0.7	6.2	0.0	0.0	0.0	2.8	0.0	0.0	4.3	0.0	1.8	49.8				
2012	3365	2,3,4,5	0.7	0.1	0.1	0.5	0.0	3.5	3.0	0.0	0.0	0.3	0.0	0.1	24.9	2.7	0.4	0.0	0.0	0.0	0.0	9.2	0.0	0.0	0.0	12.0	0.1	0.0	3.7	0.0	1.8	36.9				
2013	3592	2,3,4,5	0.3	0.1	0.0	0.0	0.1	2.6	3.6	0.0	0.0	0.2	0.0	0.1	33.3	2.1	0.4	0.0	0.0	0.0	1.0	5.8	0.0	0.0	0.0	2.0	0.0	0.0	5.1	0.0	4.3	39.0				
2014	2641	2,3,4,5	1.2	0.0	0.2	0.7	0.0	6.1	6.2	0.0	0.0	0.6	0.0	0.0	45.4	1.5	0.1	0.0	0.0	0.0	0.2	4.4	0.0	0.0	0.0	1.9	0.0	0.0	1.1	0.0	1.2	29.2				
2015	1276	2,3,4,5	0.8	0.5	0.0	0.2	0.0	0.5	2.4	0.0	0.0	2.0	0.0	0.0	34.3	1.3	0.0	0.0	0.0	0.0	0.2	1.9	0.0	0.0	0.0	3.8	0.0	0.0	1.3	0.0	7.9	42.9				
2016	3451	2,3,4,5	0.3	0.0	0.1	0.1	0.0	1.0	1.2	0.0	0.0	0.8	0.0	0.0	35.7	0.6	0.2	0.0	0.0	0.0	0.0	7.4	0.0	0.0	0.0	1.0	0.0	0.0	3.2	0.0	1.1	47.2				
85-95	3004		0.2	0.0	0.0	0.2	0.0	5.3	0.5	0.5	1.4	0.0	9.5	4.0	52.0	0.4	0.0	0.0	0.0	0.0	0.0	0.8	1.0	0.0	0.0	1.6	0.1	0.0	1.1	0.0	0.5	20.8				
96-98	922		1.7	0.0	0.0	0.0	0.0	1.3	1.2	0.0	0.3	0.4	0.0	0.6	37.6	0.0	0.0	0.0	0.0	0.0	0.0	0.6	2.8	0.0	0.0	4.5	0.3	0.0	1.5	0.0	1.9	45.3				
99-08	473		0.5	0.1	0.1	0.5	0.4	9.8	2.7	0.0	0.3	0.3	0.0	0.0	30.2	0.9	0.3	0.0	0.0	0.0	0.0	0.6	2.5	0.0	0.0	5.0	0.6	0.0	7.1	0.0	4.3	33.8				
09-16	2263		0.5	0.1	0.1	0.2	0.0	4.2	3.5	0.0	0.0	0.7	0.0	0.0	34.7	1.4	0.2	0.0	0.0	0.0	0.0	0.3	5.5	0.0	0.0	3.8	0.0	0.0	3.5	0.0	4.0	37.1				

Appendix C10—Percent distribution of Cowlitz Fall Tule (Fall Cowlitz Hatchery) total fishing mortalities among fisheries and escapement.

Catch Year	Est # of CWT	Ages	AABM Fishery							ISBM Fishery											Terminal Fishery						Escapement					
			SEAK			NBC		WCVI		NBC & CBC			Southern BC			N Falcon		S Falcon		WAC	Puget Sd		SEAK			Canada		Southern US			Stray	Esc.
			T	N	S	T	S	T	S	T	N	S	T	N	S	T	S	T	S	N	N	S	T	N	S	N	S	T	N	S		
79–84	574		4.9	0.0	0.1	4.6	0.0	19.6	0.0	1.7	1.0	0.2	0.0	1.4	2.0	8.4	10.5	2.9	0.1	0.0	0.6	0.0	0.0	0.0	0.0	0.0	0.0	9.7	1.5	2.0	28.9	
1985	729	2,3,4,5	4.0	0.8	0.0	4.5	0.0	12.9	0.0	0.0	4.5	0.0	0.0	1.1	0.4	3.4	4.8	1.8	0.8	0.0	0.4	0.7	0.0	0.0	0.0	0.0	5.6	7.8	0.7	45.7		
1986	1489	2,3,4,5	0.5	0.1	0.0	0.2	0.0	14.4	0.0	0.7	0.8	0.0	0.0	1.1	0.3	6.7	5.1	7.7	0.5	0.0	0.2	0.5	0.0	0.0	0.0	28.8	6.6	2.4	23.2			
1987	1450	2,3,4,5	5.7	0.6	0.0	4.7	0.0	11.5	1.0	1.4	0.0	0.0	0.0	0.7	0.0	4.8	6.6	7.0	0.5	0.0	0.1	0.6	0.0	0.0	0.0	20.7	7.9	0.6	25.7			
1988	1538	2,3,4,5	1.8	0.6	0.0	2.1	0.0	18.1	0.0	0.0	0.1	0.0	0.0	0.6	0.0	9.3	1.6	6.4	0.4	0.0	0.0	0.0	0.0	0.0	22.8	10.1	0.5	25.6				
1989	603	2,3,4,5	3.8	0.0	0.7	4.8	0.0	7.3	0.0	0.0	0.3	0.0	0.0	1.0	0.0	8.8	3.2	10.0	0.0	0.0	0.0	0.3	0.0	0.0	0.0	6.8	7.0	0.8	45.3			
1990	292	2,3,4,5	4.5	0.0	0.0	2.4	0.0	15.8	0.0	3.1	2.7	0.0	0.0	0.7	0.0	7.5	7.5	2.1	0.0	0.0	0.0	4.1	0.0	0.0	0.0	0.0	1.0	6.8	41.8			
1991	147	2,3,4,5	10.9	8.2	0.0	4.1	0.0	6.1	3.4	1.4	0.0	0.0	0.0	0.0	0.0	2.7	3.4	7.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	9.5	4.8	0.0	38.1			
1992	201	2,3,4,5	2.0	0.0	0.0	0.0	0.0	20.4	0.0	2.5	0.0	0.0	0.0	0.0	2.0	8.0	5.5	0.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0	3.0	0.0	3.0	51.7			
1993	353	2,3,4,5	3.7	0.0	0.0	3.1	0.0	7.9	0.0	0.0	0.8	0.0	0.0	0.0	0.0	14.4	7.6	4.5	0.3	0.0	0.0	0.0	0.0	0.0	0.0	2.8	14.4	2.3	38.0			
1994	215	2,3,4,5	5.1	0.0	0.0	1.9	0.0	1.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.4	0.0	1.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.0	81.9			
1995	175	2,3,4,5	1.1	0.0	0.0	2.9	0.0	2.9	2.9	0.0	1.1	0.0	0.0	0.0	0.0	2.9	0.0	1.7	0.0	0.0	1.1	0.0	0.0	0.0	0.0	1.1	1.7	0.0	80.6			
1996	275	2,3,4,5	4.7	0.0	0.0	0.4	0.0	0.7	0.0	0.0	0.0	0.0	0.0	0.0	2.2	0.7	0.0	5.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.1	3.3	0.0	81.5			
1997	169	2,3,4,5	5.9	0.0	10.7	2.4	0.0	5.9	0.0	0.0	0.0	0.0	0.0	0.0	2.4	1.2	0.0	4.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.2	0.0	66.3			
1998	78	2,3,4,5	3.8	0.0	0.0	3.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.6	2.6	7.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	79.5			
1999	147	2,3,4,5	6.8	0.0	4.1	0.0	6.8	4.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.1	2.7	4.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	13.6	0.0	53.1			
2000	107	2,3,4,5	3.7	0.0	0.0	0.0	0.0	8.4	14.0	0.0	0.0	0.0	0.0	0.0	0.0	1.9	1.9	14.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.7	4.7	0.0	46.7			
2001	475	2,3,4,5	0.8	0.0	0.0	0.0	0.0	1.3	3.8	0.0	0.0	0.0	0.0	0.0	0.0	3.6	9.7	8.2	0.4	0.0	0.0	0.0	0.0	0.0	0.0	1.5	2.3	0.4	68.0			
2002	568	2,3,4,5	7.0	0.0	0.0	1.2	0.0	6.7	3.2	0.0	0.0	0.0	0.0	0.0	0.0	19.2	20.2	8.1	1.6	0.0	0.0	0.0	0.0	0.0	0.0	3.2	3.7	0.4	25.5			
2003	543	2,3,4,5	5.3	0.0	0.0	1.3	0.0	9.8	2.2	0.0	0.0	0.0	0.0	0.0	1.3	9.6	6.8	9.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	8.5	5.0	2.0	38.7			
2004	215	2,3,4,5	4.7	0.0	0.0	0.9	0.0	6.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	10.2	9.3	9.8	0.0	0.0	0.0	1.9	0.0	0.0	0.0	8.8	2.3	6.5	39.5			
2005	234	2,3,4,5	2.6	7.7	0.0	2.6	0.0	4.3	3.4	0.0	0.0	0.0	0.0	0.0	0.0	4.7	5.1	3.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.4	3.8	0.9	58.1			
2006	140	2,3,4,5	5.7	0.0	0.0	2.9	0.0	5.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.4	2.1	1.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.1	10.7	0.0	63.6			
2007	146	2,3,4,5	3.4	2.7	0.0	5.5	0.0	11.0	3.4	0.0	0.0	0.0	0.0	0.0	0.0	14.4	2.7	0.0	1.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	55.5			
2008	197	2,3,4,5	0.0	0.0	0.0	0.0	0.0	9.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.0	6.1	0.0	0.0	0.0	0.0	2.5	0.0	0.0	0.0	2.5	9.6	1.0	66.0			
2009	463	2,3,4,5	2.6	0.0	2.2	0.0	1.1	1.5	1.7	0.0	0.0	0.0	0.0	0.0	3.2	6.3	3.9	0.0	0.0	0.0	0.0	2.8	0.0	0.0	0.0	1.3	6.7	1.1	65.7			
2010	630	2,3,4,5	3.3	0.5	0.0	1.1	0.3	3.0	1.4	0.0	0.0	0.0	0.0	0.0	0.0	10.0	10.3	1.7	0.5	0.0	0.0	0.0	0.0	0.0	0.0	1.7	1.3	1.3	63.5			
2011	1377	2,3,4,5	1.2	0.1	0.1	0.3	0.4	1.2	0.4	0.0	0.0	0.3	0.0	0.0	0.0	1.5	2.4	0.2	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.7	0.1	90.5			
2012	596	2,3,4,5	0.0	0.0	0.0	1.2	0.3	2.7	0.0	0.0	0.0	0.0	0.0	0.0	0.7	3.9	6.2	1.2	0.5	0.3	0.0	0.0	0.0	0.0	0.0	1.8	6.0	0.0	75.2			
2013	735	2,3,4,5	1.6	0.0	0.0	0.0	0.0	0.7	1.2	0.0	0.0	0.0	0.0	0.0	0.0	4.2	4.5	1.2	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.8	2.0	1.1	82.2			
2014	538	2,3,4,5	3.9	0.0	0.4	2.0	0.0	2.0	1.5	0.0	0.0	0.0	0.0	0.0	0.0	3.0	1.9	0.7	0.7	0.0	0.0	0.0	0.0	0.0	0.0	1.3	18.6	1.1	62.8			
2015	393	2,3,4,5	4.3	5.1	0.0	2.5	3.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.8	5.6	8.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.5	17.0	3.8	47.3			
2016	NA		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
85–95	654		3.9	0.9	0.1	2.8	0.0	10.8	0.7	0.8	1.0	0.0	0.0	0.5	0.2	6.4	4.1	4.6	0.2	0.2	0.2	0.6	0.0	0.0	0.0	0.0	9.2	5.6	2.1	45.2		
96–98	222		5.3	0.0	5.3	1.4	0.0	3.3	0.0	0.0	0.0	0.0	0.0	0.0	2.3	1.0	0.0	4.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	2.2	0.0	73.9			
99–08	296		4.0	1.2	0.5	1.6	0.8	6.4	1.8	0.0	0.0	0.0	0.0	0.0	0.1	8.4	7.2	5.0	0.4	0.0	0.0	0.5	0.0	0.0	0.0	3.3	5.7	1.2	52.0			
09–16	676		2.4	0.8	0.4	1.0	0.7	1.6	0.9	0.0	0.0	0.0	0.0	0.0	0.7	4.9	5.4	0.7	0.3	0.0	0.0	0.4	0.0	0.0	0.0	1.3	7.5	1.2	69.6			

Appendix C11—Percent distribution of Dome Creek Spring (Fraser Early) total fishing mortalities among fisheries and escapement.

Catch Year	Est # of CWT	Ages	AABM Fishery									ISBM Fishery										Terminal Fishery						Escapement						
			SEAK			NBC		WCVI		NBC & CBC			Southern BC			N Falcon		S Falcon		WAC	Puget Sd			SEAK			Canada		Southern US			Stray	Esc.	
			T	N	S	T	S	T	S	T	N	S	T	N	S	T	S	T	S	N	T	N	S	T	N	S	T	N	S					
79-84	NA		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1985	NA		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1986	NA		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1987	NA		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1988	NA		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1989	NA		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1990	41	3,4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	7.3	68.3
1991	154	3,4,5	0.0	0.0	0.0	0.0	0.0	0.6	0.0	0.0	0.0	0.0	0.6	0.0	10.4	1.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.6	63.6
1992	160	3,4,5,6	0.0	0.0	0.0	0.0	0.0	4.4	0.0	0.0	0.0	0.0	3.1	0.0	8.8	1.3	0.0	0.0	0.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	31.3
1993	351	3,4,5,6	0.0	0.0	0.0	0.0	1.4	1.7	0.0	0.0	0.0	0.0	0.0	0.0	6.0	1.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	33.9
1994	297	3,4,5,6	0.7	0.0	0.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0	0.0	1.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	67.3
1995	525	3,4,5,6	0.0	0.0	0.0	1.0	0.0	1.5	0.0	0.0	0.0	0.0	0.0	0.0	5.7	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	66.3
1996	360	3,4,5,6	0.0	0.0	0.0	0.6	0.0	0.3	0.0	0.0	0.0	0.0	0.0	0.0	6.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	48.9
1997	318	3,4,5,6	0.0	0.0	0.0	0.0	0.0	0.6	0.3	0.0	0.0	0.0	0.0	0.0	6.9	1.3	0.0	0.0	0.0	0.0	0.0	1.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	51.3
1998	230	3,4,5,6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	7.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	44.3
1999	51	3,4,5,6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	17.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	45.1
2000	99	3,4,5,6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	18.2	3.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	39.4
2001	307	3,4,5,6	0.0	0.0	0.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0	0.0	15.3	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	21.2
2002	138	4,5,6	0.0	0.0	0.0	14.5	0.0	10.9	0.0	0.0	0.0	0.0	0.0	0.0	11.6	3.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	40.6
2003	152	3,5,6	0.0	0.0	0.0	5.3	0.0	0.0	7.2	0.0	0.0	0.0	0.0	0.0	12.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	15.1
2004	6	3,4,6	0.0	0.0	0.0	16.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	33.3
2005	224	3,4,5	0.0	0.0	0.0	4.0	0.0	0.4	0.0	0.0	0.0	0.0	0.0	0.0	4.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	25.0
2006	95	4,5,6	0.0	0.0	0.0	0.0	0.0	8.4	0.0	0.0	0.0	0.0	0.0	0.0	6.3	1.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	49.5
2007	19	5,6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	31.6
2008	NA		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2009	NA		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2010	NA		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2011	NA		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2012	NA		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2013	NA		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2014	NA		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2015	NA		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2016	NA		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
85-95	297		0.1	0.0	0.0	0.2	0.3	2.1	0.0	0.0	0.0	0.0	0.8	0.0	6.4	0.9	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	52.5
96-98	303		0.0	0.0	0.0	0.2	0.0	0.3	0.1	0.0	0.0	0.0	0.0	0.0	7.2	0.4	0.0	0.0	0.0	0.0	0.0	0.4	0.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	48.2
99-08	205		0.0	0.0	0.0	5.9	0.0	3.3	1.8	0.0	0.0	0.0	0.0	0.0	10.9	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	25.5
09-16	NA		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Appendix C12—Percent distribution of Elk River (Oregon Coast) total fishing mortalities among fisheries and escapement.

Catch Year	Est # of CWT	Ages	AABM Fishery									ISBM Fishery										Terminal Fishery									Escapement					
			SEAK			NBC			WCVI			NBC & CBC			Southern BC			N Falcon		S Falcon		WAC	Puget Sd			SEAK			Canada			Southern US			Stray	Esc.
			T	N	S	T	S	T	S	T	N	S	T	N	S	T	S	T	S	N	N	S	T	N	S	N	S	T	N	S						
79–84	1928		3.0	0.1	0.1	4.5	0.0	6.2	0.0	0.8	0.7	0.0	0.0	0.0	0.0	1.6	0.4	8.4	0.1	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	4.4	0.0	31.5	0.0	37.9				
1985	1955	2,3,4,5	1.7	0.0	0.0	2.0	0.0	1.1	0.0	0.0	0.1	0.0	0.0	0.1	0.0	0.2	0.2	1.2	0.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.9	0.0	32.5	0.8	55.7					
1986	925	2,3,4,5	1.6	0.0	0.0	2.7	0.0	10.9	0.3	1.8	0.0	0.0	0.0	0.0	0.3	0.5	0.2	21.1	0.8	0.0	0.0	0.0	0.0	0.0	0.0	9.0	0.0	15.0	0.1	35.6						
1987	2024	2,3,4,5	0.8	0.0	0.0	3.5	0.0	5.7	0.0	0.7	0.0	0.0	0.0	0.0	0.4	1.1	0.1	15.5	0.7	0.0	0.0	0.0	0.0	0.0	0.0	6.0	0.0	25.0	0.0	40.4						
1988	2093	2,3,4,5	0.4	0.0	0.0	2.7	0.0	3.7	0.0	0.1	0.0	0.0	0.0	0.1	0.0	0.5	0.0	15.7	0.5	0.0	0.0	0.2	0.0	0.0	0.0	0.2	0.0	35.9	0.0	39.9						
1989	1339	2,3,4,5	0.7	0.0	0.3	1.3	0.4	1.9	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.3	0.0	14.8	0.4	0.0	0.0	0.0	0.0	0.0	0.0	11.6	0.0	32.2	0.4	35.5						
1990	542	2,3,4,5	0.9	0.0	0.0	0.0	0.0	2.6	0.0	0.6	0.0	0.0	0.0	0.0	0.0	3.7	0.0	7.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.8	0.0	38.4	0.4	41.5						
1991	457	2,3,4,5	0.0	0.7	0.0	2.2	0.0	5.3	0.0	0.0	0.7	0.0	0.0	0.0	0.0	0.4	0.0	4.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	28.0	0.2	58.2						
1992	631	2,3,4,5	2.9	3.2	0.0	0.0	0.0	6.8	0.6	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.0	6.0	0.3	0.0	0.3	0.0	0.0	0.0	0.0	4.1	0.0	35.5	0.2	39.9						
1993	892	2,3,4,5	2.6	0.0	0.0	2.2	0.0	5.5	0.8	0.0	0.0	0.0	0.0	0.0	0.3	1.7	0.2	6.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	12.1	0.0	21.2	0.2	46.6						
1994	1626	2,3,4,5	3.2	0.6	0.0	1.6	0.4	2.5	0.0	0.1	0.2	0.0	0.0	0.2	0.0	0.4	0.0	7.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	10.0	0.0	34.3	0.2	38.9						
1995	3321	2,3,4,5	2.1	0.2	0.5	1.1	0.2	1.9	0.2	0.0	0.5	0.0	0.0	0.1	0.0	0.2	0.0	5.5	0.1	0.0	0.1	0.0	0.0	0.0	0.0	8.1	0.0	32.2	0.0	47.1						
1996	5018	2,3,4,5	2.0	0.0	0.0	1.3	0.1	0.4	0.0	0.0	0.2	0.1	0.0	0.0	0.0	0.1	0.0	13.1	0.2	0.0	0.0	0.1	0.0	0.0	0.1	16.0	0.0	11.7	0.3	54.5						
1997	4055	2,3,4,5	14.0	0.0	0.0	1.8	0.2	1.3	0.0	0.0	0.1	0.2	0.0	0.0	0.0	0.6	0.0	6.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	12.1	0.0	18.5	0.2	44.2						
1998	6031	2,3,4,5	7.9	0.0	0.0	3.2	0.2	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.2	0.0	4.9	0.1	0.0	0.0	0.0	0.0	0.0	0.0	7.9	0.0	9.6	0.0	66.0						
1999	5058	2,3,4,5	8.6	0.0	0.4	2.8	0.3	0.0	0.1	0.0	0.0	0.1	0.0	0.1	0.8	0.1	1.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	16.3	0.0	19.5	0.1	49.1							
2000	4311	2,3,4,5	8.2	0.1	0.1	1.7	0.6	0.8	0.1	0.0	0.0	0.0	0.0	0.0	0.6	0.5	7.0	0.2	0.0	0.0	0.0	0.0	0.0	0.0	19.6	0.0	18.5	0.0	41.9							
2001	9398	2,3,4,5	5.4	0.0	0.5	2.5	0.0	1.1	0.2	0.0	0.0	0.0	0.0	0.0	2.4	0.9	8.1	0.3	0.0	0.0	0.0	0.0	0.0	0.0	8.3	0.0	13.9	0.1	56.3							
2002	6713	2,3,4,5	9.2	0.0	0.7	6.7	1.0	1.3	0.3	0.0	0.0	0.1	0.0	0.0	0.0	3.3	1.1	5.0	0.6	0.0	0.0	0.0	0.0	0.0	0.0	10.7	0.0	10.4	0.0	49.5						
2003	4286	2,3,4,5	8.7	0.0	0.4	5.2	0.3	1.5	0.0	0.0	0.0	0.3	0.0	0.0	0.0	3.9	0.1	7.0	0.2	0.0	0.0	0.0	0.0	0.0	0.0	16.8	0.0	17.8	0.0	37.8						
2004	5789	2,3,4,5	8.0	0.0	0.5	3.9	0.7	3.6	0.1	0.0	0.0	0.0	0.0	0.0	0.1	2.3	0.1	3.7	0.1	0.0	0.0	0.0	0.0	0.0	0.0	18.5	0.0	7.2	0.2	51.2						
2005	2270	2,3,4,5	12.6	0.0	0.4	6.8	2.2	5.3	0.9	0.0	0.0	0.3	0.0	0.0	0.4	2.9	0.4	2.7	0.2	0.0	0.0	0.0	0.0	0.0	0.0	16.0	0.0	10.9	0.0	38.2						
2006	2414	2,3,4,5	7.5	0.0	0.0	5.6	1.4	5.7	1.9	0.0	0.0	0.7	0.0	0.0	0.0	4.4	0.3	1.7	0.2	0.0	0.0	0.0	0.0	0.0	0.0	19.0	0.0	12.2	0.0	39.4						
2007	2212	2,3,4,5	9.6	0.1	1.0	4.7	1.0	1.4	0.4	0.0	0.0	0.0	0.0	0.0	0.2	4.0	0.8	5.4	0.5	0.0	0.0	0.0	0.0	0.0	0.0	18.3	0.0	18.2	0.1	34.2						
2008	4084	2,3,4,5	4.6	0.0	0.0	3.8	1.8	1.5	0.6	0.0	0.0	0.0	0.0	0.0	0.0	3.0	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.8	0.0	19.7	0.0	62.8						
2009	3268	2,3,4,5	6.8	0.0	0.1	4.4	0.6	1.6	0.8	0.0	0.0	0.0	0.0	0.0	0.4	0.9	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.2	0.0	15.9	0.0	67.1						
2010	4169	2,3,4,5	5.4	0.0	0.4	4.2	0.2	0.0	0.4	0.0	0.0	0.0	0.0	0.0	0.0	3.6	0.6	0.7	0.3	0.0	0.0	0.0	0.0	0.0	0.0	5.5	0.0	10.7	0.0	68.0						
2011	1932	2,3,4,5	6.9	0.0	0.5	4.5	0.4	2.1	1.1	0.0	0.0	0.0	0.0	0.0	0.1	5.2	0.5	1.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	16.2	0.0	18.4	0.1	42.3						
2012	2794	2,3,4,5	2.1	0.3	0.0	2.3	0.1	3.1	2.7	0.0	0.0	0.1	0.0	0.0	0.6	6.5	0.7	3.8	0.6	0.0	0.0	0.4	0.0	0.0	0.0	12.3	0.0	15.8	0.0	48.6						
2013	6623	2,3,4,5	2.7	0.0	0.2	3.9	0.5	0.7	1.0	0.0	0.0	0.3	0.0	0.0	0.1	8.2	0.4	4.9	0.2	0.0	0.0	0.0	0.0	0.0	0.0	14.1	0.0	11.7	0.0	51.2						
2014	4642	2,3,4,5	8.0	0.0	0.2	5.8	0.5	2.9	0.0	0.0	0.0	0.0	0.0	0.0	0.3	3.8	0.2	5.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	11.5	0.0	12.5	0.0	48.7						
2015	6944	2,3,4,5	3.1	0.0	0.1	0.9	0.1	0.5	0.2	0.0	0.0	0.1	0.0	0.0	0.0	2.0	0.3	1.7	0.1	0.0	0.0	0.1	0.0	0.0	0.0	19.0	0.0	15.1	0.0	56.6						
2016	NA		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-						
85–95	1437		1.5	0.4	0.1	1.8	0.1	4.4	0.2	0.3	0.1	0.0	0.0	0.0	0.1	0.8	0.1	9.6	0.3	0.0	0.0	0.0	0.0	0.0	0.0	6.3	0.0	30.0	0.2	43.6						
96–98	5035		8.0	0.0	0.0	2.1	0.1	0.5	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.3	0.0	8.3	0.1	0.0	0.0	0.0	0.0	0.0	0.0	12.0	0.0	13.3	0.2	54.9						
99–08	4654		8.2	0.0	0.4	4.4	0.9	2.2	0.5	0.0	0.0	0.1	0.0	0.0	0.1	2.8	0.4	4.2	0.2	0.0	0.0	0.0	0.0	0.0	0.0	14.5	0.0	14.8	0.1	46.0						
09–16	4339		5.0	0.0	0.2	3.7	0.3	1.6	0.9	0.0	0.0	0.1	0.0	0.0	0.2	4.3	0.4	2.6	0.2	0.0	0.0	0.1	0.0	0.0	0.0	11.4	0.0	14.3	0.0	54.7						

Appendix C14—Percent distribution of George Adams Fall Fingerling total fishing mortalities among fisheries and escapement.

Catch Year	Est # of CWT	Ages	AABM Fishery							ISBM Fishery											Terminal Fishery						Escapement						
			SEAK			NBC		WCVI		NBC & CBC			Southern BC			N Falcon		S Falcon		WAC	Puget Sd			SEAK			Canada		Southern US			Stray	Esc.
			T	N	S	T	S	T	S	T	N	S	T	N	S	T	S	T	S	N	N	S	T	N	S	N	S	T	N	S			
79-84	911		0.0	0.0	0.0	0.2	0.0	17.4	0.0	1.8	0.7	0.0	0.5	1.6	4.0	1.8	0.5	0.1	0.0	2.5	14.6	27.4	0.0	0.0	0.0	0.0	0.0	0.0	11.3	0.0	0.3	15.5	
1985	361	4,5	1.4	0.0	0.0	0.0	0.0	18.8	0.0	0.3	0.0	0.0	0.0	0.0	4.7	1.1	0.0	0.0	0.0	0.0	25.2	22.2	0.0	0.0	0.0	0.0	0.0	0.0	7.2	0.0	0.0	19.1	
1986	18	5	Failed Criteria							-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1987	208	2	Failed Criteria							-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1988	919	2,3	0.0	0.4	0.0	1.0	0.0	10.7	0.0	0.0	0.0	0.0	0.0	2.2	8.4	11.2	0.4	0.4	0.0	0.0	12.2	27.2	0.0	0.0	0.0	0.0	0.0	0.0	11.0	0.0	2.6	12.3	
1989	1905	2,3,4	0.0	0.6	0.0	0.0	0.0	10.4	1.7	0.1	0.3	0.0	0.0	4.1	3.9	13.1	0.5	0.3	0.3	0.2	14.9	18.0	0.0	0.0	0.0	0.0	0.0	18.5	1.3	1.5	10.5		
1990	1508	2,3,4,5	0.7	0.0	0.0	0.4	0.0	21.6	4.6	0.3	0.5	0.0	0.0	0.9	4.8	15.7	0.4	0.0	0.0	0.3	8.6	18.5	0.0	0.0	0.0	0.0	0.0	16.3	0.3	0.0	6.0		
1991	1161	2,3,4,5	0.2	0.0	0.0	0.0	0.0	17.1	3.4	0.0	0.0	0.0	0.0	0.3	2.5	7.3	0.0	0.3	0.0	0.0	15.8	16.5	0.0	0.0	0.0	0.0	0.0	12.4	0.7	11.5	12.0		
1992	195	2,3,4,5	0.0	0.0	0.0	0.0	0.0	13.3	0.0	0.0	0.5	0.0	0.0	4.1	1.5	15.9	0.0	0.0	0.0	0.0	0.5	32.8	0.0	0.0	0.0	0.0	0.0	8.7	0.0	15.4	7.2		
1993	103	2,3,4,5	0.0	0.0	0.0	0.0	0.0	22.3	4.9	0.0	0.0	0.0	1.9	0.0	2.9	7.8	0.0	0.0	0.0	0.0	4.9	21.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	14.6	19.4		
1994	60	2,3,4,5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	8.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.0	8.3	0.0	0.0	0.0	0.0	0.0	5.0	0.0	21.7	51.7		
1995	261	2,3,4,5	0.0	0.0	0.0	0.0	0.0	9.6	3.1	0.0	2.3	0.0	0.0	1.1	5.0	0.8	0.0	0.0	0.0	0.0	0.4	28.7	0.0	0.0	0.0	0.0	0.0	3.1	0.0	1.1	44.8		
1996	366	2,3,4,5	0.0	0.0	0.0	0.0	0.0	1.4	4.6	0.0	2.5	0.0	0.0	0.0	13.4	5.5	0.5	0.0	0.0	0.0	0.0	15.6	0.0	0.0	0.0	0.0	0.3	0.0	0.0	0.3	56.0		
1997	402	2,3,4,5	2.0	0.0	0.0	0.0	0.0	4.7	1.2	0.0	0.0	0.0	0.0	0.5	4.0	2.2	0.0	0.5	0.0	0.0	0.7	24.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	59.5		
1998	613	2,3,4,5	0.7	0.2	0.0	0.0	0.0	0.2	1.1	0.0	0.0	0.0	0.0	0.0	0.7	1.3	0.0	0.0	0.0	0.0	0.2	24.8	0.0	0.0	0.0	0.0	0.0	1.1	0.0	7.2	62.6		
1999	967	2,3,4,5	0.4	0.0	0.0	0.0	0.0	0.7	6.6	0.0	0.0	0.0	0.0	0.0	4.6	3.8	1.2	1.2	0.0	0.0	1.6	11.8	0.0	0.0	0.0	0.0	0.0	0.9	0.0	8.3	58.8		
2000	974	2,3,4,5	0.3	0.0	0.0	0.3	0.0	19.8	8.5	0.0	0.2	0.0	0.0	0.0	2.8	3.0	0.0	0.4	0.0	0.0	0.3	11.1	0.0	0.0	0.0	0.0	0.0	0.0	10.2	4.7	38.4		
2001	1009	2,3,4,5	0.7	0.0	0.0	0.0	0.0	11.0	1.9	0.0	0.0	0.0	0.0	0.0	2.1	4.4	0.9	1.6	0.0	0.0	4.4	13.6	0.0	0.0	0.0	0.0	0.0	4.2	0.4	12.9	42.1		
2002	1040	2,3,4,5	1.5	0.0	0.0	1.3	0.0	10.3	11.1	0.0	0.0	0.0	0.0	0.0	1.8	3.9	0.8	0.5	0.2	0.0	6.6	7.3	0.0	0.0	0.0	0.0	0.0	3.6	8.9	1.8	40.4		
2003	1024	2,3,4,5	0.6	0.4	0.0	0.0	0.0	11.4	2.3	0.0	0.0	0.0	0.0	0.0	2.9	6.2	0.2	0.9	0.0	0.0	3.7	9.3	0.0	0.0	0.0	0.0	0.0	6.1	11.4	0.3	44.3		
2004	1440	2,3,4,5	0.4	0.3	0.0	0.0	0.0	14.9	3.4	0.0	0.6	0.0	0.1	0.0	2.4	5.8	0.5	0.9	0.0	0.0	6.7	9.1	0.0	0.0	0.0	0.0	0.0	4.2	1.2	0.8	48.7		
2005	1742	2,3,4,5	0.3	0.1	0.0	0.1	0.0	11.4	7.7	0.0	0.0	0.0	0.0	0.0	9.0	6.9	1.3	0.5	0.0	0.0	2.3	10.0	0.0	0.0	0.0	0.0	0.0	2.5	5.8	1.7	40.5		
2006	1207	2,3,4,5	0.4	0.2	0.0	0.8	0.0	11.6	2.0	0.0	0.0	0.0	0.0	0.0	4.5	5.3	0.4	0.3	0.0	0.0	6.5	11.1	0.0	0.0	0.0	0.0	0.0	6.1	1.3	3.4	46.0		
2007	1897	2,3,4,5	0.3	0.8	0.0	0.0	0.0	9.6	1.7	0.0	0.0	0.0	0.0	0.0	3.1	3.5	0.2	0.3	0.0	0.0	2.2	19.6	0.0	0.0	0.0	0.0	0.0	8.6	10.7	0.3	39.1		
2008	1212	2,3,4,5	0.0	0.0	0.0	0.0	0.0	4.2	4.0	0.0	0.0	0.0	0.0	0.0	3.5	1.6	0.7	0.0	0.0	0.4	4.9	12.8	0.0	0.0	0.0	0.0	0.0	10.0	0.0	0.0	57.9		
2009	1598	2,3,4,5	0.0	0.0	0.0	0.2	0.0	5.6	4.8	0.0	0.0	0.0	0.0	0.0	7.5	2.4	0.4	0.0	0.0	0.0	2.9	18.0	0.0	0.0	0.0	0.0	0.0	2.6	0.0	0.3	55.2		
2010	1940	2,3,4,5	0.2	0.0	0.0	0.0	0.0	9.5	5.5	0.0	0.0	0.0	0.0	0.0	1.8	4.7	0.4	0.2	0.0	0.2	5.1	12.3	0.0	0.0	0.0	0.0	0.0	12.7	5.5	0.1	41.9		
2011	2757	2,3,4,5	0.0	0.0	0.0	0.0	0.0	3.0	2.4	0.0	0.0	0.0	0.0	0.0	1.7	2.1	0.3	0.3	0.0	0.0	4.9	16.1	0.0	0.0	0.0	0.0	0.0	9.8	6.6	0.1	52.7		
2012	3155	2,3,4,5	0.2	0.1	0.0	0.1	0.0	2.5	3.3	0.0	0.0	0.0	0.0	0.3	2.6	5.4	1.4	0.2	0.0	0.0	7.6	15.2	0.0	0.0	0.0	0.0	0.0	14.5	6.9	0.8	39.0		
2013	1979	2,3,4,5	0.0	0.5	0.0	0.2	0.0	3.4	4.3	0.0	0.0	0.0	0.0	0.0	4.2	5.1	1.0	0.3	0.0	0.0	3.1	7.8	0.0	0.0	0.0	0.0	0.0	6.3	8.2	2.0	53.7		
2014	1082	2,3,4,5	0.3	0.4	0.0	1.6	0.0	3.9	5.8	0.0	0.0	0.2	0.0	0.0	4.7	1.7	1.3	0.0	0.0	0.0	12.5	17.4	0.0	0.0	0.0	0.0	0.0	22.8	2.9	1.3	23.4		
2015	1460	2,3,4,5	0.0	0.0	0.0	0.0	0.0	1.0	0.8	0.0	0.0	0.3	0.0	0.0	4.0	6.6	0.5	0.0	0.0	0.0	5.8	12.1	0.0	0.0	0.0	0.0	0.0	23.8	6.8	0.9	37.5		
2016	NA		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
85-95	1006		0.2	0.1	0.0	0.1	0.0	14.4	2.6	0.1	0.7	0.0	0.0	2.1	3.6	10.6	0.2	0.1	0.1	0.1	8.0	22.9	0.0	0.0	0.0	0.0	0.0	11.8	0.5	5.9	16.1		
96-98	460		0.9	0.1	0.0	0.0	0.0	2.1	2.3	0.0	0.8	0.0	0.0	0.2	6.0	3.0	0.2	0.2	0.0	0.0	0.3	21.6	0.0	0.0	0.0	0.0	0.1	0.0	0.4	0.0	2.6	59.4	
99-08	1251		0.5	0.2	0.0	0.3	0.0	10.5	4.9	0.0	0.1	0.0	0.0	0.0	3.7	4.4	0.6	0.7	0.0	0.0	3.9	11.6	0.0	0.0	0.0	0.0	0.0	4.6	5.0	3.4	45.6		
09-16	1996		0.1	0.1	0.0	0.3	0.0	4.1	3.8	0.0	0.0	0.1	0.0	0.0	3.8	4.0	0.8	0.1	0.0	0.0	6.0	14.1	0.0	0.0	0.0	0.0	0.0	13.2	5.3	0.8	43.3		

Appendix C15—Percent distribution of Hanford Wild Brights total fishing mortalities among fisheries and escapement.

Catch Year	Est # of CWT	Ages	AABM Fishery									ISBM Fishery											Terminal Fishery									Escapement					
			SEAK			NBC			WCVI			NBC & CBC			Southern BC			N Falcon		S Falcon		WAC	Puget Sd			SEAK			Canada		Southern US			Stray	Esc.		
			T	N	S	T	S		T	S		T	N	S	T	N	S	T	S	N	N	S	T	N	S	N	S	T	N	S							
79–84	NA		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
1985	NA		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
1986	NA		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
1987	NA		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
1988	95	2	Failed Criteria									-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
1989	113	2,3	9.7	0.0	0.0	10.6	0.0	8.8	5.3		2.7	1.8	0.0	0.0	1.8	0.0	0.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
1990	476	2,3,4	8.8	0.8	0.2	5.0	0.0	8.8	3.6		0.4	0.4	0.0	0.0	0.2	0.0	0.6	0.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1991	614	2,3,4,5	10.7	0.0	1.5	10.6	0.5	5.2	0.0		0.2	0.0	0.0	0.0	0.0	1.0	0.5	0.0	0.5	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1992	364	2,3,4,5	15.9	15.4	1.4	6.0	0.0	15.7	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.8	0.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1993	413	2,3,4,5	18.9	0.0	2.2	3.1	1.2	6.1	1.9		0.0	0.5	0.0	0.0	1.7	0.0	3.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1994	768	2,3,4,5	17.1	3.1	0.0	5.5	0.0	4.7	0.0		0.3	1.0	0.0	0.0	0.3	0.0	0.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1995	688	2,3,4,5	13.4	0.0	4.2	5.5	0.0	2.9	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1996	623	2,3,4,5	13.2	0.0	0.0	0.8	0.0	0.6	0.0		0.0	0.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1997	647	2,3,4,5	16.8	1.1	1.1	3.1	3.1	0.8	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1998	332	2,3,4,5	13.9	0.0	0.0	11.4	0.6	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1999	276	2,3,4,5	13.4	0.4	2.2	13.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2000	230	2,3,4,5	20.9	0.4	2.2	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2001	354	2,3,4,5	5.9	0.6	1.7	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.8	0.0	0.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2002	883	2,3,4,5	17.8	0.0	1.1	0.8	0.6	2.7	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.9	0.0	0.7	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2003	1544	2,3,4,5	13.7	0.0	0.9	4.1	1.1	0.0	0.4		0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.3	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2004	1889	2,3,4,5	18.8	2.1	2.5	6.6	3.3	2.8	0.0		0.0	0.0	0.0	0.0	0.0	0.4	0.2	0.3	0.2	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2005	461	2,3,4,5	13.2	0.0	0.0	8.9	3.0	4.1	0.9		0.0	0.0	0.0	0.0	0.0	0.0	2.2	1.1	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2006	563	2,3,4,5	19.2	0.0	0.9	5.2	0.0	2.7	2.1		0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.0	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2007	313	2,3,4,5	22.7	0.0	2.6	7.0	7.3	2.6	0.0		0.0	1.3	0.0	0.0	0.0	0.0	0.6	0.0	0.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2008	218	2,3,4,5	33.9	0.0	4.1	1.4	1.8	3.2	1.8		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2009	228	2,3,4,5	21.9	0.0	0.9	3.9	2.2	1.3	2.6		0.0	0.0	0.0	0.0	0.0	3.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2010	504	2,3,4,5	16.3	0.0	4.6	8.3	3.8	0.8	1.4		0.0	0.0	0.0	0.0	0.0	0.0	1.4	0.6	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2011	553	2,3,4,5	20.8	0.7	0.0	1.8	5.1	2.4	0.0		0.0	0.0	0.0	0.0	0.0	1.3	0.0	0.2	0.7	0.9	0.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2012	659	2,3,4,5	16.2	0.9	1.8	5.3	2.4	5.8	5.6		0.0	0.0	0.0	0.0	0.0	0.0	4.7	0.3	0.5	0.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2013	1662	2,3,4,5	7.5	0.0	0.8	4.6	1.4	1.4	1.9		0.0	0.0	0.3	0.0	0.0	0.8	1.3	0.5	1.4	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2014	2239	2,3,4,5	13.7	0.4	1.1	4.6	0.8	2.6	1.3		0.0	0.0	0.7	0.0	0.0	0.6	1.3	0.2	2.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2015	2122	2,3,4,5	14.1	1.8	1.1	2.5	3.5	0.6	1.4		0.0	0.0	0.4	0.0	0.0	0.2	1.8	0.9	0.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2016	NA		-	-	-	-	-	-	-		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
85–95	554		14.1	3.2	1.6	6.0	0.3	7.2	0.9		0.1	0.3	0.0	0.0	0.4	0.2	0.9	0.3	0.2	0.1	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
96–98	534		14.6	0.4	0.4	5.1	1.2	0.5	0.0		0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
99–08	673		17.9	0.3	1.8	4.7	1.7	1.8	0.5		0.0	0.1	0.0	0.0	0.0	0.0	0.5	0.2	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
09–16	1138		15.8	0.5	1.5	4.4	2.7	2.1	2.0		0.0	0.0	0.2	0.0	0.0	0.9	1.5	0.4	0.9	0.3	0.1	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Appendix C19—Percent distribution of Kitsumkalum Yearling (North/Central BC) total fishing mortalities among fisheries and escapement.

Catch Year	Est # of CWT	Ages	AABM Fishery						ISBM Fishery										Terminal Fishery						Escapement								
			SEAK			NBC		WCVI	NBC & CBC			Southern BC			N Falcon		S Falcon		WAC	Puget Sd			SEAK			Canada		Southern US			Stray	Esc.	
			T	N	S	T	S	T	S	T	N	S	T	N	S	T	S	N	N	S	T	N	S	N	S	T	N	S					
79–84	NA		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1985	NA		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1986	NA		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1987	NA		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1988	NA		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1989	NA		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1990	NA		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1991	NA		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1992	NA		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1993	NA		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1994	NA		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1995	NA		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1996	NA		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1997	NA		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1998	NA		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1999	NA		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2000	NA		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2001	NA		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2002	12	3	Failed Criteria						-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2003	81	3,4	38.3	1.2	16.0	13.6	3.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	27.2
2004	1099	3,4,5	15.3	0.3	2.9	2.5	5.6	0.0	0.0	0.0	2.1	1.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	67.1
2005	767	3,4,5,6	22.7	0.0	7.7	3.8	2.3	0.0	0.0	0.0	0.0	5.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	52.4
2006	632	3,4,5,6	15.0	1.9	2.8	2.7	6.8	0.0	0.0	0.0	4.1	0.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	63.3
2007	1014	3,4,5,6	16.5	5.8	2.7	1.3	5.3	0.2	0.0	0.0	6.1	1.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	60.2
2008	964	4,5,6	10.2	0.0	5.8	0.6	7.7	0.0	0.0	0.0	20.2	12.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	38.3
2009	769	3,5,6	12.2	0.0	6.5	1.0	4.2	0.0	0.0	0.0	0.3	4.2	0.0	0.0	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	68.3
2010	489	3,4,6	10.2	0.2	2.2	2.0	2.7	0.0	0.0	0.0	2.0	5.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	69.7
2011	301	3,4,5	18.9	1.0	1.7	3.0	3.7	0.0	0.0	0.0	3.7	9.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	55.1
2012	391	3,4,5,6	22.8	0.0	1.5	0.8	1.0	0.0	0.0	0.0	1.5	6.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	60.1
2013	335	3,4,5,6	6.9	0.3	0.9	1.2	2.7	0.0	0.0	0.0	0.6	6.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	77.0
2014	493	3,4,5,6	20.7	1.6	1.2	2.2	1.2	0.0	0.0	0.0	2.2	3.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	63.9
2015	1339	3,4,5,6	9.3	1.0	3.6	1.2	5.4	0.0	0.0	0.0	1.3	3.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	69.5
2016	449	4,5,6	5.8	7.6	3.6	3.8	4.7	0.0	0.0	0.0	0.0	4.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	67.9
85–95	NA		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
96–98	NA		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
99–08	895		15.9	1.6	4.4	2.2	5.6	0.0	0.0	0.0	6.5	4.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	56.2
09–16	571		13.4	1.5	2.7	1.9	3.2	0.0	0.0	0.0	1.4	5.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	66.5

Appendix C20—Percent distribution of Lower River Hatchery Tule (Lower Bonneville Hatchery) total fishing mortalities among fisheries and escapement.

Catch Year	Est # of CWT	Ages	AABM Fishery									ISBM Fishery										Terminal Fishery						Escapement							
			SEAK			NBC			WCVI			NBC & CBC			Southern BC			N Falcon		S Falcon		WAC	Puget Sd			SEAK			Canada		Southern US			Stray	Esc.
			T	N	S	T	S	T	S	T	N	S	T	N	S	T	S	T	S	N	N	S	T	N	S	N	S	T	N	S					
79-84	2198		0.1	0.0	0.0	0.1	0.0	35.5	0.2	1.8	0.3	0.0	0.1	1.8	1.7	15.1	5.9	2.3	0.2	0.4	0.8	4.7	0.0	0.0	0.0	0.0	0.0	0.0	6.6	0.4	0.1	22.0			
1985	1090	2,3,4,5	0.0	0.0	0.0	0.0	0.0	30.2	0.7	0.8	0.4	0.0	0.0	1.1	1.1	13.2	3.1	4.3	0.7	0.3	1.2	1.6	0.0	0.0	0.0	0.0	0.0	2.3	0.6	0.0	38.4				
1986	1795	2,3,4,5	0.0	0.0	0.0	0.0	0.0	8.7	2.3	0.0	0.6	0.0	0.0	6.5	2.8	3.4	1.6	2.6	0.3	0.0	1.1	22.7	0.0	0.0	0.0	0.0	0.0	7.3	4.6	0.2	35.4				
1987	8842	2,3,4,5	0.0	0.0	0.0	0.2	0.0	33.6	2.0	2.0	0.0	0.0	0.2	0.6	11.1	3.0	6.0	0.7	0.4	0.6	1.5	0.0	0.0	0.0	0.0	0.0	16.4	3.5	0.2	17.8					
1988	2667	2,3,4,5	0.3	0.0	0.0	0.3	0.0	32.0	1.9	0.6	0.0	0.0	0.0	0.0	1.6	8.7	0.8	2.6	0.1	0.5	0.3	0.5	0.0	0.0	0.0	0.0	22.2	1.8	1.2	24.5					
1989	273	2,3,4,5	0.0	0.0	0.0	0.0	0.0	17.2	0.0	0.0	0.0	0.0	0.0	1.8	0.0	14.7	1.5	9.5	0.7	0.0	0.0	2.6	0.0	0.0	0.0	0.0	0.0	5.5	0.7	0.0	45.8				
1990	322	2,3,4,5	0.0	0.0	0.0	0.0	0.0	23.0	0.0	0.0	0.3	0.0	0.0	1.6	0.0	14.6	6.2	3.7	0.9	0.0	0.0	1.9	0.0	0.0	0.0	0.0	0.0	0.3	2.5	0.0	45.0				
1991	488	2,3,4,5	0.0	0.0	0.0	0.0	0.0	12.3	2.5	0.2	0.0	0.0	0.0	2.5	0.8	8.6	3.1	2.5	1.4	0.0	0.2	2.7	0.0	0.0	0.0	0.0	0.0	1.8	9.0	0.0	52.5				
1992	1314	2,3,4,5	0.0	0.0	0.0	0.0	0.0	19.9	1.8	0.6	0.0	0.0	0.0	0.8	0.0	25.1	3.8	4.9	1.7	0.0	0.0	2.1	0.0	0.0	0.0	0.0	0.0	0.7	3.0	0.0	35.5				
1993	528	2,3,4,5	0.0	0.0	0.0	0.0	0.0	21.0	4.4	0.8	0.0	0.0	0.0	0.0	0.0	15.2	2.3	5.5	0.2	0.0	0.0	4.5	0.0	0.0	0.0	0.0	0.0	1.9	4.2	0.0	40.2				
1994	31	2,3,4,5	0.0	0.0	0.0	0.0	0.0	29.0	0.0	0.0	0.0	0.0	0.0	0.0	12.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	58.1				
1995	30	2,3,4,5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.3	10.0	0.0	86.7					
1996	68	2,3,4,5	0.0	0.0	0.0	0.0	0.0	5.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	8.8	0.0	0.0	0.0	0.0	0.0	0.0	1.5	0.0	5.9	0.0	2.9	75.0					
1997	223	2,3,4,5	0.0	0.0	0.0	0.0	0.0	22.0	3.6	0.0	0.0	0.0	0.0	0.0	2.2	3.1	3.1	5.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.9	8.1	1.8	49.8					
1998	111	2,3,4,5	0.0	0.0	0.0	0.0	0.0	0.9	10.8	0.0	0.0	4.5	0.0	0.0	0.0	0.9	1.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.8	19.8	0.9	58.6					
1999	331	2,3,4,5	0.0	0.0	0.0	0.0	0.0	2.1	9.4	0.0	0.0	0.0	0.0	0.0	0.0	4.5	1.5	2.7	1.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.3	6.3	0.0	68.3					
2000	273	2,3,4,5	0.0	0.0	0.0	0.0	0.0	16.8	12.8	0.0	0.0	0.0	0.0	0.0	1.8	2.2	0.0	0.0	0.0	0.0	0.0	3.7	0.0	0.0	0.0	0.0	0.0	2.2	2.9	0.0	57.5				
2001	1218	2,3,4,5	0.0	0.0	0.0	0.0	0.0	8.8	2.4	0.0	0.0	0.0	0.0	0.0	0.2	7.9	2.8	12.5	0.7	0.0	0.1	1.1	0.0	0.0	0.0	0.0	0.0	1.2	4.3	0.9	57.1				
2002	2015	2,3,4,5	0.4	0.0	0.0	0.0	0.0	9.0	3.1	0.0	0.0	0.0	0.0	0.0	0.0	17.5	5.7	3.5	1.5	0.0	0.1	0.0	0.0	0.0	0.0	0.0	7.0	2.6	0.0	49.5					
2003	2122	2,3,4,5	0.0	0.0	0.0	0.0	0.0	13.1	5.7	0.0	0.0	0.0	0.0	0.0	0.4	10.9	5.9	3.9	0.2	0.0	0.0	0.8	0.0	0.0	0.0	0.0	0.0	5.8	1.9	0.0	51.3				
2004	1618	2,3,4,5	0.5	0.0	0.0	0.3	0.0	21.3	8.8	0.0	0.0	0.0	0.0	0.0	0.7	4.5	3.5	4.1	0.1	0.0	0.0	0.1	0.0	0.0	0.0	0.0	15.1	1.2	0.0	39.7					
2005	617	2,3,4,5	0.0	0.0	0.0	0.3	0.0	29.3	7.6	0.0	0.0	0.0	0.0	0.0	0.0	5.2	2.1	1.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	15.1	0.2	0.0	38.6					
2006	87	2,3,4,5	0.0	0.0	0.0	0.0	0.0	16.1	14.9	0.0	0.0	0.0	0.0	0.0	0.0	2.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	9.2	1.1	0.0	56.3					
2007	162	2,3,4,5	0.0	0.6	0.0	0.0	0.0	11.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.8	2.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.3	2.5	0.0	72.2					
2008	388	2,3,4,5	0.0	0.0	0.0	0.0	0.0	11.3	8.0	0.0	0.0	0.0	0.0	0.0	1.8	4.9	7.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	22.4	3.1	0.0	41.5					
2009	586	2,3,4,5	0.0	0.0	0.0	0.0	0.0	4.3	8.2	0.0	0.0	0.0	0.0	0.0	3.8	4.1	4.9	0.0	0.0	0.0	0.0	7.7	0.0	0.0	0.0	0.0	27.3	2.6	0.0	37.2					
2010	1590	2,3,4,5	0.1	0.0	0.0	0.3	0.0	6.7	6.3	0.0	0.0	0.0	0.0	0.0	2.9	14.9	5.4	3.8	0.0	0.3	0.0	0.4	0.0	0.0	0.0	0.0	26.8	3.1	0.0	29.2					
2011	840	2,3,4,5	0.0	0.0	0.0	0.0	0.0	9.4	6.4	0.0	0.0	1.0	0.0	0.0	0.5	4.8	7.5	2.3	0.4	2.3	0.0	2.9	0.0	0.0	0.0	0.0	17.4	3.1	0.0	42.3					
2012	863	2,3,4,5	0.0	0.0	0.0	0.5	0.0	3.0	8.1	0.0	0.0	0.0	0.0	0.0	1.3	9.3	13.1	6.8	1.5	0.2	0.0	3.0	0.0	0.0	0.0	0.0	15.2	2.7	0.0	35.3					
2013	714	2,3,4,5	0.0	0.0	0.0	0.0	0.0	2.2	3.2	0.0	0.0	0.6	0.0	0.0	3.1	6.7	6.2	2.1	0.0	0.0	0.0	12.2	0.0	0.0	0.0	0.0	0.0	15.1	4.2	0.0	44.4				
2014	2470	2,3,4,5	0.0	0.1	0.1	0.0	0.0	6.1	3.1	0.0	0.0	0.0	0.1	0.0	3.2	15.6	13.3	7.9	1.1	0.4	0.0	1.5	0.0	0.0	0.0	0.0	0.0	15.2	3.2	0.2	29.0				
2015	1458	2,3,4,5	0.3	0.0	0.0	0.2	0.0	5.1	2.0	0.0	0.0	0.3	0.0	0.0	2.1	17.2	9.0	5.7	0.2	0.0	0.0	3.5	0.0	0.0	0.0	0.0	0.0	11.4	2.5	0.0	40.5				
2016	NA		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-				
85-95	1924		0.0	0.0	0.0	0.1	0.0	22.0	1.7	0.6	0.1	0.0	0.0	1.6	0.8	12.7	2.8	4.6	0.8	0.1	0.4	4.5	0.0	0.0	0.0	0.0	0.0	6.5	3.3	0.2	37.2				
96-98	167		0.0	0.0	0.0	0.0	0.0	11.4	7.2	0.0	0.0	2.3	0.0	0.0	1.1	2.0	2.5	2.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.3	13.9	1.3	54.2					
99-08	972		0.1	0.1	0.0	0.1	0.0	13.7	6.4	0.0	0.0	0.0	0.0	0.0	0.5	7.2	3.4	3.1	0.5	0.0	0.0	0.6	0.0	0.0	0.0	0.0	8.5	2.8	0.1	52.9					
09-16	1217		0.1	0.0	0.0	0.1	0.0	5.3	5.3	0.0	0.0	0.3	0.0	0.0	2.4	10.4	8.5	4.1	0.4	0.4	0.0	4.4	0.0	0.0	0.0	0.0	0.0	18.3	3.0	0.0	36.8				

Appendix C21—Percent distribution of Lewis River Wild (Lewis River Wild) total fishing mortalities among fisheries and escapement.

Catch Year	Est # of CWT	Ages	AABM Fishery									ISBM Fishery												Terminal Fishery									Escapement		
			SEAK			NBC			WCVI			NBC & CBC			Southern BC			N Falcon		S Falcon		WAC	Puget Sd			SEAK			Canada		Southern US			Stray	Esc.
			T	N	S	T	S	T	S	T	N	S	T	N	S	T	S	T	S	N	N	S	T	N	S	T	N	S	T	N	S				
79-84	1078		7.6	0.4	0.1	3.5	0.0	9.1	0.0	1.6	0.4	0.0	0.2	0.7	1.1	2.7	5.3	0.8	0.0	0.4	0.4	0.5	0.0	0.0	0.0	0.0	0.0	0.0	4.2	14.0	2.0	45.0			
1985	343	2,3	2.3	0.6	0.0	6.7	0.0	9.9	0.3	0.3	1.5	0.0	0.0	3.8	0.0	0.3	2.0	0.3	0.0	0.0	0.6	0.0	0.0	0.0	0.0	0.0	14.3	20.1	7.9	29.2					
1986	673	2,3,4	6.2	0.0	0.0	2.5	0.0	8.3	2.5	2.4	0.9	0.0	0.0	0.0	0.0	1.6	0.6	1.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	25.1	11.3	0.9	35.7						
1987	1163	2,3,4,5	5.6	0.0	0.0	5.5	0.0	9.7	1.0	1.5	0.0	0.0	0.0	0.0	0.0	1.1	0.9	1.7	0.0	0.3	0.0	0.3	0.0	0.0	0.0	23.9	5.0	2.3	41.2						
1988	984	2,3,4,5	5.3	0.0	0.0	3.6	0.0	10.9	0.0	0.0	0.5	0.0	0.0	0.1	0.0	3.9	0.6	1.0	0.4	0.0	0.0	1.4	0.0	0.0	0.0	21.6	14.1	1.9	34.7						
1989	1343	2,3,4,5	2.4	0.7	0.2	5.1	0.4	6.0	0.0	0.2	0.7	0.0	0.0	0.8	0.5	3.1	0.7	2.3	0.0	0.2	0.0	0.0	0.0	0.0	0.0	8.8	6.6	4.5	56.7						
1990	1203	2,3,4,5	7.3	0.0	0.0	1.9	0.0	13.4	0.0	0.4	0.6	0.6	0.0	0.0	0.8	2.7	1.8	1.5	0.0	0.0	0.0	1.3	0.0	0.0	0.0	3.2	2.2	1.7	60.7						
1991	910	2,3,4,5	7.0	0.2	0.0	4.2	1.2	6.5	0.0	0.4	0.0	0.0	0.0	0.7	0.0	1.3	0.5	1.1	0.5	0.0	0.0	0.0	0.0	0.0	15.4	6.0	1.3	53.5							
1992	572	2,3,4,5	1.9	0.0	0.0	4.2	0.0	6.8	0.0	1.9	0.0	0.0	0.0	0.0	0.9	1.2	0.3	1.9	0.3	0.0	0.0	1.0	0.0	0.0	0.0	4.4	21.9	2.3	50.9						
1993	404	2,3,4,5	4.2	0.0	1.0	5.9	0.0	8.7	0.0	0.0	0.2	0.0	0.0	1.5	0.0	1.5	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.4	8.7	5.7	55.7							
1994	264	2,3,4,5	8.7	0.0	0.0	4.9	0.0	3.8	0.0	0.0	0.0	0.0	0.0	1.5	0.0	0.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.5	0.0	3.8	75.0							
1995	551	2,3,4,5	7.4	0.0	2.2	4.0	0.0	6.4	0.0	0.0	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	24.3	2.4	52.8							
1996	330	2,3,4,5	9.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.0	2.1	0.0	0.0	0.0	0.0	0.0	0.0	0.9	4.5	0.3	82.1							
1997	234	3,4,5	15.4	0.0	0.0	4.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.0	0.0	76.9							
1998	101	2,4,5	7.9	0.0	0.0	5.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0	2.0	8.9	74.3							
1999	62	2,3,5	17.7	0.0	1.6	8.1	0.0	1.6	1.6	0.0	0.0	0.0	0.0	0.0	0.0	1.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.6	66.1							
2000	72	2,3,4	8.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	15.3	2.8	6.9	65.3							
2001	239	2,3,4,5	5.9	0.0	2.5	0.0	0.0	8.8	3.8	0.0	0.0	0.0	0.0	0.0	0.0	5.0	2.1	1.3	0.8	0.0	0.0	0.0	0.0	0.0	2.1	2.9	2.9	61.9							
2002	386	2,3,4,5	15.0	0.0	1.0	0.0	0.0	5.7	5.7	0.0	0.0	0.0	0.0	0.0	0.0	2.8	2.3	3.6	0.0	0.0	0.0	0.0	0.0	0.0	4.4	2.3	3.9	53.1							
2003	477	2,3,4,5	10.7	0.0	0.0	1.7	1.3	4.8	1.3	0.0	0.0	0.0	0.0	0.0	0.0	6.1	1.0	4.2	0.0	0.0	0.0	0.0	0.0	0.0	6.5	5.9	1.3	55.3							
2004	2167	2,3,4,5	6.6	0.0	0.3	3.3	0.5	2.1	0.0	0.0	0.0	0.0	0.0	0.3	0.6	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	2.5	1.9	0.4	81.3							
2005	390	2,3,4,5	4.1	0.0	0.0	13.1	7.2	4.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.8	0.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	11.5	8.7	0.3	48.2							
2006	594	2,3,4,5	14.5	0.0	1.2	6.6	1.7	8.2	1.0	0.0	0.0	0.0	0.0	0.0	1.9	1.2	0.5	0.3	0.0	0.0	0.0	0.0	0.0	0.0	5.6	19.0	1.3	37.0							
2007	207	2,3,4,5	37.2	0.0	1.4	6.3	0.0	1.9	0.0	0.0	0.0	0.0	0.0	0.0	1.0	2.9	5.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.9	0.0	1.4	39.1							
2008	142	2,3,4,5	8.5	0.0	0.0	0.0	1.4	12.7	0.0	0.0	0.0	2.8	0.0	0.0	0.0	5.6	0.7	0.0	0.0	0.0	0.0	5.6	0.0	0.0	0.0	4.9	0.0	57.7							
2009	176	2,3,4,5	19.9	0.0	0.0	3.4	2.3	6.3	19.3	0.0	0.0	0.0	0.0	0.0	1.1	0.0	1.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	3.4	0.0	42.6							
2010	200	2,3,4,5	6.5	0.0	0.0	5.0	2.5	1.5	2.0	0.0	0.0	0.0	0.0	0.0	0.0	4.0	4.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0	8.0	0.0	64.0							
2011	225	2,3,4,5	12.0	0.0	1.3	12.4	1.3	4.4	4.0	0.0	0.0	0.0	0.0	0.0	0.0	0.9	6.2	2.2	0.0	0.0	0.0	0.0	0.0	0.0	1.8	20.9	1.8	30.7							
2012	272	2,3,4,5	12.5	2.2	0.4	3.3	3.3	6.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.7	1.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.1	16.5	1.1	43.4							
2013	301	2,3,4,5	1.3	0.0	1.3	2.7	1.0	3.7	1.3	0.0	0.0	0.0	0.0	0.0	0.0	1.7	1.7	2.3	0.0	0.0	0.0	0.0	0.0	0.0	2.0	35.2	1.3	44.5							
2014	275	2,3,4,5	8.4	0.4	0.0	6.9	0.0	4.4	0.0	0.0	0.0	0.0	0.0	0.0	2.5	7.6	1.5	8.4	0.0	0.0	0.0	0.0	0.0	0.0	3.3	0.0	0.4	56.4							
2015	369	2,3,4,5	6.5	0.0	0.8	6.0	3.0	0.5	0.0	0.0	0.0	1.1	0.0	0.0	0.0	0.8	1.1	0.8	0.0	0.0	0.0	0.0	0.0	0.0	9.2	2.7	0.0	67.5							
2016	NA		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-						
85-95	807		5.6	0.1	0.3	4.2	0.2	8.0	0.4	0.7	0.3	0.1	0.0	0.5	0.2	1.7	0.6	1.1	0.1	0.1	0.0	0.4	0.0	0.0	0.0	11.0	10.0	2.7	51.7						
96-98	282		12.4	0.0	0.0	2.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.0	1.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	3.8	0.2	79.5							
99-08	575		12.8	0.0	0.8	3.9	1.5	6.1	1.5	0.0	0.0	0.4	0.0	0.0	0.3	3.0	1.3	1.9	0.1	0.0	0.0	0.7	0.0	0.0	0.0	4.4	5.7	1.4	54.2						
09-16	260		9.6	0.4	0.5	5.7	1.9	3.9	3.8	0.0	0.0	0.2	0.0	0.0	0.5	2.7	2.6	2.0	0.0	0.0	0.0	0.0	0.0	0.0	3.4	12.4	0.7	49.9							

Appendix C22—Percent distribution of Lyons Ferry (Lyons Ferry Hatchery) total fishing mortalities among fisheries and escapement.

Catch Year	Est # of CWT	Ages	AABM Fishery									ISBM Fishery									Terminal Fishery						Escapement									
			SEAK			NBC			WCVI			NBC & CBC			Southern BC			N Falcon		S Falcon		WAC	Puget Sd			SEAK			Canada		Southern US			Stray	Esc.	
			T	N	S	T	S	T	S	T	N	S	T	N	S	T	S	T	S	N	N	S	T	N	S	N	S	T	N	S						
79–84	NA		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
1985	NA		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
1986	335	2	Failed Criteria									-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
1987	753	3	Failed Criteria									-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
1988	773	2,4	3.2	0.0	0.1	3.8	0.0	22.6	0.0	0.6	0.3	0.0	0.0	0.0	0.0	6.9	0.1	4.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	28.7	3.6	0.0	25.7		
1989	395	2,3,5	1.5	0.0	0.0	6.1	0.0	17.7	1.8	0.0	0.8	0.0	0.0	2.3	0.0	8.1	1.3	6.8	4.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	18.7	1.5	0.0	29.4			
1990	545	2,3,4	2.9	0.0	0.0	2.6	0.0	18.0	0.0	0.0	0.6	0.0	0.0	0.0	0.0	8.1	3.7	5.1	0.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	24.2	1.1	0.0	33.2				
1991	354	2,3,4,5	2.3	0.0	2.0	4.0	0.0	11.6	0.0	0.0	0.3	0.0	0.0	0.8	0.0	0.6	0.6	2.3	1.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	8.8	0.8	0.3	64.7				
1992	264	3,4,5	1.9	0.0	0.0	7.2	1.5	11.7	4.2	0.0	0.0	0.0	0.0	0.0	0.0	2.3	0.0	4.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.7	6.1	0.0	53.0					
1993	229	4,5	7.0	0.0	0.0	11.4	0.0	13.1	0.0	0.0	0.0	0.0	0.0	1.3	0.0	3.1	0.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	17.5	0.0	5.7	40.2					
1994	105	5	Failed Criteria									-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
1995	NA		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
1996	30	2	Failed Criteria									-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
1997	41	3	Failed Criteria									-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
1998	159	4	Failed Criteria									-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1999	123	5	Failed Criteria									-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2000	698	2	Failed Criteria									-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2001	1661	2,3	1.1	0.1	0.1	0.1	0.0	0.6	0.9	0.0	0.0	0.0	0.0	0.0	0.0	2.3	4.3	5.6	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.1	3.5	1.1	73.9				
2002	1849	3,4	3.4	0.0	0.4	0.6	0.0	3.0	0.6	0.0	0.0	0.0	0.0	0.0	0.0	4.9	3.4	1.8	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	7.7	3.5	0.0	70.6					
2003	658	2,4,5	6.2	0.0	0.0	1.4	0.2	2.9	0.0	0.0	0.0	0.0	0.0	0.0	5.0	1.8	3.5	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.0	8.8	0.8	0.2	69.1					
2004	689	2,3,5	3.3	0.0	0.0	0.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	1.3	1.5	0.3	0.0	0.0	0.3	0.0	0.0	0.0	0.0	0.0	0.0	3.2	0.7	0.3	88.2					
2005	420	2,3,4	3.6	0.2	0.0	2.9	0.0	3.8	0.0	0.0	0.0	1.9	0.0	0.0	0.0	2.1	2.6	2.6	0.0	0.0	0.0	2.4	0.0	0.0	0.0	0.0	0.0	12.1	1.0	0.0	64.8					
2006	425	2,3,4,5	3.8	0.0	0.0	0.5	1.6	0.7	1.4	0.0	0.0	1.2	0.0	0.0	0.0	6.1	1.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.8	0.9	0.0	75.5					
2007	1570	2,3,4,5	0.2	0.1	0.0	0.2	0.0	1.7	0.4	0.0	0.0	0.0	0.0	0.0	0.3	0.3	0.1	0.1	0.1	0.0	0.0	2.2	0.0	0.0	0.0	0.0	0.0	2.4	1.2	0.0	90.7					
2008	2586	2,3,4,5	0.2	0.0	0.0	0.2	0.2	6.0	1.2	0.0	0.0	0.2	0.0	0.0	0.6	4.0	2.2	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.0	7.3	2.3	0.0	75.4					
2009	3626	2,3,4,5	0.8	0.0	0.1	0.7	0.0	1.5	1.6	0.0	0.0	0.0	0.0	0.0	0.2	1.4	1.2	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.0	5.6	3.5	0.1	83.1						
2010	1999	2,3,4,5	0.5	0.2	0.0	1.3	0.1	5.5	3.9	0.0	0.0	0.0	0.0	0.0	0.6	8.3	6.8	0.9	0.1	0.0	0.0	0.4	0.0	0.0	0.0	0.0	15.2	4.3	0.0	52.1						
2011	2013	2,3,4,5	0.7	0.0	0.1	1.0	0.1	3.7	2.9	0.0	0.0	0.0	0.0	0.0	0.2	4.2	1.8	0.9	0.5	0.0	0.0	1.4	0.0	0.0	0.0	0.0	15.0	7.7	0.0	59.4						
2012	2466	2,3,4,5	1.3	0.2	0.1	0.3	0.0	3.6	3.2	0.0	0.0	0.2	0.0	0.0	0.4	5.7	3.5	2.3	0.6	0.0	0.0	0.6	0.0	0.0	0.0	0.0	10.6	13.5	7.4	46.5						
2013	2032	2,3,4,5	1.8	0.0	0.0	1.0	0.1	2.9	2.2	0.0	0.0	0.0	0.0	0.0	0.3	7.1	3.3	3.6	0.5	0.0	0.0	0.1	0.0	0.0	0.0	0.0	26.4	17.5	0.0	33.0						
2014	1668	2,3,4,5	7.7	0.2	0.2	2.2	0.8	6.4	0.5	0.0	0.0	0.0	0.0	0.0	0.7	7.9	2.0	3.5	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	23.6	8.2	0.7	35.4						
2015	1448	2,3,4,5	5.8	0.3	1.7	1.9	0.0	0.7	0.6	0.0	0.0	0.3	0.0	0.0	0.6	8.1	4.6	3.9	0.1	0.0	0.0	0.8	0.0	0.0	0.0	0.0	17.3	13.5	3.5	36.5						
2016	NA		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
85–95	390		2.2	0.0	0.5	4.9	0.4	14.8	1.5	0.0	0.4	0.0	0.0	0.8	0.0	4.8	1.4	4.8	1.4	0.0	0.0	0.4	0.0	0.0	0.0	0.0	0.0	14.3	2.4	0.1	45.1					
96–98	NA		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
99–08	1058		2.9	0.1	0.0	0.9	0.3	2.5	0.5	0.0	0.0	0.6	0.0	0.0	0.1	3.0	1.6	1.3	0.1	0.0	0.0	0.9	0.0	0.0	0.0	0.0	0.0	6.8	1.1	0.1	77.3					
09–16	2179		2.7	0.1	0.3	1.2	0.2	3.5	2.1	0.0	0.0	0.1	0.0	0.0	0.4	6.1	3.3	2.2	0.3	0.0	0.0	0.5	0.0	0.0	0.0	0.0	0.0	16.2	9.7	1.7	49.4					

Appendix C23—Percent distribution of Lyons Ferry Yearling total fishing mortalities among fisheries and escapement.

Catch Year	Est # of CWT	Ages	AABM Fishery						ISBM Fishery												Terminal Fishery						Escapement										
			SEAK			NBC		WCVI		NBC & CBC			Southern BC			N Falcon		S Falcon		WAC	Puget Sd			SEAK			Canada		Southern US			Stray	Esc.				
			T	N	S	T	S	T	S	T	N	S	T	N	S	T	S	T	S	N	N	S	T	N	S	N	S	T	N	S							
79-84	NA		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
1985	NA		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
1986	NA		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
1987	622	3	Failed Criteria						-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
1988	1220	4	Failed Criteria						-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1989	2199	3,5	0.3	0.4	0.0	1.4	0.0	8.7	4.9	0.5	0.2	0.0	0.0	2.5	0.1	7.0	1.5	5.1	1.0	0.0	0.3	1.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	11.6	2.1	0.0	50.9		
1990	3149	3,4,6	0.5	0.0	0.0	0.6	0.0	20.1	2.5	0.9	0.7	0.0	0.0	0.3	1.2	10.5	5.3	12.7	0.5	0.0	0.3	3.9	0.0	0.0	0.0	0.0	0.0	0.0	14.3	1.5	0.8	23.2	0.8	23.2			
1991	3688	3,4,5	0.2	0.0	0.0	0.7	0.0	11.6	1.7	0.1	0.8	0.0	0.2	0.7	0.4	6.9	0.9	4.4	0.8	0.0	0.3	1.1	0.0	0.0	0.0	0.0	0.0	12.1	0.8	0.0	56.4	0.0	56.4				
1992	2218	4,5,6	1.0	0.0	0.0	2.8	0.0	23.0	3.1	0.0	0.4	0.2	0.0	0.5	0.2	17.3	1.6	4.4	0.5	0.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0	8.8	1.8	0.0	32.6	0.0	32.6				
1993	720	5,6	4.9	0.0	0.0	1.8	0.0	26.9	1.4	0.0	0.0	0.0	0.4	0.0	0.3	9.4	1.4	4.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	16.0	0.0	1.8	31.1	1.8	31.1					
1994	42	3,6	0.0	0.0	0.0	0.0	0.0	7.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	7.1	0.0	0.0	85.7	0.0	85.7					
1995	980	3,4	0.3	0.0	0.0	0.3	0.0	2.6	2.0	0.0	2.1	0.1	0.0	0.2	0.4	1.7	0.3	2.7	0.2	0.0	1.0	0.0	0.0	0.0	0.0	0.0	2.9	1.0	1.2	80.9	1.2	80.9					
1996	6658	3,4,5	0.6	0.0	0.0	0.4	0.0	0.5	0.3	0.0	0.7	0.1	0.0	0.0	0.1	0.5	0.1	3.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.0	7.2	1.3	0.4	84.6	0.4	84.6				
1997	3377	3,4,5,6	1.9	0.0	0.0	1.1	0.0	4.8	0.8	0.4	0.3	0.2	0.0	0.2	0.1	1.2	0.4	6.5	0.3	0.0	0.0	0.1	0.0	0.0	0.0	0.0	11.0	4.5	1.6	64.4	1.6	64.4					
1998	5967	3,4,5,6	1.6	0.1	0.2	2.4	1.0	0.1	0.0	0.0	0.1	0.5	0.0	0.0	0.2	1.3	0.3	1.8	0.1	0.0	0.0	0.1	0.0	0.0	0.0	0.0	9.4	5.6	0.4	74.9	0.4	74.9					
1999	6618	3,4,5,6	1.8	0.1	0.4	1.1	0.1	1.3	1.4	0.1	0.1	0.0	0.0	0.0	0.5	8.3	2.1	6.5	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	7.8	4.0	0.8	63.1	0.8	63.1					
2000	6748	3,4,5,6	1.6	0.0	0.1	0.1	0.0	6.5	3.7	0.0	0.0	0.1	0.0	0.0	0.2	2.6	3.5	3.5	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	10.0	3.8	0.7	63.2	0.7	63.2					
2001	10516	3,4,5,6	0.8	0.0	0.2	0.0	0.0	7.4	1.5	0.0	0.0	0.4	0.0	0.0	0.2	5.4	3.7	14.9	1.1	0.0	0.0	0.9	0.0	0.0	0.0	0.0	12.6	3.4	0.3	47.3	0.3	47.3					
2002	6801	3,4,5,6	1.4	0.2	0.1	0.9	0.1	6.9	1.6	0.0	0.0	0.5	0.0	0.4	0.0	12.2	8.9	6.4	1.7	0.0	0.1	0.2	0.0	0.0	0.0	0.0	10.6	4.2	0.5	43.2	0.5	43.2					
2003	9230	3,4,5,6	0.7	0.0	0.0	0.2	0.1	7.2	1.2	0.0	0.0	0.0	0.0	0.0	0.2	5.1	2.6	4.1	1.0	0.0	0.0	0.3	0.0	0.0	0.0	0.0	8.0	2.4	0.3	66.4	0.3	66.4					
2004	16206	3,4,5,6	0.4	0.0	0.1	0.3	0.0	3.6	0.8	0.0	0.0	0.1	0.0	0.0	0.1	4.2	1.9	4.6	1.0	0.0	0.0	0.9	0.0	0.0	0.0	0.0	4.4	1.8	0.2	75.5	0.2	75.5					
2005	8281	3,4,5,6	0.4	0.0	0.0	0.6	0.2	9.0	2.3	0.0	0.0	0.4	0.0	0.0	0.3	7.6	5.9	5.5	0.5	0.0	0.0	0.3	0.0	0.0	0.0	0.0	10.1	1.8	0.4	54.7	0.4	54.7					
2006	5249	3,4,5,6	0.5	0.0	0.1	1.5	0.6	5.2	1.9	0.0	0.0	0.3	0.0	0.0	0.5	6.0	2.6	1.5	0.2	0.0	0.0	0.9	0.0	0.0	0.0	0.0	10.5	1.9	1.1	64.7	1.1	64.7					
2007	8520	3,4,5,6	0.9	0.2	0.1	0.4	0.0	5.2	1.2	0.0	0.1	0.0	0.0	0.0	0.8	4.1	2.4	1.6	0.7	0.0	0.0	0.8	0.0	0.0	0.0	0.0	6.5	1.8	0.6	72.6	0.6	72.6					
2008	4373	3,4,5,6	0.4	0.0	0.0	0.2	0.5	4.9	2.4	0.0	0.0	0.0	0.0	0.0	0.5	5.4	2.0	0.0	0.0	0.0	0.1	0.4	0.0	0.0	0.0	0.0	11.3	2.0	0.1	69.7	0.1	69.7					
2009	14023	3,4,5,6	0.1	0.0	0.0	0.2	0.1	1.4	3.4	0.0	0.0	0.1	0.0	0.0	0.6	2.6	4.2	0.0	0.1	0.0	0.0	6.2	0.0	0.0	0.0	0.0	7.3	2.6	0.0	71.1	0.0	71.1					
2010	6734	3,4,5,6	0.9	0.1	0.0	1.2	0.2	6.4	3.3	0.0	0.0	0.3	0.0	0.0	0.4	10.2	9.4	3.4	0.2	0.0	0.0	0.4	0.0	0.0	0.0	0.0	24.7	3.2	0.3	35.3	0.3	35.3					
2011	6227	3,4,5,6	0.6	0.0	0.0	0.4	0.1	3.9	2.7	0.0	0.0	0.1	0.0	0.0	0.3	5.7	6.6	1.3	0.8	0.0	0.0	1.0	0.0	0.0	0.0	0.0	19.8	8.3	0.0	48.4	0.0	48.4					
2012	5572	3,4,5,6	0.7	0.1	0.0	0.4	0.0	2.2	3.0	0.0	0.0	0.1	0.0	0.0	0.6	7.9	5.2	5.0	1.1	0.0	0.0	0.5	0.0	0.0	0.0	0.0	12.9	7.9	4.3	47.9	4.3	47.9					
2013	4953	3,4,5,6	0.5	0.1	0.0	0.3	0.1	2.0	2.4	0.0	0.0	0.1	0.0	0.0	1.2	10.8	5.5	3.4	0.6	0.0	0.0	1.2	0.0	0.0	0.0	0.0	22.0	16.4	0.3	33.3	0.3	33.3					
2014	5710	3,4,5,6	1.0	0.2	0.3	1.0	0.1	4.3	1.6	0.0	0.0	0.3	0.0	0.0	0.8	14.6	4.8	7.6	0.7	0.0	0.0	0.2	0.0	0.0	0.0	0.0	22.8	10.5	0.2	29.1	0.2	29.1					
2015	4505	3,4,5,6	2.9	0.6	0.2	1.5	0.0	1.2	1.6	0.0	0.0	0.6	0.0	0.0	0.7	11.5	4.9	5.4	0.4	0.0	0.0	0.6	0.0	0.0	0.0	0.0	18.0	12.4	2.8	34.6	2.8	34.6					
2016	NA		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
85-95	3018		0.6	0.0	0.0	1.4	0.0	18.2	2.4	0.3	0.6	0.1	0.1	0.5	0.6	11.5	2.6	7.2	0.6	0.0	0.2	2.3	0.0	0.0	0.0	0.0	0.0	11.7	1.4	0.3	37.4	0.3	37.4				
96-98	5334		1.3	0.0	0.1	1.3	0.3	1.8	0.4	0.1	0.4	0.2	0.0	0.1	0.1	1.0	0.3	3.8	0.1	0.0	0.0	0.1	0.0	0.0	0.0	0.1	9.2	3.8	0.8	74.6	0.8	74.6					
99-08	8254		0.9	0.1	0.1	0.5	0.2	5.7	1.8	0.0	0.0	0.2	0.0	0.0	0.3	6.1	3.5	4.8	0.7	0.0	0.0	0.5	0.0	0.0	0.0	0.0	9.2	2.7	0.5	62.0	0.5	62.0					
09-16	6818		1.0	0.2	0.1	0.7	0.1	3.1	2.6	0.0	0.0	0.2	0.0	0.0	0.6	9.0	5.8	3.7	0.5	0.0	0.0	1.4	0.0	0.0	0.0	0.0	18.2	8.8	1.1	42.8	1.1	42.8					

Appendix C24—Percent distribution of Middle Shuswap River Summer (Fraser Early) total fishing mortalities among fisheries and escapement.

Catch Year	Est # of CWT	Ages	AABM Fishery									ISBM Fishery										Terminal Fishery						Escapement							
			SEAK			NBC			WCVI			NBC & CBC			Southern BC			N Falcon		S Falcon		WAC	Puget Sd			SEAK			Canada		Southern US			Stray	Esc.
			T	N	S	T	S	T	S	T	N	S	T	N	S	T	S	T	S	N	N	N	S	T	N	S	N	S	T	N	S				
79–84	NA		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
1985	NA		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
1986	NA		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
1987	NA		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
1988	NA		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
1989	NA		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
1990	NA		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
1991	NA		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
1992	NA		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
1993	NA		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
1994	NA		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
1995	NA		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
1996	NA		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
1997	NA		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
1998	NA		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
1999	NA		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
2000	NA		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
2001	NA		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
2002	NA		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
2003	NA		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
2004	NA		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
2005	NA		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
2006	NA		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
2007	NA		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
2008	NA		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
2009	NA		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
2010	3	2	Failed Criteria									-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
2011	57	2,3	7.0	0.0	1.8	7.0	1.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
2012	288	2,3,4	8.3	0.0	1.7	10.4	8.0	2.1	0.3	0.0	0.0	0.3	0.0	0.7	13.9	2.1	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.4	36.8
2013	1660	2,3,4,5	2.4	0.0	0.5	7.5	2.7	0.3	0.7	0.0	0.0	0.1	0.0	1.1	14.3	0.1	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.3	61.9
2014	1197	2,3,4,5	9.3	0.0	0.8	6.9	4.2	3.1	2.4	0.0	0.0	0.4	0.0	1.5	7.3	0.8	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	53.9	
2015	2060	2,3,4,5	4.0	0.0	0.3	2.1	1.9	1.5	1.1	0.0	0.0	0.3	0.0	0.7	14.2	1.6	0.0	0.0	0.0	0.0	0.0	0.1	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.8	61.2	
2016	368	3,4,5	3.8	0.0	0.3	5.7	4.3	0.8	0.0	0.0	0.0	2.2	0.0	0.3	16.6	0.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	56.0		
85–95	NA		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
96–98	NA		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
99–08	NA		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
09–16	1115		5.6	0.0	0.7	6.5	4.2	1.6	0.9	0.0	0.0	0.7	0.0	0.9	13.2	1.1	0.1	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.0	5.5	3.1	0.0	0.0	0.0	1.7	53.9		

Appendix C25—Percent distribution of Nanaimo River Fall (Lower Strait of Georgia Natural) total fishing mortalities among fisheries and escapement.

Catch Year	Est # of CWT	Ages	AABM Fishery									ISBM Fishery										Terminal Fishery						Escapement							
			SEAK			NBC			WCVI			NBC & CBC			Southern BC			N Falcon		S Falcon		WAC	Puget Sd			SEAK			Canada		Southern US			Stray	Esc.
			T	N	S	T	S	T	S	T	N	S	T	N	S	T	S	T	S	N	N	S	T	N	S	N	S	T	N	S					
79-84	540		4.3	0.0	0.0	1.9	0.0	1.7	0.0	12.6	3.0	0.0	1.1	16.3	46.7	0.0	0.0	0.0	0.0	0.0	0.0	1.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.0	0.0	0.0	11.1	
1985	57	3,5	15.8	7.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	15.8	10.5	35.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.5	0.0	0.0	0.0	0.0	12.3		
1986	27	4	Failed Criteria									-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
1987	NA		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
1988	NA		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
1989	24	2	Failed Criteria									-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
1990	394	2,3	0.0	0.0	0.0	0.5	0.0	2.0	0.0	0.8	9.4	0.0	3.8	20.8	56.3	0.3	0.0	0.0	0.0	0.0	0.0	1.5	1.3	0.0	0.0	0.0	1.8	0.0	0.0	0.0	0.0	0.3	1.3		
1991	1181	2,3,4	0.2	0.4	0.0	0.8	0.1	1.8	0.3	1.1	2.0	0.1	6.9	6.2	57.3	0.7	0.0	0.0	0.0	0.0	0.0	1.8	0.9	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.3	19.1			
1992	2322	2,3,4,5	0.1	0.0	0.0	0.6	0.0	5.1	0.0	1.2	2.2	0.2	8.2	3.4	48.8	0.4	0.1	0.0	0.0	0.0	0.0	0.4	0.8	0.0	0.0	0.0	0.0	0.1	0.0	0.3	28.1				
1993	1634	2,3,4,5	0.1	0.4	0.0	1.7	0.2	2.7	0.0	1.3	1.0	0.0	6.1	3.3	57.8	0.6	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.2	0.0	0.4	23.3				
1994	492	2,3,4,5	0.6	0.0	0.0	0.6	0.0	3.9	0.0	0.0	1.2	0.8	0.8	5.5	39.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.6	0.0	0.0	0.8	0.0	0.0	0.0	0.0	0.4	44.1			
1995	1616	2,3,4,5	0.0	0.0	0.0	0.0	0.0	1.5	0.2	0.0	1.4	0.2	0.0	1.7	37.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.9	0.0	0.0	0.3	0.2	0.0	0.0	0.0	0.2	54.6			
1996	945	2,3,4,5	0.0	1.3	0.0	0.0	0.0	0.3	0.4	0.0	2.1	0.0	0.0	0.2	68.3	0.2	0.0	0.0	0.0	0.0	0.0	0.0	3.2	0.0	0.0	3.7	0.0	0.0	0.4	0.0	2.2	17.7			
1997	284	2,3,4,5	6.3	0.0	0.0	4.2	0.0	0.7	0.4	2.8	1.4	0.0	0.0	1.4	40.8	0.0	0.0	0.0	0.0	0.0	1.1	2.5	3.9	0.0	0.0	0.0	0.0	0.0	1.1	0.0	0.7	32.7			
1998	264	2,3,4,5	1.1	4.5	0.0	6.1	0.0	0.4	0.0	0.0	0.4	1.9	0.0	1.5	43.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.8	0.0	2.7	37.1				
1999	303	2,3,4,5	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	39.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.0	0.0	0.0	1.0	0.7	0.0	2.6	0.0	2.3	50.2			
2000	171	3,4,5	0.0	0.0	0.0	0.0	0.0	2.9	2.9	0.0	0.0	0.0	0.0	0.0	52.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.3	0.0	0.0	0.0	0.0	2.3	33.9			
2001	533	2,4,5	0.0	0.0	0.0	0.0	0.0	0.9	0.0	0.0	0.0	0.0	0.0	0.0	40.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	9.6	0.2	0.0	2.4	0.0	0.0	2.8	0.0	0.4	43.7			
2002	924	2,3,5	0.3	0.1	0.0	0.0	0.2	1.0	0.1	0.0	0.0	0.4	0.0	2.6	43.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.0	0.5	0.0	4.2	0.0	0.0	2.1	0.0	0.5	40.7			
2003	864	2,3,4	0.1	0.7	0.1	0.1	0.0	3.7	0.0	0.0	0.0	2.4	0.0	0.0	25.5	0.0	0.0	0.0	0.0	0.0	0.0	0.2	3.2	0.0	0.0	1.3	0.0	0.0	2.0	0.0	2.1	58.6			
2004	803	2,3,4,5	1.1	0.0	0.0	0.7	2.4	5.5	1.1	0.0	0.0	2.7	0.0	0.0	17.2	0.7	0.0	0.0	0.0	0.0	0.0	1.0	3.1	0.0	0.0	1.4	0.0	0.0	0.5	0.0	4.6	57.9			
2005	419	3,4,5	0.7	0.0	0.7	1.9	0.0	7.6	0.0	0.0	0.0	7.9	0.0	0.0	16.0	0.0	0.0	0.0	0.0	0.0	0.0	0.7	1.2	0.0	0.0	24.1	0.0	0.0	2.4	0.0	0.7	36.0			
2006	1543	2,4,5	0.3	0.0	0.0	0.1	0.0	0.5	0.1	0.0	0.0	0.1	0.0	0.0	15.1	0.0	0.0	0.1	0.0	0.0	0.0	0.1	1.7	0.0	0.0	4.8	0.0	0.0	0.1	0.0	1.6	75.6			
2007	1089	3,5	1.3	0.0	0.0	0.1	0.0	4.4	0.5	0.0	0.0	0.9	0.0	0.0	35.1	0.2	0.0	0.5	0.0	0.0	0.0	0.8	0.0	0.0	0.0	5.1	0.0	0.0	1.1	0.0	1.1	48.9			
2008	261	4	Failed Criteria									-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
2009	NA		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
2010	NA		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
2011	NA		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
2012	NA		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
2013	NA		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
2014	NA		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
2015	NA		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
2016	NA		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
85-95	1449		0.2	0.2	0.0	0.7	0.1	3.0	0.1	0.7	1.6	0.3	4.4	4.0	48.3	0.3	0.0	0.0	0.0	0.0	0.4	1.2	0.0	0.0	0.0	0.2	0.0	0.0	0.1	0.0	0.3	33.8			
96-98	498		2.5	1.9	0.0	3.4	0.0	0.5	0.3	0.9	1.3	0.6	0.0	1.0	50.9	0.1	0.0	0.0	0.0	0.4	0.8	2.3	0.0	0.0	0.0	1.2	0.0	0.0	0.7	0.0	1.9	29.2			
99-08	695		0.3	0.1	0.1	0.4	0.3	2.8	0.7	0.0	0.0	1.7	0.0	0.3	31.1	0.1	0.0	0.0	0.0	0.0	0.3	3.2	0.1	0.0	0.0	5.6	0.1	0.0	1.6	0.0	1.8	49.6			
09-16	NA		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		

Appendix C26—Percent distribution of Nicola River Spring (Fraser Early) total fishing mortalities among fisheries and escapement.

Catch Year	Est # of CWT	Ages	AABM Fishery									ISBM Fishery										Terminal Fishery						Escapement						
			SEAK			NBC		WCVI		NBC & CBC			Southern BC			N Falcon		S Falcon		WAC	Puget Sd			SEAK			Canada		Southern US			Stray	Esc.	
			T	N	S	T	S	T	S	T	N	S	T	N	S	T	S	N	N	N	S	T	N	S	N	S	T	N	S					
79–84	NA		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
1985	NA		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
1986	NA		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
1987	NA		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
1988	184	3	Failed Criteria						-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1989	1277	3,4	0.0	0.0	0.0	0.3	1.1	0.9	0.0	0.0	0.2	0.0	0.0	12.5	11.0	0.9	0.0	0.0	0.0	0.0	0.0	1.1	1.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	67.8		
1990	271	3,4,5	0.0	0.0	0.0	0.0	0.0	1.8	0.0	0.0	0.0	0.0	0.0	0.0	2.2	1.5	0.0	0.0	0.0	0.0	0.0	0.0	2.2	0.0	0.0	0.0	14.8	13.3	0.0	0.0	0.0	1.8	62.4	
1991	1331	3,4,5,6	0.2	0.2	0.0	0.0	0.2	3.5	0.0	0.2	0.0	0.0	0.2	0.6	5.0	0.7	0.0	0.0	0.2	0.0	0.2	1.2	0.0	0.0	0.0	13.4	6.9	0.0	0.0	0.0	0.9	66.6		
1992	507	3,4,5,6	0.0	0.0	0.0	4.1	0.0	4.5	0.0	2.2	0.0	0.0	0.0	0.8	7.9	4.7	0.0	0.6	0.0	0.0	0.0	4.1	0.0	0.0	0.0	6.9	7.7	0.0	0.0	0.0	0.4	56.0		
1993	1167	3,4,5,6	0.0	0.0	0.0	2.6	0.0	4.7	1.1	0.0	0.2	0.0	0.0	1.2	5.7	1.7	0.0	0.0	0.0	0.0	0.0	1.9	0.0	0.0	0.0	10.0	5.2	0.0	0.0	0.0	0.0	65.7		
1994	2029	3,4,5,6	0.0	0.0	0.0	0.2	0.0	3.0	0.4	0.0	0.2	0.0	0.0	0.0	3.2	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.3	7.6	0.0	0.0	0.0	0.2	83.4			
1995	1821	3,4,5,6	0.0	0.0	0.0	0.2	0.5	1.0	0.5	0.0	0.0	0.0	0.0	0.0	2.7	0.1	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.0	0.0	3.5	3.5	0.0	0.0	0.0	0.0	87.6		
1996	69	3,4,5,6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	18.8	0.0	0.0	0.0	0.0	0.0	0.0	81.2		
1997	202	3,4,5,6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0	0.0	5.0	0.0	0.0	0.0	0.0	0.0	0.0	5.9	0.0	0.0	0.0	2.0	6.4	0.0	0.0	0.0	0.0	79.7		
1998	400	3,4,5,6	0.0	0.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	10.5	16.8	0.0	0.0	0.0	0.0	67.3			
1999	2415	3,4,5,6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.7	0.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.9	2.1	0.0	0.0	0.0	0.0	89.7			
2000	1750	3,4,5,6	0.0	0.0	0.0	0.0	1.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	8.3	5.0	0.0	0.0	0.0	0.0	81.1			
2001	2246	3,4,5,6	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	3.8	0.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.8	4.1	0.0	0.0	0.0	0.0	84.5			
2002	2299	3,4,5,6	0.0	0.0	0.0	1.3	0.3	0.6	0.0	0.0	0.1	0.0	0.0	0.0	1.0	0.5	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	4.0	2.3	0.0	0.0	0.0	0.0	89.6			
2003	1777	3,4,5,6	0.1	0.0	0.0	2.1	0.0	0.9	0.5	0.0	0.0	0.0	0.0	0.0	2.4	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	6.4	0.0	0.0	0.0	0.0	86.6			
2004	436	3,4,5,6	0.0	0.0	0.0	1.8	0.0	1.8	0.0	0.0	0.0	0.0	0.0	0.0	3.4	0.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	23.9	0.0	0.0	0.0	0.0	0.0	68.1			
2005	395	3,4,5,6	0.0	0.0	0.0	1.0	0.0	3.8	0.0	0.0	0.0	0.0	0.0	0.0	6.1	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	13.4	14.4	0.0	0.0	0.0	0.0	60.8			
2006	420	3,4,5,6	0.0	0.0	0.0	1.4	0.0	1.7	0.0	0.0	0.0	0.0	0.0	0.0	2.6	0.5	0.0	0.0	0.7	0.0	0.0	0.0	0.0	0.0	12.4	9.3	0.0	0.0	0.0	0.0	71.4			
2007	144	3,4,5,6	0.0	0.0	0.0	0.0	0.0	6.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	28.5	21.5	0.0	0.0	0.0	0.0	43.1			
2008	606	3,4,5,6	0.0	0.0	0.0	1.0	0.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.3	1.8	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	10.7	3.5	0.0	0.5	0.0	0.0	78.2			
2009	268	3,4,5,6	0.0	0.0	0.0	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	8.2	3.0	0.0	0.0	0.0	0.0	0.0	0.7	0.0	0.0	17.5	20.5	0.0	0.0	0.0	0.0	49.6			
2010	2299	3,4,5,6	0.3	0.0	0.0	1.1	0.1	0.0	0.1	0.0	0.0	0.0	0.0	0.0	1.4	0.6	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.0	4.7	0.0	0.0	0.0	0.0	0.0	91.3			
2011	668	3,4,5,6	0.0	0.0	0.0	0.6	0.0	0.0	0.4	0.0	0.0	0.0	0.0	0.3	3.9	1.8	0.1	0.0	0.0	0.0	0.0	0.9	0.0	0.0	3.9	2.4	0.0	0.0	0.0	0.0	85.6			
2012	699	3,4,5,6	0.0	0.0	0.0	0.4	0.6	0.0	0.0	0.0	0.0	0.0	0.0	0.6	3.6	6.3	0.0	0.4	0.0	0.0	0.0	0.0	0.0	0.0	17.7	0.9	0.0	0.0	0.0	0.0	69.5			
2013	1433	3,4,5,6	0.0	0.0	0.0	0.8	0.0	0.2	0.0	0.0	0.0	0.2	0.2	4.2	2.7	0.3	0.0	0.0	0.0	0.0	0.0	0.7	0.0	0.0	1.6	0.0	0.0	0.0	0.0	0.0	89.0			
2014	431	3,4,5,6	0.0	0.0	0.0	0.0	0.0	1.9	0.0	0.0	0.0	0.0	0.0	0.9	0.9	1.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	9.3	0.9	0.0	0.0	0.0	0.0	84.7			
2015	1534	3,4,5,6	0.0	0.0	0.0	0.2	0.1	0.3	0.0	0.0	0.0	0.0	0.0	0.8	3.1	0.7	0.2	0.0	0.0	0.0	0.2	0.4	0.0	0.0	10.1	0.0	0.0	0.0	0.0	0.0	83.9			
2016	934	3,4,5,6	0.2	0.0	0.0	1.4	0.0	1.1	0.0	0.0	0.0	0.0	0.0	0.7	8.7	0.9	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.0	8.4	0.0	0.0	0.0	0.0	0.0	78.4			
85–95	1188		0.0	0.0	0.0	1.2	0.1	3.1	0.3	0.4	0.1	0.0	0.0	0.4	4.4	1.5	0.0	0.1	0.0	0.0	0.0	1.6	0.0	0.0	8.3	7.4	0.0	0.0	0.0	0.6	70.3			
96–98	301		0.0	0.0	0.0	0.0	1.5	0.0	0.0	0.0	0.5	0.0	0.0	0.0	3.7	0.0	0.0	0.0	0.0	0.0	0.0	3.0	0.0	0.0	6.2	11.6	0.0	0.0	0.0	0.0	73.5			
99–08	1249		0.0	0.0	0.0	0.9	0.2	1.5	0.1	0.0	0.0	0.0	0.0	0.0	2.7	0.7	0.1	0.0	0.1	0.0	0.0	0.0	0.0	0.0	11.5	6.9	0.0	0.0	0.0	0.0	75.3			
09–16	1033		0.1	0.0	0.0	0.6	0.1	0.4	0.1	0.0	0.0	0.0	0.0	0.5	4.2	2.2	0.1	0.1	0.0	0.0	0.0	0.4	0.0	0.0	9.1	3.1	0.0	0.0	0.0	0.0	79.0			

Appendix C27–Percent distribution of Nisqually Fall Fingerling total fishing mortalities among fisheries and escapement.

Catch Year	Est # of CWT	Ages	AABM Fishery									ISBM Fishery											Terminal Fishery						Escapement						
			SEAK			NBC			WCVI			NBC & CBC			Southern BC			N Falcon		S Falcon		WAC	Puget Sd			SEAK			Canada		Southern US			Stray	Esc.
			T	N	S	T	S		T	S		T	N	S	T	N	S	T	S	T	S	N	N	S	T	N	S	N	S	T	N	S			
79–84	NA		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1985	NA		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1986	NA		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1987	NA		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1988	NA		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1989	NA		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1990	NA		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1991	NA		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1992	NA		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1993	NA		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1994	NA		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1995	NA		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1996	NA		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1997	NA		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1998	NA		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1999	NA		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2000	105	2	Failed Criteria									-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2001	967	2,3	0.2	0.0	0.0	0.0	0.0	2.2	2.8	0.0	0.0	0.0	0.0	0.0	0.7	4.3	0.5	1.2	0.0	0.0	0.4	23.3	0.0	0.0	0.0	0.0	0.0	0.0	25.5	0.0	0.0	38.8	0.0	38.8	
2002	1485	2,3,4	0.0	0.0	0.0	0.0	0.0	6.7	3.4	0.0	0.0	0.1	0.0	0.0	1.1	2.8	0.5	0.7	0.0	0.0	0.1	13.9	0.0	0.0	0.0	0.0	0.0	38.1	3.0	0.0	29.4	0.0	29.4		
2003	1699	2,3,4,5	0.1	0.0	0.0	0.0	0.0	5.2	1.0	0.0	0.0	0.5	0.0	0.0	2.1	3.9	0.0	0.8	0.0	0.0	0.4	15.7	0.0	0.0	0.0	0.0	0.0	40.7	1.7	0.0	28.0	0.0	28.0		
2004	1780	2,3,4,5	0.0	0.1	0.0	0.0	0.0	5.9	1.2	0.0	0.0	0.0	0.0	0.0	1.2	6.5	0.7	1.1	0.0	0.0	0.6	13.4	0.0	0.0	0.0	0.0	0.0	28.7	0.0	0.1	40.7	0.0	40.7		
2005	1310	2,3,4,5	0.0	0.0	0.0	0.0	0.0	5.6	2.1	0.0	0.3	0.0	0.0	0.0	3.6	3.7	2.0	0.5	0.0	0.0	0.5	13.9	0.0	0.0	0.0	0.0	0.0	9.2	0.0	0.0	58.5	0.0	58.5		
2006	2972	2,3,4,5	0.1	0.0	0.0	0.0	0.0	6.5	1.5	0.0	0.0	0.0	0.0	0.0	2.2	5.8	0.4	0.2	0.0	0.0	0.5	9.1	0.0	0.0	0.0	0.0	0.0	36.7	0.0	0.0	36.9	0.0	36.9		
2007	3204	2,3,4,5	0.0	0.0	0.0	0.1	0.0	10.1	1.1	0.0	0.0	0.0	0.0	0.0	1.3	4.9	0.3	0.1	0.0	0.0	0.7	14.6	0.0	0.0	0.0	0.0	0.0	33.2	0.0	0.0	33.5	0.0	33.5		
2008	1070	2,3,4,5	0.0	0.0	0.0	0.0	0.0	5.4	2.9	0.0	0.0	0.0	0.0	0.0	5.0	1.8	0.5	0.0	0.0	0.0	0.0	16.4	0.0	0.0	0.0	0.0	0.0	44.3	0.0	0.0	23.8	0.0	23.8		
2009	1644	2,3,4,5	0.0	0.0	0.0	0.0	0.0	2.1	3.6	0.0	0.0	0.0	0.0	0.0	1.2	2.3	0.3	0.0	0.0	0.0	0.5	15.5	0.0	0.0	0.0	0.0	0.0	35.3	0.0	0.0	39.2	0.0	39.2		
2010	1721	2,3,4,5	0.0	0.2	0.0	0.0	0.0	4.6	3.9	0.0	0.0	0.0	0.0	0.0	1.3	4.6	0.7	0.1	0.0	0.3	0.2	9.5	0.0	0.0	0.0	0.0	0.0	32.6	3.3	0.0	38.6	0.0	38.6		
2011	1456	2,3,4,5	0.0	0.0	0.0	0.3	0.0	2.9	3.2	0.0	0.0	0.0	0.0	0.0	0.8	3.3	0.6	0.5	0.0	0.0	1.3	14.4	0.0	0.0	0.0	0.0	0.0	17.4	3.9	0.0	51.4	0.0	51.4		
2012	1489	2,3,4,5	0.0	0.0	0.0	0.0	0.0	1.7	1.7	0.0	0.0	0.0	0.0	0.0	2.3	5.7	1.1	0.3	0.0	0.0	0.5	13.8	0.0	0.0	0.0	0.0	0.0	15.6	13.3	0.0	44.0	0.0	44.0		
2013	2217	2,3,4,5	0.0	0.0	0.0	0.0	0.0	2.3	1.8	0.0	0.0	0.0	0.0	0.0	3.0	3.2	0.2	0.2	0.0	0.0	1.2	10.7	0.0	0.0	0.0	0.0	0.0	19.9	4.4	0.0	53.2	0.0	53.2		
2014	899	2,3,4,5	0.3	0.0	0.0	0.0	0.0	4.3	4.8	0.0	0.0	0.7	0.0	0.0	2.2	5.8	1.8	0.0	0.0	0.0	0.1	18.6	0.0	0.0	0.0	0.0	0.0	23.8	0.0	0.1	37.5	0.0	37.5		
2015	916	2,3,4,5	0.0	0.1	0.0	0.3	0.0	1.6	2.3	0.0	0.0	0.0	0.0	0.0	1.9	6.2	0.2	0.0	0.0	0.0	0.3	16.9	0.0	0.0	0.0	0.0	0.0	18.1	0.0	0.0	52.0	0.0	52.0		
2016	NA		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
85–95	NA		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
96–98	NA		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
99–08	1931		0.0	0.0	0.0	0.0	0.0	6.5	1.9	0.0	0.0	0.1	0.0	0.0	2.3	4.2	0.6	0.5	0.0	0.0	0.4	13.8	0.0	0.0	0.0	0.0	0.0	33.0	0.7	0.0	35.8	0.0	35.8		
09–16	1477		0.0	0.0	0.0	0.1	0.0	2.8	3.0	0.0	0.0	0.1	0.0	0.0	1.8	4.5	0.7	0.2	0.0	0.0	0.6	14.2	0.0	0.0	0.0	0.0	0.0	23.2	3.6	0.0	45.1	0.0	45.1		

Appendix C28—Percent distribution of Nooksack Spring Yearling (Nooksack Spring Yearling) total fishing mortalities among fisheries and escapement.

Catch Year	Est # of CWT	Ages	AABM Fishery									ISBM Fishery										Terminal Fishery						Escapement								
			SEAK			NBC			WCVI			NBC & CBC			Southern BC			N Falcon		S Falcon		WAC	Puget Sd			SEAK			Canada		Southern US			Stray	Esc.	
			T	N	S	T	S	T	S	T	N	S	T	N	S	T	S	T	S	N	N	N	S	T	N	S	N	S	T	N	S					
79-84	NA		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1985	194	3,4	6.7	0.0	0.0	0.0	0.0	12.9	2.1	0.0	0.0	0.0	0.0	2.6	30.4	0.0	2.1	0.0	0.0	0.0	0.0	5.2	4.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.7	0.0	0.0	27.8
1986	236	2,4,5	0.0	0.0	0.0	0.0	0.0	2.1	0.4	0.4	0.0	0.0	2.5	4.2	17.8	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	68.2
1987	555	3,5	0.0	0.0	0.0	0.0	0.0	0.9	1.8	0.2	0.7	0.0	4.3	2.2	61.4	0.2	0.0	0.0	0.0	0.0	0.0	4.7	3.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.7	0.0	0.0	0.0	17.3	
1988	560	2,4	0.0	0.0	0.0	0.0	0.0	9.5	0.0	1.3	0.0	0.0	6.1	1.8	32.9	1.4	0.7	0.0	0.0	0.0	0.0	2.1	1.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	11.4	0.0	0.0	0.0	31.8	
1989	120	2,3,5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	10.0	0.0	0.0	0.0	0.0	0.0	0.0	5.0	10.0	0.0	0.0	0.0	0.0	0.0	0.0	7.5	0.0	0.0	0.0	67.5		
1990	83	2,3,4	0.0	0.0	0.0	0.0	0.0	8.4	1.2	1.2	2.4	0.0	0.0	6.0	38.6	1.2	0.0	0.0	0.0	0.0	0.0	0.0	24.1	0.0	0.0	0.0	0.0	0.0	0.0	2.4	0.0	0.0	0.0	14.5		
1991	370	2,3,4,5	0.0	0.0	0.0	0.0	0.0	2.2	4.9	0.0	0.5	0.0	0.0	4.1	44.3	2.2	0.0	0.0	0.0	0.0	0.0	4.6	6.5	0.0	0.0	0.0	1.4	0.0	0.0	1.6	0.0	0.0	0.0	27.8		
1992	1013	2,3,4,5	1.7	1.9	0.0	0.0	0.0	19.3	1.1	1.0	0.6	0.0	1.7	0.9	15.6	1.0	0.0	0.0	0.0	0.0	0.0	0.0	9.9	0.0	0.0	0.0	0.3	0.0	0.0	0.3	0.0	0.0	0.0	44.8		
1993	643	3,4,5	0.0	0.0	0.0	0.0	0.0	4.8	4.8	0.0	0.5	0.0	3.3	4.5	19.1	0.8	0.0	0.0	0.0	0.0	0.0	3.9	12.9	0.0	0.0	0.0	1.1	0.0	0.0	1.2	0.0	0.0	0.0	43.1		
1994	538	2,4,5	0.6	0.0	0.0	0.0	0.0	5.0	0.0	0.0	0.0	0.0	5.9	0.6	30.5	0.2	0.0	0.0	0.0	0.0	0.0	0.0	3.9	0.0	0.0	0.0	0.7	0.0	0.0	5.9	0.0	0.0	0.0	46.7		
1995	181	2,3,5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	29.3	0.0	0.0	0.0	0.0	0.0	0.0	2.8	12.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	55.2		
1996	200	2,3,4	0.0	0.0	0.0	0.0	0.0	0.0	3.0	0.0	0.0	1.0	0.0	0.0	16.0	0.5	0.0	0.0	0.0	0.0	0.0	0.0	5.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	73.5		
1997	129	2,3,4,5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.8	20.9	0.0	0.0	0.0	0.0	0.0	0.0	3.1	21.7	0.0	0.0	0.0	2.3	0.0	0.0	0.0	0.0	0.0	0.0	51.2		
1998	114	2,3,4,5	0.0	0.0	0.0	0.0	0.0	0.0	7.0	0.0	4.4	4.4	0.0	0.0	27.2	0.0	0.0	0.0	0.0	0.0	0.0	1.8	11.4	0.0	0.0	0.0	2.6	0.0	0.0	2.6	0.0	0.0	0.0	38.6		
1999	178	3,4,5	0.0	0.0	0.0	0.0	0.0	2.8	1.7	0.0	0.0	0.0	0.0	0.0	30.3	3.4	0.0	0.0	0.0	0.0	0.0	0.0	2.2	0.0	0.0	0.0	0.0	0.0	0.0	5.1	0.0	0.0	0.0	54.5		
2000	146	4,5	0.0	0.0	0.0	0.0	0.0	15.1	0.0	0.0	0.0	0.0	0.0	0.0	16.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	10.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	58.2		
2001	31	5	Failed Criteria						-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
2002	NA		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
2003	NA		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
2004	NA		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
2005	NA		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
2006	NA		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
2007	NA		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
2008	NA		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
2009	NA		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
2010	NA		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
2011	NA		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
2012	NA		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
2013	NA		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
2014	NA		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
2015	NA		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
2016	NA		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
85-95	443		0.3	0.3	0.0	0.0	0.0	4.8	1.6	0.2	0.2	0.0	1.9	2.1	23.8	0.6	0.0	0.0	0.0	0.0	0.0	2.3	8.4	0.0	0.0	0.0	0.5	0.0	0.0	2.4	0.0	0.0	0.0	50.5		
96-98	164		0.0	0.0	0.0	0.0	0.0	0.0	1.5	0.0	0.0	0.5	0.0	0.4	18.5	0.3	0.0	0.0	0.0	0.0	0.0	1.6	13.6	0.0	0.0	0.0	1.2	0.0	0.0	0.0	0.0	0.0	0.3	62.3		
99-08	178		0.0	0.0	0.0	0.0	0.0	2.8	1.7	0.0	0.0	0.0	0.0	0.0	30.3	3.4	0.0	0.0	0.0	0.0	0.0	0.0	2.2	0.0	0.0	0.0	0.0	0.0	0.0	5.1	0.0	0.0	0.0	54.5		
09-16	NA		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	

Appendix C29—Percent distribution of Nooksack Spring Fingerling (Nooksack Spring Yearling) total fishing mortalities among fisheries and escapement.

Catch Year	Est # of CWT	Ages	AABM Fishery									ISBM Fishery										Terminal Fishery						Escapement								
			SEAK			NBC			WCVI			NBC & CBC			Southern BC			N Falcon		S Falcon		WAC	Puget Sd			SEAK			Canada		Southern US			Stray	Esc.	
			T	N	S	T	S	T	S	T	N	S	T	N	S	T	S	T	S	N	N	S	T	N	S	N	S	T	N	S						
79–84	NA		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
1985	NA		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
1986	NA		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
1987	NA		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
1988	NA		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
1989	NA		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
1990	10	2	Failed Criteria									-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1991	189	2,3	0.0	0.0	0.0	3.7	0.0	18.5	1.1	0.0	3.7	0.0	3.2	7.9	18.5	4.8	0.0	0.0	0.0	0.0	5.3	5.3	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.0	0.0	0.0	27.5	0.0		
1992	508	3,4	0.0	0.0	0.0	3.0	0.0	36.4	4.9	0.0	1.2	0.0	3.3	3.1	11.4	3.0	0.0	0.0	0.0	0.0	0.0	4.5	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.0	0.0	0.0	28.5	0.0		
1993	367	4,5	0.0	0.0	0.0	0.0	0.0	10.1	2.7	0.8	0.0	0.0	0.5	0.0	8.2	1.6	0.0	0.0	0.0	0.0	0.0	1.6	0.0	0.0	0.0	0.0	0.0	0.3	0.0	1.9	0.0	72.2	1.9			
1994	67	2,5	1.5	0.0	0.0	0.0	0.0	0.0	1.5	0.0	3.0	0.0	0.0	11.9	13.4	0.0	0.0	0.0	0.0	0.0	0.0	22.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	7.5	38.8	0.0		
1995	475	2,3	1.7	0.0	0.0	0.0	0.0	1.1	2.7	0.0	15.2	0.2	0.0	1.5	15.4	0.0	0.0	0.0	0.0	0.0	0.0	15.4	0.0	0.0	0.0	0.6	0.0	0.0	0.0	0.0	0.0	0.0	46.3	0.0		
1996	1091	2,3,4	3.4	0.0	0.2	0.0	0.0	1.1	3.8	0.0	5.6	0.8	0.0	0.4	18.3	0.7	0.0	0.0	0.0	0.0	0.1	9.6	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.4	0.0	55.5	0.4			
1997	2049	2,3,4,5	4.2	0.4	0.8	0.2	0.0	2.2	2.8	0.8	0.3	0.0	0.0	0.9	10.5	0.5	0.0	0.0	0.0	0.0	0.2	6.6	0.0	0.0	0.0	0.0	0.0	1.0	0.0	0.8	0.0	67.5	0.8			
1998	1518	2,3,4,5	8.7	0.2	0.0	0.0	0.0	1.9	3.6	0.0	0.2	0.0	0.0	0.0	3.4	0.2	0.0	0.0	0.0	0.0	0.0	1.1	0.0	0.0	0.0	0.0	0.1	0.0	1.6	0.0	79.1	1.6				
1999	1649	2,3,4,5	2.0	0.2	0.0	0.0	0.0	2.4	5.3	0.0	0.0	0.7	0.0	0.0	5.1	1.5	0.0	0.0	0.0	0.0	0.0	1.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	81.7	0.0			
2000	927	2,3,4,5	5.2	0.2	0.0	0.0	0.0	20.8	3.7	0.0	0.0	0.0	0.0	0.0	15.1	0.2	0.0	0.0	0.0	0.0	0.0	0.6	0.0	0.0	0.0	0.0	0.2	0.0	0.6	0.0	53.3	0.6				
2001	1402	2,3,4,5	1.8	0.0	0.0	0.0	0.0	10.9	4.8	0.0	0.0	0.0	0.0	0.0	5.1	1.1	0.0	0.0	0.0	0.0	0.0	1.6	0.0	0.0	0.0	0.0	0.7	0.0	0.6	0.0	73.4	0.6				
2002	1269	2,3,4,5	6.1	0.0	0.4	0.9	0.0	17.1	2.4	0.0	0.0	1.3	0.0	0.0	1.5	0.2	0.5	0.0	0.0	0.0	0.0	0.7	0.0	0.0	0.0	0.0	0.2	0.0	3.4	0.0	65.2	3.4				
2003	771	2,3,4,5	3.6	0.0	0.0	0.0	0.0	13.7	3.0	0.0	0.0	0.6	0.0	0.0	6.7	0.0	0.0	0.0	0.0	0.0	0.0	3.4	0.0	0.0	0.0	0.0	1.3	0.0	0.1	0.0	67.4	0.1				
2004	682	2,3,4,5	1.3	0.0	0.0	0.3	0.0	32.1	5.4	0.0	0.0	0.0	0.0	0.0	9.7	3.1	0.0	0.0	0.0	0.0	0.0	1.8	0.0	0.0	0.0	0.0	0.4	0.0	0.3	0.0	45.6	0.3				
2005	851	2,3,4,5	3.8	0.1	0.0	0.2	0.0	32.9	4.6	0.0	0.5	0.0	0.0	0.0	7.8	0.5	0.2	0.0	0.0	0.0	0.1	1.1	0.0	0.0	0.0	0.0	0.7	0.0	1.1	0.0	46.5	1.1				
2006	551	2,3,4,5	2.4	0.0	1.1	1.1	0.0	32.7	4.9	0.0	0.0	0.0	0.0	0.0	9.8	1.1	0.0	0.0	0.0	0.0	0.2	3.1	0.0	0.0	0.0	0.0	2.2	0.5	0.5	0.0	40.5	0.5				
2007	587	2,3,4,5	5.8	0.2	0.7	0.3	0.0	24.7	8.9	0.0	0.2	0.0	0.0	0.0	9.4	0.3	0.0	0.0	0.0	0.0	0.0	6.0	0.0	0.0	0.0	0.0	0.7	0.3	0.2	0.0	42.4	0.2				
2008	1044	2,3,4,5	1.5	0.2	0.0	0.4	0.0	20.3	12.0	0.0	0.0	0.0	0.0	0.0	15.5	1.3	0.5	0.0	0.0	0.0	0.0	7.4	0.3	0.0	0.0	0.0	2.0	0.2	0.0	0.0	38.4	0.0				
2009	797	2,3,4,5	3.0	0.6	0.0	0.0	0.0	7.8	6.3	0.0	0.0	0.0	0.0	0.0	19.1	0.8	0.0	0.0	0.0	0.0	0.0	3.6	0.0	0.0	0.0	0.0	1.4	0.0	1.4	0.0	56.1	1.4				
2010	934	2,3,4,5	3.0	0.3	0.0	0.6	0.0	19.6	8.0	0.0	0.0	0.3	0.0	0.0	4.7	2.2	0.4	0.0	0.0	0.0	0.0	3.1	0.0	0.0	0.0	0.0	0.6	0.0	0.0	0.0	57.0	0.0				
2011	516	2,3,4,5	3.1	0.0	0.0	0.0	0.0	15.3	5.6	0.0	0.4	0.8	0.0	0.0	13.2	1.0	0.0	0.0	0.0	0.0	0.0	4.1	0.0	0.0	0.0	0.0	2.5	0.0	0.2	0.0	53.9	0.2				
2012	469	2,3,4,5	4.9	0.9	0.6	0.0	0.0	14.7	6.0	0.0	0.0	0.0	0.0	1.7	13.2	3.8	0.0	0.0	0.0	0.0	0.0	11.9	0.0	0.0	0.0	0.0	3.8	0.0	1.5	0.0	36.9	1.5				
2013	976	2,3,4,5	1.1	1.7	0.6	0.0	0.0	5.7	8.7	0.0	0.0	1.1	0.0	0.0	13.6	1.6	0.6	0.0	0.0	0.0	0.0	5.8	0.0	0.0	0.0	0.0	5.8	0.0	0.3	0.0	53.1	0.3				
2014	1792	2,3,4,5	3.7	0.6	0.0	0.2	0.1	7.6	7.4	0.0	0.0	2.6	0.0	0.0	16.4	1.8	0.8	0.0	0.0	0.0	0.0	4.9	0.0	0.0	0.0	0.0	6.1	0.0	0.1	0.0	47.7	0.1				
2015	2243	2,3,4,5	3.0	0.0	0.0	0.4	0.0	4.7	1.1	0.0	0.0	0.4	0.0	0.0	9.2	2.0	0.2	0.0	0.0	0.0	0.0	2.9	0.0	0.0	0.0	0.0	1.6	0.0	0.1	0.0	74.2	0.1				
2016	NA		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
85–95	NA		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
96–98	1553		5.4	0.2	0.3	0.1	0.0	1.7	3.4	0.3	2.0	0.3	0.0	0.4	10.7	0.5	0.0	0.0	0.0	0.0	0.1	5.8	0.0	0.0	0.0	0.0	0.4	0.0	0.9	0.0	67.3	0.9				
99–08	973		3.4	0.1	0.2	0.3	0.0	20.8	5.5	0.0	0.1	0.3	0.0	0.0	8.6	0.9	0.1	0.0	0.0	0.0	0.0	2.7	0.0	0.0	0.0	0.0	0.8	0.1	0.7	0.0	55.5	0.7				
09–16	1104		3.1	0.6	0.2	0.2	0.0	10.8	6.2	0.0	0.1	0.7	0.0	0.2	12.8	1.9	0.3	0.0	0.0	0.0	0.0	5.2	0.0	0.0	0.0	0.0	3.1	0.0	0.5	0.0	54.1	0.5				

Appendix C30—Percent distribution of Phillips River Fall (Upper Strait of Georgia) AEQ total fishing mortalities and escapement.

Catch Year	Est # of CWT	Ages	AABM Fishery									ISBM Fishery									Terminal Fishery						Escapement								
			SEAK			NBC			WCVI			NBC & CBC			Southern BC			N Falcon		S Falcon		WAC	Puget Sd			SEAK			Canada		Southern US			Stray	Esc.
			T	N	S	T	S	T	S	T	N	S	T	N	S	T	S	T	S	N	N	N	S	T	N	S	N	S	T	N	S				
79–84	NA		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
1985	NA		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
1986	NA		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
1987	NA		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
1988	NA		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
1989	NA		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
1990	NA		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
1991	NA		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
1992	NA		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
1993	NA		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
1994	NA		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
1995	NA		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
1996	NA		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
1997	NA		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
1998	NA		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
1999	NA		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
2000	NA		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
2001	NA		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
2002	NA		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
2003	NA		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
2004	NA		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
2005	NA		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
2006	NA		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
2007	NA		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
2008	NA		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
2009	NA		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
2010	NA		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
2011	19	2	Failed Criteria									-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
2012	54	2,3	16.7	5.6	3.7	0.0	1.9	0.0	0.0	0.0	0.0	0.0	7.4	0.0	0.0	11.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	53.7	
2013	641	2,3,4	6.4	6.6	2.7	0.0	0.8	0.0	0.0	0.0	0.0	0.0	3.4	0.0	0.0	3.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	77.1		
2014	1285	2,3,4,5	8.9	4.2	1.3	0.9	0.9	0.3	0.0	0.0	0.2	6.4	0.0	0.0	2.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	74.4		
2015	1651	2,3,4,5	11.2	0.6	2.3	0.0	0.6	0.0	0.0	0.0	0.0	6.4	0.0	0.0	6.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	72.7		
2016	1848	2,3,4,5	14.8	4.4	1.1	0.8	1.0	0.0	0.0	0.0	0.0	5.6	0.0	0.0	7.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	65.2		
85–95	NA		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
96–98	NA		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
99–08	NA		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
09–16	1356		10.3	3.9	1.8	0.4	0.8	0.1	0.0	0.0	0.0	5.5	0.0	0.0	4.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	72.4		

Appendix C31—Percent distribution of Puntledge River Summer (Lower Strait of Georgia Hatchery) AEQ total fishing mortalities and escapement.

Catch Year	Est # of CWT	Ages	AABM Fishery									ISBM Fishery											Terminal Fishery									Escapement			
			SEAK			NBC			WCVI			NBC & CBC			Southern BC			N Falcon		S Falcon		WAC	Puget Sd			SEAK			Canada		Southern US			Stray	Esc.
			T	N	S	T	S	T	S	T	N	S	T	N	S	T	S	T	S	N	N	S	T	N	S	N	S	T	N	S					
79-84	749		1.3	0.3	0.1	4.1	0.0	2.2	0.0	10.2	4.9	0.1	13.2	6.6	23.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	33.0
1985	155	2,3,4,5	12.3	0.6	3.2	6.5	0.0	0.0	0.0	1.3	7.7	3.2	0.0	5.2	37.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	22.6
1986	205	2,3,4,5	5.9	0.0	5.4	2.4	0.0	2.4	0.0	4.4	10.2	0.0	12.7	1.5	32.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	22.9	
1987	165	2,3,4,5	3.0	1.2	0.0	15.2	3.0	0.0	4.2	2.4	6.7	0.0	0.0	0.0	24.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	39.4	
1988	104	2,3,4,5	11.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.8	0.0	0.0	1.0	36.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	45.2		
1989	76	2,3,4,5	2.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	52.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.3	39.5		
1990	100	2,3,4,5	8.0	0.0	0.0	0.0	0.0	0.0	0.0	3.0	11.0	0.0	0.0	5.0	14.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	59.0		
1991	127	2,3,4,5	5.5	7.9	0.0	0.0	0.0	0.0	0.0	0.0	4.7	2.4	0.0	5.5	43.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	30.7		
1992	101	2,3,4,5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.9	0.0	3.0	12.9	45.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	32.7		
1993	82	2,3,4,5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	7.3	4.9	0.0	0.0	59.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	28.0		
1994	32	2,3,4,5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.3	0.0	0.0	3.1	65.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	25.0		
1995	46	2,3,4,5	4.3	2.2	0.0	0.0	0.0	0.0	0.0	0.0	13.0	0.0	0.0	2.2	41.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	37.0		
1996	53	2,3,4,5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.9	0.0	0.0	0.0	45.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	52.8		
1997	27	3,4,5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	7.4	0.0	0.0	0.0	14.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	77.8		
1998	9	2,4,5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	88.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	11.1		
1999	51	2,3,5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.9	0.0	0.0	0.0	17.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	78.4		
2000	64	2,3,4	1.6	1.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	12.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	84.4		
2001	214	2,3,4,5	2.8	0.5	0.0	0.0	0.0	2.8	0.0	0.0	0.0	0.0	0.0	0.0	4.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	89.7			
2002	121	2,3,4,5	5.8	0.0	0.0	0.0	0.0	0.0	11.6	0.0	0.0	9.9	0.0	0.0	5.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	67.8		
2003	124	2,3,4,5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.8	0.0	0.0	0.0	18.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.5	74.2			
2004	105	2,3,4,5	16.2	1.0	0.0	0.0	0.0	2.9	0.0	0.0	0.0	0.0	0.0	0.0	11.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	68.6		
2005	333	2,3,4,5	1.5	0.0	0.0	1.2	0.0	0.6	0.0	0.0	0.0	0.0	0.0	0.0	27.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	69.4		
2006	303	2,3,4,5	7.9	2.0	0.0	0.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	9.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	80.2		
2007	432	2,3,4,5	11.6	8.3	1.6	0.7	0.0	0.0	0.0	0.0	0.5	0.0	0.0	0.0	5.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	71.3			
2008	272	2,3,4,5	1.5	1.1	0.0	0.0	0.0	0.0	5.1	0.0	0.0	5.1	0.0	0.0	10.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	76.1			
2009	611	2,3,4,5	5.2	1.8	0.2	1.1	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	14.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	76.6		
2010	489	2,3,4,5	6.7	0.8	0.0	0.0	1.0	1.6	1.0	0.0	0.0	3.1	0.0	0.0	15.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	70.1		
2011	332	2,3,4,5	6.6	3.3	0.3	1.2	1.5	0.0	0.0	0.0	0.0	8.4	0.0	0.0	11.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	66.9		
2012	215	2,3,4,5	11.6	0.0	0.0	0.0	0.0	0.0	2.8	0.0	0.0	2.3	0.0	0.0	26.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	57.2		
2013	261	2,3,4,5	0.0	1.5	0.0	1.5	0.4	0.0	0.0	0.0	0.0	1.9	0.0	0.0	29.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	64.8		
2014	507	2,3,4,5	1.6	0.0	1.2	0.8	0.0	0.0	0.0	0.0	0.2	1.0	0.0	0.0	23.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	71.6		
2015	336	2,3,4,5	6.3	0.0	0.0	0.0	1.5	0.9	0.0	0.0	0.0	3.0	0.0	0.0	18.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	66.1		
2016	208	3,4,5	6.7	6.7	0.5	3.8	0.0	0.0	2.4	0.0	0.0	5.8	0.0	0.0	25.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	48.6		
85-95	175		7.0	0.6	2.9	8.0	1.0	0.8	1.4	2.7	8.2	1.1	4.2	2.2	31.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	28.3		
96-98	NA		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
99-08	257		4.4	1.7	0.2	0.4	0.0	0.5	2.4	0.0	0.2	2.2	0.0	0.0	11.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	75.5			
09-16	370		5.6	1.8	0.3	1.1	0.6	0.3	0.8	0.0	0.0	3.2	0.0	0.0	20.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	65.2		

Appendix C32—Percent distribution of Queets Fall Fingerling (Washington Coastal Wild) total fishing mortalities among fisheries and escapement.

Catch Year	Est # of CWT	Ages	AABM Fishery									ISBM Fishery											Terminal Fishery									Escapement			
			SEAK			NBC			WCVI			NBC & CBC			Southern BC			N Falcon		S Falcon		WAC	Puget Sd			SEAK			Canada		Southern US			Stray	Esc.
			T	N	S	T	S		T	S		T	N	S	T	N	S	T	S	N	N	S	T	N	S	T	N	S	T	N	S				
79-84	199		25.5	0.8	0.0	18.1	0.9	9.2	0.0	0.0	0.4	0.4	0.0	0.5	0.0	1.3	0.0	0.0	0.0	0.0	0.3	0.3	0.0	0.0	0.0	0.0	22.3	0.0	0.0	20.2					
1985	287	2,3,4,5	20.9	0.0	0.0	31.4	0.0	2.4	0.0	0.0	0.0	0.0	0.0	1.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.7	0.0	0.0	0.0	0.0	0.0	12.5	0.0	0.0	29.6			
1986	340	3,4,5	22.9	0.0	1.2	11.2	0.0	6.8	0.0	1.5	0.0	0.0	0.0	0.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	7.1	0.0	0.0	48.5						
1987	524	2,4,5	32.6	2.1	0.0	13.9	1.1	1.7	0.0	1.1	0.6	0.0	0.0	0.0	0.0	0.6	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	23.3	0.0	0.0	21.9				
1988	924	2,3,5	16.2	1.5	1.3	7.6	0.1	5.0	0.0	1.8	0.3	0.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.1	0.0	0.0	0.0	0.0	12.1	0.0	0.0	49.9				
1989	909	2,3,4	7.5	0.1	0.1	7.5	0.1	6.7	0.0	0.4	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.2	0.0	0.0	0.0	0.0	16.6	0.0	0.0	59.5				
1990	1753	2,3,4,5	12.1	0.4	0.0	4.8	1.9	5.7	0.0	0.2	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	10.0	0.0	0.0	64.6				
1991	1508	2,3,4,5	18.4	0.2	0.6	7.4	0.7	3.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.0	0.0	0.0	0.0	10.3	0.0	0.0	58.5				
1992	790	2,3,4,5	13.4	5.7	2.3	8.0	1.3	14.9	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	14.1	0.0	0.0	40.0					
1993	956	2,3,4,5	14.0	1.8	0.4	9.3	1.0	9.6	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.3	1.4	0.0	0.0	0.0	0.0	0.0	0.6	0.0	0.0	0.0	0.0	10.1	0.0	0.0	51.2				
1994	1858	2,3,4,5	14.9	0.8	0.3	13.9	1.0	2.6	0.3	0.1	0.2	0.0	0.0	0.0	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	12.0	0.0	0.0	53.4					
1995	1460	2,3,4,5	12.4	0.0	1.0	3.9	2.2	0.5	0.0	0.0	0.1	0.0	0.0	0.0	0.3	0.4	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	15.3	0.0	0.0	63.7					
1996	847	2,3,4,5	16.1	0.0	1.4	0.9	0.0	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	13.3	0.0	0.0	67.8					
1997	1226	2,3,4,5	29.0	0.4	0.0	4.3	0.0	0.2	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	14.9	0.0	0.0	50.9					
1998	1188	2,3,4,5	13.9	0.0	1.9	9.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.7	0.0	0.0	66.3					
1999	833	2,3,4,5	8.0	0.0	1.8	1.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.8	0.0	0.0	81.5					
2000	931	2,3,4,5	14.2	0.0	5.3	7.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.8	0.0	0.0	71.4					
2001	1061	2,3,4,5	13.7	0.0	3.9	2.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	17.6	0.0	0.0	61.5					
2002	2623	2,3,4,5	20.0	0.0	2.1	3.5	2.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	15.4	0.0	10.0	46.7					
2003	3097	2,3,4,5	11.8	0.0	1.9	5.8	2.8	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	9.7	0.0	0.2	67.2					
2004	3528	2,3,4,5	13.3	0.7	1.8	5.4	6.4	1.5	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	8.2	0.0	0.1	62.4					
2005	2999	2,3,4,5	12.8	0.0	2.3	5.2	2.1	2.5	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	15.2	0.0	0.1	59.2					
2006	1378	2,3,4,5	18.6	0.1	3.1	10.3	2.3	2.8	0.5	0.0	0.0	0.0	0.0	0.0	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	12.8	0.0	0.9	48.1					
2007	835	2,3,4,5	27.4	0.0	6.3	9.1	13.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.2	0.1	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	11.7	0.0	0.0	29.8					
2008	1158	2,3,4,5	15.8	0.0	2.5	7.8	4.6	0.7	0.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	18.1	0.0	0.0	49.6					
2009	1851	2,3,4,5	24.8	1.5	3.1	8.9	3.1	0.1	1.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	15.5	0.0	0.3	41.6					
2010	2510	2,3,4,5	21.9	0.0	4.6	4.6	4.9	0.0	0.4	0.0	0.0	0.0	0.0	0.1	0.2	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	15.1	0.0	0.0	47.9					
2011	3285	2,3,4,5	19.3	0.1	3.0	5.0	4.0	0.1	0.2	0.0	0.0	0.1	0.0	0.0	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	16.9	0.0	0.0	51.1					
2012	3075	2,3,4,5	34.1	0.2	2.5	7.9	6.4	0.7	0.6	0.0	0.0	0.0	0.0	0.2	0.7	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.0	0.0	17.7	0.0	0.4	28.3					
2013	2114	2,3,4,5	16.2	0.8	4.8	7.2	5.3	0.3	0.9	0.0	0.0	3.1	0.0	0.0	0.7	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	19.2	0.0	0.0	41.1					
2014	2625	2,3,4,5	20.8	1.0	3.0	6.4	3.1	0.6	0.2	0.0	0.0	0.0	0.0	0.0	0.3	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.0	0.0	13.1	0.0	0.0	50.9					
2015	1643	3,4,5	22.9	0.0	5.0	7.5	9.3	0.5	0.4	0.0	0.0	1.3	0.0	0.0	0.7	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	9.3	0.0	1.0	41.8					
2016	NA		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-				
85-95	1028		16.8	1.1	0.6	10.8	0.9	5.4	0.0	0.5	0.2	0.0	0.0	0.2	0.2	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.7	0.0	0.0	0.0	13.0	0.0	0.0	49.2					
96-98	1087		19.6	0.1	1.1	4.8	0.0	0.2	0.0	0.1	0.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	11.3	0.0	0.0	61.7					
99-08	1844		15.6	0.1	3.1	5.8	3.3	0.7	0.2	0.0	0.0	0.0	0.0	0.0	0.3	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	11.7	0.0	1.1	57.8					
09-16	2443		22.8	0.5	3.7	6.8	5.2	0.4	0.5	0.0	0.0	0.6	0.0	0.0	0.0	0.4	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	15.2	0.0	0.2	43.3					

Appendix C36—Percent distribution of Samish Fall Fingerling (Nooksack Fall Fingerling) total fishing mortalities among fisheries and escapement.

Catch Year	Est # of CWT	Ages	AABM Fishery									ISBM Fishery										Terminal Fishery						Escapement							
			SEAK			NBC			WCVI			NBC & CBC			Southern BC			N Falcon		S Falcon		WAC	Puget Sd			SEAK			Canada		Southern US			Stray	Esc.
			T	N	S	T	S	T	S	T	N	S	T	N	S	T	S	T	S	N	N	S	T	N	S	N	S	T	N	S					
79–84	NA		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1985	NA		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
1986	NA		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
1987	73	2	Failed Criteria									-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
1988	919	2,3	0.0	0.0	0.0	0.2	0.0	13.2	0.3	0.3	0.9	0.1	1.2	3.8	22.6	6.4	0.0	0.0	0.0	0.2	9.0	12.2	0.0	0.0	0.0	0.0	0.0	0.0	16.0	0.0	0.1	13.4			
1989	2017	2,3,4	0.0	0.0	0.0	0.2	0.0	9.1	1.7	0.2	0.1	0.2	1.3	3.2	17.9	8.0	0.0	0.0	0.0	0.0	4.3	11.3	0.0	0.0	0.0	0.0	0.0	0.0	27.4	0.0	0.5	14.4			
1990	2534	2,3,4,5	0.2	0.0	0.0	0.6	0.0	20.3	1.9	0.1	0.2	0.0	3.5	1.3	10.7	9.2	0.1	0.2	0.0	0.0	1.5	8.1	0.0	0.0	0.0	0.0	0.0	0.0	25.8	0.0	2.1	14.4			
1991	1039	2,3,4,5	0.0	0.0	0.0	0.0	0.0	14.3	3.4	0.1	0.3	0.0	1.9	2.5	10.4	8.9	1.4	0.4	0.0	0.0	0.9	10.1	0.0	0.0	0.0	0.0	0.0	0.0	20.1	0.4	0.9	24.1			
1992	736	2,3,4,5	0.0	0.0	0.0	0.0	0.0	11.3	0.8	0.0	0.1	0.0	2.4	1.8	16.7	9.2	1.1	0.4	0.0	0.0	0.1	22.4	0.0	0.0	0.0	0.0	0.0	0.0	12.1	0.0	0.0	21.5			
1993	1224	2,3,4,5	0.0	0.0	0.0	0.2	0.0	13.7	7.3	0.2	0.5	0.0	3.7	2.0	20.2	3.8	0.1	0.2	0.0	0.0	2.0	13.4	0.0	0.0	0.0	0.0	0.0	0.0	12.1	0.0	0.7	20.0			
1994	1036	2,3,4,5	0.5	0.0	0.0	0.4	0.0	13.1	3.4	0.0	0.4	0.0	1.3	1.6	16.6	2.0	0.4	0.0	0.0	0.0	3.1	4.2	0.0	0.0	0.0	0.4	0.0	0.0	31.8	0.0	1.9	19.0			
1995	810	2,3,4,5	0.2	0.0	0.0	0.0	0.0	7.3	2.6	0.0	0.9	0.0	0.0	0.7	6.5	3.1	2.1	0.0	0.0	0.0	3.5	20.7	0.0	0.0	0.0	0.0	0.0	0.0	19.5	0.0	0.1	32.7			
1996	1290	2,3,4,5	0.0	0.1	0.0	0.0	0.0	1.0	0.8	0.0	0.3	0.0	0.0	0.2	13.6	1.6	13.7	0.0	0.0	0.2	0.3	15.0	0.0	0.0	0.0	0.0	0.2	0.0	28.8	0.0	0.0	24.2			
1997	1369	2,3,4,5	0.7	0.1	0.0	0.2	0.0	2.6	1.8	0.7	0.8	0.1	0.0	0.4	9.3	0.9	0.4	0.0	0.0	0.0	1.9	11.8	0.0	0.0	0.0	0.0	0.0	0.0	30.6	0.0	0.0	37.7			
1998	725	2,3,4,5	3.6	0.0	0.0	0.0	0.0	1.7	1.4	0.0	0.0	0.0	0.0	0.0	13.8	0.6	0.6	0.1	0.0	0.0	0.3	4.8	0.0	0.0	0.0	0.0	0.0	0.0	41.7	0.0	0.1	31.4			
1999	274	2,3,4,5	4.0	0.0	0.0	1.8	0.0	1.5	10.2	0.0	0.0	3.3	0.0	0.0	14.6	1.5	0.0	0.0	0.0	0.0	0.0	5.8	0.0	0.0	0.0	0.0	0.0	0.0	34.7	0.0	0.0	22.6			
2000	337	2,3,4,5	0.0	0.0	0.0	0.0	0.0	11.3	8.6	0.0	0.0	0.0	0.0	0.0	18.1	0.3	0.0	0.0	0.0	0.0	0.0	6.5	0.0	0.0	0.0	0.0	0.0	0.0	29.4	0.0	0.0	25.8			
2001	1688	2,3,4,5	0.0	0.2	0.0	0.0	0.0	5.1	4.9	0.0	0.5	0.0	0.0	0.0	9.8	2.4	0.1	0.2	0.0	0.2	0.1	8.2	0.0	0.0	0.0	0.0	0.7	0.0	35.5	0.0	0.1	32.0			
2002	1604	2,3,4,5	0.9	0.0	0.0	0.7	0.0	8.2	6.0	0.0	0.0	0.0	0.0	0.0	8.9	2.7	0.6	0.3	0.0	0.0	0.0	6.2	0.0	0.0	0.0	0.0	0.0	0.0	35.1	0.0	0.3	30.0			
2003	763	2,3,4,5	0.8	0.0	0.0	0.0	0.0	13.4	3.1	0.0	0.0	0.0	0.0	0.3	6.2	6.8	0.5	0.0	0.0	0.0	0.5	3.1	0.0	0.0	0.0	0.0	0.0	0.0	36.8	0.0	0.0	28.4			
2004	546	2,3,4,5	0.4	0.0	0.0	0.0	0.0	7.9	6.0	0.0	0.0	0.0	0.0	0.0	6.0	11.2	0.4	0.5	0.0	0.0	0.7	9.5	0.0	0.0	0.0	0.0	0.0	0.0	28.0	0.0	0.0	29.3			
2005	758	2,3,4,5	0.3	0.1	0.0	0.3	0.0	10.7	8.0	0.0	0.0	0.0	0.0	0.0	17.4	7.3	0.7	0.3	0.0	0.0	0.7	6.9	0.0	0.0	0.0	0.0	0.0	0.0	28.5	0.0	1.1	17.9			
2006	1558	2,3,4,5	0.4	0.1	0.0	0.1	0.0	8.2	4.7	0.0	0.0	0.0	0.0	0.0	7.1	6.9	1.3	0.1	0.0	0.0	0.8	7.4	0.0	0.0	0.0	0.0	0.0	0.0	46.9	0.0	2.4	13.8			
2007	2034	2,3,4,5	0.5	0.0	0.0	0.0	0.0	9.5	4.4	0.0	0.0	0.0	0.0	0.0	7.1	2.9	20.3	0.0	0.1	0.0	0.0	6.5	0.0	0.0	0.0	0.0	0.0	0.0	27.4	0.1	0.7	20.3			
2008	1738	2,3,4,5	0.2	0.0	0.0	0.0	0.0	6.3	4.1	0.0	0.0	0.0	0.0	0.0	7.1	4.5	0.3	0.0	0.0	0.0	0.1	11.6	0.0	0.0	0.0	0.0	0.0	0.0	40.4	0.0	0.5	24.9			
2009	1633	2,3,4,5	0.0	0.1	0.0	0.0	0.0	3.3	4.2	0.0	0.0	0.0	0.0	0.0	5.5	3.6	0.4	0.0	0.0	0.0	0.1	12.9	0.0	0.0	0.0	0.0	0.0	0.0	30.7	0.0	0.7	38.6			
2010	1832	2,3,4,5	0.0	0.0	0.1	0.0	0.0	7.0	6.7	0.0	0.0	0.0	0.0	0.0	5.9	10.0	0.7	0.3	0.0	0.0	0.2	9.3	0.0	0.0	0.0	0.0	0.0	0.0	29.2	0.0	3.0	27.7			
2011	1319	2,3,4,5	0.1	0.0	0.0	0.0	0.0	5.0	5.2	0.0	0.0	0.0	0.0	0.0	10.0	3.2	0.3	0.0	0.0	0.0	0.2	8.6	0.0	0.0	0.0	0.0	0.0	0.0	35.7	0.0	0.0	31.7			
2012	1835	2,3,4,5	0.0	0.2	0.1	0.5	0.0	2.2	4.5	0.0	0.0	0.2	0.0	0.4	6.8	6.6	1.0	0.3	0.0	0.0	0.0	6.8	0.0	0.0	0.0	0.0	0.0	0.0	51.8	0.0	0.0	18.5			
2013	1785	2,3,4,5	0.0	0.0	0.0	0.0	0.0	1.2	3.7	0.0	0.0	0.0	0.0	0.0	8.2	3.5	0.2	0.0	0.0	0.0	1.7	10.9	0.0	0.0	0.0	0.0	0.0	0.0	43.0	0.0	0.6	26.9			
2014	1567	2,3,4,5	0.6	0.1	0.0	0.4	0.1	5.8	5.0	0.0	0.0	0.0	0.0	0.0	11.2	5.9	1.0	0.3	0.0	0.0	0.0	11.1	0.0	0.0	0.0	0.0	0.0	0.0	24.5	0.0	0.4	33.5			
2015	907	2,3,4,5	0.6	0.0	0.0	0.3	0.0	2.5	2.9	0.0	0.0	0.8	0.0	0.0	12.2	10.3	1.3	0.0	0.0	0.0	0.1	6.3	0.0	0.0	0.0	0.0	0.0	0.0	30.7	0.0	2.0	30.1			
2016	NA		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
85–95	1342		0.1	0.0	0.0	0.2	0.0	12.7	3.0	0.1	0.4	0.0	2.0	1.9	14.1	6.3	0.7	0.2	0.0	0.0	2.2	12.9	0.0	0.0	0.0	0.1	0.0	0.0	21.3	0.1	0.9	20.9			
96–98	1128		1.4	0.1	0.0	0.1	0.0	1.8	1.3	0.2	0.4	0.0	0.0	0.2	12.2	1.0	4.9	0.0	0.0	0.1	0.8	10.5	0.0	0.0	0.0	0.0	0.1	0.0	33.7	0.0	0.0	31.1			
99–08	1130		0.8	0.0	0.0	0.3	0.0	8.2	6.0	0.0	0.1	0.3	0.0	0.0	10.2	4.6	2.4	0.1	0.0	0.0	0.3	7.2	0.0	0.0	0.0	0.0	0.1	0.0	34.3	0.0	0.5	24.5			
09–16	1554		0.2	0.1	0.0	0.2	0.0	3.9	4.6	0.0	0.0	0.1	0.0	0.1	8.6	6.2	0.7	0.1	0.0	0.0	0.3	9.4	0.0	0.0	0.0	0.0	0.0	0.0	35.1	0.0	0.9	29.6			

Appendix C37—Percent distribution of Lower Shuswap River Summer (Fraser Early) total fishing mortalities among fisheries and escapement.

Catch Year	Est # of CWT	Ages	AABM Fishery									ISBM Fishery												Terminal Fishery						Escapement							
			SEAK			NBC			WCVI			NBC & CBC			Southern BC			N Falcon		S Falcon		WAC	Puget Sd			SEAK			Canada		Southern US			Stray	Esc.		
			T	N	S	T	S		T	S		T	N	S	T	N	S	T	S	N	N	S	S	N	S	T	N	S									
79–84	NA		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1985	NA		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1986	112	2	Failed Criteria									-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
1987	632	2,3	7.8	2.2	0.2	11.7	0.0	2.2	0.0	2.7	0.8	0.6	0.8	8.2	4.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	47.0
1988	2072	2,3,4	7.7	0.2	0.0	9.7	0.3	5.1	0.0	1.6	1.4	0.0	0.0	6.3	2.8	0.0	0.1	0.0	0.0	0.0	0.1	1.2	0.2	0.0	0.0	0.0	0.0	0.9	1.4	0.0	0.3	0.0	0.2	60.5			
1989	1682	2,3,4,5	5.1	4.0	0.0	7.2	0.0	1.1	0.0	0.5	0.2	0.0	0.0	12.3	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.9	0.1	0.0	0.0	0.0	1.1	0.4	0.0	0.5	0.0	0.0	66.0				
1990	1250	2,3,4,5	27.7	0.0	0.8	19.4	0.3	3.8	3.0	1.8	1.1	0.9	0.0	2.1	1.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.0	0.0	0.0	7.6	1.5	0.0	0.0	0.0	1.1	26.7				
1991	628	2,3,4,5	33.9	0.0	0.6	22.1	0.5	3.0	0.0	1.3	1.3	0.0	0.0	5.4	1.3	0.0	0.0	0.0	0.0	0.0	0.0	3.2	0.0	0.0	0.0	0.0	5.3	0.6	0.0	0.0	0.0	0.2	21.3				
1992	285	2,3,4,5	12.6	0.0	0.0	17.2	0.0	3.9	0.0	6.0	1.4	0.0	0.0	4.9	4.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.8	0.0	0.0	0.0	5.3	4.6	0.0	0.0	0.0	0.0	36.5				
1993	464	2,3,4,5	6.0	1.7	0.0	12.5	0.0	9.5	0.0	1.1	0.9	0.0	0.0	7.5	1.5	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.5	0.0	0.0	8.8	3.7	0.0	0.0	0.0	0.0	41.8				
1994	1045	2,3,4,5	9.4	0.0	1.1	17.4	1.7	8.1	0.0	10.0	0.9	0.0	0.9	4.3	1.8	0.0	0.0	0.0	0.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0	9.8	0.0	0.0	0.0	0.0	0.5	31.2				
1995	530	2,3,4,5	15.8	0.0	3.8	11.3	4.2	3.4	0.0	0.8	0.2	1.5	0.0	3.4	2.6	0.0	0.0	0.0	0.0	0.0	0.0	2.5	0.0	0.0	0.0	0.0	7.9	0.4	0.0	0.8	0.0	0.6	40.9				
1996	743	2,3,4,5	16.3	0.0	0.0	0.5	0.7	0.4	0.9	0.0	0.1	1.5	0.0	0.4	4.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	8.2	1.3	0.0	0.0	0.0	0.0	65.5				
1997	608	2,3,4,5	13.3	0.7	0.0	8.7	2.1	0.5	0.0	0.2	0.2	0.7	0.0	3.6	5.6	0.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	15.6	0.0	0.0	0.3	0.0	0.0	46.5				
1998	754	2,3,4,5	21.5	0.4	9.2	7.0	14.1	0.0	0.0	0.0	0.0	1.1	0.0	0.4	7.8	0.0	0.0	0.0	0.0	0.0	0.0	0.8	0.0	0.0	0.0	0.0	5.4	0.7	0.0	0.0	0.0	1.2	30.5				
1999	832	2,3,4,5	15.5	0.0	6.0	0.7	4.6	0.0	0.0	0.0	0.0	0.2	0.0	0.0	4.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.4	0.4	0.0	0.0	0.0	0.0	62.6				
2000	718	2,3,4,5	11.0	0.0	9.9	0.0	4.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.6	0.0	0.4	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	6.4	1.4	0.0	0.0	0.0	1.0	61.4				
2001	1159	2,3,4,5	8.1	1.2	0.4	0.0	0.0	0.0	0.0	0.3	0.0	1.0	0.1	0.7	9.4	0.1	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.0	1.5	1.6	0.0	0.3	0.0	0.0	75.2				
2002	1577	2,3,4,5	18.0	0.0	2.5	13.7	4.1	1.3	0.0	0.1	0.0	1.6	0.0	0.0	3.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	8.5	0.4	0.0	0.0	0.0	0.0	46.3				
2003	1872	2,3,4,5	9.8	0.9	1.6	7.9	2.5	0.0	0.0	1.3	0.0	0.4	0.0	0.0	7.1	0.2	0.0	0.1	0.0	0.0	0.0	0.5	0.0	0.0	0.0	0.0	4.5	2.4	0.0	0.0	0.0	0.0	60.9				
2004	1156	2,3,4,5	18.3	0.0	1.6	9.3	4.0	0.8	0.0	0.0	0.0	4.8	0.0	0.0	5.4	0.3	0.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	11.9	2.8	0.0	0.0	0.0	0.0	39.7				
2005	824	2,3,4,5	15.0	0.0	1.8	12.4	5.3	0.4	3.2	0.0	0.0	1.3	0.0	0.0	13.8	0.2	0.0	0.0	0.0	0.0	0.0	0.4	0.0	0.0	0.0	0.0	7.0	3.6	0.0	0.0	0.0	0.0	35.4				
2006	1323	2,3,4,5	11.9	0.0	2.7	13.2	8.2	0.3	0.9	0.0	0.0	1.7	0.0	0.0	9.8	0.2	0.0	0.0	0.0	0.0	0.0	0.8	0.0	0.0	0.0	0.0	7.2	3.1	0.0	0.0	0.0	0.8	39.2				
2007	504	2,3,4,5	7.7	0.2	9.7	3.6	10.1	0.0	1.0	0.0	0.0	0.0	0.0	0.4	3.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.6	5.2	0.0	0.0	0.0	0.0	54.2				
2008	1771	2,3,4,5	8.8	0.0	0.6	8.1	7.7	0.0	1.6	0.0	0.0	0.0	0.0	0.0	7.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.9	3.0	0.0	0.0	0.0	0.0	60.1				
2009	1691	2,3,4,5	9.2	0.0	1.3	6.4	3.4	0.8	2.3	0.0	0.0	0.6	0.0	0.0	8.9	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.0	0.0	10.0	6.2	0.0	0.0	0.0	0.2	50.4				
2010	2025	2,3,4,5	9.8	0.0	1.5	10.5	3.1	0.0	0.5	0.0	0.0	0.3	0.0	0.0	9.4	0.2	0.1	0.1	0.0	0.0	0.0	1.2	0.0	0.0	0.0	0.0	9.4	1.9	0.0	0.3	0.0	1.2	50.4				
2011	1853	2,3,4,5	8.1	0.1	1.8	7.6	4.4	1.3	0.7	0.0	0.0	0.0	0.0	1.2	8.3	0.5	0.0	0.0	0.0	0.0	0.0	0.3	0.5	0.0	0.0	0.0	9.3	2.9	0.0	0.0	0.0	0.1	53.0				
2012	1942	2,3,4,5	6.8	0.0	2.5	7.6	4.4	1.1	1.2	0.0	0.0	0.6	0.0	0.4	10.1	0.2	0.4	0.2	0.0	0.0	0.0	0.1	2.3	0.0	0.0	0.0	4.5	4.9	0.0	0.0	0.0	0.0	52.8				
2013	8083	2,3,4,5	7.5	0.1	0.5	7.6	2.2	0.2	1.0	0.0	0.0	0.4	0.0	1.6	10.1	0.6	0.0	0.0	0.0	0.0	0.0	0.3	0.7	0.0	0.0	0.0	2.5	2.1	0.0	0.0	0.0	0.9	61.6				
2014	4633	2,3,4,5	11.0	0.2	0.9	7.2	1.9	3.3	1.7	0.0	0.0	0.2	0.0	3.0	5.2	2.2	0.5	0.1	0.0	0.0	0.0	0.5	0.9	0.0	0.0	0.0	8.1	1.8	0.0	0.0	0.0	0.9	50.5				
2015	5046	2,3,4,5	6.6	0.2	0.2	3.6	1.4	0.5	1.2	0.0	0.0	0.7	0.0	0.5	8.4	2.3	0.5	0.0	0.0	0.0	0.0	0.8	1.0	0.0	0.0	0.0	2.9	3.7	0.0	0.1	0.0	1.4	64.1				
2016	2177	2,3,4,5	9.7	0.5	1.7	8.9	2.2	2.0	1.1	0.0	0.0	1.2	0.0	0.4	6.6	0.3	0.0	0.0	0.0	0.0	0.0	0.4	0.8	0.0	0.0	0.0	2.5	1.1	0.0	0.0	0.0	0.0	60.5				
85–95	994		14.8	0.7	0.8	14.6	0.9	4.7	0.4	2.9	0.9	0.3	0.1	5.8	2.1	0.1	0.0	0.0	0.0	0.0	1.3	0.4	0.6	0.0	0.0	0.0	5.8	1.6	0.0	0.2	0.0	0.3	40.6				
96–98	702		17.0	0.4	3.1	5.4	5.6	0.3	0.3	0.1	0.1	1.1	0.0	1.5	5.8	0.0	0.0	0.0	0.0	0.0	0.0	0.9	0.0	0.0	0.0	0.0	9.8	0.7	0.0	0.1	0.0	0.4	47.5				
99–08	1174		12.4	0.2	3.7	6.9	5.1	0.3	0.7	0.2	0.0	1.1	0.0	0.1	6.8	0.1	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.0	0.0	0.0	6.0	2.4	0.0	0.0	0.0	0.2	53.5				
09–16	3431		8.6	0.1	1.3	7.4	2.9	1.2	1.2	0.0	0.0	0.5	0.0	0.9	8.4	0.8	0.2	0.1	0.0	0.0	0.0	0.4	0.8	0.0	0.0	0.0	6.1	3.1	0.0	0.0	0.0	0.6	55.4				

Appendix C38—Percent distribution of Skagit Spring Fingerling total fishing mortalities among fisheries and escapement.

Catch Year	Est # of CWT	Ages	AABM Fishery									ISBM Fishery									Terminal Fishery						Escapement									
			SEAK			NBC			WCVI			NBC & CBC			Southern BC			N Falcon		S Falcon		WAC	Puget Sd			SEAK			Canada		Southern US			Stray	Esc.	
			T	N	S	T	S	T	S	T	N	S	T	N	S	T	S	T	S	N	N	N	S	T	N	S	N	S	T	N	S					
79–84	NA		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
1985	NA		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
1986	NA		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
1987	28	2	Failed Criteria									-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
1988	68	3	Failed Criteria									-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1989	38	4	Failed Criteria									-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1990	4	5	Failed Criteria									-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1991	NA		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
1992	NA		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
1993	NA		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
1994	NA		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
1995	66	2	Failed Criteria									-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1996	538	2,3	0.6	0.4	0.0	0.0	0.0	0.6	0.6	0.0	5.4	0.4	0.0	0.2	12.8	0.2	0.0	0.0	0.0	0.0	0.0	0.2	15.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.9	62.5		
1997	915	2,3,4	1.5	0.0	0.0	0.2	0.0	2.2	3.1	0.3	1.7	0.4	0.0	1.1	11.7	0.0	0.0	0.0	0.0	0.0	0.0	0.9	9.8	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.0	0.2	66.2			
1998	674	2,3,4,5	2.4	0.0	0.0	0.0	0.0	0.0	3.9	0.0	0.6	0.7	0.0	0.3	19.4	0.0	0.0	0.0	0.0	0.0	0.0	0.4	6.7	0.0	0.0	0.0	0.0	0.0	0.0	1.2	0.0	1.8	62.6			
1999	1800	2,3,4,5	0.9	0.2	0.0	0.3	0.3	2.3	5.3	0.0	0.1	0.0	0.0	0.0	7.7	0.4	0.0	0.0	0.0	0.0	0.0	0.0	2.8	0.0	0.0	0.0	0.0	0.0	1.4	0.0	0.4	77.9				
2000	1208	2,3,4,5	1.9	0.0	0.6	0.0	0.0	6.5	6.5	0.0	0.0	0.6	0.0	0.2	11.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.1	0.0	0.0	0.0	0.0	0.0	0.2	0.0	1.2	65.3				
2001	1927	2,3,4,5	1.8	0.1	0.4	0.3	0.0	5.9	4.0	0.0	0.0	0.6	0.0	0.0	6.6	0.2	0.0	0.0	0.0	0.0	0.0	0.1	10.0	0.0	0.0	0.0	0.0	0.0	0.6	0.0	1.0	68.5				
2002	1801	2,3,4,5	2.8	0.0	0.8	0.6	0.0	5.6	5.2	0.0	0.1	0.6	0.0	0.0	7.7	0.3	0.1	0.0	0.0	0.0	0.0	0.0	3.7	0.0	0.0	0.0	0.0	0.0	0.6	0.0	0.6	71.5				
2003	685	2,3,4,5	2.6	0.0	0.4	1.3	0.0	18.7	0.9	0.0	0.3	0.0	0.0	0.0	6.9	1.5	0.0	0.0	0.0	0.0	0.0	0.0	1.8	0.0	0.0	0.0	0.0	0.0	0.9	0.0	1.3	63.5				
2004	1157	2,3,4,5	0.0	0.0	0.0	0.5	0.0	12.3	2.5	0.0	0.0	0.0	0.0	0.0	12.4	2.4	0.0	0.3	0.0	0.0	0.0	0.0	2.9	0.0	0.0	0.0	0.0	0.0	1.3	0.0	0.3	65.2				
2005	1150	2,3,4,5	1.8	0.2	0.0	0.0	0.0	13.0	3.5	0.0	0.3	1.7	0.0	0.0	11.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.8	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.4	66.8				
2006	1579	2,3,4,5	0.4	0.1	0.0	0.3	0.0	7.6	1.5	0.0	0.0	0.0	0.0	0.0	10.3	0.2	0.0	0.0	0.0	0.0	0.0	0.0	4.2	0.0	0.0	0.0	0.0	0.0	1.6	0.0	1.3	72.7				
2007	2348	2,3,4,5	0.3	0.3	0.0	0.0	0.0	10.0	6.6	0.0	0.0	0.0	0.0	0.0	9.3	1.0	0.0	0.0	0.0	0.0	0.0	0.3	4.2	0.0	0.0	0.0	0.0	0.0	1.4	0.0	0.6	66.0				
2008	1404	2,3,4,5	0.4	0.0	0.0	0.0	0.0	4.1	5.4	0.0	0.3	0.3	0.0	0.0	7.1	0.9	0.0	0.0	0.0	0.0	0.0	0.0	9.1	0.0	0.0	0.0	0.0	0.0	14.5	0.0	0.7	57.4				
2009	905	2,3,4,5	0.6	0.0	0.0	0.0	0.0	3.0	4.3	0.0	0.0	0.0	0.0	0.0	7.1	1.2	0.0	0.0	0.0	0.0	0.0	0.0	8.0	0.0	0.0	0.0	0.0	0.0	17.2	0.0	0.6	58.1				
2010	1479	2,3,4,5	0.1	0.0	0.0	0.0	0.0	2.3	2.9	0.0	0.0	0.0	0.0	0.0	7.9	0.3	0.0	0.0	0.0	0.0	0.0	0.2	2.8	0.0	0.0	0.0	0.0	0.0	19.3	0.0	1.1	63.0				
2011	1319	2,3,4,5	0.4	0.1	0.0	0.0	0.0	1.4	3.6	0.0	0.0	0.5	0.0	0.0	5.5	0.0	0.2	0.0	0.0	0.0	0.0	0.1	5.1	0.0	0.0	0.0	0.0	0.0	18.4	0.0	1.2	63.7				
2012	1580	2,3,4,5	0.0	0.0	0.0	0.0	0.0	3.2	2.8	0.0	0.0	0.5	0.0	0.0	11.1	0.3	0.0	0.0	0.0	0.0	0.0	0.0	8.7	0.0	0.0	0.0	0.0	0.0	18.4	0.0	0.9	54.1				
2013	1205	2,3,4,5	0.7	0.6	0.0	0.0	0.0	2.8	3.6	0.0	0.0	0.5	0.0	0.0	7.4	0.4	0.2	0.0	0.0	0.0	0.0	0.0	5.0	0.0	0.0	0.0	0.0	0.0	25.9	0.0	0.2	52.8				
2014	1041	2,3,4,5	2.1	0.2	0.0	1.1	0.0	3.2	4.8	0.0	0.0	0.4	0.0	0.0	8.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	7.9	0.0	0.0	0.0	0.0	0.0	26.0	0.0	0.1	46.0				
2015	1047	2,3,4,5	0.9	0.0	0.0	0.0	0.0	1.4	1.1	0.0	0.0	0.4	0.0	0.0	8.9	0.5	0.0	0.0	0.0	0.0	0.0	0.1	10.4	0.0	0.0	0.0	0.0	0.0	11.0	0.0	0.5	64.9				
2016	NA		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
85–95	NA		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
96–98	794		2.0	0.0	0.0	0.1	0.0	1.1	3.5	0.2	1.2	0.6	0.0	0.7	15.6	0.0	0.0	0.0	0.0	0.0	0.0	0.7	8.3	0.0	0.0	0.0	0.0	0.0	0.9	0.0	1.0	64.4				
99–08	1506		1.3	0.1	0.2	0.3	0.0	8.6	4.1	0.0	0.1	0.4	0.0	0.0	9.1	0.7	0.0	0.0	0.0	0.0	0.0	0.0	4.4	0.0	0.0	0.0	0.0	2.3	0.0	0.8	67.5					
09–16	1225		0.7	0.1	0.0	0.2	0.0	2.5	3.3	0.0	0.0	0.3	0.0	0.0	8.0	0.4	0.0	0.0	0.0	0.0	0.0	0.1	6.8	0.0	0.0	0.0	0.0	0.0	19.5	0.0	0.7	57.5				

Appendix C39—Percent distribution of Skagit Spring Yearling total fishing mortalities among fisheries and escapement.

Catch Year	Est # of CWT	Ages	AABM Fishery									ISBM Fishery											Terminal Fishery						Escapement							
			SEAK			NBC		WCVI		NBC & CBC			Southern BC			N Falcon		S Falcon		WAC	Puget Sd			SEAK			Canada		Southern US			Stray	Esc.			
			T	N	S	T	S	T	S	T	N	S	T	N	S	T	S	T	S	N	N	S	T	N	S	N	S	T	N	S						
79–84	NA		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1985	132	2,3,4	0.0	0.0	0.0	0.0	0.0	6.8	0.0	0.0	0.8	0.0	0.0	25.0	29.5	0.0	0.0	0.0	0.0	0.0	9.1	18.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	10.6
1986	229	2,3,4,5	1.7	0.0	0.0	0.0	0.0	6.6	3.5	3.9	6.6	0.0	6.1	2.6	38.0	0.0	0.0	0.0	0.0	0.0	3.1	9.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	18.8	
1987	161	2,3,4,5	0.0	0.0	0.0	5.0	0.0	3.1	0.0	0.0	5.0	0.0	0.0	4.3	9.3	1.2	0.0	0.0	0.0	0.0	14.9	41.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	15.5	
1988	576	2,3,4,5	0.0	0.0	0.0	0.0	0.0	2.4	2.4	0.0	5.6	0.0	0.5	7.1	24.8	2.1	0.0	0.0	0.0	0.3	16.3	16.3	0.0	0.0	0.0	0.0	0.0	0.0	1.6	0.0	0.0	0.0	0.0	20.5		
1989	852	2,3,4,5	0.0	0.0	0.0	0.0	0.0	4.0	1.8	0.8	0.1	0.0	0.0	3.3	21.1	4.7	0.0	0.0	0.0	0.4	10.4	10.3	0.0	0.0	0.0	0.0	0.0	0.0	16.3	0.0	0.2	0.0	26.5			
1990	732	3,4,5	0.0	0.0	0.0	0.0	0.0	5.1	2.0	0.4	1.9	0.5	3.3	2.2	18.7	3.7	0.0	0.0	0.0	0.0	11.9	24.6	0.0	0.0	0.0	1.8	0.0	0.0	2.3	0.0	0.0	0.0	21.6			
1991	501	4,5	0.6	0.0	0.0	0.0	0.0	6.0	4.8	0.2	0.0	0.0	0.0	1.0	7.8	6.8	0.0	0.0	0.0	0.0	0.8	18.4	0.0	0.0	0.0	0.0	0.0	0.0	1.8	0.0	0.0	0.0	51.9			
1992	96	2,5	0.0	0.0	0.0	0.0	0.0	8.3	2.1	0.0	2.1	0.0	3.1	3.1	24.0	1.0	0.0	0.0	0.0	0.0	7.3	27.1	0.0	0.0	0.0	3.1	0.0	0.0	1.0	0.0	0.0	0.0	17.7			
1993	417	3	Failed Criteria			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
1994	754	4	Failed Criteria			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
1995	176	2,5	1.1	0.0	0.0	0.0	0.0	1.1	0.6	0.0	0.0	0.0	0.0	0.0	10.2	0.0	0.0	0.0	0.0	0.0	1.1	24.4	0.0	0.0	0.0	0.0	0.0	0.0	1.7	0.0	0.6	0.0	59.1			
1996	181	2,3	0.6	0.0	0.0	0.0	0.0	1.7	2.2	0.0	0.6	1.1	0.0	0.0	9.4	0.0	0.0	0.0	0.0	0.0	0.0	33.1	0.0	0.0	0.0	0.0	0.0	0.6	0.0	0.6	0.0	50.3				
1997	621	2,3,4	0.2	0.0	0.0	0.0	0.0	3.2	5.0	0.0	0.8	0.3	0.0	3.2	24.0	0.0	0.0	0.0	0.0	0.0	0.8	30.9	0.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0	0.0	30.6				
1998	1238	2,3,4,5	0.6	0.2	0.0	0.0	0.0	1.1	6.9	0.0	0.1	1.9	0.0	0.2	13.7	0.0	0.0	0.0	0.0	0.0	2.0	20.8	0.0	0.0	0.0	0.0	0.0	0.8	0.0	1.0	0.0	50.8				
1999	2530	2,3,4,5	0.6	0.0	0.0	0.0	0.0	5.6	4.2	0.0	0.0	0.1	0.0	0.0	8.1	0.2	0.0	0.0	0.0	0.0	0.0	12.0	0.0	0.0	0.0	0.0	0.0	1.2	0.0	0.2	0.0	67.8				
2000	578	2,3,4,5	0.7	0.0	0.0	0.0	0.0	6.4	3.1	0.0	0.0	0.0	0.0	0.0	15.9	0.0	0.0	0.0	0.0	0.0	0.2	19.9	0.0	0.0	0.0	0.0	0.0	1.2	0.0	1.6	0.0	51.0				
2001	345	2,3,4,5	0.0	0.0	0.0	0.0	0.0	2.9	2.0	0.0	0.0	0.0	0.0	0.0	17.7	2.6	0.0	0.0	0.0	0.0	0.0	25.2	0.0	0.0	0.0	0.0	0.0	1.4	0.0	0.0	0.0	48.1				
2002	306	2,3,4,5	1.0	0.0	0.0	0.0	0.0	0.7	9.5	0.0	0.0	0.0	0.0	0.0	21.9	0.0	0.0	0.0	0.0	0.0	0.7	13.4	0.0	0.0	0.0	0.0	0.0	0.7	0.0	0.0	0.0	52.3				
2003	957	2,3,4,5	0.0	0.0	0.0	0.9	0.0	19.4	4.1	0.0	0.0	0.3	0.0	0.0	10.9	0.1	0.0	0.0	0.0	0.0	0.0	10.4	0.0	0.0	0.0	0.0	0.0	0.7	0.0	0.3	0.0	52.8				
2004	1656	2,3,4,5	0.2	0.0	0.0	0.0	0.0	13.0	1.7	0.0	0.0	0.0	0.0	0.0	8.5	0.9	0.0	0.0	0.0	0.0	0.2	5.9	0.0	0.0	0.0	0.0	0.0	0.8	0.1	0.7	0.0	68.1				
2005	1235	2,3,4,5	0.9	0.0	0.0	0.2	0.0	8.3	5.3	0.0	0.0	0.0	0.0	0.3	11.7	0.2	0.2	0.0	0.0	0.0	0.1	8.7	0.0	0.0	0.0	0.0	0.0	0.9	0.0	0.2	0.0	63.0				
2006	773	2,3,4,5	0.4	0.0	0.0	0.0	0.0	8.7	3.4	0.0	0.0	0.0	0.0	0.0	13.8	0.0	0.3	0.0	0.4	0.0	0.5	5.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0	2.1	0.0	64.4				
2007	815	2,3,4,5	0.0	0.0	0.0	0.0	0.0	2.5	6.1	0.0	0.0	0.0	0.0	0.0	6.6	0.5	1.2	0.0	0.0	0.0	1.0	18.3	0.0	0.0	0.0	0.0	0.0	0.4	0.0	0.6	0.0	62.8				
2008	744	2,3,4,5	0.0	0.0	0.0	0.0	0.0	1.7	3.9	0.0	0.0	0.0	0.0	0.0	6.0	0.0	0.0	0.0	0.0	0.0	0.3	12.9	0.0	0.0	0.0	0.0	0.0	12.0	0.0	0.1	0.0	63.0				
2009	391	2,3,4,5	1.0	0.0	0.0	0.0	0.0	1.5	12.0	0.0	0.0	0.0	0.0	0.0	5.6	1.5	0.0	0.0	0.0	0.0	0.3	9.7	0.0	0.0	0.0	0.0	0.0	14.1	0.0	0.3	0.0	54.0				
2010	413	2,3,4,5	0.2	0.0	0.0	0.0	1.2	0.0	1.7	0.0	0.0	0.0	0.0	0.0	2.2	0.0	0.0	0.0	0.0	0.0	0.0	11.1	0.0	0.0	0.0	0.0	0.0	17.9	0.0	0.5	0.0	65.1				
2011	607	2,3,4,5	0.0	0.0	0.0	0.0	0.0	2.1	1.6	0.0	0.0	0.5	0.0	0.0	10.0	0.2	0.0	0.0	0.0	0.0	0.0	13.7	0.0	0.0	0.0	0.0	0.0	10.9	0.0	0.7	0.0	60.3				
2012	850	2,3,4,5	0.7	0.0	0.0	0.0	0.0	1.1	3.4	0.0	0.0	0.0	0.0	1.3	7.5	0.8	0.0	0.0	0.0	0.0	0.0	15.9	0.0	0.0	0.0	0.0	0.0	14.8	0.0	0.0	0.0	54.5				
2013	426	3,4,5	0.0	0.0	0.9	0.0	0.0	2.1	2.1	0.0	0.0	0.0	0.0	0.0	10.3	0.9	0.5	0.0	0.0	0.0	0.0	8.5	0.0	0.0	0.0	0.0	0.0	16.9	0.0	0.5	0.0	57.3				
2014	445	4,5	0.9	0.0	0.0	0.0	0.0	2.9	1.8	0.0	0.0	0.0	0.0	0.0	7.9	0.7	0.0	0.0	0.0	0.0	0.0	4.9	0.0	0.0	0.0	0.0	0.0	35.1	0.0	0.2	0.0	45.6				
2015	80	5	Failed Criteria			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
2016	NA		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
85–95	447		0.3	0.0	0.0	0.8	0.0	4.7	1.6	0.9	3.3	0.1	1.7	7.4	23.6	2.0	0.0	0.0	0.0	0.1	11.0	20.0	0.0	0.0	0.0	0.3	0.0	0.0	3.4	0.0	0.0	0.0	18.9			
96–98	930		0.4	0.1	0.0	0.0	0.0	2.1	6.0	0.0	0.4	1.1	0.0	1.7	18.8	0.0	0.0	0.0	0.0	0.0	1.4	25.9	0.0	0.0	0.0	0.0	0.0	0.9	0.0	0.5	0.0	40.7				
99–08	994		0.4	0.0	0.0	0.1	0.0	6.9	4.3	0.0	0.0	0.0	0.0	0.0	12.1	0.5	0.2	0.0	0.0	0.0	0.3	13.2	0.0	0.0	0.0	0.0	0.0	2.0	0.0	0.6	0.0	59.3				
09–16	537		0.4	0.0	0.2	0.0	0.2	1.4	4.2	0.0	0.0	0.1	0.0	0.3	7.1	0.7	0.1	0.0	0.0	0.0	0.1	11.8	0.0	0.0	0.0	0.0	0.0	14.9	0.0	0.4	0.0	58.2				

Appendix C40—Percent distribution of Skykomish Fall Fingerling (Snohomish Wild) total fishing mortalities among fisheries and escapement.

Catch Year	Est # of CWT	Ages	AABM Fishery									ISBM Fishery									Terminal Fishery						Escapement								
			SEAK			NBC			WCVI			NBC & CBC			Southern BC			N Falcon		S Falcon		WAC	Puget Sd			SEAK			Canada		Southern US			Stray	Esc.
			T	N	S	T	S		T	S		T	N	S	T	N	S	T	S	N	N	N	S	T	N	S	N	S	T	N	S				
79–84	NA		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
1985	NA		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
1986	NA		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
1987	NA		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
1988	NA		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
1989	NA		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
1990	NA		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
1991	NA		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
1992	NA		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
1993	NA		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
1994	NA		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
1995	NA		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
1996	NA		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
1997	NA		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
1998	NA		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
1999	NA		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
2000	NA		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
2001	NA		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
2002	16	2	Failed Criteria						-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
2003	130	2,3	3.8	0.0	0.0	0.0	0.0	12.3	7.7	0.0	0.0	0.0	0.0	0.0	16.2	3.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	36.9
2004	609	2,3,4	0.5	0.0	0.0	0.0	0.0	16.6	3.6	0.0	0.0	1.5	0.0	0.0	7.9	0.5	0.0	0.0	0.0	0.0	0.0	0.5	8.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	60.3	
2005	549	2,3,4,5	0.7	0.0	0.0	0.4	0.0	18.4	6.4	0.0	0.7	0.0	0.0	0.0	9.1	3.1	0.5	0.0	0.0	0.0	0.0	0.0	3.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	57.0	
2006	635	2,3,4,5	1.1	0.0	0.0	0.3	0.0	14.2	3.3	0.0	0.2	0.0	0.0	0.0	8.0	5.2	0.0	0.0	0.0	0.0	0.0	0.9	8.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	57.8	
2007	1144	2,3,4,5	0.4	0.0	0.0	0.2	0.0	15.0	5.6	0.0	0.0	0.0	0.0	0.0	6.6	3.1	0.0	0.0	0.0	0.0	0.0	1.4	7.5	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	60.1		
2008	784	2,3,4,5	0.3	0.0	0.0	0.0	0.0	8.5	1.8	0.0	0.0	0.0	0.0	0.0	3.8	0.0	0.0	0.0	0.0	0.0	0.0	0.4	8.0	0.0	0.0	0.0	0.0	0.0	0.9	0.0	3.8	72.4			
2009	351	2,3,4,5	0.0	0.0	0.0	0.0	0.0	2.3	4.8	0.0	0.0	0.0	0.0	0.0	4.0	1.1	0.0	0.0	0.0	0.0	0.0	0.0	16.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	71.2		
2010	414	2,3,4,5	0.0	0.2	0.0	0.0	0.0	2.7	1.4	0.0	0.0	0.0	0.0	0.0	4.3	0.7	0.0	0.0	0.0	0.0	0.0	1.7	8.7	0.0	0.0	0.0	0.0	0.0	0.0	3.1	0.0	77.1			
2011	497	2,3,4,5	0.2	0.4	0.0	0.0	0.0	1.8	3.6	0.0	0.0	0.0	0.0	0.0	6.2	1.6	0.6	0.0	0.0	0.4	0.4	19.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	8.9	0.2	55.7			
2012	1026	2,3,4,5	0.3	0.0	0.0	0.0	0.2	3.9	2.5	0.0	0.0	0.1	0.0	0.0	16.3	2.9	0.0	0.0	0.0	0.2	0.4	10.9	0.0	0.0	0.0	0.0	0.0	0.5	1.3	0.6	59.9				
2013	628	2,3,4,5	0.3	0.0	0.3	0.0	0.0	6.8	6.5	0.0	0.0	0.0	0.0	0.0	10.8	1.8	0.6	0.0	0.0	0.0	0.6	9.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.1	61.8			
2014	480	2,3,4,5	1.3	0.0	0.0	0.0	0.0	1.5	2.1	0.0	0.0	0.2	0.0	0.0	13.8	0.0	0.0	0.0	0.0	0.0	0.0	14.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	66.3				
2015	505	2,3,4,5	1.0	0.0	0.0	0.0	0.0	1.2	2.4	0.0	0.0	0.0	0.0	0.0	3.0	4.2	0.0	0.0	0.0	0.0	2.0	6.3	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.2	79.6				
2016	NA		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
85–95	NA		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
96–98	NA		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
99–08	744		0.6	0.0	0.0	0.2	0.0	14.5	4.1	0.0	0.2	0.3	0.0	0.0	7.1	2.4	0.1	0.0	0.0	0.0	0.6	7.3	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.8	61.5				
09–16	557		0.4	0.1	0.0	0.0	0.0	2.9	3.3	0.0	0.0	0.0	0.0	0.0	8.3	1.8	0.2	0.0	0.0	0.1	0.7	12.3	0.0	0.0	0.0	0.0	0.0	0.1	1.9	0.3	67.4				

Appendix C41—Percent distribution of Sooes (now Tsoo-Yess) Fall Fingerling (Washington Coastal Wild) total fishing mortalities among fisheries and escapement.

Catch Year	Est # of CWT	Ages	AABM Fishery							ISBM Fishery											Terminal Fishery						Escapement									
			SEAK			NBC		WCVI		NBC & CBC			Southern BC			N Falcon		S Falcon		WAC	Puget Sd			SEAK			Canada		Southern US			Stray	Esc.			
			T	N	S	T	S	T	S	T	N	S	T	N	S	T	S	N	N	N	S	T	N	S	N	S	T	N	S							
79–84	NA		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
1985	NA		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
1986	NA		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
1987	16	2	Failed Criteria							-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1988	32	2,3	3.1	3.1	3.1	12.5	0.0	3.1	0.0	0.0	0.0	0.0	0.0	9.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	65.6	0.0
1989	221	2,3,4	8.1	19.0	0.5	2.7	0.0	3.6	5.9	0.0	3.2	0.0	0.0	1.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	53.8	0.0
1990	170	3,4,5	11.2	5.3	4.1	16.5	0.0	17.6	0.0	1.8	0.6	0.0	0.0	1.8	6.5	1.8	2.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	30.0	0.0
1991	371	2,4,5	14.3	0.0	0.3	9.7	0.0	7.3	0.0	0.3	1.6	0.0	0.0	1.9	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	59.3	0.0
1992	328	2,3,5	10.1	0.3	0.3	10.7	0.0	20.7	1.5	2.1	0.0	0.0	0.0	3.0	1.2	0.3	0.0	0.0	0.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	47.3	0.0
1993	246	2,3,4	6.5	0.4	0.0	8.1	2.0	16.3	0.0	2.0	2.0	0.0	0.0	0.0	0.0	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	61.0	0.0
1994	240	2,3,4,5	18.8	11.3	3.8	10.4	0.8	7.1	0.0	0.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	47.1	0.0
1995	175	2,3,4,5	13.7	0.0	0.0	6.3	0.0	13.1	0.0	0.0	1.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.3	0.0	0.0	0.0	0.0	0.0	63.4	0.0	
1996	224	2,3,4,5	15.2	0.0	0.0	0.4	0.0	0.4	0.0	0.0	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	83.0	0.0
1997	300	2,3,4,5	11.7	0.0	6.3	5.3	0.0	0.0	0.0	0.7	0.3	0.0	0.0	0.3	4.0	0.0	0.0	1.0	0.0	0.0	0.0	2.7	0.0	0.0	0.0	0.0	0.0	20.0	0.0	0.0	0.0	0.0	0.0	47.7	0.0	
1998	282	2,3,4,5	9.6	0.0	1.4	20.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	68.8	0.0	
1999	232	2,3,4,5	13.4	0.0	12.5	6.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.5	59.9	0.0	0.0	
2000	91	2,3,4,5	0.0	0.0	5.5	0.0	0.0	0.0	11.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	83.5	0.0	
2001	309	2,3,4,5	9.4	0.0	3.2	0.0	0.0	0.0	2.6	0.0	0.0	0.0	0.0	0.0	1.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	83.5	0.0	
2002	564	2,3,4,5	12.9	0.2	1.2	3.9	2.3	0.7	0.0	0.0	0.0	1.4	0.0	0.0	0.9	0.0	0.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	75.7	0.0	
2003	793	2,3,4,5	14.1	0.1	0.0	5.5	2.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.1	0.0	0.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	24.0	0.0	0.0	0.0	0.0	0.0	50.8	0.0		
2004	923	2,3,4,5	19.5	0.8	1.4	16.3	0.0	0.8	1.1	0.0	0.0	0.0	0.0	0.0	0.8	0.0	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.9	0.0	0.0	0.0	0.0	0.0	57.7	0.0		
2005	508	2,3,4,5	24.8	0.0	2.4	25.4	8.3	1.0	0.0	0.0	0.0	0.0	0.0	0.0	1.8	0.8	2.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	33.7	0.0	
2006	240	2,3,4,5	24.2	4.2	4.6	23.8	2.1	1.7	2.9	0.0	0.0	0.0	0.0	0.0	5.0	0.4	1.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	27.9	0.0	
2007	65	2,3,4,5	3.1	0.0	0.0	18.5	20.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	58.5	0.0	
2008	115	2,3,4,5	8.7	0.0	0.0	14.8	11.3	0.0	9.6	0.0	0.0	0.0	0.0	0.0	0.0	2.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	53.0	0.0	
2009	556	2,3,4,5	11.7	1.3	1.1	8.1	2.3	0.0	4.7	0.0	0.0	1.4	0.0	0.0	1.6	2.3	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.2	64.6	0.0	0.0		
2010	441	2,3,4,5	4.3	0.0	2.0	5.7	1.4	0.9	1.1	0.0	0.0	0.0	0.0	0.0	4.1	0.2	3.4	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	74.8	0.0	
2011	1126	2,3,4,5	10.0	0.4	0.9	4.6	1.4	1.8	2.0	0.0	0.0	1.2	0.0	0.0	2.0	0.4	1.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	72.8	0.0	
2012	587	2,3,4,5	13.5	0.0	1.4	10.7	4.8	1.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	2.4	0.7	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.7	0.0	0.0	0.0	0.0	0.0	63.4	0.0		
2013	547	2,3,4,5	6.0	0.0	0.5	1.3	1.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.1	0.5	1.8	0.0	0.0	0.0	0.0	0.0	0.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	83.5	0.0	
2014	713	2,3,4,5	4.6	0.0	0.7	6.2	0.1	2.8	0.0	0.0	0.0	0.3	0.0	0.0	0.0	0.0	0.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	84.3	0.0		
2015	1314	3,4,5	5.8	0.0	0.6	3.6	0.7	0.5	1.4	0.0	0.0	0.0	0.0	0.0	0.8	0.7	3.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	79.3	0.0	
2016	NA		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
85–95	250		11.8	5.2	1.3	9.2	0.4	12.3	1.1	1.0	1.2	0.0	0.0	1.2	1.1	0.4	0.4	0.0	0.1	0.0	0.0	1.4	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.0	0.0	0.0	0.0	51.7	0.0	
96–98	269		12.1	0.0	2.6	8.7	0.0	0.1	0.0	0.2	0.3	0.0	0.0	0.1	1.3	0.0	0.0	0.3	0.1	0.0	0.9	0.0	0.0	0.0	0.0	0.0	6.7	0.0	0.0	0.0	0.0	0.0	66.5	0.0		
99–08	510		16.9	0.7	3.6	11.7	2.2	0.6	0.9	0.0	0.0	0.2	0.0	0.0	1.5	0.2	0.7	0.0	0.0	0.0	0.1	0.5	0.0	0.0	0.0	0.0	3.5	0.0	0.0	0.0	0.0	0.0	55.6	0.9		
09–16	755		8.0	0.2	1.0	5.7	1.8	1.0	1.5	0.0	0.0	0.4	0.0	0.0	1.6	0.9	1.8	0.1	0.0	0.0	0.0	0.9	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.1	74.7	0.0		

Appendix C42—Percent distribution of Spring Creek Tule (Spring Creek Hatchery) total fishing mortalities among fisheries and escapement.

Catch Year	Est # of CWT	Ages	AABM Fishery									ISBM Fishery											Terminal Fishery									Escapement				
			SEAK			NBC			WCVI			NBC & CBC			Southern BC			N Falcon		S Falcon		WAC	Puget Sd			SEAK			Canada			Southern US			Stray	Esc.
			T	N	S	T	S	T	S	T	N	S	T	N	S	T	S	T	S	N	N	S	T	N	S	N	S	T	N	S						
79–84	4266		0.0	0.0	0.0	0.0	0.0	26.2	0.2	0.8	0.1	0.0	0.1	1.1	1.2	16.0	5.7	1.8	0.4	0.5	0.5	5.7	0.0	0.0	0.0	0.0	0.0	0.0	21.4	0.5	0.2	17.7				
1985	1225	2,3,4,5	0.0	0.0	0.0	0.0	0.0	14.9	0.7	0.2	0.0	0.0	0.0	0.2	0.0	12.1	2.4	4.2	0.1	0.0	0.7	1.5	0.0	0.0	0.0	0.0	0.0	25.3	0.2	0.1	37.6					
1986	334	2,3,4,5	0.0	0.0	0.0	0.0	0.0	24.0	2.4	3.0	0.0	0.0	0.0	1.5	1.8	0.9	2.4	1.5	0.0	0.0	0.9	4.8	0.0	0.0	0.0	0.0	0.0	33.2	1.2	7.8	14.7					
1987	134	2,3,4,5	0.0	0.0	0.0	0.0	0.0	11.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	15.7	8.2	2.2	0.7	0.0	14.9	5.2	0.0	0.0	0.0	0.0	17.9	7.5	3.0	13.4						
1988	798	2,3,4,5	0.0	0.0	0.0	0.5	0.0	26.9	0.0	0.4	0.3	0.0	0.0	1.5	4.6	12.4	1.8	4.9	1.3	0.0	1.3	5.1	0.0	0.0	0.0	0.0	0.0	23.6	3.6	3.1	8.8					
1989	2297	2,3,4,5	0.0	0.0	0.0	0.3	0.0	17.0	3.0	0.0	0.0	0.0	0.0	0.4	0.5	19.4	2.2	7.6	1.0	0.0	0.1	2.0	0.0	0.0	0.0	0.0	0.0	30.5	3.0	0.0	12.9					
1990	2394	2,3,4,5	0.0	0.0	0.0	0.3	0.0	20.3	4.1	0.4	0.1	0.0	0.3	0.8	0.9	12.0	7.2	3.6	0.0	0.0	0.3	5.6	0.0	0.0	0.0	0.0	0.0	19.9	2.0	0.0	22.1					
1991	2878	2,3,4,5	0.0	0.0	0.0	0.0	0.0	15.6	1.3	0.3	0.1	0.0	0.0	0.4	0.4	13.0	3.2	5.8	1.7	0.0	0.4	3.4	0.0	0.0	0.0	0.0	0.0	30.3	3.4	0.0	20.8					
1992	3133	2,3,4,5	0.0	0.0	0.0	0.0	0.0	14.4	2.1	0.3	0.0	0.0	0.2	0.4	0.7	22.9	4.4	6.0	0.8	0.0	0.0	3.5	0.0	0.0	0.0	0.0	0.0	13.2	3.3	0.2	27.6					
1993	1238	2,3,4,5	0.0	0.0	0.0	0.0	0.0	20.0	4.2	0.0	0.0	0.0	0.3	0.0	17.9	2.3	1.5	0.6	0.0	0.0	5.7	0.0	0.0	0.0	0.0	0.0	19.1	3.0	0.0	25.4						
1994	948	2,3,4,5	0.0	0.0	0.0	0.0	0.0	22.0	4.0	0.0	0.0	0.0	0.9	0.0	2.2	0.0	1.4	0.0	0.0	0.0	1.1	0.0	0.0	0.0	0.0	0.0	28.6	0.0	0.0	39.8						
1995	917	2,3,4,5	0.0	0.0	0.0	0.0	0.0	10.7	2.9	0.0	0.0	0.0	0.4	0.0	1.4	0.0	0.4	0.0	0.0	0.3	0.0	0.0	0.0	0.0	0.0	0.0	37.1	0.0	1.7	44.9						
1996	873	2,3,4,5	0.0	0.0	0.0	0.0	0.0	1.4	3.1	0.0	0.0	0.0	0.0	0.0	0.9	0.0	5.6	1.1	0.0	0.0	1.0	0.0	0.0	0.0	0.3	0.0	54.0	1.5	0.7	30.4						
1997	628	2,3,4,5	0.0	0.0	0.0	0.0	0.0	13.9	1.8	0.0	0.0	0.0	0.0	0.0	0.8	1.0	1.3	4.6	0.2	0.0	0.0	4.0	0.0	0.0	0.0	0.0	23.1	6.4	0.0	43.2						
1998	760	2,3,4,5	0.0	0.0	0.0	0.0	0.0	0.3	1.8	0.0	0.0	0.0	0.0	0.0	0.5	1.8	3.0	0.3	0.0	0.0	1.4	0.0	0.0	0.0	0.0	0.0	15.4	11.4	1.6	62.4						
1999	1578	2,3,4,5	0.0	0.0	0.0	0.0	0.0	0.3	2.9	0.0	0.0	0.0	0.0	0.0	1.3	8.6	1.8	10.8	1.0	0.0	0.0	0.4	0.0	0.0	0.0	0.0	35.0	6.3	1.4	30.2						
2000	905	2,3,4,5	0.0	0.0	0.0	0.0	0.0	4.5	5.9	0.0	0.0	0.0	0.0	0.0	0.0	1.7	2.0	4.2	0.1	0.0	0.0	2.0	0.0	0.0	0.0	0.0	19.2	6.5	0.0	53.9						
2001	6492	2,3,4,5	0.0	0.0	0.0	0.0	0.0	3.7	0.9	0.0	0.0	0.0	0.0	0.2	4.7	2.3	11.6	0.8	0.0	0.0	1.3	0.0	0.0	0.0	0.0	0.0	22.0	2.1	0.1	50.3						
2002	4555	2,3,4,5	0.0	0.0	0.0	0.0	0.0	10.7	1.2	0.0	0.0	0.0	0.0	0.5	14.7	7.1	4.3	1.3	0.0	0.0	0.5	0.0	0.0	0.0	0.0	0.0	23.7	2.4	0.0	33.5						
2003	6249	2,3,4,5	0.0	0.0	0.0	0.0	0.0	10.5	2.8	0.0	0.0	0.0	0.0	0.3	8.6	3.4	4.0	0.4	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.0	21.6	2.2	0.5	45.5						
2004	6313	2,3,4,5	0.0	0.0	0.0	0.0	0.0	12.3	3.0	0.0	0.0	0.0	0.0	0.1	7.4	2.4	3.3	1.0	0.0	0.0	0.4	0.0	0.0	0.0	0.0	0.0	17.9	1.8	0.0	50.5						
2005	2432	2,3,4,5	0.0	0.0	0.0	0.0	0.0	25.0	3.0	0.0	0.0	0.0	0.0	0.3	6.1	0.9	1.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	26.5	0.9	0.2	35.8						
2006	729	2,3,4,5	0.0	0.0	0.0	0.0	0.0	17.4	4.9	0.0	0.0	0.0	0.0	0.0	4.7	1.4	1.5	0.5	0.0	0.0	1.5	0.0	0.0	0.0	0.0	0.0	35.5	1.0	0.0	31.6						
2007	1069	2,3,4,5	0.0	0.0	0.0	0.0	0.0	6.5	3.1	0.0	0.0	0.0	0.0	0.8	2.2	4.4	1.0	0.0	0.0	0.0	5.3	0.0	0.0	0.0	0.0	0.0	35.8	1.4	0.0	39.4						
2008	2285	2,3,4,5	0.0	0.0	0.0	0.0	0.0	5.0	6.2	0.0	0.0	0.0	0.0	0.9	7.6	2.9	0.0	0.0	0.0	0.0	1.8	0.0	0.0	0.0	0.0	0.0	39.0	2.5	0.0	34.0						
2009	2569	2,3,4,5	0.0	0.0	0.0	0.0	0.0	1.3	2.6	0.0	0.0	0.4	0.0	0.0	0.2	1.7	4.2	0.0	0.0	0.0	5.9	0.0	0.0	0.0	0.0	0.0	35.2	2.3	0.2	46.0						
2010	3965	2,3,4,5	0.0	0.0	0.0	0.0	0.0	4.9	3.4	0.0	0.0	0.0	0.0	0.9	12.5	5.4	4.4	0.3	0.2	0.0	1.0	0.0	0.0	0.0	0.0	0.0	35.9	1.4	0.1	29.6						
2011	2237	2,3,4,5	0.0	0.0	0.0	0.0	0.0	5.9	6.2	0.0	0.0	0.0	0.0	0.4	6.0	6.5	2.2	0.2	0.7	0.0	0.6	0.0	0.0	0.0	0.0	0.0	41.6	1.3	0.3	28.1						
2012	2509	2,3,4,5	0.0	0.0	0.0	0.0	0.0	3.5	3.3	0.0	0.0	0.0	0.0	0.0	2.7	9.5	8.9	4.8	0.6	0.4	0.0	3.3	0.0	0.0	0.0	0.0	33.8	2.5	0.2	26.6						
2013	2612	2,3,4,5	0.0	0.0	0.0	0.0	0.0	3.4	3.7	0.0	0.0	0.0	0.0	0.0	1.5	6.0	4.4	1.6	1.1	0.2	0.0	2.3	0.0	0.0	0.0	0.0	43.6	6.2	0.0	25.9						
2014	4969	2,3,4,5	0.0	0.0	0.0	0.4	0.0	3.0	1.9	0.0	0.0	0.0	0.1	0.0	0.5	11.4	7.2	5.9	0.2	0.3	0.0	0.8	0.0	0.0	0.0	0.0	43.1	3.6	0.2	21.5						
2015	6823	2,3,4,5	0.0	0.0	0.0	0.0	0.0	2.2	2.6	0.0	0.0	0.0	0.0	0.0	0.3	14.6	5.6	5.9	0.0	0.0	0.0	0.7	0.0	0.0	0.0	0.0	43.2	3.0	0.4	21.4						
2016	NA		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-					
85–95	1481		0.0	0.0	0.0	0.1	0.0	17.9	2.2	0.4	0.0	0.0	0.1	0.6	0.8	11.8	3.1	3.5	0.6	0.0	1.7	3.4	0.0	0.0	0.0	0.0	0.0	25.3	2.5	1.4	24.4					
96–98	754		0.0	0.0	0.0	0.0	0.0	5.2	2.2	0.0	0.0	0.0	0.0	0.3	0.8	1.0	4.4	0.5	0.0	0.0	2.2	0.0	0.0	0.0	0.1	0.0	30.8	6.4	0.8	45.3						
99–08	3261		0.0	0.0	0.0	0.0	0.0	9.6	3.4	0.0	0.0	0.0	0.0	0.5	6.6	2.9	4.2	0.5	0.0	0.0	1.3	0.0	0.0	0.0	0.0	0.0	27.6	2.7	0.2	40.5						
09–16	3669		0.0	0.0	0.0	0.1	0.0	3.5	3.4	0.0	0.0	0.1	0.0	0.0	0.9	8.8	6.0	3.5	0.3	0.3	0.0	2.1	0.0	0.0	0.0	0.0	39.5	2.9	0.2	28.4						

Appendix C43–Percent distribution of South Puget Sound Fall Fingerling (Puget Sound Hatchery Fingerling) total fishing mortalities among fisheries and escapement.

Catch Year	Est # of CWT	Ages	AABM Fishery									ISBM Fishery										Terminal Fishery									Escapement				
			SEAK			NBC			WCVI			NBC & CBC			Southern BC			N Falcon		S Falcon		WAC	Puget Sd			SEAK			Canada		Southern US			Stray	Esc.
			T	N	S	T	S	T	S	T	N	S	T	N	S	T	S	T	S	N	N	N	S	T	N	S	N	S	T	N	S				
79–84	3947		0.2	0.1	0.0	0.5	0.0	20.8	0.1	1.4	0.3	0.0	1.2	1.6	7.4	1.9	0.1	0.1	0.0	0.1	13.8	29.3	0.0	0.0	0.0	0.0	0.0	0.0	8.3	0.1	0.2	12.5			
1985	1497	2,3,4,5	0.8	0.0	0.0	0.0	0.0	18.6	0.2	0.3	0.3	0.0	0.3	1.6	6.8	1.7	0.0	0.1	0.0	0.0	16.6	21.0	0.0	0.0	0.0	0.0	0.0	11.1	0.0	0.3	20.2				
1986	549	2,3,4,5	0.0	0.0	0.0	0.0	0.0	18.9	0.0	0.0	1.3	0.0	0.0	1.6	7.3	4.0	1.1	0.0	0.0	0.0	8.6	27.0	0.0	0.0	0.0	0.0	0.0	0.7	0.0	0.0	29.5				
1987	587	2,3,4,5	0.0	0.0	0.0	0.0	0.0	21.3	0.0	0.0	0.0	0.0	0.0	3.2	11.9	9.0	0.2	0.0	0.0	0.3	9.7	15.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.2	27.4				
1988	2485	2,3,4,5	0.4	0.0	0.0	0.2	0.0	10.4	1.1	1.0	0.6	0.0	0.2	3.0	13.8	7.7	0.4	0.2	0.1	0.2	15.2	22.9	0.0	0.0	0.0	0.0	0.0	0.0	2.8	0.0	0.4	19.5			
1989	5711	2,3,4,5	0.1	0.0	0.0	0.3	0.0	8.6	2.0	0.4	0.1	0.0	0.2	3.6	5.0	10.9	0.3	0.9	0.1	0.4	11.6	16.7	0.0	0.0	0.0	0.0	0.0	6.8	0.0	4.0	28.2				
1990	6112	2,3,4,5	0.0	0.0	0.1	0.3	0.0	23.0	3.8	0.3	0.3	0.0	0.2	0.9	3.8	8.9	0.4	0.0	0.0	0.1	12.0	12.6	0.0	0.0	0.0	0.0	0.0	9.0	0.4	3.9	19.8				
1991	2231	2,3,4,5	0.4	0.0	0.0	0.0	0.0	14.0	2.0	0.1	0.0	0.0	0.1	0.8	1.6	9.5	0.3	0.8	0.0	0.0	8.7	11.8	0.0	0.0	0.0	0.0	0.0	12.1	0.2	16.1	21.5				
1992	1611	2,3,4,5	0.6	0.4	0.0	0.0	0.0	17.3	2.0	0.9	0.4	0.0	0.3	2.4	3.5	8.4	0.6	0.6	0.1	0.0	11.5	23.2	0.0	0.0	0.0	0.0	0.0	8.1	0.0	2.2	17.8				
1993	1641	2,3,4,5	0.2	0.1	0.0	0.0	0.0	17.6	3.7	0.1	0.5	0.0	0.9	2.0	4.1	5.7	0.2	0.0	0.0	0.0	6.6	22.4	0.0	0.0	0.0	0.0	0.0	6.9	0.0	3.0	25.9				
1994	1964	2,3,4,5	0.0	0.0	0.0	0.5	0.0	9.1	0.5	0.0	0.2	0.0	0.0	4.6	4.6	0.6	0.0	0.0	0.0	0.0	9.0	15.1	0.0	0.0	0.0	0.0	0.0	4.2	0.2	6.9	44.5				
1995	3961	2,3,4,5	0.2	0.1	0.0	0.1	0.0	5.4	1.2	0.0	1.0	0.0	0.0	0.7	2.1	1.3	0.0	0.0	0.0	0.0	3.4	17.6	0.0	0.0	0.0	0.0	0.0	1.6	0.0	0.5	64.9				
1996	5436	2,3,4,5	0.1	0.0	0.0	0.0	0.0	0.9	1.6	0.0	0.4	0.0	0.0	0.1	4.3	2.5	0.0	0.2	0.0	0.0	3.3	17.3	0.0	0.0	0.0	0.0	0.3	0.0	2.3	0.0	5.0	61.5			
1997	2745	2,3,4,5	0.5	0.0	0.0	0.5	0.0	6.5	1.5	0.0	0.6	0.0	0.0	0.4	1.7	1.2	0.1	0.3	0.0	0.0	2.0	16.1	0.0	0.0	0.0	0.0	0.0	0.7	0.1	0.8	66.9				
1998	2173	2,3,4,5	1.2	0.0	0.0	0.5	0.0	0.4	1.3	0.0	0.0	0.0	0.0	0.0	1.6	0.9	0.0	0.0	0.0	0.0	3.3	9.6	0.0	0.0	0.0	0.0	0.0	3.2	0.4	14.0	63.6				
1999	2527	2,3,4,5	0.5	0.0	0.0	0.2	0.0	0.6	2.9	0.0	0.0	0.0	0.0	0.0	3.7	2.8	0.3	0.3	0.0	0.0	3.5	6.7	0.0	0.0	0.0	0.0	0.0	4.4	0.0	10.5	63.5				
2000	2646	2,3,4,5	0.4	0.1	0.0	0.0	0.0	9.4	4.1	0.0	0.0	0.0	0.0	0.0	2.1	0.3	0.2	0.0	0.0	0.0	4.9	13.0	0.0	0.0	0.0	0.0	0.0	5.2	0.0	6.5	53.8				
2001	4198	2,3,4,5	0.1	0.0	0.0	0.0	0.0	8.1	3.0	0.0	0.0	0.0	0.0	0.0	3.4	3.2	0.3	1.2	0.1	0.0	3.7	13.7	0.0	0.0	0.0	0.0	0.0	6.5	0.0	2.6	53.8				
2002	3892	2,3,4,5	0.8	0.0	0.0	0.8	0.0	10.4	3.2	0.0	0.3	0.0	0.0	0.0	4.4	3.3	0.5	0.7	0.0	0.0	3.0	8.6	0.0	0.0	0.0	0.0	0.0	12.9	0.0	7.7	43.5				
2003	2426	2,3,4,5	0.7	0.0	0.0	0.8	0.0	13.0	3.6	0.0	0.0	0.0	0.0	0.0	4.4	4.0	0.4	1.1	0.0	0.0	6.0	12.5	0.0	0.0	0.0	0.0	0.0	6.9	0.0	4.4	42.4				
2004	2295	2,3,4,5	0.3	0.1	0.0	0.6	0.0	16.6	4.0	0.0	0.0	0.0	0.0	0.0	3.3	9.2	1.4	0.3	0.0	0.0	6.8	14.5	0.0	0.0	0.0	0.0	0.0	5.5	0.0	4.6	32.8				
2005	2417	2,3,4,5	0.0	0.0	0.0	0.4	0.0	14.2	4.8	0.0	0.0	0.0	0.0	0.0	4.9	5.4	1.2	0.5	0.0	0.0	3.6	10.0	0.0	0.0	0.0	0.0	0.0	1.6	0.0	2.7	50.7				
2006	3620	2,3,4,5	0.3	0.0	0.2	0.5	0.0	12.0	2.5	0.0	0.0	0.4	0.0	0.0	2.8	6.5	0.5	0.4	0.0	0.0	5.5	9.6	0.0	0.0	0.0	0.0	0.0	7.2	0.0	2.5	49.1				
2007	3649	2,3,4,5	0.2	0.0	0.0	0.2	0.0	11.7	3.7	0.0	0.0	0.0	0.0	0.0	2.5	5.4	0.2	0.4	0.0	0.0	2.8	16.3	0.0	0.0	0.0	0.0	0.0	11.0	0.2	0.3	45.2				
2008	2602	2,3,4,5	0.0	0.0	0.0	0.3	0.0	7.1	3.5	0.0	0.0	0.0	0.0	0.0	2.7	3.2	0.4	0.0	0.0	0.0	2.3	14.6	0.0	0.0	0.0	0.0	0.0	13.1	0.3	1.3	51.0				
2009	2946	2,3,4,5	0.1	0.0	0.0	0.2	0.0	5.1	8.0	0.0	0.0	0.0	0.0	0.0	4.8	2.8	0.3	0.0	0.0	0.0	2.4	13.1	0.0	0.0	0.0	0.0	0.0	11.1	0.2	1.5	50.2				
2010	2958	2,3,4,5	0.1	0.0	0.0	0.1	0.1	5.5	5.4	0.0	0.0	0.5	0.0	0.0	2.3	2.8	1.4	0.1	0.0	0.1	0.9	11.2	0.0	0.0	0.0	0.0	0.0	1.1	0.0	1.3	67.2				
2011	2939	2,3,4,5	0.3	0.1	0.0	0.0	0.0	3.4	5.3	0.0	0.0	0.0	0.0	0.0	3.6	3.0	0.4	0.1	0.0	0.0	1.5	14.5	0.0	0.0	0.0	0.0	0.0	5.8	0.0	4.2	57.9				
2012	2901	2,3,4,5	0.0	0.0	0.0	0.1	0.0	4.2	4.2	0.0	0.0	0.0	0.0	0.0	5.2	5.1	0.7	0.7	0.0	0.0	1.2	19.0	0.0	0.0	0.0	0.0	0.0	1.4	0.0	4.4	53.7				
2013	2954	2,3,4,5	0.2	0.4	0.0	0.1	0.0	2.9	2.6	0.0	0.0	0.0	0.0	0.0	3.6	3.4	0.7	0.0	0.0	0.0	1.6	12.6	0.0	0.0	0.0	0.0	0.0	1.0	0.0	1.7	69.3				
2014	2128	2,3,4,5	1.1	0.6	0.0	0.2	0.0	5.8	3.8	0.0	0.0	0.0	0.0	0.0	6.9	3.9	2.0	0.5	0.0	0.0	0.4	14.1	0.0	0.0	0.0	0.0	0.0	1.1	0.0	3.8	55.8				
2015	2159	2,3,4,5	0.5	0.0	0.0	0.0	0.0	2.5	2.6	0.0	0.0	0.2	0.0	0.0	12.4	9.4	0.8	0.3	0.0	0.1	1.6	19.4	0.0	0.0	0.0	0.0	0.0	0.5	0.0	6.0	43.9				
2016	NA		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-				
85–95	2577		0.2	0.1	0.0	0.1	0.0	14.9	1.5	0.3	0.4	0.0	0.2	2.2	5.9	6.2	0.3	0.2	0.0	0.1	10.2	18.7	0.0	0.0	0.0	0.0	0.0	5.8	0.1	3.5	29.0				
96–98	3451		0.6	0.0	0.0	0.4	0.0	2.6	1.5	0.0	0.3	0.0	0.0	0.2	2.5	1.5	0.0	0.2	0.0	0.0	2.9	14.3	0.0	0.0	0.0	0.0	0.1	0.0	2.0	0.2	6.6	64.0			
99–08	3027		0.3	0.0	0.0	0.4	0.0	10.3	3.5	0.0	0.0	0.0	0.0	0.0	3.4	4.3	0.5	0.5	0.0	0.0	4.2	12.0	0.0	0.0	0.0	0.0	0.0	7.4	0.0	4.3	48.6				
09–16	2712		0.3	0.1	0.0	0.1	0.0	4.2	4.6	0.0	0.0	0.1	0.0	0.0	5.5	4.4	0.9	0.2	0.0	0.0	1.4	14.8	0.0	0.0	0.0	0.0	0.0	3.2	0.0	3.3	56.8				

Appendix C44—Percent distribution of South Puget Sound Fall Yearling (Puget Sound Hatchery Yearling) total fishing mortalities among fisheries and escapement.

Catch Year	Est # of CWT	Ages	AABM Fishery							ISBM Fishery										Terminal Fishery						Escapement							
			SEAK			NBC		WCVI		NBC & CBC			Southern BC			N Falcon		S Falcon		WAC	Puget Sd			SEAK			Canada		Southern US			Stray	Esc.
			T	N	S	T	S	T	S	T	N	S	T	N	S	T	S	T	S	N	T	N	S	T	N	S	T	N	S				
79–84	360		0.0	0.0	0.0	0.0	0.0	5.3	0.0	1.3	0.0	0.0	0.0	0.0	1.5	0.3	0.0	0.0	0.0	0.0	14.6	65.7	0.0	0.0	0.0	0.0	0.0	0.0	2.6	0.4	0.0	8.4	
1985	71	4,5	0.0	0.0	0.0	0.0	0.0	14.1	0.0	0.0	0.0	0.0	0.0	0.0	4.2	0.0	0.0	0.0	0.0	0.0	7.0	57.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	16.9	
1986	NA		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
1987	NA		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
1988	125	2	Failed Criteria							-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1989	723	2,3	0.0	0.0	0.0	0.0	0.0	1.1	0.0	0.0	0.0	0.0	0.8	0.1	1.9	0.0	0.0	0.0	0.0	0.0	26.8	65.8	0.0	0.0	0.0	0.0	0.0	1.0	0.0	0.3	2.1		
1990	1401	2,3,4	0.0	0.0	0.0	0.0	0.0	0.8	0.0	0.1	0.1	0.0	0.0	0.4	0.1	1.6	0.1	0.0	0.0	0.0	29.8	56.0	0.0	0.0	0.0	0.0	0.0	0.6	0.6	0.1	9.9		
1991	1228	2,3,4,5	0.0	0.0	0.0	0.0	0.0	5.4	0.0	0.0	0.0	0.0	0.0	0.0	0.7	2.9	0.0	0.6	0.0	0.0	10.7	62.4	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.2	16.9		
1992	573	2,3,4,5	0.0	0.0	0.0	0.0	0.0	4.9	1.0	0.0	0.0	0.0	0.0	0.0	0.7	4.7	0.7	0.0	0.0	0.0	23.6	52.5	0.0	0.0	0.0	0.0	0.0	1.4	0.0	0.2	10.3		
1993	456	2,3,4,5	0.0	0.0	0.0	0.0	0.0	1.3	0.0	0.0	0.0	0.0	0.0	0.0	0.9	1.1	0.0	0.0	0.0	0.0	6.4	71.5	0.0	0.0	0.0	0.0	0.0	0.0	1.8	0.2	16.9		
1994	791	2,3,4,5	0.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	2.3	1.5	0.0	0.0	0.0	0.0	0.0	15.2	63.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	16.4		
1995	714	2,3,4,5	0.0	0.0	0.0	0.0	0.0	5.5	1.7	0.0	0.0	0.0	0.0	0.0	2.1	0.3	0.0	0.0	0.0	0.0	7.6	73.7	0.0	0.0	0.0	0.0	0.0	0.4	1.1	0.1	7.6		
1996	787	2,3,4,5	0.0	0.0	0.0	0.0	0.0	0.1	1.1	0.0	0.0	0.0	0.0	0.0	1.7	0.1	0.0	0.0	0.0	0.0	2.5	90.7	0.0	0.0	0.0	0.0	0.0	0.3	0.5	0.0	2.9		
1997	581	2,3,4,5	0.0	0.0	0.0	0.0	0.0	1.5	0.3	0.0	0.0	0.0	0.0	0.0	0.9	0.5	2.1	0.7	0.0	0.0	3.3	70.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	20.7		
1998	117	2,3,4,5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.7	0.0	0.0	0.0	0.0	1.7	86.3	0.0	0.0	0.0	0.0	0.0	2.6	0.0	0.0	7.7		
1999	107	2,3,4,5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	11.2	3.7	0.0	0.0	0.0	0.0	0.9	82.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.9		
2000	95	3,4,5	0.0	0.0	0.0	0.0	0.0	0.0	5.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.3	0.0	0.0	9.5	74.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.3		
2001	91	2,4,5	0.0	0.0	0.0	0.0	0.0	3.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.2	0.0	0.0	0.0	0.0	0.0	80.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	14.3		
2002	10	2,3,5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	80.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	20.0		
2003	7	3,4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	14.3	42.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	42.9		
2004	227	2,4,5	0.0	0.0	0.0	0.0	0.0	1.3	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.0	0.0	0.0	0.0	0.0	43.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.3	52.9		
2005	313	2,3,5	0.0	0.0	0.0	0.0	0.0	0.0	1.3	0.0	0.0	0.0	0.0	0.0	0.0	1.0	1.3	0.0	0.0	0.0	13.1	61.3	0.0	0.0	0.0	0.0	0.0	2.6	0.0	0.0	19.5		
2006	404	2,3,4	0.0	0.0	0.0	0.0	0.0	5.9	3.2	0.0	0.0	0.0	0.0	0.0	0.0	1.7	0.0	0.0	0.0	0.0	13.6	53.0	0.0	0.0	0.0	0.0	0.0	2.2	0.0	0.2	20.0		
2007	316	2,3,4,5	0.0	0.0	0.0	0.0	0.0	4.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.3	0.6	0.0	0.9	0.0	12.7	54.4	0.0	0.0	0.0	0.0	0.0	2.2	0.0	0.3	23.4		
2008	117	2,3,4,5	0.0	0.0	0.0	0.0	0.0	2.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.4	0.0	0.0	0.0	0.0	4.3	48.7	0.0	0.0	0.0	0.0	0.0	8.5	0.0	2.6	29.9		
2009	211	2,3,4,5	0.0	0.0	0.0	0.0	0.0	0.0	12.3	0.0	0.0	0.0	0.0	0.0	4.3	0.5	0.0	0.0	0.0	0.0	2.4	57.8	0.0	0.0	0.0	0.0	0.0	0.9	3.3	0.0	18.5		
2010	172	2,3,4,5	0.0	0.0	0.0	0.0	0.0	0.0	1.7	0.0	0.0	0.0	0.0	0.0	2.3	0.6	1.7	0.0	0.0	0.0	5.2	33.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.5	51.7		
2011	241	3,4,5	0.0	0.0	0.0	0.0	0.0	1.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.1	0.4	0.8	0.0	2.1	23.2	63.1	0.0	0.0	0.0	0.0	0.0	5.4	0.0	0.0	1.2		
2012	217	2,4,5	0.0	0.0	0.0	0.0	0.0	1.4	5.5	0.0	0.0	0.0	0.0	0.0	2.3	3.7	3.7	1.4	0.0	0.0	31.8	46.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.1		
2013	37	2,3,5	0.0	0.0	0.0	0.0	0.0	8.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	21.6	48.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	21.6		
2014	8	2,3,4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	62.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	37.5		
2015	10	2,3,4,5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	40.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	60.0		
2016	NA		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
85–95	860		0.0	0.0	0.0	0.0	0.0	3.1	0.5	0.0	0.0	0.0	0.0	0.5	1.0	1.8	0.1	0.1	0.0	0.0	15.5	63.3	0.0	0.0	0.0	0.0	0.0	0.4	0.6	0.1	13.0		
96–98	684		0.0	0.0	0.0	0.0	0.0	0.8	0.7	0.0	0.0	0.0	0.0	0.0	1.3	0.3	1.0	0.3	0.0	0.0	2.9	80.4	0.0	0.0	0.0	0.0	0.0	0.1	0.3	0.0	11.8		
99–08	315		0.0	0.0	0.0	0.0	0.0	2.8	1.2	0.0	0.0	0.0	0.0	0.0	0.0	1.1	0.5	0.0	0.2	0.0	9.8	53.1	0.0	0.0	0.0	0.0	0.0	1.7	0.0	0.5	29.0		
09–16	210		0.0	0.0	0.0	0.0	0.0	0.8	4.9	0.0	0.0	0.0	0.0	0.0	2.2	1.7	1.5	0.6	0.0	0.5	15.7	50.0	0.0	0.0	0.0	0.0	0.0	1.6	0.8	0.9	18.9		

Appendix C45—Percent distribution of Squaxin Pens Fall Yearling (Puget Sound Hatchery Yearling) total fishing mortalities among fisheries and escapement.

Catch Year	Est # of CWT	Ages	AABM Fishery									ISBM Fishery										Terminal Fishery						Escapement							
			SEAK			NBC			WCVI			NBC & CBC			Southern BC			N Falcon		S Falcon		WAC	Puget Sd			SEAK			Canada		Southern US			Stray	Esc.
			T	N	S	T	S	T	S	T	N	S	T	N	S	T	S	T	S	N	N	N	S	T	N	S	N	S	T	N	S				
79-84	NA		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
1985	NA		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
1986	NA		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
1987	NA		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
1988	150	2	Failed Criteria									-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
1989	884	2,3	0.0	0.0	0.0	0.0	0.0	1.5	0.1	0.0	0.0	0.0	0.1	1.0	0.5	4.5	0.3	0.0	0.0	0.0	35.3	52.1	0.0	0.0	0.0	0.0	0.0	0.0	0.9	0.5	2.1	1.0			
1990	1634	2,3,4	0.0	0.0	0.0	0.0	0.0	3.5	0.6	0.0	0.1	0.0	0.0	1.1	0.9	4.3	0.4	0.0	0.0	0.0	28.2	57.1	0.0	0.0	0.0	0.0	0.0	1.2	0.0	0.7	2.0				
1991	891	2,3,4,5	0.0	0.0	0.0	0.0	0.0	4.7	0.0	0.0	0.0	0.0	0.4	0.4	1.3	9.1	0.3	0.0	0.0	0.0	30.6	49.4	0.0	0.0	0.0	0.0	0.0	0.2	0.0	1.3	2.0				
1992	743	2,3,4,5	0.0	0.0	0.0	0.0	0.0	1.5	0.4	0.0	0.4	0.0	0.4	1.2	2.3	4.7	0.3	0.0	0.0	0.0	20.9	62.0	0.0	0.0	0.0	0.0	0.0	1.1	0.0	0.9	3.9				
1993	331	3,4,5	0.0	0.0	0.0	0.0	0.0	9.7	2.4	0.0	0.9	0.0	0.0	1.5	6.6	11.2	0.6	0.0	0.0	0.0	1.2	46.5	0.0	0.0	0.0	0.0	0.0	2.4	0.0	4.8	12.1				
1994	173	2,4,5	0.0	0.0	0.0	0.0	0.0	26.6	5.2	0.0	0.0	0.0	0.0	4.6	5.8	6.4	0.0	0.0	0.0	0.0	22.0	6.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.5	19.1				
1995	132	2,3,5	0.0	0.0	0.0	0.0	0.0	0.8	0.0	0.0	0.0	0.0	0.0	0.0	0.8	0.0	0.0	0.0	0.0	0.0	19.7	67.4	0.0	0.0	0.0	0.0	0.0	1.5	0.0	3.0	6.8				
1996	253	2,3,4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.6	0.0	0.0	0.4	0.0	0.0	0.0	6.3	87.4	0.0	0.0	0.0	0.0	0.0	0.4	0.4	1.2	2.4				
1997	139	2,3,4,5	0.0	0.0	0.0	0.0	0.0	2.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.2	0.0	0.0	10.1	84.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.7				
1998	77	3,4,5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.9	0.0	0.0	0.0	2.6	88.3	0.0	0.0	0.0	0.0	0.0	1.3	0.0	1.3	2.6				
1999	166	2,4,5	0.0	0.0	0.0	0.0	0.0	2.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.0	0.6	0.0	0.0	0.0	94.0	0.0	0.0	0.0	0.0	0.0	0.0	1.2	1.2					
2000	358	3,5	0.0	0.0	0.0	0.0	0.0	0.0	1.1	0.0	0.0	0.0	0.0	0.0	1.1	0.6	0.0	0.6	0.0	0.0	6.1	89.7	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.0	0.6				
2001	223	4	Failed Criteria									-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
2002	NA		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
2003	NA		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
2004	NA		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
2005	NA		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
2006	NA		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
2007	NA		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
2008	NA		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
2009	NA		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
2010	NA		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
2011	NA		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
2012	NA		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
2013	NA		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
2014	NA		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
2015	NA		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
2016	NA		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
85-95	754		0.0	0.0	0.0	0.0	0.0	9.2	1.7	0.0	0.3	0.0	0.2	1.8	3.4	7.1	0.3	0.0	0.0	0.0	20.6	44.4	0.0	0.0	0.0	0.0	0.0	1.0	0.0	2.3	7.8				
96-98	196		0.0	0.0	0.0	0.0	0.0	1.1	0.0	0.0	0.0	0.0	0.0	0.8	0.0	0.0	1.3	0.0	0.0	0.0	8.2	86.1	0.0	0.0	0.0	0.0	0.0	0.2	0.2	0.6	1.5				
99-08	NA		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
09-16	NA		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		

Appendix C47–Percent distribution of Skagit Summer Fingerling (Skagit Wild) total fishing mortalities among fisheries and escapement.

Catch Year	Est # of CWT	Ages	AABM Fishery						ISBM Fishery										Terminal Fishery						Escapement											
			SEAK			NBC		WCVI		NBC & CBC			Southern BC			N Falcon		S Falcon		WAC	Puget Sd			SEAK			Canada		Southern US			Stray	Esc.			
			T	N	S	T	S	T	S	T	N	S	T	N	S	T	S	T	S	N	N	S	T	N	S	N	S	T	N	S						
79–84	NA		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
1985	NA		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
1986	NA		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
1987	NA		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
1988	NA		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
1989	NA		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
1990	NA		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
1991	NA		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
1992	NA		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
1993	NA		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
1994	NA		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
1995	NA		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
1996	4	2	Failed Criteria						-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
1997	10	2,3	10.0	0.0	0.0	0.0	0.0	0.0	10.0	0.0	0.0	0.0	0.0	10.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	10.0	10.0	
1998	182	2,3,4	3.8	0.0	0.0	0.0	0.0	1.6	3.8	0.0	0.0	0.0	0.0	0.0	6.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	83.0	0.0	
1999	179	2,3,4,5	10.6	0.6	0.0	0.0	0.0	0.0	22.3	0.0	0.0	0.0	0.0	0.0	7.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.1	0.0	0.0	58.1	
2000	269	2,3,4,5	10.8	0.7	0.0	0.0	0.0	3.3	7.8	0.0	0.0	0.0	0.0	0.0	7.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.0	0.0	55.4	
2001	843	2,3,4,5	9.4	2.6	1.1	0.0	0.0	8.8	5.6	0.0	0.0	0.5	0.0	0.0	10.3	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.7	0.0	1.7	0.0	0.0	56.6
2002	2237	2,3,4,5	13.4	0.0	0.5	1.6	0.5	6.0	1.8	0.0	0.1	0.4	0.0	0.0	2.3	4.5	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.7	0.0	3.6	0.0	0.0	64.2
2003	870	2,3,4,5	7.2	0.1	0.0	4.1	1.4	10.5	3.9	0.0	0.0	0.0	0.0	0.0	0.2	8.9	0.3	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.0	61.7
2004	836	2,3,4,5	5.5	0.0	0.0	2.8	0.0	11.5	1.3	0.0	0.0	0.0	0.0	0.0	0.0	2.9	0.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	10.0	0.0	0.0	63.6	
2005	955	2,3,4,5	8.7	0.3	0.0	1.7	2.3	7.3	2.0	0.0	0.4	0.0	0.0	0.0	0.0	7.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.6	0.0	0.5	0.0	0.0	64.8
2006	1388	2,3,4,5	3.5	1.2	0.2	0.6	0.9	4.3	3.4	0.0	0.2	0.0	0.0	0.0	0.0	4.6	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.0	0.0	0.5	0.0	0.0	76.2
2007	1464	2,3,4,5	6.2	0.8	0.2	1.0	0.6	8.8	2.1	0.0	0.1	0.3	0.0	0.0	0.0	2.3	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.7	0.0	0.8	0.0	0.0	72.3
2008	1107	2,3,4,5	5.6	0.0	0.0	1.4	1.0	5.2	4.3	0.0	0.0	0.4	0.0	0.0	0.0	3.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	17.9	0.0	1.6	0.0	0.0	57.5
2009	830	2,3,4,5	7.7	1.0	0.8	1.7	0.0	3.6	6.0	0.0	0.0	1.2	0.0	0.0	0.0	7.0	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	33.5	0.0	1.2	0.0	0.0	32.8
2010	561	2,3,4,5	8.6	0.5	0.2	1.6	0.0	4.6	4.3	0.0	0.5	3.6	0.0	0.0	0.0	2.9	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	7.1	0.9	3.7	0.0	0.0	57.0
2011	569	2,3,4,5	4.9	0.0	0.5	0.0	0.0	6.7	5.4	0.0	0.0	0.7	0.0	0.0	0.0	6.0	1.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	18.3	0.0	2.1	0.0	0.0	46.9
2012	533	2,3,4,5	8.6	1.7	0.0	1.9	0.4	2.6	2.3	0.0	0.0	0.0	0.0	0.0	0.0	2.8	0.0	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.8	0.0	3.2	0.0	0.0	72.4
2013	326	2,3,4,5	4.6	1.5	0.0	2.1	0.0	0.9	9.8	0.0	0.0	1.2	0.0	0.0	0.0	6.7	0.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	14.7	0.0	6.1	0.0	0.0	47.5
2014	335	2,3,4,5	14.6	2.1	0.0	0.0	0.0	6.3	1.8	0.0	0.0	1.8	0.0	0.0	0.0	15.8	0.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.9	0.0	4.5	0.0	0.0	41.8
2015	581	3,4,5	13.4	0.0	0.5	1.0	1.2	1.4	6.5	0.0	0.0	1.2	0.0	0.0	0.0	9.3	1.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.9	0.0	0.0	0.0	0.0	57.1
2016	NA		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
85–95	NA		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
96–98	182		3.8	0.0	0.0	0.0	0.0	1.6	3.8	0.0	0.0	0.0	0.0	0.0	0.0	6.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	83.0
99–08	1015		8.1	0.6	0.2	1.3	0.7	6.6	5.5	0.0	0.1	0.2	0.0	0.3	5.9	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.0	0.0	1.9	0.0	0.0	63.0
09–16	534		8.9	1.0	0.3	1.2	0.2	3.7	5.2	0.0	0.1	1.4	0.0	0.0	0.0	7.2	0.7	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	12.2	0.1	3.0	0.0	0.0	50.8	

Appendix C48—Percent distribution of Stikine River total fishing mortalities among fisheries and escapement.

Catch Year	Est # of CWT	Ages	AABM Fishery									ISBM Fishery										Terminal Fishery						Escapement							
			SEAK			NBC			WCVI			NBC & CBC			Southern BC			N Falcon		S Falcon		WAC	Puget Sd			SEAK			Canada		Southern US			Stray	Esc.
			T	N	S	T	S	T	S	T	N	S	T	N	S	T	S	T	S	N	N	N	S	T	N	S	N	S	T	N	S				
79–84	NA		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
1985	NA		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
1986	NA		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
1987	NA		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
1988	NA		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
1989	NA		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
1990	NA		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
1991	NA		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
1992	NA		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
1993	NA		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
1994	NA		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
1995	NA		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
1996	NA		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
1997	NA		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
1998	NA		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
1999	NA		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2000	NA		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2001	9	3	Failed Criteria									-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2002	24	3,4	4.2	0.0	0.0	4.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	83.3	
2003	175	3,4,5	5.7	0.6	2.9	9.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	72.6		
2004	247	3,4,5,6	8.5	0.0	0.0	0.0	6.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	67.2		
2005	450	3,4,5,6	9.1	2.0	4.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	35.1		
2006	482	3,4,5,6	8.1	2.3	2.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	29.0		
2007	377	3,4,5,6	9.0	0.0	1.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	35.0		
2008	423	3,4,5,6	3.8	0.0	1.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	44.2		
2009	230	3,4,5,6	11.7	3.5	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	56.5		
2010	248	3,4,5,6	12.5	2.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	62.5		
2011	387	3,4,5,6	4.7	5.7	1.8	0.0	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	65.4		
2012	621	3,4,5,6	8.9	3.2	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	68.8		
2013	484	3,4,5,6	4.1	3.5	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	75.8		
2014	552	3,4,5,6	3.8	3.6	0.0	0.0	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	78.1		
2015	772	3,4,5,6	3.9	1.4	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	74.1		
2016	622	4,5,6	3.2	0.3	0.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	80.5		
85–95	NA		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
96–98	NA		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
99–08	359		7.4	0.8	2.1	1.6	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	47.2		
09–16	490		6.6	3.0	0.6	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	70.2		

Appendix C49—Percent distribution of Stillaguamish Fall Fingerling (Stillaguamish Wild) total fishing mortalities among fisheries and escapement.

Catch Year	Est # of CWT	Ages	AABM Fishery							ISBM Fishery										Terminal Fishery						Escapement									
			SEAK			NBC		WCVI		NBC & CBC			Southern BC			N Falcon		S Falcon		WAC	Puget Sd			SEAK			Canada		Southern US			Stray	Esc.		
			T	N	S	T	S	T	S	T	N	S	T	N	S	T	S	T	S	N	T	N	S	T	N	S	T	N	S						
79–84	NA		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
1985	110	2,3,4,5	8.2	0.0	0.0	3.6	0.0	30.0	2.7	0.0	4.5	0.0	0.0	10.0	13.6	0.0	0.0	0.0	0.0	0.0	0.0	8.2	18.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.9	0.0	
1986	95	3,4,5	5.3	0.0	0.0	0.0	0.0	32.6	0.0	0.0	4.2	0.0	0.0	0.0	20.0	0.0	0.0	0.0	0.0	0.0	0.0	15.8	22.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
1987	42	4,5	9.5	0.0	0.0	0.0	0.0	11.9	0.0	0.0	0.0	0.0	0.0	0.0	21.4	0.0	0.0	0.0	0.0	0.0	0.0	9.5	7.1	0.0	0.0	0.0	0.0	0.0	0.0	16.7	0.0	0.0	23.8	0.0	
1988	101	2,5	0.0	0.0	0.0	0.0	0.0	5.9	1.0	1.0	3.0	0.0	0.0	6.9	12.9	3.0	0.0	0.0	0.0	0.0	0.0	21.8	43.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0
1989	305	2,3	0.0	0.0	0.0	0.0	0.0	12.8	5.6	3.6	2.0	0.0	0.0	6.2	16.1	9.2	0.0	0.0	0.0	0.0	0.0	16.4	16.7	0.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0	6.6	3.0	0.0	
1990	404	2,3,4	0.7	0.0	0.0	1.0	0.0	21.8	4.0	7.9	4.7	0.0	0.7	5.0	11.9	6.7	0.0	0.0	0.0	0.0	0.0	5.7	16.6	0.0	0.0	0.0	0.0	0.0	2.2	0.0	0.0	0.0	11.1	0.0	
1991	968	2,3,4,5	0.2	0.0	0.0	0.0	0.0	5.5	2.4	0.0	0.1	0.5	0.0	0.8	4.3	4.9	0.0	0.0	0.0	0.0	0.0	3.5	8.4	0.0	0.0	0.0	0.0	0.0	1.8	0.0	0.5	67.1	0.0		
1992	878	2,3,4,5	0.0	0.0	0.0	0.5	0.0	18.2	2.6	0.0	2.2	0.0	0.0	2.1	6.0	5.7	0.0	0.0	0.0	0.0	0.0	7.9	40.2	0.0	0.0	0.0	0.0	0.0	1.3	0.0	0.0	13.4	0.0		
1993	925	2,3,4,5	0.0	0.0	0.0	0.8	0.0	13.4	8.8	0.5	0.9	0.6	0.3	1.2	10.3	5.9	0.3	0.0	0.0	0.0	0.0	0.2	21.5	0.0	0.0	0.0	0.0	0.0	1.1	0.0	3.4	30.8	0.0		
1994	478	2,3,4,5	2.9	0.0	0.0	0.6	0.0	7.3	5.6	0.0	1.3	0.0	0.0	1.0	8.8	0.0	0.0	0.0	0.0	0.0	0.0	2.1	7.1	0.0	0.0	0.0	0.0	0.2	0.0	0.0	63.0	0.0			
1995	507	2,3,4,5	2.4	0.0	0.0	0.0	0.0	3.7	7.7	0.0	10.5	0.0	0.0	1.6	7.3	0.8	0.0	0.0	0.0	0.0	0.0	1.6	24.9	0.0	0.0	0.0	0.0	0.2	0.0	0.2	39.3	0.0			
1996	841	2,3,4,5	1.1	0.0	0.0	0.0	0.0	1.1	6.8	0.0	8.2	0.0	0.0	0.5	8.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	25.9	0.0	0.0	0.0	0.1	0.0	0.2	0.0	2.6	44.8	0.0		
1997	844	2,3,4,5	9.8	0.6	0.0	0.2	0.0	7.1	4.5	0.0	1.4	0.9	0.0	0.4	5.3	0.0	0.0	0.0	0.0	0.0	0.0	1.3	18.8	0.0	0.0	0.0	0.0	0.0	0.5	0.0	1.4	47.6	0.0		
1998	1091	2,3,4,5	10.4	0.3	0.3	1.6	0.0	0.9	1.8	0.0	0.0	0.4	0.0	0.5	2.9	0.0	0.0	0.0	0.0	0.0	0.0	1.4	2.8	0.0	0.0	0.0	0.0	0.3	0.0	13.4	63.0	0.0			
1999	487	2,3,4,5	0.8	1.4	0.0	0.0	0.0	4.5	9.9	0.0	0.6	0.4	0.0	0.0	9.4	0.0	0.0	0.0	0.0	0.0	0.0	0.4	5.3	0.0	0.0	0.0	0.0	0.2	0.0	5.3	61.6	0.0			
2000	815	2,3,4,5	5.0	0.0	0.0	0.0	0.0	7.4	1.6	0.0	0.0	0.0	0.0	0.0	2.1	0.5	0.0	0.0	0.0	0.0	0.0	0.0	2.8	0.0	0.0	0.0	0.0	0.1	0.0	0.6	79.9	0.0			
2001	301	3,4,5	2.0	0.0	0.0	0.0	0.0	5.3	4.0	0.0	0.0	0.0	0.0	0.0	5.0	0.3	0.0	0.0	0.0	0.0	0.0	1.0	15.6	0.0	0.0	0.0	0.0	0.3	0.0	1.0	65.4	0.0			
2002	246	4,5	0.0	0.0	0.0	0.0	0.0	23.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.9	69.9	0.0			
2003	13	5	Failed Criteria							-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
2004	135	2	Failed Criteria							-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2005	535	2,3	0.9	1.9	0.0	0.0	0.0	14.0	3.2	0.0	0.0	0.0	0.0	0.0	5.8	3.9	0.0	0.0	0.0	0.0	0.0	2.1	9.3	0.0	0.0	0.0	0.0	0.0	0.4	0.0	4.1	54.4	0.0		
2006	845	2,3,4	2.4	0.1	0.0	0.0	0.0	14.1	0.7	0.0	0.0	0.0	0.0	0.0	4.7	0.7	0.0	0.0	0.0	0.0	0.0	1.4	3.9	0.0	0.0	0.0	0.0	0.7	0.0	13.6	57.6	0.0			
2007	775	2,3,4,5	1.0	1.2	0.0	0.0	0.0	15.2	3.9	0.0	1.0	0.0	0.0	0.0	14.5	1.9	0.0	0.0	0.0	0.0	0.0	3.6	9.7	0.0	0.0	0.0	0.0	0.5	0.0	5.7	41.8	0.0			
2008	1192	2,3,4,5	2.3	0.0	0.0	0.0	0.0	4.8	3.4	0.0	0.0	0.0	0.0	0.0	7.3	0.1	0.0	0.0	0.0	0.0	0.0	0.0	12.1	0.0	0.0	0.0	0.0	3.7	0.0	3.9	62.3	0.0			
2009	972	2,3,4,5	1.2	0.1	0.2	0.3	0.6	2.4	4.2	0.0	0.0	0.0	0.0	0.0	7.6	0.2	0.0	0.0	0.0	0.0	0.0	1.1	12.4	0.0	0.0	0.0	0.0	3.7	0.0	5.1	60.7	0.0			
2010	853	2,3,4,5	1.1	0.0	0.0	0.0	0.0	8.3	8.1	0.0	0.0	0.7	0.0	0.0	9.4	2.5	0.5	0.0	0.0	0.0	0.0	2.9	9.4	0.0	0.0	0.0	0.0	2.1	0.0	1.3	53.8	0.0			
2011	1314	2,3,4,5	1.4	0.2	0.0	0.0	0.0	4.9	7.5	0.0	0.0	0.0	3.0	0.0	7.8	0.7	0.2	0.0	0.0	0.0	0.0	1.1	5.6	0.0	0.0	0.0	0.0	1.4	0.2	2.8	63.2	0.0			
2012	1076	2,3,4,5	1.6	0.3	0.0	0.3	0.0	4.0	1.9	0.0	0.0	0.5	0.0	0.0	7.3	0.3	0.0	0.0	0.0	0.0	0.0	0.4	4.6	0.0	0.0	0.0	0.0	1.0	0.0	8.1	69.8	0.0			
2013	391	2,3,4,5	1.5	2.3	0.8	0.0	0.0	7.9	9.2	0.0	0.0	1.3	0.0	0.0	13.6	5.4	0.0	0.0	0.0	0.0	0.0	1.0	21.2	0.0	0.0	0.0	0.0	4.1	0.0	2.0	29.7	0.0			
2014	784	2,3,4,5	4.5	1.0	0.0	0.8	0.3	9.4	10.3	0.0	0.0	2.4	0.0	0.0	23.1	1.8	0.6	0.0	0.5	0.0	0.0	1.3	24.6	0.0	0.0	0.0	0.0	1.8	0.0	2.0	15.6	0.0			
2015	335	2,3,4,5	4.5	0.6	0.0	0.0	0.0	8.1	5.1	0.0	0.0	2.7	0.0	0.0	21.5	1.2	0.0	0.0	0.0	0.0	0.0	4.8	14.3	0.0	0.0	0.0	0.0	0.3	0.0	12.2	24.8	0.0			
2016	NA		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
85–95	693		1.0	0.0	0.0	0.5	0.0	11.7	5.2	1.4	3.3	0.2	0.2	1.9	8.1	4.0	0.1	0.0	0.0	0.0	0.0	3.5	19.8	0.0	0.0	0.0	0.0	0.0	1.1	0.0	0.7	37.5	0.0		
96–98	925		7.1	0.3	0.1	0.6	0.0	3.0	4.4	0.0	3.2	0.4	0.0	0.4	5.6	0.0	0.0	0.0	0.0	0.0	0.0	0.9	15.9	0.0	0.0	0.0	0.0	0.3	0.0	5.8	51.8	0.0			
99–08	736		2.3	0.5	0.0	0.0	0.0	8.5	3.9	0.0	0.3	0.1	0.0	0.0	7.2	0.6	0.0	0.0	0.0	0.0	0.0	1.1	8.2	0.0	0.0	0.0	0.0	0.9	0.0	5.0	61.4	0.0			
09–16	818		2.3	0.6	0.1	0.2	0.1	6.4	6.6	0.0	0.0	1.5	0.0	0.0	12.9	1.7	0.2	0.0	0.1	0.0	0.0	1.8	13.2	0.0	0.0	0.0	0.0	2.1	0.0	4.8	45.4	0.0			

¹ Estimates for this year can only be used for distribution of fishing mortalities because the escapement data are insufficient.

Appendix C50—Percent distribution of Columbia River Summers (Columbia River Summer) total fishing mortalities among fisheries and escapement.

Catch Year	Est # of CWT	Ages	AABM Fishery						ISBM Fishery										Terminal Fishery						Escapement							
			SEAK			NBC		WCVI	NBC & CBC			Southern BC			N Falcon		S Falcon		WAC	Puget Sd			SEAK			Canada		Southern US			Stray	Esc.
			T	N	S	T	S	T	S	T	N	S	T	N	S	T	S	N	N	S	T	N	S	N	S	T	N	S				
79-84	282		23.0	0.0	0.9	7.8	0.0	16.8	0.0	3.7	4.7	0.7	1.2	0.7	2.0	0.8	1.2	0.0	0.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0	2.5	31.2
1985	6	2	Failed Criteria						-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1986	30	2,3	0.0	0.0	0.0	3.3	0.0	6.7	0.0	13.3	13.3	0.0	0.0	0.0	0.0	3.3	6.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	13.3	0.0	3.3	36.7			
1987	110	2,3,4	14.5	0.9	0.0	5.5	0.0	11.8	0.9	2.7	5.5	0.0	0.0	0.0	3.6	14.5	0.9	8.2	0.0	0.0	0.0	0.0	0.0	0.0	6.4	0.0	3.6	20.9				
1988	291	2,3,4,5	1.7	3.4	0.0	10.0	2.1	22.3	4.8	0.0	7.9	0.0	0.0	1.4	0.0	3.4	0.0	0.3	0.0	0.0	0.0	0.0	0.0	13.7	2.7	0.0	26.1					
1989	707	2,3,4,5	7.1	2.0	0.6	5.4	0.0	16.0	1.4	0.6	0.3	0.6	0.0	2.0	2.1	9.8	2.4	4.7	0.0	0.0	0.0	0.0	0.0	7.5	0.0	0.0	37.8					
1990	861	2,3,4,5	10.7	0.0	0.0	7.8	0.0	20.9	0.0	1.2	1.4	0.0	0.0	0.3	0.6	3.5	1.4	2.4	0.9	0.0	0.0	0.0	10.6	0.2	0.5	37.6						
1991	558	2,3,4,5	5.6	0.0	0.0	3.0	0.0	8.4	0.9	0.7	2.2	0.0	0.0	1.4	0.0	3.2	1.8	1.4	0.5	0.0	0.0	0.0	5.2	0.5	0.9	64.2						
1992	323	2,3,4,5	16.1	0.0	0.0	3.1	0.0	14.2	0.0	1.9	0.9	0.0	0.0	0.0	0.6	3.7	0.0	2.5	0.0	0.0	0.0	1.2	0.0	0.6	53.6							
1993	167	2,3,4,5	9.6	0.0	0.0	1.8	0.0	20.4	2.4	0.0	3.0	0.0	0.0	0.0	0.0	4.2	1.8	2.4	0.0	0.0	0.0	4.2	0.0	0.6	49.7							
1994	44	2,3,4,5	11.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	18.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.5	0.0	0.0	65.9						
1995	174	2,3,4,5	4.6	0.0	0.0	0.0	0.0	9.8	0.0	0.0	0.0	0.0	1.1	0.0	1.7	0.0	0.0	0.0	0.0	1.1	0.0	0.0	0.0	0.0	0.0	0.0	81.6					
1996	359	2,3,4,5	12.5	0.8	0.0	2.2	0.0	3.3	0.0	0.0	3.6	0.0	0.0	0.3	2.5	0.6	0.0	2.8	0.8	0.0	0.0	0.0	0.3	0.0	2.2	1.4	66.6					
1997	1183	2,3,4,5	9.9	0.1	4.1	0.3	1.4	2.0	0.0	0.0	0.4	0.0	0.0	0.0	0.2	0.0	0.0	3.6	0.0	0.0	0.0	0.2	0.5	0.1	77.1							
1998	1705	2,3,4,5	9.0	0.3	1.0	0.1	1.9	0.0	0.4	0.0	0.1	0.2	0.0	0.0	0.1	0.6	0.0	1.1	0.0	0.0	0.0	1.0	0.8	0.2	83.3							
1999	987	2,3,4,5	13.6	0.6	2.7	0.6	1.0	0.6	4.4	0.0	0.5	1.0	0.0	0.0	1.1	5.2	0.4	3.5	0.0	0.0	0.0	1.0	2.5	0.0	61.2							
2000	2976	2,3,4,5	22.8	1.4	2.9	0.6	2.0	4.2	4.6	0.0	0.0	0.4	0.0	0.0	1.0	0.9	1.3	1.9	0.0	0.0	0.0	0.8	1.9	0.1	52.7							
2001	6994	2,3,4,5	16.3	2.2	1.6	0.6	1.0	13.6	2.5	0.0	0.0	0.6	0.0	0.0	0.4	7.4	2.4	10.1	1.3	0.0	0.0	0.7	1.6	0.3	36.1							
2002	10545	2,3,4,5	24.3	0.0	1.4	14.5	1.7	14.9	1.4	0.0	0.0	0.3	0.0	0.0	0.1	5.7	3.2	3.6	0.6	0.0	0.0	1.0	2.3	0.3	24.6							
2003	7210	2,3,4,5	29.9	0.7	1.2	13.0	1.5	12.3	0.4	0.0	0.0	1.0	0.0	0.0	0.1	3.2	0.5	4.3	0.6	0.0	0.0	2.9	6.1	0.3	22.1							
2004	4340	2,3,4,5	16.1	0.5	1.2	6.1	1.6	14.0	1.3	0.0	0.0	0.2	0.0	0.0	0.4	5.5	0.7	6.7	1.0	0.0	0.0	8.2	15.9	0.1	20.2							
2005	8458	2,3,4,5	10.8	0.0	0.8	7.1	3.0	12.3	0.9	0.0	0.0	0.1	0.0	0.0	0.2	3.1	0.4	4.4	0.2	0.0	0.0	8.0	8.9	0.0	39.7							
2006	3612	2,3,4,5	12.9	0.1	0.7	4.0	0.5	12.0	1.2	0.0	0.1	0.5	0.0	0.0	0.4	3.0	0.1	0.4	0.3	0.0	0.2	13.5	10.8	0.0	39.2							
2007	4517	2,3,4,5	12.0	2.4	2.3	1.5	2.1	6.6	1.3	0.0	1.0	0.4	0.0	0.0	0.6	3.1	0.1	1.7	0.4	0.0	0.0	10.4	19.1	0.4	33.8							
2008	5006	2,3,4,5	8.4	0.1	0.6	0.9	0.6	6.4	2.7	0.0	0.1	0.6	0.0	0.0	0.5	2.9	0.6	0.0	0.0	0.0	0.0	17.7	9.8	0.2	47.6							
2009	4115	2,3,4,5	8.8	0.3	0.5	1.5	0.6	5.8	6.7	0.0	0.0	0.3	0.0	0.0	1.7	1.6	0.5	0.0	0.0	0.0	0.0	16.8	8.5	0.0	46.1							
2010	6011	2,3,4,5	7.8	0.0	1.0	1.7	1.1	6.1	0.7	0.0	0.0	0.5	0.0	0.0	0.8	5.0	0.4	2.2	0.2	0.0	0.0	21.6	8.4	0.0	42.5							
2011	4816	2,3,4,5	10.0	0.1	0.4	1.3	0.8	3.0	2.0	0.0	0.0	0.3	0.0	0.0	0.5	1.3	1.2	2.5	0.3	0.0	0.0	22.4	13.6	0.0	39.8							
2012	4260	2,3,4,5	17.3	0.9	0.8	4.2	1.1	6.9	3.1	0.0	0.0	0.5	0.0	0.0	0.8	7.6	3.2	5.2	0.9	0.0	0.0	12.1	13.4	0.0	21.7							
2013	5020	2,3,4,5	7.4	0.4	0.4	2.4	0.9	4.3	2.2	0.0	0.0	0.4	0.0	0.0	0.3	5.6	0.6	3.9	0.6	0.0	0.0	15.1	13.8	0.3	41.3							
2014	3835	2,3,4,5	11.0	0.8	0.4	1.0	0.4	9.4	0.3	0.0	0.1	0.8	0.1	0.0	0.3	5.3	1.3	4.9	0.3	0.0	0.0	23.5	14.9	0.0	25.5							
2015	5672	2,3,4,5	15.5	0.7	1.0	1.9	0.6	2.5	0.7	0.0	0.0	0.7	0.0	0.0	0.0	10.2	2.2	4.7	0.1	0.0	0.0	31.6	16.2	0.0	11.2							
2016	NA		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
85-95	440		7.9	0.8	0.1	4.4	0.3	16.0	1.4	0.6	2.2	0.1	0.0	0.9	0.5	4.2	1.1	2.0	0.2	0.0	0.2	6.1	0.5	0.4	50.1							
96-98	1082		10.5	0.4	1.7	0.9	1.1	1.8	0.1	0.0	1.4	0.1	0.0	0.1	0.9	0.4	0.0	2.5	0.3	0.0	0.0	0.4	1.2	0.6	75.7							
99-08	5464		16.7	0.8	1.5	4.9	1.5	9.7	2.1	0.0	0.2	0.5	0.0	0.0	0.5	4.0	1.0	3.6	0.5	0.0	0.0	6.4	7.9	0.2	37.7							
09-16	4818		11.1	0.5	0.6	2.0	0.8	5.4	2.2	0.0	0.0	0.5	0.0	0.0	0.6	5.2	1.3	3.3	0.3	0.0	0.0	20.4	12.7	0.0	32.6							

Appendix C51—Percent distribution of Taku River total fishing mortalities among fisheries and escapement.

Catch Year	Est # of CWT	Ages	AABM Fishery						ISBM Fishery										Terminal Fishery						Escapement							
			SEAK			NBC		WCVI	NBC & CBC			Southern BC			N Falcon		S Falcon		WAC	Puget Sd			SEAK			Canada		Southern US			Stray	Esc.
			T	N	S	T	S	T	S	T	N	S	T	N	S	T	S	N	N	S	T	N	S	N	S	T	N	S				
79–84	315		5.9	0.2	0.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	89.2
1985	347	4,5,6	2.9	0.0	8.4	0.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	86.5	
1986	169	5,6	3.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	94.7	
1987	52	6	Failed Criteria						-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1988	NA		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
1989	NA		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
1990	NA		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
1991	NA		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
1992	NA		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
1993	NA		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
1994	70	3	Failed Criteria						-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1995	181	3,4	0.6	0.0	2.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	89.5	
1996	391	3,4,5	1.5	0.0	2.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	91.6	
1997	657	3,4,5,6	0.3	0.0	9.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	85.7	
1998	405	3,4,5,6	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	94.8	
1999	649	3,4,5,6	1.8	0.0	3.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	86.3	
2000	1172	3,4,5,6	1.9	0.5	2.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	89.6	
2001	1105	3,4,5,6	3.3	0.1	8.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	81.2		
2002	963	3,4,5,6	3.3	0.0	6.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	84.2	
2003	995	3,4,5,6	2.1	0.1	3.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	85.9	
2004	2281	3,4,5,6	3.0	0.3	3.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	84.6	
2005	1451	3,4,5,6	2.8	0.2	6.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	53.5	
2006	1051	3,4,5,6	2.9	0.0	6.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	63.9	
2007	409	3,4,5,6	6.6	0.0	6.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	71.9	
2008	576	3,4,5,6	5.2	0.0	1.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	82.6			
2009	349	3,4,5,6	8.6	0.0	2.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	61.0	
2010	225	3,4,5,6	4.0	0.0	1.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	79.1	
2011	335	3,4,5,6	6.9	0.9	2.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	77.9	
2012	272	3,4,5,6	9.9	0.4	0.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	77.6	
2013	350	3,4,5,6	3.4	1.1	1.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	88.6	
2014	359	3,4,5,6	2.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	86.4			
2015	400	3,4,5,6	7.5	1.8	3.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0	77.3			
2016	244	4,5,6	0.8	0.4	4.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	84.0	
85–95	347		2.9	0.0	8.4	0.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	86.5	
96–98	484		0.9	0.0	4.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	90.7	
99–08	1065		3.3	0.1	4.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	78.4	
09–16	317		5.5	0.6	2.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	79.0			

Appendix C52—Percent distribution of Unuk River total fishing mortalities among fisheries and escapement.

Catch Year	Est # of CWT	Ages	AABM Fishery						ISBM Fishery									Terminal Fishery						Escapement										
			SEAK			NBC		WCVI		NBC & CBC			Southern BC			N Falcon		S Falcon		WAC	Puget Sd			SEAK			Canada		Southern US			Stray	Esc.	
			T	N	S	T	S	T	S	T	N	S	T	N	S	T	S	N	N	N	S	T	N	S	N	S	T	N	S					
79–84	NA		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1985	28	3	Failed Criteria						-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1986	579	3,4	10.5	2.8	3.8	0.7	0.0	0.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	80.8
1987	409	3,4,5	10.5	0.2	3.2	0.0	0.0	0.0	0.0	0.0	0.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	84.4	
1988	414	3,4,5,6	6.8	1.0	1.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	90.3	
1989	167	3,4,5,6	15.6	3.6	0.0	2.4	0.0	0.0	0.0	0.0	0.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	77.8	
1990	180	4,5,6	27.8	0.6	11.7	2.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	57.2	
1991	138	5,6	23.9	5.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	70.3	
1992	144	6	Failed Criteria						-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
1993	NA		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
1994	NA		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
1995	1	3	Failed Criteria						-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
1996	31	3,4	9.7	12.9	9.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	67.7	
1997	157	3,4,5	12.1	7.0	3.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	77.7	
1998	479	3,4,5,6	9.6	2.1	3.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	83.7	
1999	758	3,4,5,6	7.8	0.7	10.2	0.0	1.2	0.0	0.0	0.0	1.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	76.4	
2000	1093	3,4,5,6	9.9	2.4	3.5	0.0	2.0	0.0	0.0	0.0	0.7	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	75.5		
2001	1466	3,4,5,6	8.0	0.5	7.8	0.1	0.0	0.0	0.0	0.0	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	81.1			
2002	1041	3,4,5,6	8.2	0.6	9.7	1.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.2	76.9			
2003	717	3,4,5,6	10.7	0.1	6.1	1.4	0.0	0.0	0.0	0.0	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	77.5			
2004	755	3,4,5,6	7.0	15.0	6.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.7	70.5			
2005	790	3,4,5,6	20.8	2.3	11.5	0.3	0.0	0.0	0.0	0.0	0.0	2.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	59.7				
2006	851	3,4,5,6	11.3	7.2	5.5	0.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	71.0		
2007	697	3,4,5,6	15.8	6.7	6.3	0.3	0.0	0.0	0.0	0.0	1.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	69.6		
2008	380	3,4,5,6	15.0	3.9	6.6	0.0	2.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	71.3			
2009	400	3,4,5,6	14.5	1.5	3.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	77.5		
2010	411	3,4,5,6	18.7	1.0	6.6	0.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	72.3			
2011	283	3,4,5,6	20.1	4.2	1.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	72.1		
2012	202	3,4,5,6	35.6	7.9	6.9	0.0	1.0	0.0	0.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	41.6			
2013	188	3,4,5,6	18.1	13.8	2.1	0.0	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	60.6		
2014	203	3,4,5,6	27.1	5.9	2.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	60.1		
2015	216	3,4,5,6	25.9	6.9	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	62.5		
2016	135	4,5,6	20.0	17.0	2.2	0.0	3.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	57.0		
85–95	292		15.2	1.3	4.0	1.3	0.0	0.0	0.0	0.0	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	77.4				
96–98	318		10.9	4.5	3.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	80.7				
99–08	855		11.4	3.9	7.4	0.4	0.6	0.0	0.0	0.0	0.4	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	73.0				
09–16	255		22.5	7.3	3.1	0.1	0.7	0.0	0.0	0.0	0.0	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	63.0					

Appendix C53—Percent distribution of Columbia River Upriver Bright (Columbia River Upriver Brights) total fishing mortalities among fisheries and escapement.

Catch Year	Est # of CWT	Ages	AABM Fishery									ISBM Fishery											Terminal Fishery									Escapement			
			SEAK			NBC			WCVI			NBC & CBC			Southern BC			N Falcon		S Falcon		WAC	Puget Sd			SEAK			Canada		Southern US			Stray	Esc.
			T	N	S	T	S		T	S		T	N	S	T	N	S	T	S	T	S	N	N	S	T	N	S	T	N	S					
79-84	2506		19.1	0.5	0.4	8.1	0.0	7.3	0.0	2.0	2.2	0.1	0.2	0.4	0.3	0.7	0.6	0.1	0.0	0.0	0.0	0.3	0.0	0.0	0.0	0.0	0.0	0.0	9.8	0.4	0.4	47.1			
1985	2533	2,3,4,5	15.2	2.3	0.2	7.8	0.0	7.3	0.1	0.2	1.6	0.0	0.0	1.7	0.2	0.2	0.4	0.4	0.1	0.0	0.0	0.5	0.0	0.0	0.0	0.0	0.0	26.5	2.6	1.0	31.8				
1986	2951	2,3,4,5	9.1	1.3	0.1	6.9	0.0	11.3	0.2	1.5	1.4	0.0	0.0	0.4	0.3	0.9	0.2	0.6	0.1	0.0	0.1	0.7	0.0	0.0	0.0	0.0	28.2	2.6	0.2	33.8					
1987	3714	2,3,4,5	17.4	1.6	0.4	11.7	0.0	7.9	0.5	1.9	0.6	0.0	0.0	0.0	0.1	0.4	0.4	1.0	0.1	0.1	0.0	0.2	0.0	0.0	0.0	0.0	33.0	2.9	0.0	19.9					
1988	2983	2,3,4,5	11.1	1.6	0.4	8.8	0.0	12.0	0.0	0.5	0.5	0.0	0.0	0.1	0.0	0.8	0.3	1.1	0.2	0.0	0.1	0.1	0.0	0.0	0.0	42.3	2.2	0.2	17.5						
1989	1305	2,3,4,5	14.7	0.0	0.2	15.5	0.5	8.2	0.0	0.2	0.7	0.0	0.0	0.7	0.0	0.8	0.2	0.5	0.2	0.0	0.0	0.0	0.0	0.0	0.0	40.1	1.5	0.2	15.9						
1990	706	2,3,4,5	14.2	0.0	1.0	10.9	0.0	8.8	0.0	0.7	0.7	0.0	0.0	0.0	0.0	1.3	0.4	0.0	0.0	0.0	0.0	0.8	0.0	0.0	0.0	32.4	1.1	0.0	27.6						
1991	290	2,3,4,5	7.6	2.1	3.4	6.9	0.0	10.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	18.3	3.8	0.0	46.6						
1992	322	2,3,4,5	3.7	1.6	0.0	3.7	0.0	12.4	0.0	0.0	2.5	0.0	0.0	0.6	1.2	0.0	0.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	16.1	5.9	0.0	51.6						
1993	593	2,3,4,5	15.2	0.0	0.0	7.9	0.5	19.6	0.0	0.0	0.3	0.0	0.0	0.0	0.0	0.5	1.2	1.0	0.0	0.0	0.0	0.7	0.0	0.0	0.0	13.8	3.9	0.0	35.4						
1994	975	2,3,4,5	10.9	2.5	0.0	8.2	1.2	7.2	0.6	0.2	0.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	13.3	8.6	0.0	46.4						
1995	738	2,3,4,5	10.2	0.1	2.4	2.7	0.0	7.2	0.0	0.0	0.5	0.0	0.0	0.0	0.0	0.7	0.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	9.3	3.4	0.0	62.7						
1996	788	2,3,4,5	4.2	0.0	0.0	1.4	0.0	0.8	0.0	0.0	0.3	0.3	0.0	0.0	0.0	0.1	0.0	0.8	0.0	0.0	0.0	0.4	0.0	0.0	0.0	21.7	5.1	0.0	64.8						
1997	1039	2,3,4,5	13.4	0.6	3.2	5.0	0.0	0.5	0.1	0.6	0.0	0.5	0.0	0.0	0.4	0.0	0.0	1.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	19.6	9.8	0.0	45.3						
1998	726	2,3,4,5	11.0	3.7	2.8	2.5	0.3	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	14.5	8.8	0.1	56.2						
1999	1411	2,3,4,5	14.1	0.0	2.8	7.8	0.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.9	0.2	0.0	0.4	0.1	0.0	0.0	0.0	0.0	0.0	0.0	13.2	7.9	0.1	51.7						
2000	957	2,3,4,5	25.5	0.1	3.0	0.0	0.0	1.5	2.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	19.1	4.5	0.3	42.2						
2001	1308	2,3,4,5	6.4	0.0	1.5	0.0	0.0	1.1	0.7	0.0	0.0	0.6	0.0	0.0	0.0	1.8	0.2	0.5	0.2	0.0	0.0	0.0	0.0	0.0	0.0	15.4	8.1	1.0	62.5						
2002	1798	2,3,4,5	16.2	0.0	5.1	1.8	0.9	1.6	0.0	0.0	0.0	0.0	0.0	1.5	1.2	1.6	0.9	0.3	0.1	0.0	0.0	0.0	0.0	0.0	0.0	16.3	8.2	0.9	43.5						
2003	2340	2,3,4,5	14.4	1.2	0.4	5.5	1.0	0.8	0.7	0.0	0.0	0.2	0.0	0.0	0.0	0.5	0.5	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	14.7	6.8	0.3	52.9						
2004	2472	2,3,4,5	11.0	1.9	0.7	3.8	1.2	2.1	0.0	0.0	0.0	0.3	0.0	0.0	0.2	1.0	1.3	0.0	0.2	0.0	0.0	0.2	0.0	0.0	0.0	15.2	6.1	0.0	54.7						
2005	2611	2,3,4,5	14.9	1.4	1.1	9.5	2.2	3.6	2.0	0.0	0.0	1.2	0.0	0.0	2.0	0.5	1.3	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	13.3	6.9	0.0	39.8						
2006	1706	2,3,4,5	13.9	1.7	2.1	6.9	1.9	1.5	1.7	0.0	0.0	0.0	0.0	0.0	0.3	1.0	0.4	0.4	0.0	0.0	0.0	0.3	0.0	0.0	0.0	12.9	15.1	0.1	39.9						
2007	600	2,3,4,5	11.3	0.2	2.7	5.5	5.8	1.2	0.7	0.0	0.0	0.0	0.0	0.0	0.0	0.3	1.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	11.2	17.3	0.0	42.3						
2008	867	2,3,4,5	13.3	0.5	0.0	3.0	1.8	1.8	3.8	0.0	0.0	0.0	0.0	0.0	0.0	1.4	0.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	18.1	7.8	0.3	47.3						
2009	1341	2,3,4,5	22.1	1.7	1.8	9.2	1.3	0.6	0.9	0.0	0.0	0.0	0.0	0.0	1.0	0.7	1.1	0.0	0.0	0.0	0.0	1.1	0.0	0.0	0.0	19.5	5.9	0.1	33.0						
2010	1738	2,3,4,5	5.1	0.4	2.5	1.7	1.3	0.9	1.4	0.0	0.0	0.0	0.0	0.0	0.0	2.4	2.2	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	18.6	4.5	0.6	58.3						
2011	3068	2,3,4,5	10.7	0.2	0.8	3.0	2.3	1.6	2.5	0.0	0.0	0.9	0.0	0.0	0.3	1.3	0.9	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	23.6	10.1	0.0	41.3						
2012	4869	2,3,4,5	7.4	0.6	0.5	2.8	0.7	1.0	1.6	0.0	0.0	0.2	0.0	0.0	0.3	2.1	0.9	0.3	0.1	0.1	0.0	0.0	0.0	0.0	0.0	12.6	17.9	0.1	50.7						
2013	14275	2,3,4,5	5.3	0.0	0.4	2.5	0.9	0.8	1.6	0.0	0.0	0.3	0.0	0.0	0.6	1.8	0.9	0.9	0.1	0.0	0.0	0.2	0.0	0.0	0.0	24.7	10.9	0.2	48.0						
2014	16329	2,3,4,5	14.9	0.3	1.2	5.3	0.6	2.4	0.3	0.0	0.0	0.3	0.0	0.0	0.1	1.3	0.5	0.4	0.1	0.0	0.0	0.0	0.0	0.0	0.0	18.9	6.0	0.1	47.3						
2015	13661	2,3,4,5	9.0	0.9	0.7	2.3	1.4	0.5	0.6	0.0	0.0	0.2	0.0	0.0	0.2	1.1	0.8	0.3	0.0	0.0	0.0	0.1	0.0	0.0	0.0	13.6	8.3	0.2	59.8						
2016	NA		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-					
85-95	1555		11.8	1.2	0.7	8.3	0.2	10.2	0.1	0.5	0.9	0.0	0.0	0.3	0.2	0.6	0.4	0.4	0.1	0.0	0.0	0.3	0.0	0.0	0.0	24.9	3.5	0.1	35.4						
96-98	851		9.5	1.4	2.0	3.0	0.1	0.5	0.0	0.2	0.1	0.2	0.0	0.0	0.1	0.0	0.0	0.6	0.0	0.0	0.0	0.1	0.0	0.0	0.0	18.6	7.9	0.0	55.5						
99-08	1607		14.1	0.7	1.9	4.4	1.6	1.5	1.2	0.0	0.0	0.2	0.0	0.2	0.5	0.8	0.7	0.3	0.1	0.0	0.0	0.0	0.0	0.0	0.0	14.9	8.9	0.3	47.7						
09-16	7897		10.7	0.6	1.1	3.8	1.2	1.1	1.3	0.0	0.0	0.3	0.0	0.0	0.4	1.5	1.1	0.3	0.1	0.0	0.0	0.2	0.0	0.0	0.0	18.8	9.1	0.2	48.3						

Appendix C54—Percent distribution of University Of Washington Accelerated total fishing mortalities among fisheries and escapement.

Catch Year	Est # of CWT	Ages	AABM Fishery									ISBM Fishery										Terminal Fishery									Escapement					
			SEAK			NBC			WCVI			NBC & CBC			Southern BC			N Falcon		S Falcon		WAC	Puget Sd			SEAK			Canada			Southern US			Stray	Esc.
			T	N	S	T	S	T	S	T	N	S	T	N	S	T	S	T	S	N	N	S	T	N	S	N	S	T	N	S						
79-84	4089		0.0	0.0	0.0	0.1	0.0	12.9	0.1	0.4	0.0	0.0	0.6	1.9	3.7	1.8	0.2	0.0	0.0	0.2	10.3	44.8	0.0	0.0	0.0	0.0	0.1	0.0	1.9	0.0	0.0	0.0	0.0	0.0	20.9	
1985	855	2,3,4,5	0.0	0.0	0.0	0.0	0.0	14.5	0.9	0.0	0.4	0.0	0.0	4.7	5.0	2.1	0.0	0.0	0.0	0.0	5.1	30.4	0.0	0.0	0.0	0.0	0.0	0.0	8.2	0.0	0.0	0.0	0.0	0.1	28.5	
1986	890	2,3,4,5	0.0	0.0	0.0	0.0	0.0	19.8	1.0	0.0	0.6	0.0	0.0	7.2	3.8	1.7	0.0	0.0	0.0	0.0	17.1	25.2	0.0	0.0	0.0	0.0	0.0	0.0	4.8	0.0	0.0	0.0	0.0	0.1	18.8	
1987	1009	3,4,5	0.5	0.0	0.0	0.1	0.0	11.8	0.7	0.4	0.0	0.0	1.4	0.3	5.4	4.2	0.2	0.3	0.0	0.0	20.9	15.4	0.0	0.0	0.0	0.0	0.0	0.0	24.7	0.0	0.0	0.0	0.0	0.1	13.8	
1988	617	4,5	0.0	0.0	0.0	1.3	0.0	19.3	0.0	1.1	0.5	0.0	0.0	0.5	4.7	8.4	0.2	0.3	0.0	0.3	8.9	12.3	0.0	0.0	0.0	0.0	0.0	0.0	24.8	0.0	0.0	0.0	0.0	0.0	17.3	
1989	44	5	Failed Criteria									-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
1990	NA		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
1991	NA		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
1992	NA		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
1993	NA		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
1994	NA		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
1995	NA		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
1996	NA		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
1997	NA		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
1998	NA		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
1999	NA		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
2000	NA		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
2001	NA		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
2002	NA		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
2003	NA		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
2004	NA		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
2005	NA		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
2006	NA		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
2007	NA		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
2008	NA		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
2009	NA		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
2010	NA		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
2011	NA		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
2012	NA		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
2013	NA		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
2014	NA		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
2015	NA		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
2016	NA		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
85-95	918		0.2	0.0	0.0	0.0	0.0	15.4	0.9	0.1	0.3	0.0	0.5	4.1	4.7	2.7	0.1	0.1	0.0	0.0	14.4	23.6	0.0	0.0	0.0	0.0	0.0	0.0	12.6	0.0	0.0	0.0	0.0	0.1	20.4	
96-98	NA		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
99-08	NA		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
09-16	NA		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		

Appendix C55—Percent distribution of White River Spring Yearling total fishing mortalities among fisheries and escapement.

Catch Year	Est # of CWT	Ages	AABM Fishery									ISBM Fishery										Terminal Fishery						Escapement							
			SEAK			NBC			WCVI			NBC & CBC			Southern BC			N Falcon		S Falcon		WAC	Puget Sd			SEAK			Canada		Southern US			Stray	Esc.
			T	N	S	T	S	T	S	T	N	S	T	N	S	T	S	T	S	N	N	S	T	N	S	N	S	T	N	S					
79–84	NA		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
1985	NA		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
1986	NA		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
1987	NA		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
1988	NA		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
1989	NA		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
1990	NA		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
1991	NA		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
1992	NA		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
1993	NA		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
1994	NA		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
1995	NA		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
1996	NA		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
1997	NA		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
1998	NA		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
1999	NA		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
2000	NA		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
2001	NA		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
2002	NA		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
2003	NA		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
2004	173	2	Failed Criteria									-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2005	1041	2,3	0.0	0.0	0.0	0.0	0.0	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.8	0.0	0.0	0.0	0.0	0.3	10.2	0.0	0.0	0.0	0.0	0.0	0.0	0.7	0.0	0.4	87.2			
2006	1047	2,3,4	0.0	0.0	0.0	0.0	0.0	1.9	0.0	0.0	0.0	0.0	0.0	0.0	2.7	0.1	0.0	0.0	0.0	0.2	17.8	0.0	0.0	0.0	0.0	0.0	0.0	1.6	0.0	0.3	75.5				
2007	776	2,3,4,5	0.0	0.0	0.0	0.0	0.0	1.3	0.0	0.0	0.0	0.0	0.0	0.3	0.5	0.0	0.0	0.0	0.0	0.0	22.6	0.0	0.0	0.0	0.0	0.0	0.0	2.4	0.0	0.4	72.6				
2008	197	2,3,4,5	0.0	0.0	0.0	0.0	0.0	2.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	5.6	0.0	0.0	0.0	0.0	0.0	6.6	0.0	0.0	84.8					
2009	209	2,3,4,5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	13.9	0.0	0.0	0.0	0.0	0.0	2.4	0.0	1.0	82.8					
2010	212	2,3,4,5	0.0	0.0	0.0	0.0	0.0	1.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.4	0.0	0.0	0.0	0.0	0.0	7.5	0.0	0.0	88.2					
2011	219	2,3,4,5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.5	0.0	1.8	92.7						
2012	202	2,3,4,5	0.0	0.0	0.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0	0.0	6.9	0.0	0.0	0.0	0.0	0.0	15.8	0.0	0.0	73.3					
2013	94	2,3,4,5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.1	0.0	0.0	0.0	0.0	0.0	12.8	0.0	0.0	86.2						
2014	117	2,3,4,5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.9	6.8	0.0	0.0	0.0	0.0	0.0	6.8	0.0	0.0	85.5					
2015	230	2,3,4,5	0.0	0.0	0.0	0.0	0.0	2.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.9	5.7	0.0	0.0	0.0	0.0	10.9	0.0	0.4	79.6						
2016	NA		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
85–95	NA		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
96–98	NA		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
99–08	673		0.0	0.0	0.0	0.0	0.0	1.9	0.0	0.0	0.0	0.0	0.0	1.0	0.2	0.0	0.0	0.0	0.2	15.3	0.0	0.0	0.0	0.0	0.0	3.6	0.0	0.2	77.6						
09–16	198		0.0	0.0	0.0	0.0	0.0	1.1	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.0	0.0	0.0	0.3	5.9	0.0	0.0	0.0	0.0	0.0	8.2	0.0	0.5	83.7						

Appendix C56—Percent distribution of Willamette Spring (Willamette River Hatchery) total fishing mortalities among fisheries and escapement.

Catch Year	Est # of CWT	Ages	AABM Fishery						ISBM Fishery										Terminal Fishery						Escapement							
			SEAK			NBC		WCVI	NBC & CBC			Southern BC			N Falcon		S Falcon		WAC	Puget Sd			SEAK			Canada		Southern US			Stray	Esc.
			T	N	S	T	S	T	S	T	N	S	T	N	S	T	S	N	N	S	T	N	S	N	S	T	N	S				
79-84	4861		7.2	0.3	0.2	6.1	0.0	2.3	0.0	0.2	0.2	0.0	0.1	0.0	0.1	0.9	0.5	0.1	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.0	4.2	18.3	0.0	59.2
1985	2549	3,4,5,6	7.0	0.2	0.0	0.5	0.0	0.5	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	18.0	19.8	0.0	53.5	
1986	629	3,4,5,6	3.3	0.3	0.0	6.2	0.0	4.5	0.5	0.5	1.9	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	9.9	17.8	0.0	54.7		
1987	686	3,4,5,6	15.9	0.0	0.6	12.0	0.0	1.3	0.9	1.0	0.7	0.0	0.0	0.0	0.0	1.7	0.0	1.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.7	26.2	0.0	33.2			
1988	2014	3,4,5,6	10.7	0.3	0.5	6.7	0.0	3.5	0.0	0.7	0.0	0.0	0.0	0.0	0.0	1.7	0.0	0.3	0.1	0.0	0.0	0.0	0.0	0.0	0.0	6.5	28.0	0.1	40.8			
1989	2681	3,4,5,6	5.2	0.0	0.2	1.8	0.0	1.5	0.3	0.0	0.1	0.0	0.0	0.1	0.4	1.6	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	12.3	20.4	0.0	55.7			
1990	2668	3,4,5,6	8.5	0.6	0.2	1.6	0.0	2.3	0.6	0.2	0.3	0.3	0.0	0.1	0.0	1.3	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	16.3	27.5	0.0	40.2			
1991	2895	3,4,5,6	3.7	1.5	0.6	1.7	0.0	0.3	0.1	0.0	0.1	0.0	0.0	0.0	0.2	0.5	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.8	43.0	0.0	42.1			
1992	2722	3,4,5,6	6.0	4.6	0.2	1.4	0.0	2.3	0.1	0.0	0.1	0.1	0.0	0.0	0.0	2.2	0.2	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	5.3	28.8	0.0	48.1			
1993	5080	3,4,5,6	11.2	0.0	0.0	1.3	0.1	1.4	0.2	0.0	0.0	0.0	0.0	0.0	0.0	1.6	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.8	42.0	0.0	41.3			
1994	4910	3,4,5,6	5.4	0.7	0.7	0.8	0.1	0.8	0.0	0.2	0.1	0.0	0.0	0.0	0.0	0.1	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	4.9	38.4	0.5	47.1			
1995	4367	3,4,5,6	4.5	0.1	0.3	1.2	0.0	0.5	0.1	0.0	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	42.6	0.1	49.8			
1996	3645	3,4,5,6	2.2	0.0	0.0	0.2	0.0	0.1	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.8	33.9	0.4	62.1			
1997	2218	3,4,5,6	4.3	0.0	0.0	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.8	15.7	0.1	78.4			
1998	1575	3,4,5,6	5.1	0.2	0.3	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	16.6	0.0	77.0			
1999	1770	3,4,5,6	7.5	0.0	0.7	0.0	0.0	0.0	0.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.8	14.8	0.2	75.2			
2000	6525	3,4,5,6	11.8	0.1	0.8	0.2	0.4	0.4	0.1	0.0	0.0	0.0	0.0	0.0	0.2	0.1	0.2	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	2.2	29.2	0.0	54.2			
2001	33958	3,4,5,6	1.6	0.0	0.1	0.1	0.1	0.5	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.5	23.9	0.0	69.7			
2002	19159	3,4,5,6	2.2	0.1	0.1	1.1	0.1	0.6	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.8	0.3	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	16.0	21.0	0.0	57.6			
2003	6696	3,4,5,6	5.6	0.0	0.1	0.4	0.1	2.4	0.2	0.0	0.0	0.1	0.0	0.0	0.0	0.1	0.0	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	1.5	16.4	0.0	72.8			
2004	6801	3,4,5,6	3.7	0.4	0.1	0.7	0.0	5.8	0.0	0.0	0.0	0.0	0.0	0.0	0.8	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.2	20.9	0.0	60.4			
2005	2910	3,4,5,6	3.1	0.0	0.1	0.3	0.3	6.1	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.1	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.2	16.1	0.0	67.7			
2006	1884	3,4,5,6	3.9	0.0	0.0	0.4	0.7	4.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	8.0	25.5	0.0	55.1			
2007	1514	3,4,5,6	5.0	0.2	0.0	0.0	0.0	1.4	0.0	0.0	0.0	0.0	0.0	0.0	0.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.9	18.0	0.1	69.7			
2008	2190	3,4,5,6	1.8	0.1	0.4	0.5	0.0	0.9	0.0	0.0	0.0	0.0	0.0	0.4	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	19.2	12.4	0.4	63.7			
2009	4045	3,4,5,6	3.4	0.0	0.0	0.2	0.1	0.7	1.8	0.0	0.0	0.1	0.0	0.0	0.8	0.3	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	7.7	19.2	0.0	65.1			
2010	11342	3,4,5,6	2.9	0.0	0.1	0.5	0.2	0.5	0.1	0.0	0.0	0.1	0.0	0.0	0.0	1.9	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.8	32.3	0.1	57.2			
2011	7736	3,4,5,6	4.1	0.0	0.2	0.8	0.2	1.1	0.1	0.0	0.0	0.1	0.0	0.1	0.9	0.2	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.1	41.2	0.3	45.4			
2012	5918	3,4,5,6	6.4	0.0	0.3	0.3	0.2	3.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	1.5	0.8	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.9	37.0	0.8	43.8			
2013	6288	3,4,5,6	2.4	0.0	0.6	0.4	0.1	0.7	0.3	0.0	0.0	0.1	0.0	0.0	0.3	1.0	0.3	0.3	0.1	0.0	0.0	0.0	0.0	0.0	0.0	4.5	29.9	0.0	58.9			
2014	14506	3,4,5,6	4.6	0.2	0.2	0.7	0.1	3.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	1.6	0.4	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.0	21.4	0.0	64.3			
2015	16842	3,4,5,6	5.2	0.1	0.1	0.6	0.0	0.4	0.1	0.0	0.0	0.0	0.0	0.0	0.1	4.0	0.5	1.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.9	24.9	0.5	57.0			
2016	NA		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
85-95	2836		7.4	0.8	0.3	3.2	0.0	1.7	0.3	0.3	0.3	0.0	0.0	0.0	0.1	1.0	0.1	0.1	0.1	0.0	0.0	0.1	0.0	0.0	0.0	7.7	30.4	0.1	46.0			
96-98	2479		3.9	0.1	0.1	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.7	22.1	0.2	72.5			
99-08	8341		4.6	0.1	0.2	0.4	0.2	2.3	0.1	0.0	0.0	0.0	0.0	0.1	0.5	0.1	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.7	19.8	0.1	64.6			
09-16	9525		4.1	0.1	0.2	0.5	0.1	1.4	0.3	0.0	0.0	0.1	0.0	0.0	0.2	1.6	0.4	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.8	29.4	0.2	56.0			

APPENDIX D: MODEL ESTIMATES OF THE STOCK COMPOSITION OF THE AABM AND 3 ISBM OCEAN FISHERIES FOR 2016 AND THE AVERAGE, 1985–2015

This appendix shows the model estimates of the stock composition of the catch for the 3 AABM fisheries (Appendices D1, D2 and D4), and 3 ISBM ocean fisheries (Appendices D3, D5 and D6). These estimates are based on the summation of the contribution of the 30 model stocks for each fishery, expressed as a percentage of the total catch.

The estimated stock composition may not reflect the true stock composition in a given year for several reasons:

1. The yearly catch estimates by stock are influenced by the base period stock composition in a fishery which may not reflect the current stock composition in the fishery, amongst the 30 model stocks.
2. The distribution of certain stocks may have changed over time.
3. The 30 model stocks do not represent all production present in a fishery.

For example, in the SEAK fishery a substantial component (over 20%) of the catch is comprised of Alaska hatchery fish, most of which do not count as treaty catch and are not included in Appendix D1. Also, in the sport fishery portion of the present NBC AABM fishery, the base period data used is from fisheries which were located near shore and do not represent the current stock composition of the sport fishery which is located offshore.

Hence, these tables do not necessarily portray the true stock composition of the total catch of the fisheries in Appendices D1 to D6. There are genetic estimates for most of these fisheries in selected years which can provide more accurate accounting of contributions by stocks or stock groups.

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Appendix D1–Southeast Alaska all gear.

FISHERY	SOUTHEAST ALASKA ALL GEAR				
	2016	Average (1985–2015)			Associated Escapement Indicator Stocks ¹
Model Stock	% of Fishery Catch	% of Fishery Catch	% of Stock Catch	% of Stock Total Return	
Columbia Upriver Bright	28.22%	18.11%	26.18%	13.04%	Columbia Upriver Bright, Deschutes
North/Central BC	10.61%	15.92%	20.40%	10.23%	Nass, Skeena, Yakoun, Dean, Rivers Inlet
WCVI Hatchery	16.06%	15.17%	52.51%	17.62%	NA
Oregon Coastal North Migrating	9.92%	13.68%	33.56%	15.09%	Nehalem, Siletz, Siuslaw
Mid-Columbia Brights	8.97%	6.64%	35.29%	13.83%	Not Represented
Upper Georgia Strait	6.48%	5.70%	34.01%	19.58%	Upper Georgia Strait
Fraser Early	3.37%	3.96%	24.76%	5.12%	Fraser Spring 1.2, Fraser Spring 1.3, Fraser Summer 1.3, Fraser Summer 0.3
Columbia Upriver Summer	6.03%	3.94%	27.57%	12.79%	Columbia Upriver Summer
Alaska South SE	1.08%	3.55%	96.58%	33.55%	Unuk, Chickamin
WCVI Wild	1.88%	2.88%	54.19%	17.73%	Artlish, Burman, Kaouk, Tahsis, Tashish, Marble
Washington Coastal Wild	1.81%	2.72%	17.25%	9.11%	Grays Harbor Fall, Quillayute Fall, Hoh Fall, Queets Fall
WA Coastal Hatchery	1.95%	2.23%	16.95%	8.55%	NA
Willamette River Hatchery	0.74%	2.22%	12.81%	5.33%	NA
Fall Cowlitz Hatchery	0.93%	1.00%	5.33%	2.18%	NA
Lewis River Wild	0.86%	0.86%	19.19%	8.29%	Lewis River
Lower GS Hatchery	0.12%	0.32%	3.58%	1.79%	NA
PS Hatchery Fingerling	0.13%	0.21%	0.52%	0.28%	NA
Lower Georgia Strait	0.18%	0.19%	3.87%	2.01%	Lower Georgia Strait
Fraser Late	0.04%	0.15%	0.31%	0.11%	Harrison
Snake River Fall	0.32%	0.13%	6.66%	4.07%	Not Represented
Spring Cowlitz Hatchery	0.16%	0.10%	2.25%	1.05%	NA
Skagit Summer/Fall	0.03%	0.09%	4.29%	1.15%	Skagit Summer/Fall
Stillaguamish Summer/Fall	0.02%	0.06%	20.06%	6.69%	Stillaguamish
PS Yearling	0.04%	0.05%	0.53%	0.34%	NA
Nooksack Fall	0.01%	0.04%	0.18%	0.13%	NA
Puget Sound Natural	0.01%	0.03%	0.70%	0.29%	Green, Lake Washington
Snohomish Summer/Fall	0.02%	0.03%	4.45%	1.17%	Snohomish
Spring Creek Hatchery	0.00%	0.00%	0.00%	0.00%	NA
Lower Bonneville Hatchery	0.00%	0.00%	0.00%	0.00%	NA
Nooksack Spring	0.00%	0.00%	0.00%	0.00%	Nooksack Spring

¹ NA = a hatchery stock; Not represented = a wild stock without an escapement indicator.

Appendix D2–North BC troll.

FISHERY	NORTH TROLL				Associated Escapement Indicator Stocks
	2016	Average (1985–2015)			
Model Stock	% of Fishery Catch	% of Fishery Catch	% of Stock Catch	% of Stock Tot. Ret.	
Oregon Coastal North Migrating	21.97%	26.43%	29.84%	14.19%	Nehalem, Siletz, Siuslaw
Columbia Upriver Bright	33.89%	17.06%	11.50%	6.01%	Columbia Upriver Bright, Deschutes
North/Central BC	7.17%	10.37%	6.85%	3.42%	Nass, Skeena, Yakoun, Dean, Rivers Inlet
WCVI Hatchery	1.47%	6.83%	9.72%	3.83%	NA
Fraser Early	7.02%	6.37%	17.63%	4.07%	Fraser Spring 1.2, Fraser Spring 1.3, Fraser Summer 1.3, Fraser Summer 0.3
Willamette River Hatchery	2.08%	5.41%	13.49%	6.28%	NA
Upper Georgia Strait	5.64%	4.66%	13.00%	7.88%	Upper Georgia Strait
Washington Coastal Wild	3.12%	4.54%	13.47%	7.60%	Grays Harbor Fall, Quillayute Fall, Hoh Fall, Queets Fall
Mid-Columbia Brights	5.82%	4.32%	10.72%	4.49%	Not Represented
WA Coastal Hatchery	3.40%	3.74%	13.26%	7.13%	NA
Columbia Upriver Summer	4.17%	2.52%	8.62%	4.22%	Columbia Upriver Summer
WCVI Wild	0.17%	1.54%	9.81%	3.82%	Artlish, Burman, Kaouk, Tahsis, Tashish, Marble
Fall Cowlitz Hatchery	0.85%	0.98%	2.11%	0.95%	NA
Lower GS Hatchery	0.23%	0.76%	3.23%	1.72%	NA
Fraser Late	0.30%	0.65%	0.44%	0.20%	Harrison
Lewis River Wild	0.48%	0.54%	4.18%	2.06%	Lewis River
Lower Georgia Strait	0.33%	0.42%	2.91%	1.66%	Lower Georgia Strait
Skagit Summer/Fall	0.31%	0.38%	5.84%	1.77%	Skagit Summer/Fall
PS Hatchery Fingerling	0.21%	0.38%	0.32%	0.19%	NA
Spring Cowlitz Hatchery	0.35%	0.33%	2.44%	1.24%	NA
Snake River Fall	0.66%	0.33%	5.53%	3.55%	Not Represented
Alaska South SE	0.05%	0.25%	2.16%	0.74%	Unuk, Chickamin
PS Yearling	0.14%	0.25%	0.71%	0.48%	NA
Nooksack fall	0.05%	0.24%	0.27%	0.20%	NA
Snohomish Summer/Fall	0.07%	0.21%	5.69%	1.77%	Snohomish
Puget Sound Natural	0.02%	0.15%	0.39%	0.18%	Green, Lake Washington
Spring Creek Hatchery	0.05%	0.13%	0.05%	0.04%	NA
Stillaguamish Summer/Fall	0.00%	0.12%	2.33%	0.89%	Stillaguamish
Nooksack Spring	0.01%	0.11%	1.62%	0.50%	Nooksack Spring
Lower Bonneville Hatchery	0.00%	0.00%	0.00%	0.00%	NA

¹ NA = a hatchery stock; Not represented = a wild stock without an escapement indicator.

Appendix D3—Central BC troll.

FISHERY	CENTRAL TROLL				Associated Escapement Indicator Stocks
	2016	Average (1985–2015)			
Model Stock	% of Fishery Catch	% of Fishery Catch	% of Stock Catch	% of Stock Tot. Ret.	
Fraser Late	0.00%	14.30%	1.39%	0.79%	Harrison
WCVI Hatchery	0.00%	11.43%	2.29%	0.97%	NA
Columbia Upriver Bright	0.00%	5.60%	0.59%	0.34%	Columbia Upriver Bright, Deschutes
Upper Georgia Strait	0.00%	4.78%	2.22%	1.40%	Upper Georgia Strait
North/Central BC	0.00%	4.67%	0.65%	0.28%	Nass, Skeena, Yakoun, Dean, Rivers Inlet
WCVI Wild	0.00%	2.54%	2.26%	0.95%	Artlish, Burman, Kaouk, Tahsis, Tashish, Marble
Columbia Upriver Summer	0.00%	2.51%	2.20%	1.06%	Columbia Upriver Summer
Fraser Early	0.00%	2.22%	0.67%	0.23%	Fraser Spring 1.2, Fraser Spring 1.3, Fraser Summer 1.3, Fraser Summer 0.3
Washington Coastal Wild	0.00%	2.21%	0.75%	0.49%	Grays Harbor Fall, Quillayute Fall, Hoh Fall, Queets Fall
Lower GS Hatchery	0.00%	1.96%	0.92%	0.63%	NA
Mid-Columbia Brights	0.00%	1.78%	0.69%	0.35%	Not Represented
WA Coastal Hatchery	0.00%	1.67%	0.73%	0.46%	NA
Oregon Coastal North Migrating	0.00%	1.66%	0.24%	0.13%	Nehalem, Siletz, Siuslaw
Lower Bonneville Hatchery	0.00%	1.49%	0.61%	0.31%	NA
PS Hatchery Fingerling	0.00%	1.20%	0.17%	0.11%	NA
Lower Georgia Strait	0.00%	1.19%	0.88%	0.62%	Lower Georgia Strait
Nooksack Fall	0.00%	1.16%	0.24%	0.20%	NA
Skagit Summer/Fall	0.00%	0.80%	1.43%	0.59%	Skagit Summer/Fall
Lewis River Wild	0.00%	0.60%	0.41%	0.23%	Lewis River
PS Yearling	0.00%	0.50%	0.25%	0.20%	NA
Snohomish Summer/Fall	0.00%	0.47%	1.24%	0.61%	Snohomish
Spring Creek Hatchery	0.00%	0.46%	0.07%	0.06%	NA
Puget Sound Natural	0.00%	0.45%	0.19%	0.12%	Green, Lake Washington
Willamette River Hatchery	0.00%	0.42%	0.07%	0.04%	NA
Spring Cowlitz Hatchery	0.00%	0.32%	0.15%	0.09%	NA
Fall Cowlitz Hatchery	0.00%	0.31%	0.03%	0.02%	NA
Stillaguamish Summer/Fall	0.00%	0.28%	1.33%	0.62%	Stillaguamish
Snake River Fall	0.00%	0.27%	0.47%	0.36%	Not Represented
Nooksack Spring	0.00%	0.24%	0.28%	0.13%	Nooksack Spring
Alaska South SE	0.00%	0.23%	0.01%	0.00%	Unuk, Chickamin

¹ NA = a hatchery stock; Not represented = a wild stock without an escapement indicator.

Appendix D4–WCVI troll and outside sport.

FISHERY	WCVI TROLL AND OUTSIDE SPORT				
	2016	Average (1985-2015)			Associated Escapement Indicator Stocks
Model Stock	% of Fishery Catch	% of Fishery Catch	% of Stock Catch	% of Stock Tot. Ret.	
Fraser Late	20.16%	25.49%	22.97%	11.08%	Harrison
PS Hatchery Fingerling	5.27%	10.42%	13.63%	8.40%	NA
Columbia Upriver Bright	26.38%	9.43%	7.89%	4.26%	Columbia Upriver Bright, Deschutes
Spring Creek Hatchery	12.66%	7.28%	12.83%	10.11%	NA
Fall Cowlitz Hatchery	6.38%	6.62%	19.94%	9.54%	NA
Lower Bonneville Hatchery	1.26%	4.82%	27.56%	12.89%	NA
Oregon Coastal North Migrating	2.98%	4.54%	6.55%	3.23%	Nehalem, Siletz, Siuslaw
Nooksack Fall	1.41%	4.12%	9.90%	7.56%	NA
Mid-Columbia Brights	4.29%	3.78%	11.59%	5.11%	Not Represented
WCVI Hatchery	0.00%	3.31%	5.47%	2.51%	NA
Columbia Upriver Summer	4.14%	3.16%	15.53%	7.54%	Columbia Upriver Summer
Washington Coastal Wild	2.58%	2.45%	9.23%	5.07%	Grays Harbor Fall, Quillayute Fall, Hoh Fall, Queets Fall
WA Coastal Hatchery	2.89%	2.19%	9.54%	4.88%	NA
Willamette River Hatchery	0.67%	1.91%	5.94%	2.83%	NA
Puget Sound Natural	0.45%	1.87%	16.62%	8.48%	Green, Lake Washington
PS Yearling	1.04%	1.57%	8.92%	6.36%	NA
Fraser Early	1.96%	1.52%	5.18%	1.12%	Fraser Spring 1.2, Fraser Spring 1.3, Fraser Summer 1.3, Fraser Summer 0.3
Skagit Summer/Fall	0.62%	0.84%	19.24%	6.30%	Skagit Summer/Fall
WCVI Wild	0.00%	0.80%	5.44%	2.50%	Artlish, Burman, Kaouk, Tahsis, Tashish, Marble
Lewis River Wild	0.94%	0.76%	9.60%	4.73%	Lewis River
Snake River Fall	1.46%	0.66%	20.57%	13.87%	Not Represented
Spring Cowlitz Hatchery	0.88%	0.66%	7.86%	4.37%	NA
North/Central BC	0.47%	0.49%	0.37%	0.18%	Nass, Skeena, Yakoun, Dean, Rivers Inlet
Lower GS Hatchery	0.27%	0.45%	2.78%	1.44%	NA
Snohomish Summer/Fall	0.15%	0.33%	18.45%	6.29%	Snohomish
Lower Georgia Strait	0.40%	0.25%	2.75%	1.53%	Lower Georgia Strait
Upper Georgia Strait	0.26%	0.16%	0.54%	0.32%	Upper Georgia Strait
Stillaguamish Summer/Fall	0.02%	0.09%	15.28%	5.98%	Stillaguamish
Nooksack Spring	0.04%	0.06%	10.18%	3.46%	Nooksack Spring
Alaska South SE	0.00%	0.00%	0.00%	0.00%	Unuk, Chickamin

¹ NA = a hatchery stock; Not represented = a wild stock without an escapement indicator.

Appendix D5–Strait of Georgia sport and troll.

FISHERY	STRAIT OF GEORGIA SPORT AND TROLL				
	2016	Average (1985–2015)			Associated Escapement Indicator Stocks
Model Stock	% of Fishery Catch	% of Fishery Catch	% of Stock Catch	% of Stock Tot. Ret.	
Fraser Late	37.71%	47.48%	36.10%	18.05%	Harrison
Lower GS Hatchery	5.89%	8.92%	42.59%	24.29%	NA
Nooksack Fall	5.11%	8.58%	17.55%	13.13%	NA
PS Hatchery Fingerling	7.86%	6.54%	7.31%	4.41%	NA
Lower Georgia Strait	7.85%	5.27%	43.29%	26.02%	Lower Georgia Strait
PS Yearling	6.46%	4.43%	19.36%	13.54%	NA
Fraser Early	7.18%	4.28%	11.69%	2.57%	Fraser Spring 1.2, Fraser Spring 1.3, Fraser Summer 1.3, Fraser Summer 0.3
Upper Georgia Strait	8.11%	4.01%	10.77%	6.28%	Upper Georgia Strait
Columbia Upriver Bright	1.98%	1.35%	0.87%	0.45%	Columbia Upriver Bright, Deschutes
Skagit Summer/Fall	1.92%	1.21%	23.90%	7.59%	Skagit Summer/Fall
Puget Sound Natural	0.61%	1.06%	8.85%	4.19%	Green, Lake Washington
Spring Creek Hatchery	2.84%	1.00%	1.38%	1.08%	NA
Washington Coastal Wild	0.87%	0.87%	2.64%	1.49%	Grays Harbor Fall, Quillayute Fall, Hoh Fall, Queets Fall
WA Coastal Hatchery	1.01%	0.75%	2.67%	1.46%	NA
WCVI Hatchery	0.90%	0.73%	1.26%	0.41%	NA
North/Central BC	0.69%	0.61%	0.45%	0.21%	Nass, Skeena, Yakoun, Dean, Rivers Inlet
Lower Bonneville Hatchery	0.24%	0.58%	2.94%	1.25%	NA
Columbia Upriver Summer	0.89%	0.48%	2.25%	0.99%	Columbia Upriver Summer
Snohomish Summer/Fall	0.46%	0.46%	22.59%	7.45%	Snohomish
Nooksack Spring	0.57%	0.45%	65.69%	23.72%	Nooksack Spring
Mid-Columbia Brights	0.43%	0.45%	1.12%	0.48%	Not Represented
Stillaguamish Summer/Fall	0.09%	0.16%	23.50%	8.86%	Stillaguamish
WCVI Wild	0.11%	0.13%	1.29%	0.41%	Artlish, Burman, Kaouk, Tahsis, Tashish, Marble
Willamette River Hatchery	0.11%	0.13%	0.33%	0.16%	NA
Spring Cowlitz Hatchery	0.10%	0.05%	0.49%	0.25%	NA
Fall Cowlitz Hatchery	0.00%	0.01%	0.03%	0.02%	NA
Lewis River Wild	0.00%	0.01%	0.13%	0.07%	Lewis River
Snake River Fall	0.01%	0.00%	0.10%	0.06%	Not Represented
Oregon Coastal North Migrating	0.00%	0.00%	0.00%	0.00%	Nehalem, Siletz, Siuslaw
Alaska South SE	0.00%	0.00%	0.00%	0.00%	Unuk, Chickamin

¹ NA = a hatchery stock; Not represented = a wild stock without an escapement indicator.

Appendix D6–Washington/Oregon troll and sport.

FISHERY	WA/OR TROLL AND SPORT				
	2016	Average (1985-2015)			Associated Escapement Indicator Stocks
Model Stock	% of Fishery Catch	% of Fishery Catch	% of Stock Catch	% of Stock Tot. Ret.	
Spring Creek Hatchery	28.12%	25.37%	32.02%	25.21%	NA
Fall Cowlitz Hatchery	17.62%	19.02%	42.00%	19.06%	NA
Fraser Late	14.69%	18.94%	12.40%	5.85%	Harrison
Lower Bonneville Hatchery	3.70%	9.42%	42.00%	18.14%	NA
Columbia Upriver Bright	7.57%	4.56%	2.79%	1.43%	Columbia Upriver Bright, Deschutes
Spring Cowlitz Hatchery	9.31%	4.45%	41.15%	21.31%	NA
PS Hatchery Fingerling	3.63%	4.21%	3.88%	2.27%	NA
Oregon Coastal North Migrating	2.09%	2.53%	2.80%	1.26%	Nehalem, Siletz, Siuslaw
Willamette River Hatchery	1.13%	1.76%	4.12%	1.80%	NA
Nooksack Fall	0.63%	1.57%	2.56%	1.90%	NA
Mid-Columbia Brights	1.78%	1.56%	3.59%	1.46%	Not Represented
Lewis River Wild	1.73%	1.41%	14.27%	6.27%	Lewis River
Snake River Fall	3.40%	1.10%	23.59%	14.77%	Not Represented
Washington Coastal Wild	0.91%	1.04%	2.63%	1.42%	Grays Harbor Fall, Quillayute Fall, Hoh Fall, Queets Fall
WA Coastal Hatchery	1.05%	0.89%	2.70%	1.37%	NA
Columbia Upriver Summer	1.61%	0.81%	2.42%	1.17%	Columbia Upriver Summer
Puget Sound Natural	0.31%	0.75%	5.20%	2.28%	Green, Lake Washington
PS Yearling	0.33%	0.27%	1.13%	0.76%	NA
Fraser Early	0.27%	0.19%	0.60%	0.11%	Fraser Spring 1.2, Fraser Spring 1.3, Fraser Summer 1.3, Fraser Summer 0.3
Alaska South SE	0.03%	0.07%	0.81%	0.27%	Unuk, Chickamin
Lower GS Hatchery	0.02%	0.03%	0.16%	0.08%	NA
WCVI Hatchery	0.03%	0.02%	0.04%	0.01%	NA
Lower Georgia Strait	0.03%	0.02%	0.17%	0.09%	Lower Georgia Strait
WCVI Wild	0.00%	0.01%	0.04%	0.01%	Artlish, Burman, Kaouk, Tahsis, Tashish, Marble
Skagit Summer/Fall	0.00%	0.00%	0.06%	0.02%	Skagit Summer/Fall
Snohomish Summer/Fall	0.00%	0.00%	0.08%	0.02%	Snohomish
Nooksack Spring	0.00%	0.00%	0.00%	0.00%	Nooksack Spring
North/Central BC	0.00%	0.00%	0.00%	0.00%	Nass, Skeena, Yakoun, Dean, Rivers Inlet
Stillaguamish Summer/Fall	0.00%	0.00%	0.00%	0.00%	Stillaguamish
Upper Georgia Strait	0.00%	0.00%	0.00%	0.00%	Upper Georgia Strait

¹ NA = a hatchery stock; Not represented = a wild stock without an escapement indicator.

APPENDIX E: FIGURES OF CHINOOK MODEL-GENERATED STOCK COMPOSITION OF ACTUAL LANDED CATCH FOR ALL (AABM AND ISBM) MODEL FISHERIES, 1979-2016

Stock abbreviations in each figure correspond to the following model stocks and aggregations:

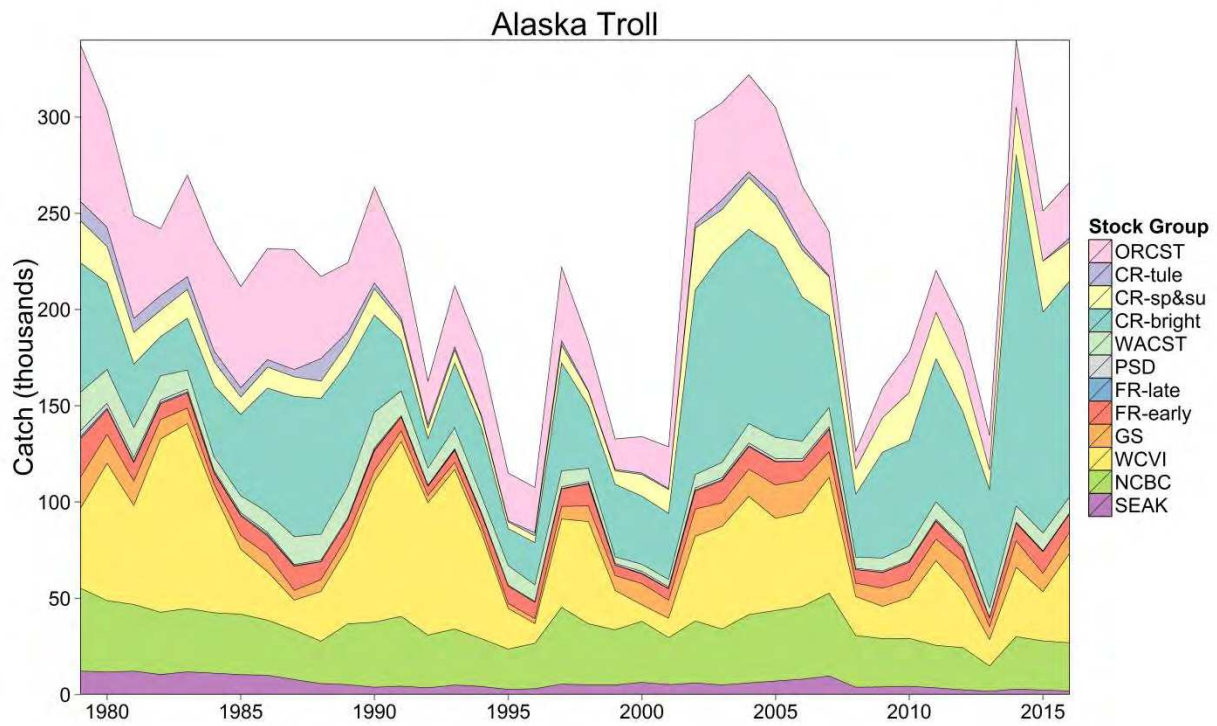
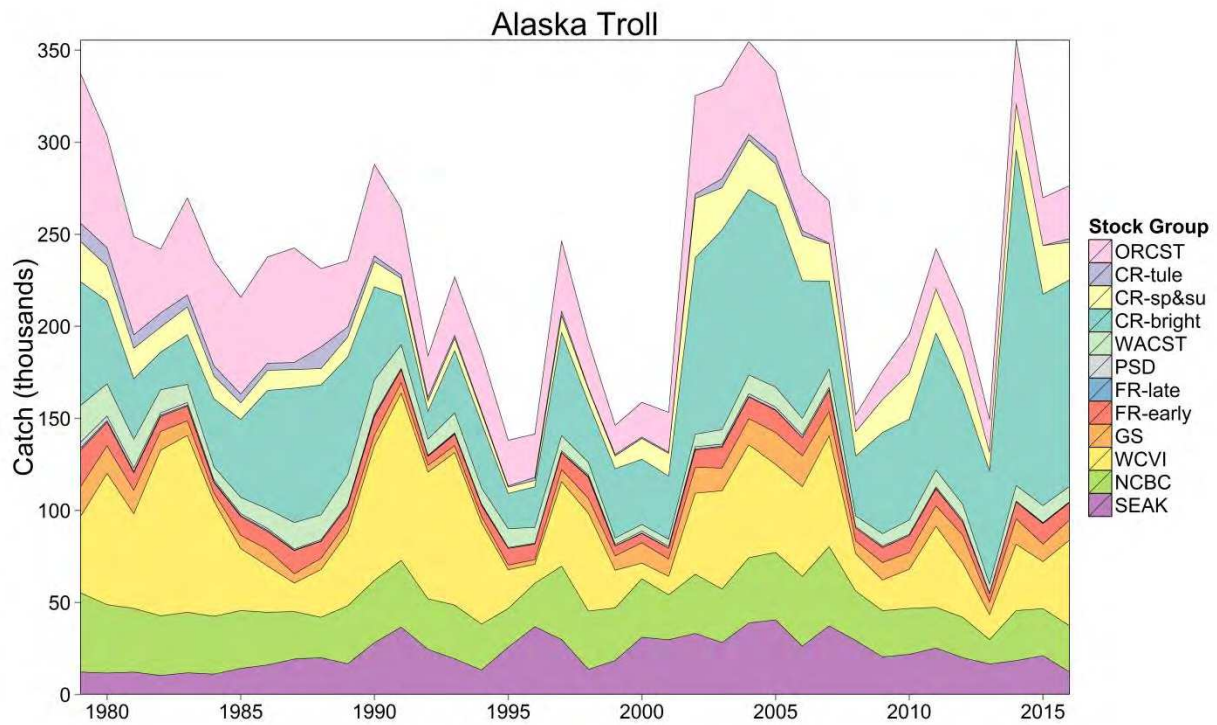
ORCST	Oregon Coast
CR-tule	Columbia River-Fall Tule stocks (Spring Creek, Lower River Hatchery, and Cowlitz Fall)
CR-sp&su	Columbia River Spring and Summer stocks (Willamette, Cowlitz Spring, Columbia Summers)
CR-bright	Columbia River Fall Bright stocks (Upriver, Mid-Columbia, Lewis River Wild, Lyons Ferry)
WACST	Washington Coast
PSD	Puget Sound stocks (Nooksack Fall and Spring, Natural Fall Fingerlings, Hatchery Fall Fingerlings, Hatchery Yearlings, Skagit Wild, Stillaguamish Wild, Snohomish Wild)
FR-late	Fraser River Late stock
FR-early	Fraser River Early stocks
GS	Georgia Strait stocks (Upper, Lower Natural, Lower Hatchery)
WCVI	West Coast Vancouver Island Stocks (hatchery and natural)
NCBC	North Central British Columbia stocks
SEAK	Southeast Alaska stocks

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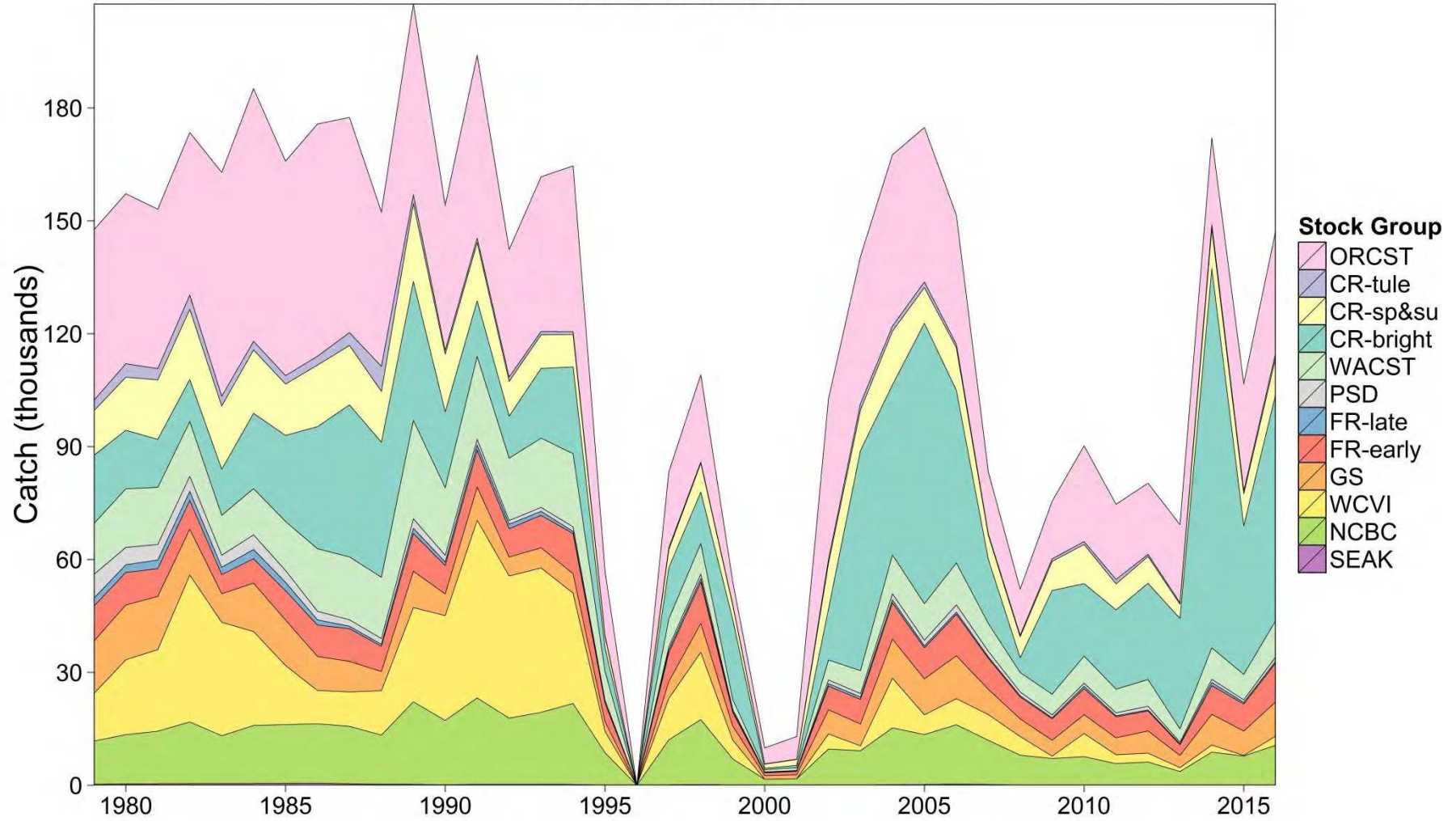
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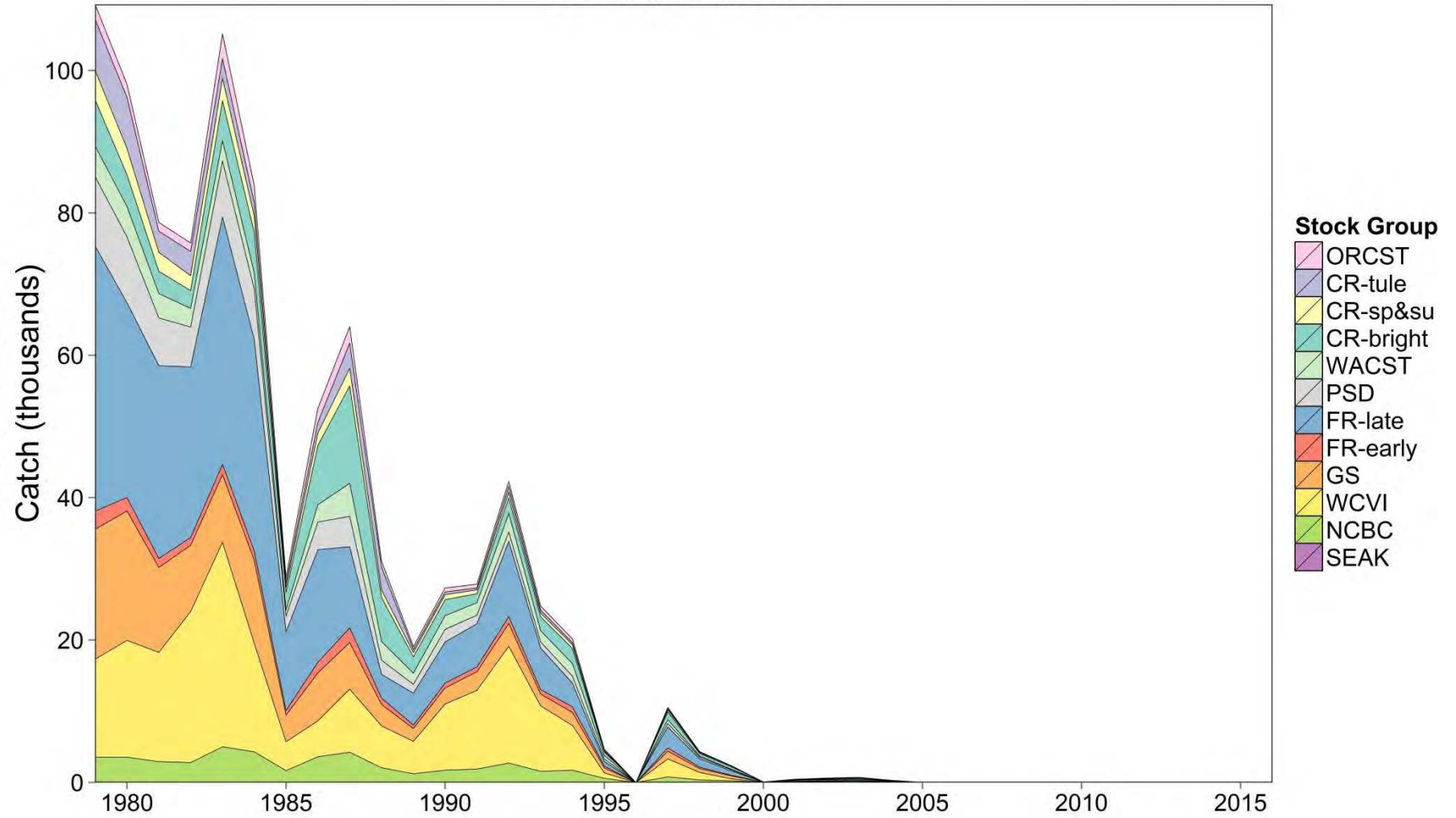
Appendix E1—Chinook Model Estimates of landed catch stock composition for Alaska troll with (upper) and without (lower) Alaska hatchery add-on and terminal exclusion, 1979–2016.



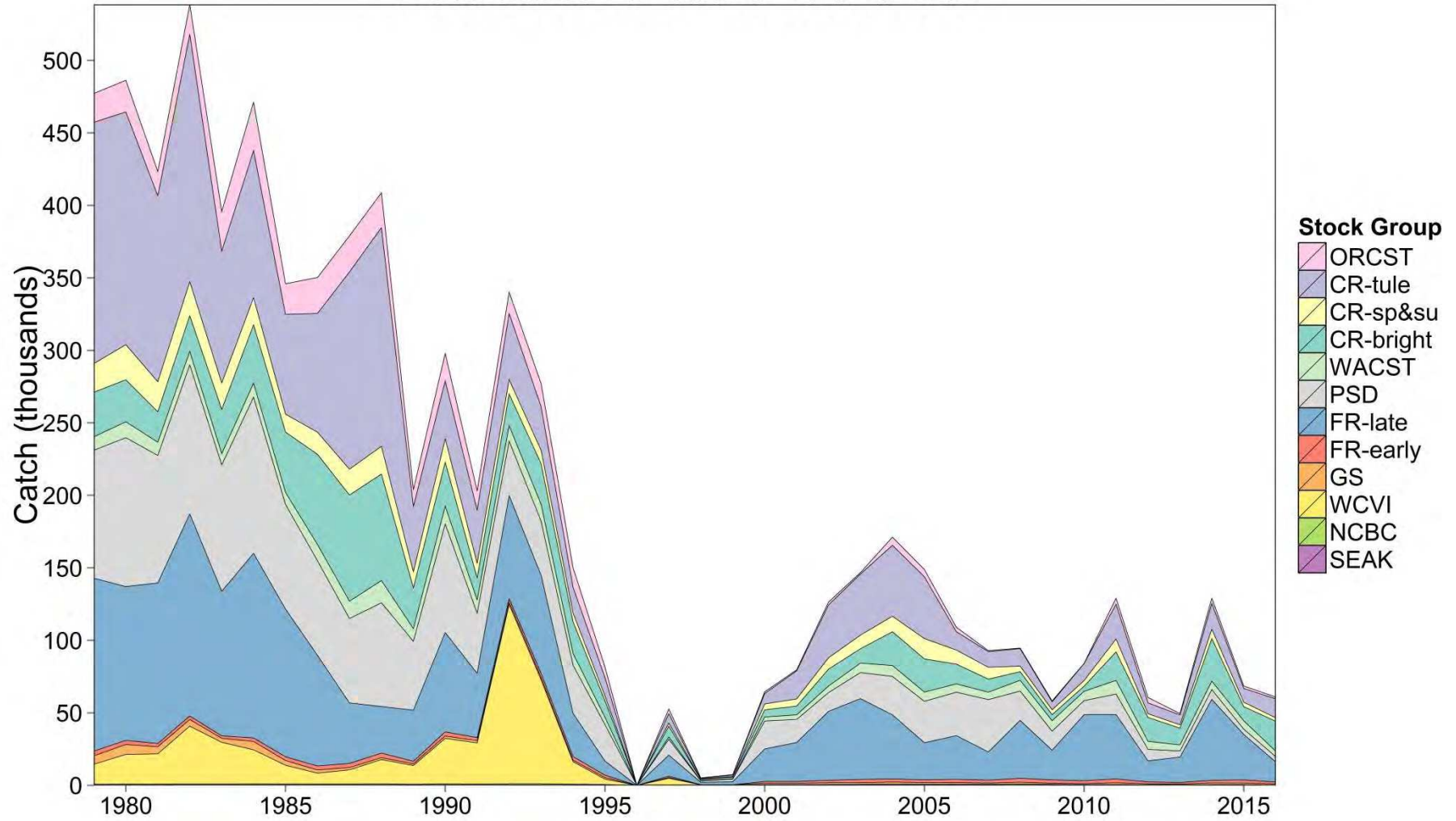
North BC Troll



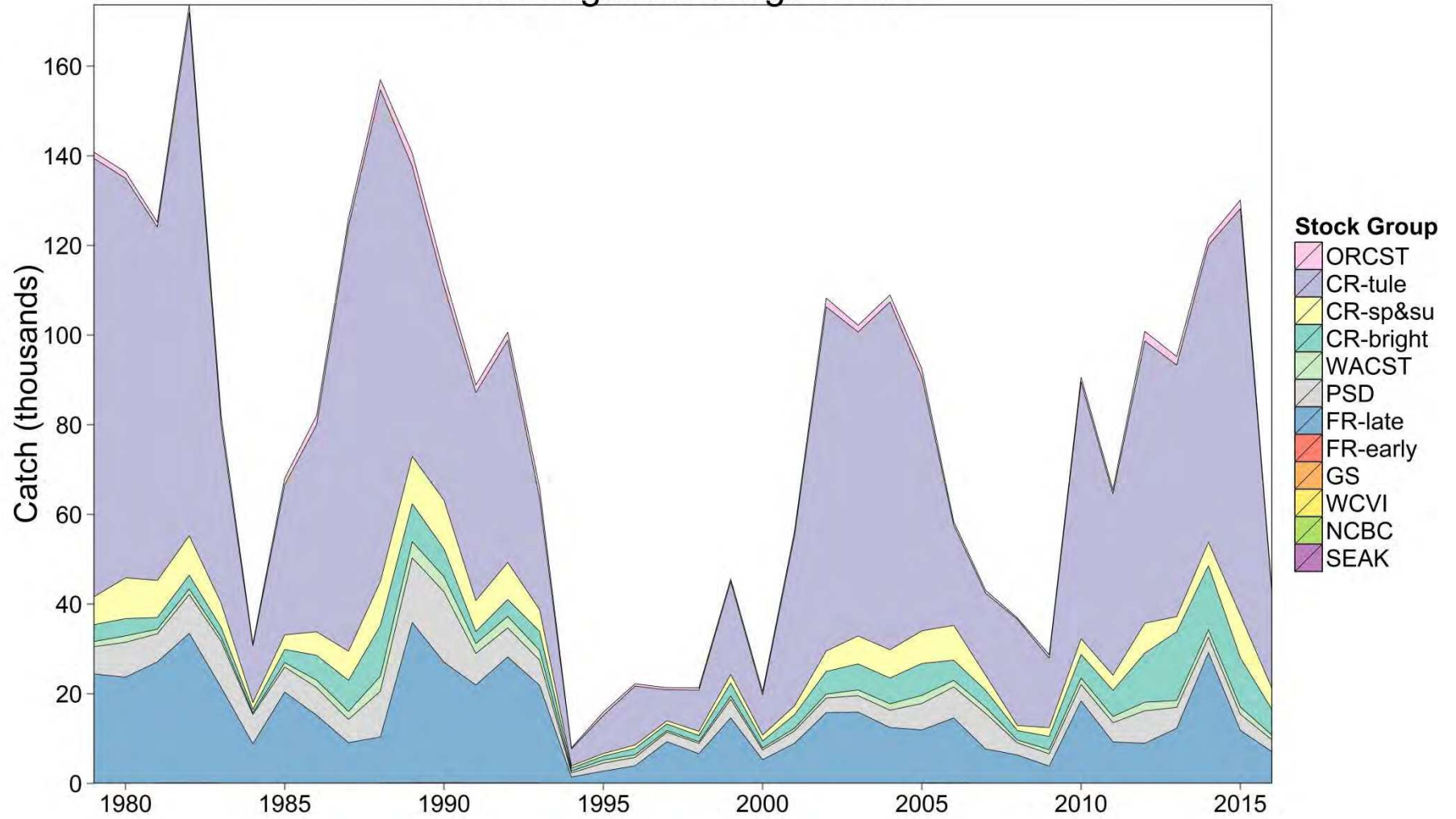
Central BC Troll



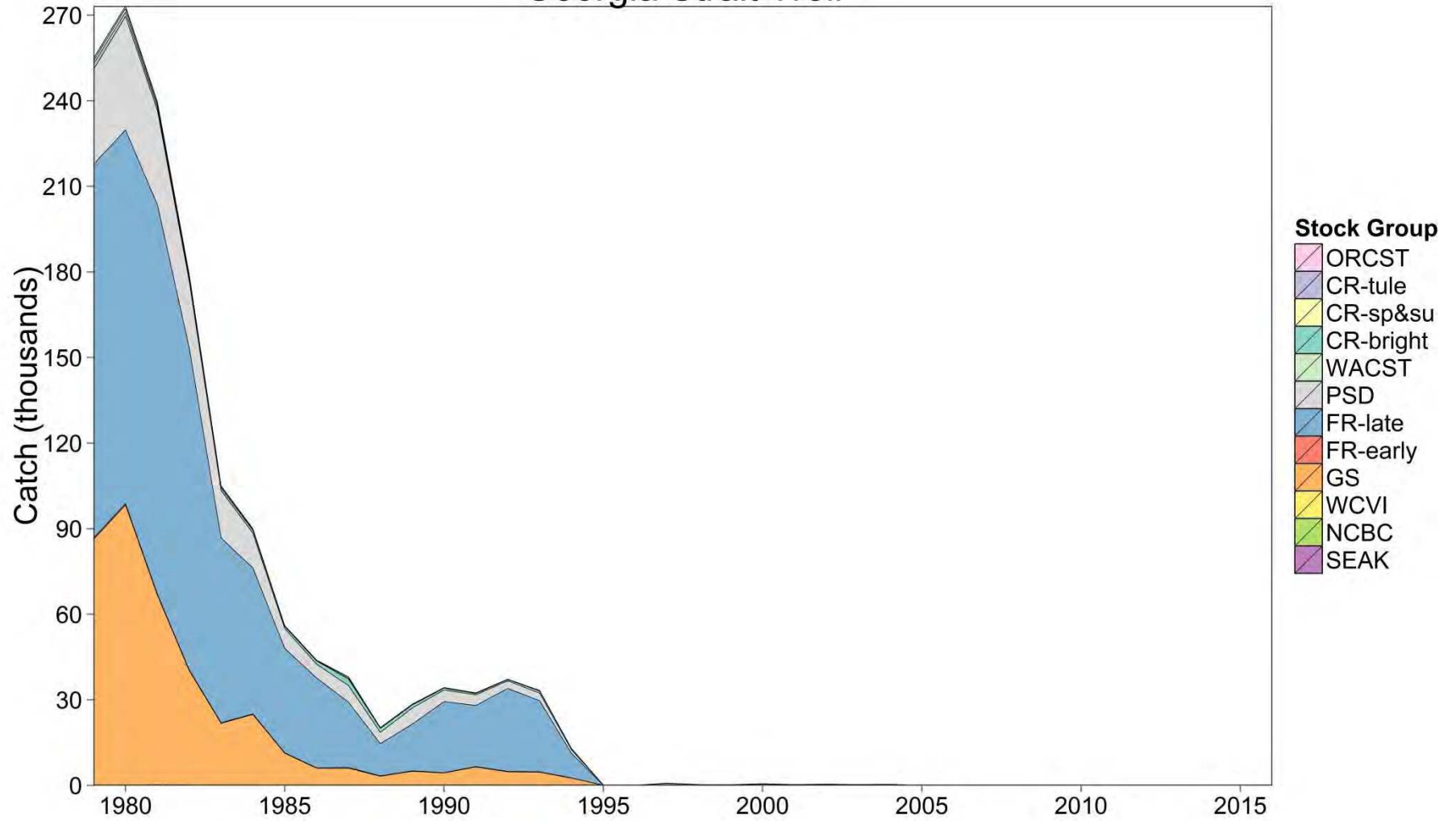
West Coast Vancouver Island Troll



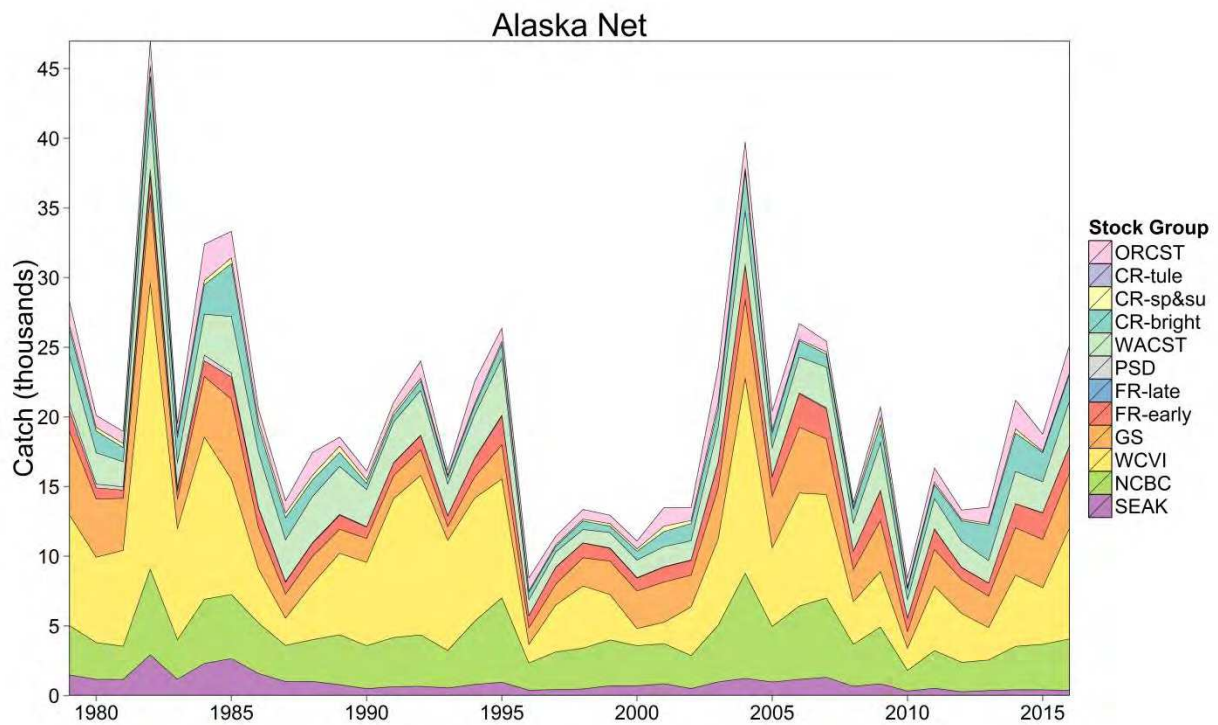
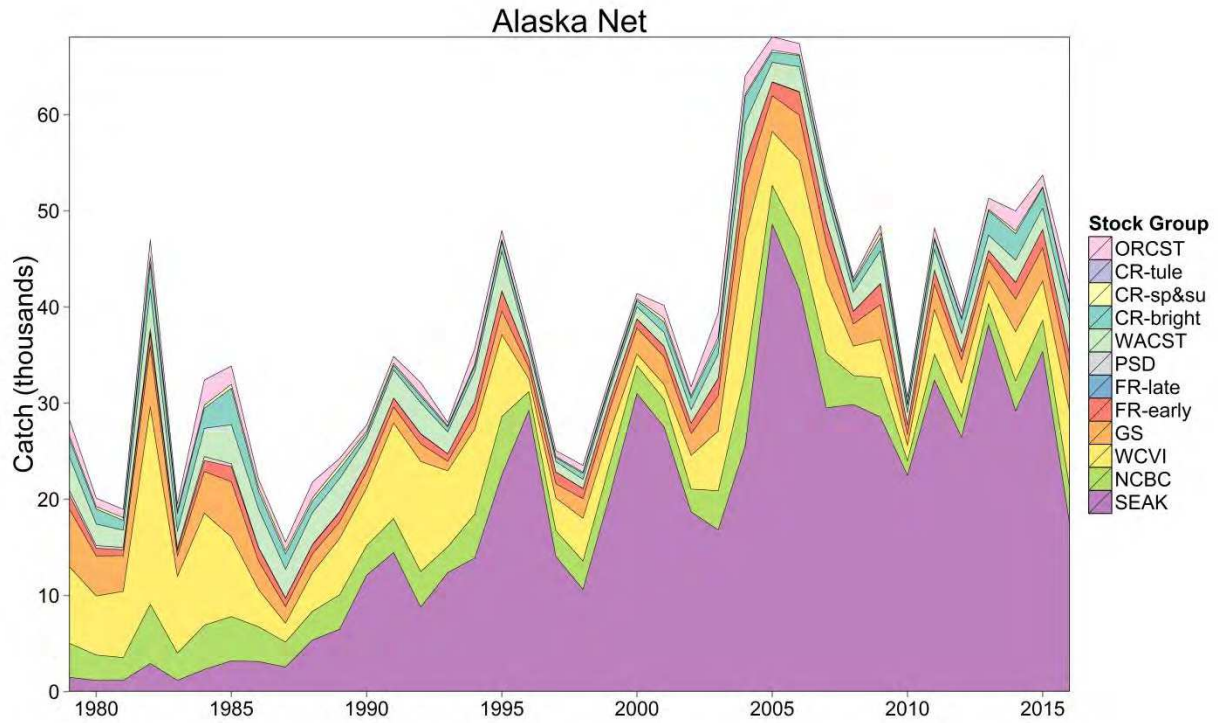
Washington & Oregon Troll



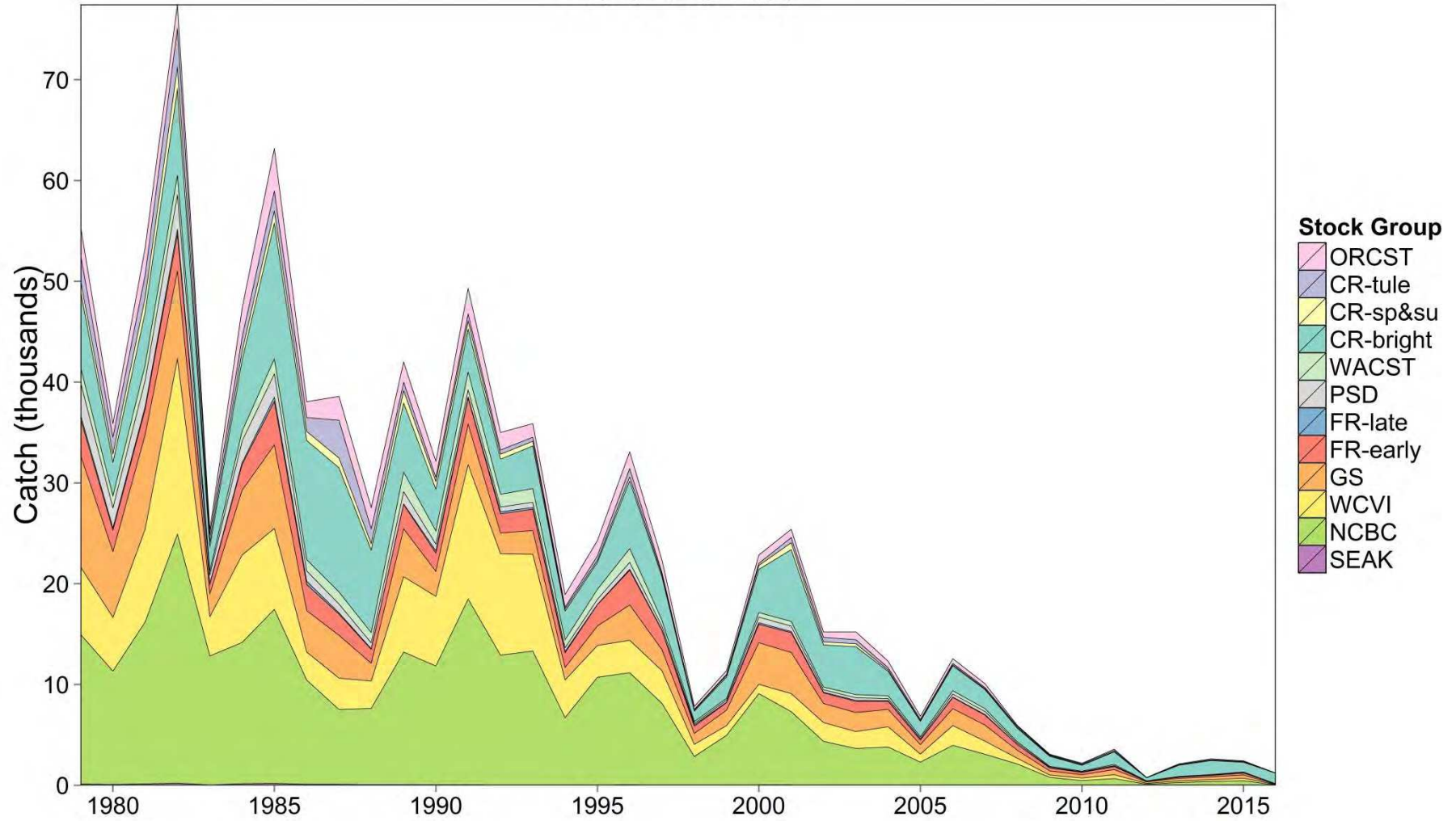
Georgia Strait Troll



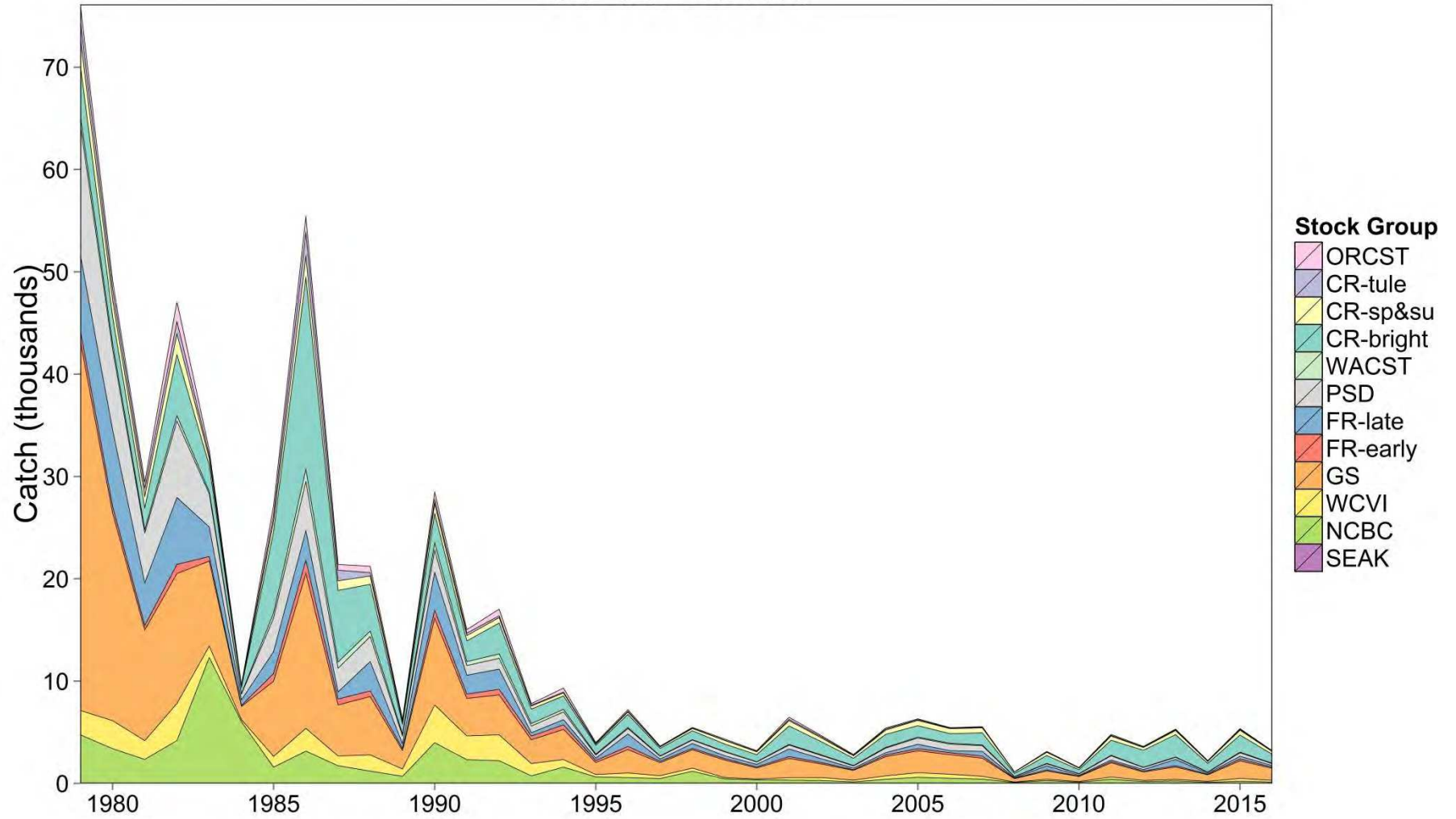
Appendix E7—Chinook Model Estimates of landed catch stock composition for Alaska net with (upper) and without (lower) hatchery add-on and terminal exclusion, 1979–2016.



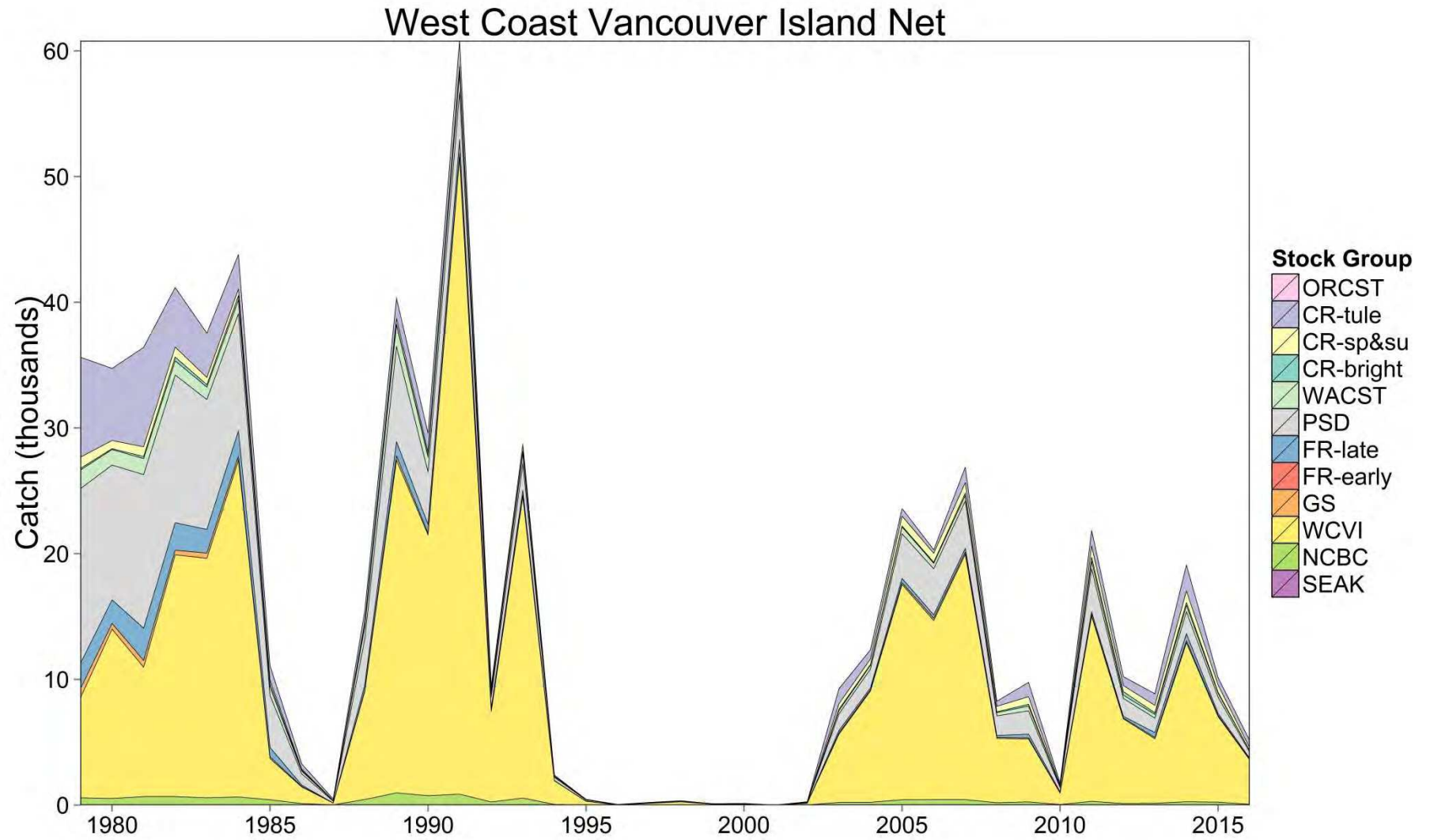
North BC Net



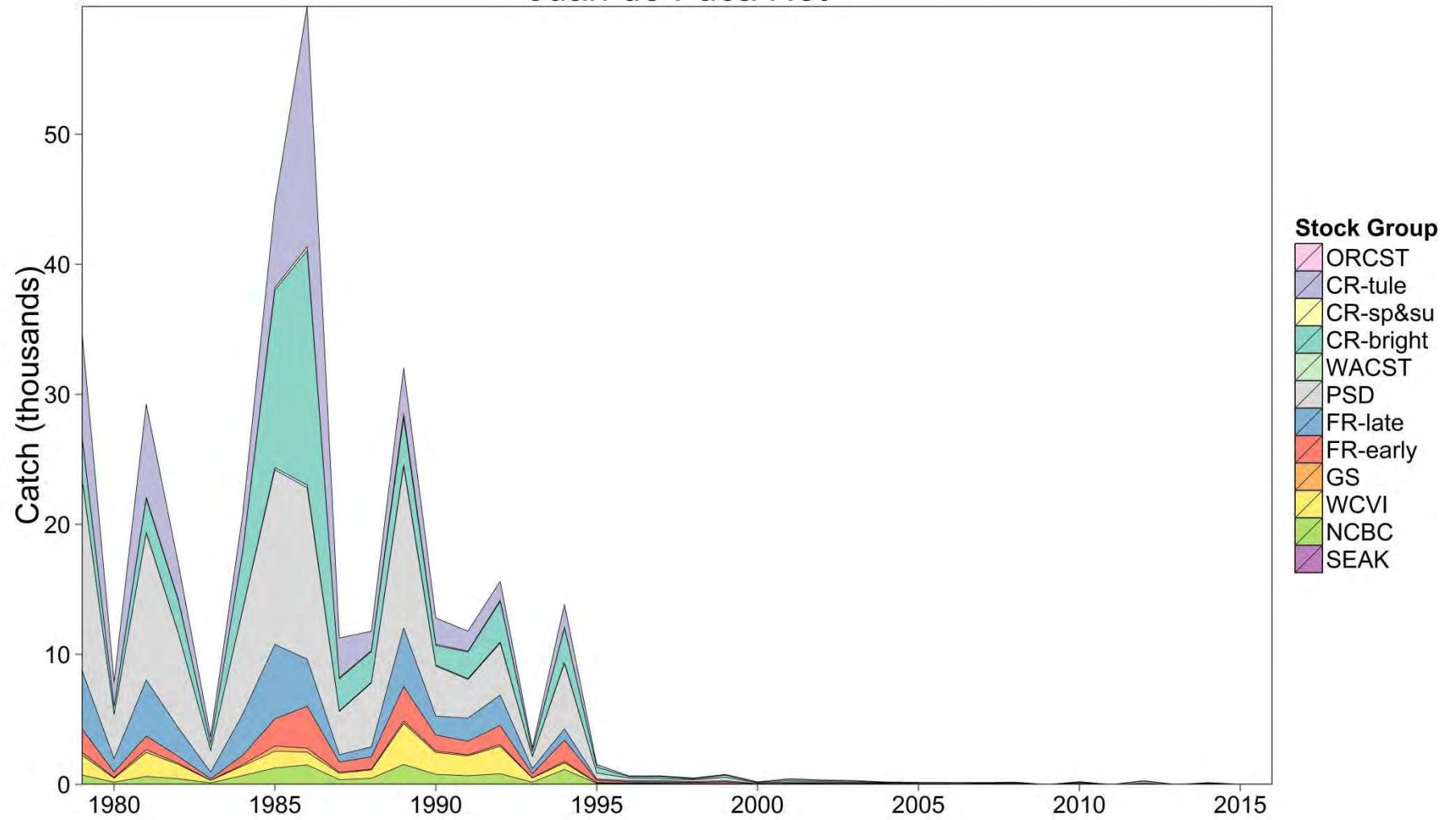
Central BC Net



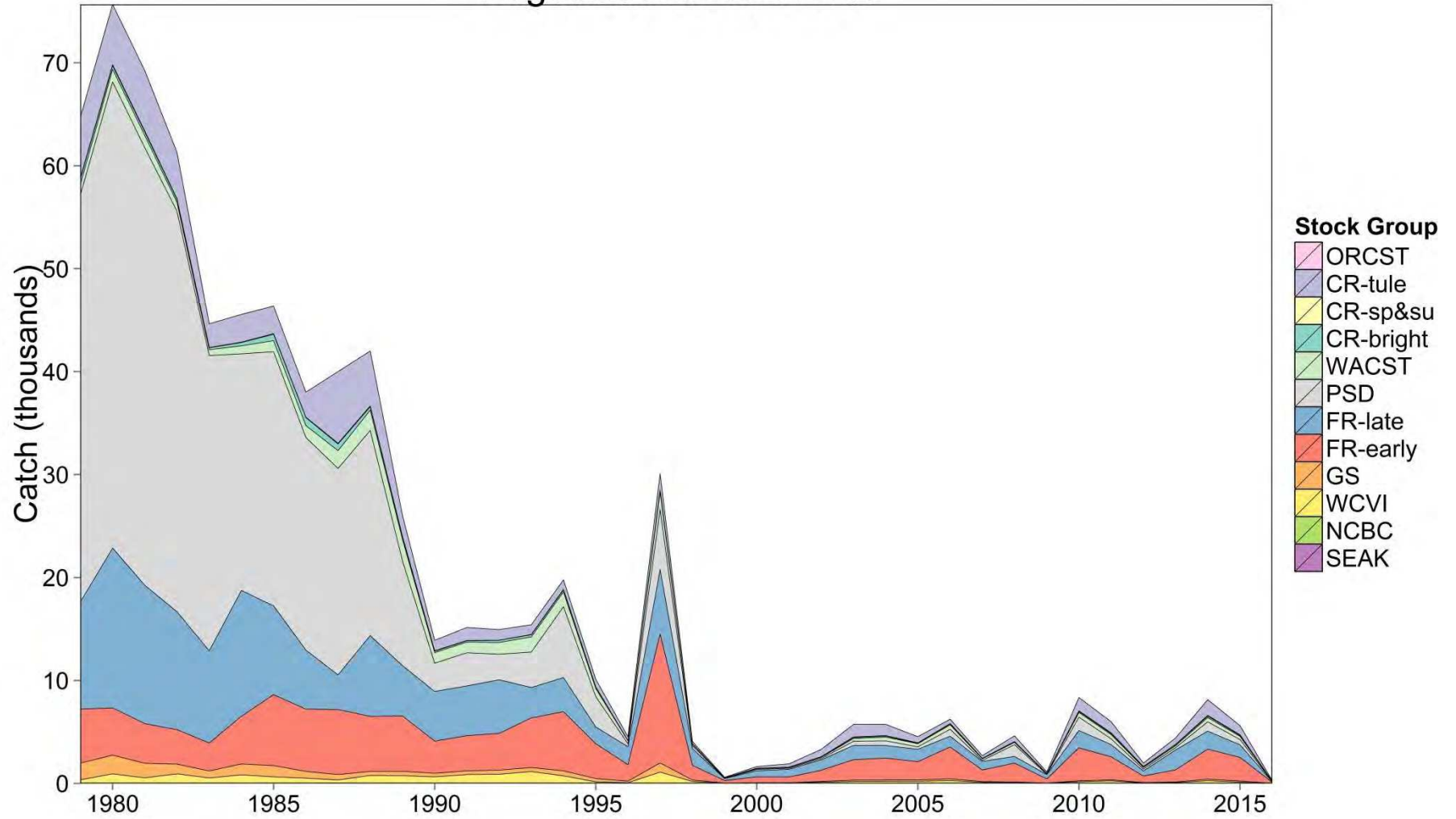
Appendix E10—Chinook Model Estimates of landed catch stock composition for West Coast Vancouver Island net, 1979–2016.

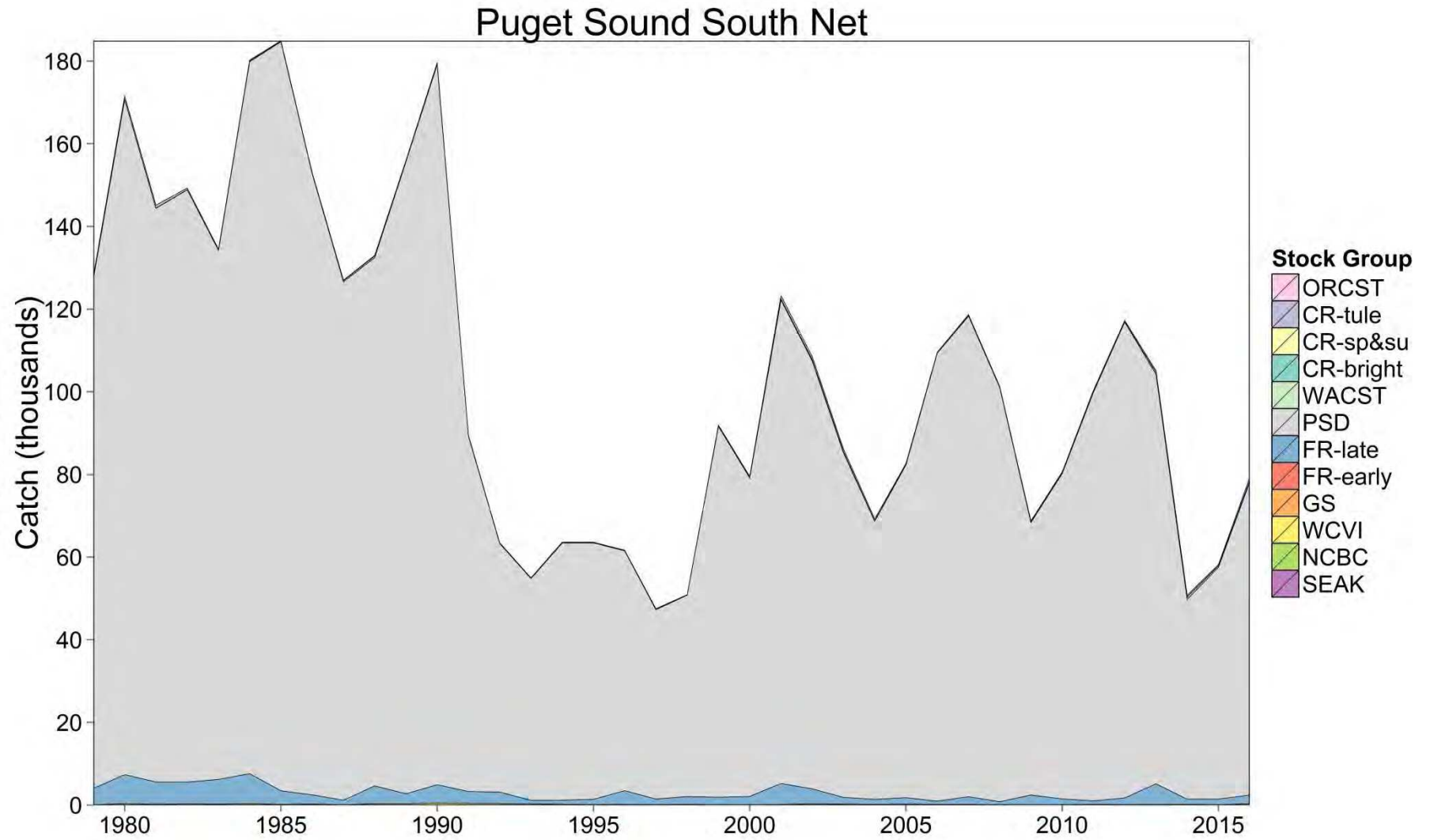


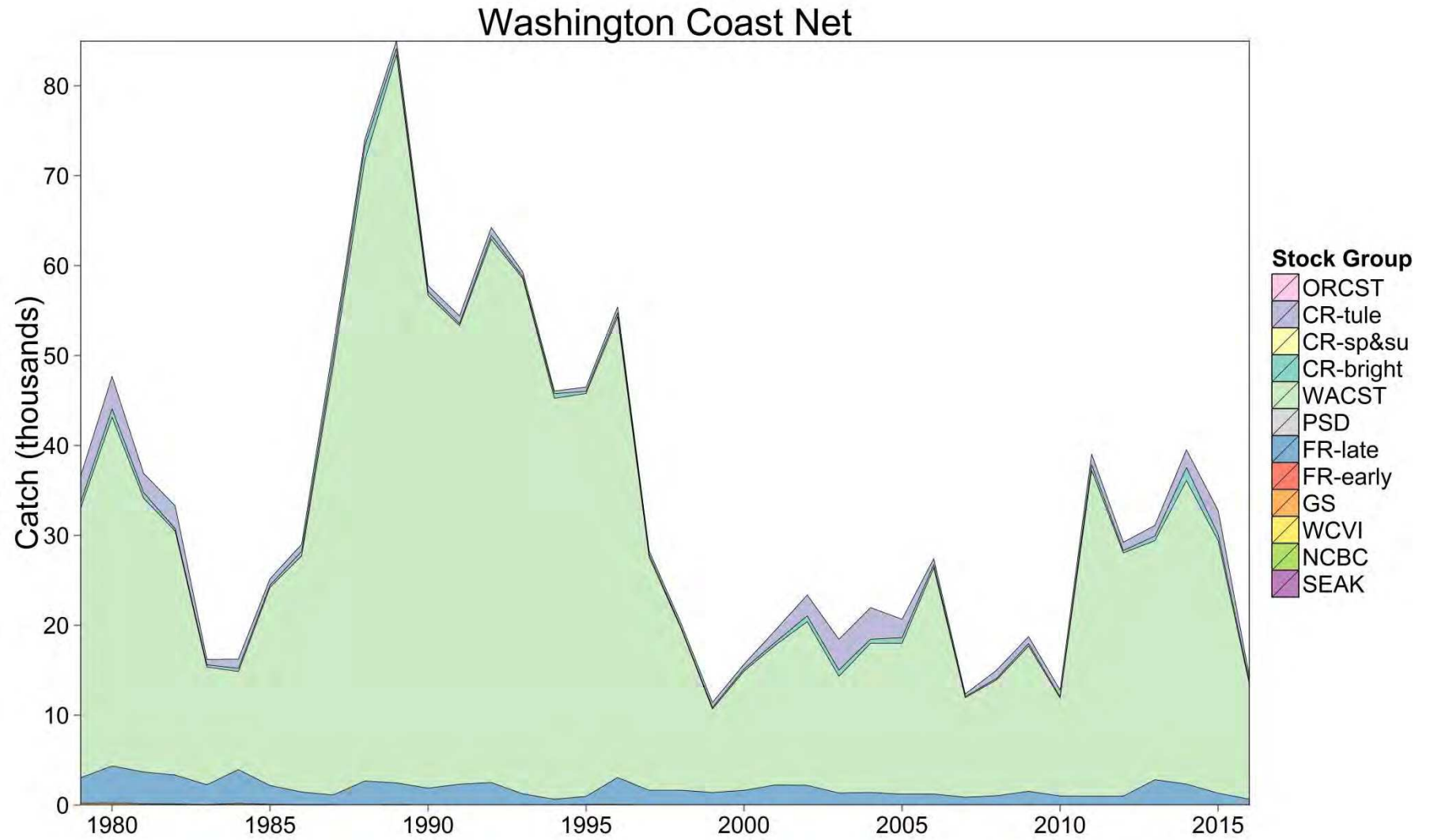
Juan de Fuca Net



Puget Sound North Net

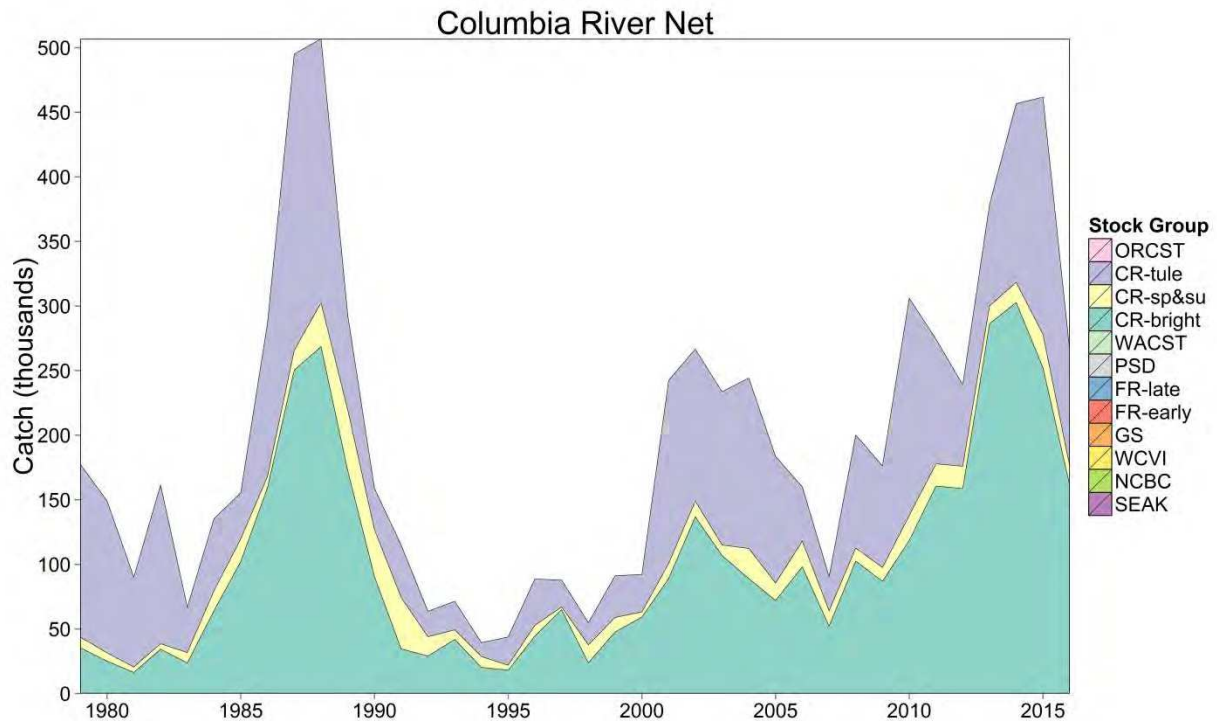
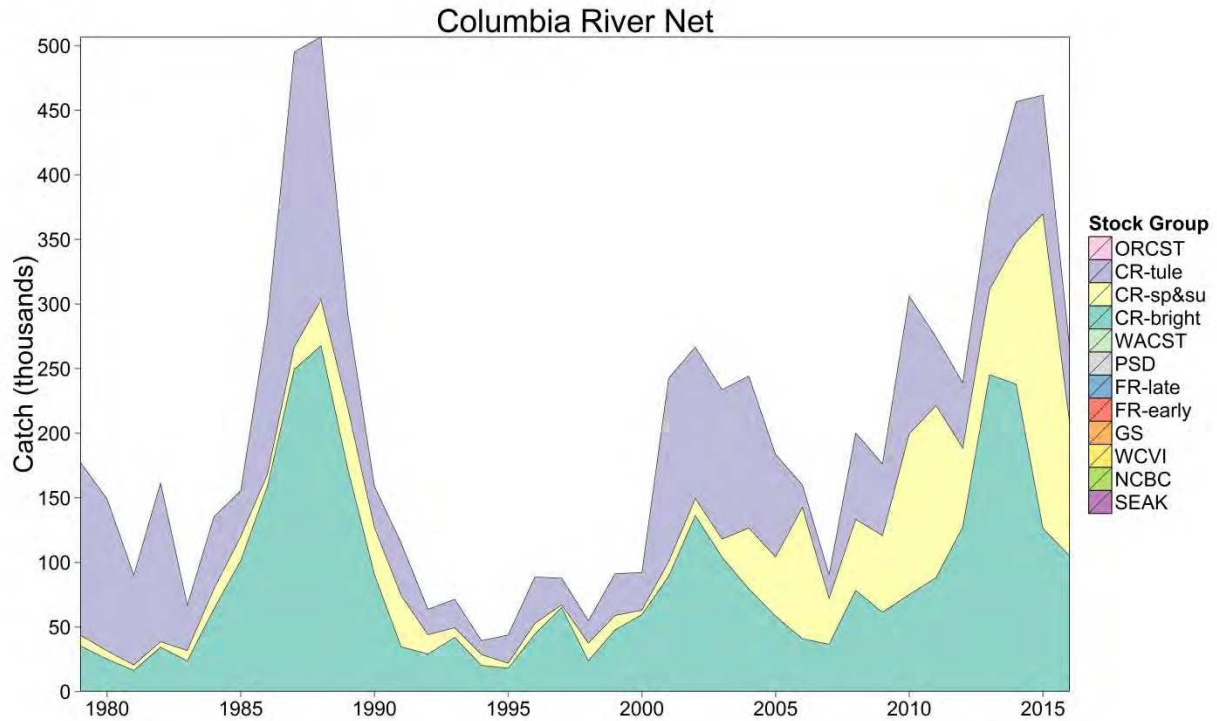




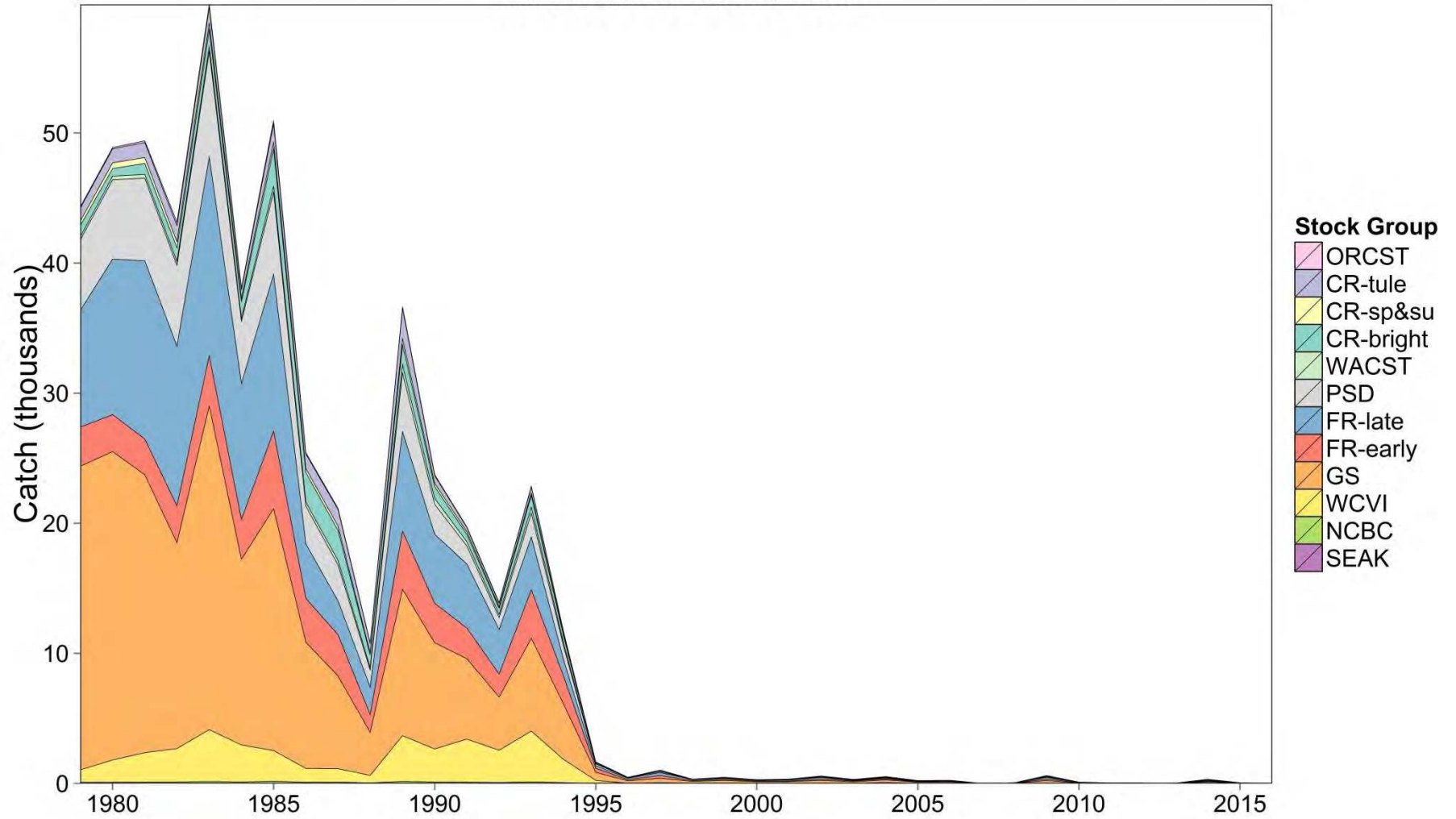


Appendix E15—Chinook Model Estimates of landed catch stock composition for Columbia River net, 1979–2016. The top figure is the version used in CLB 1702; the bottom figure is a corrected version.

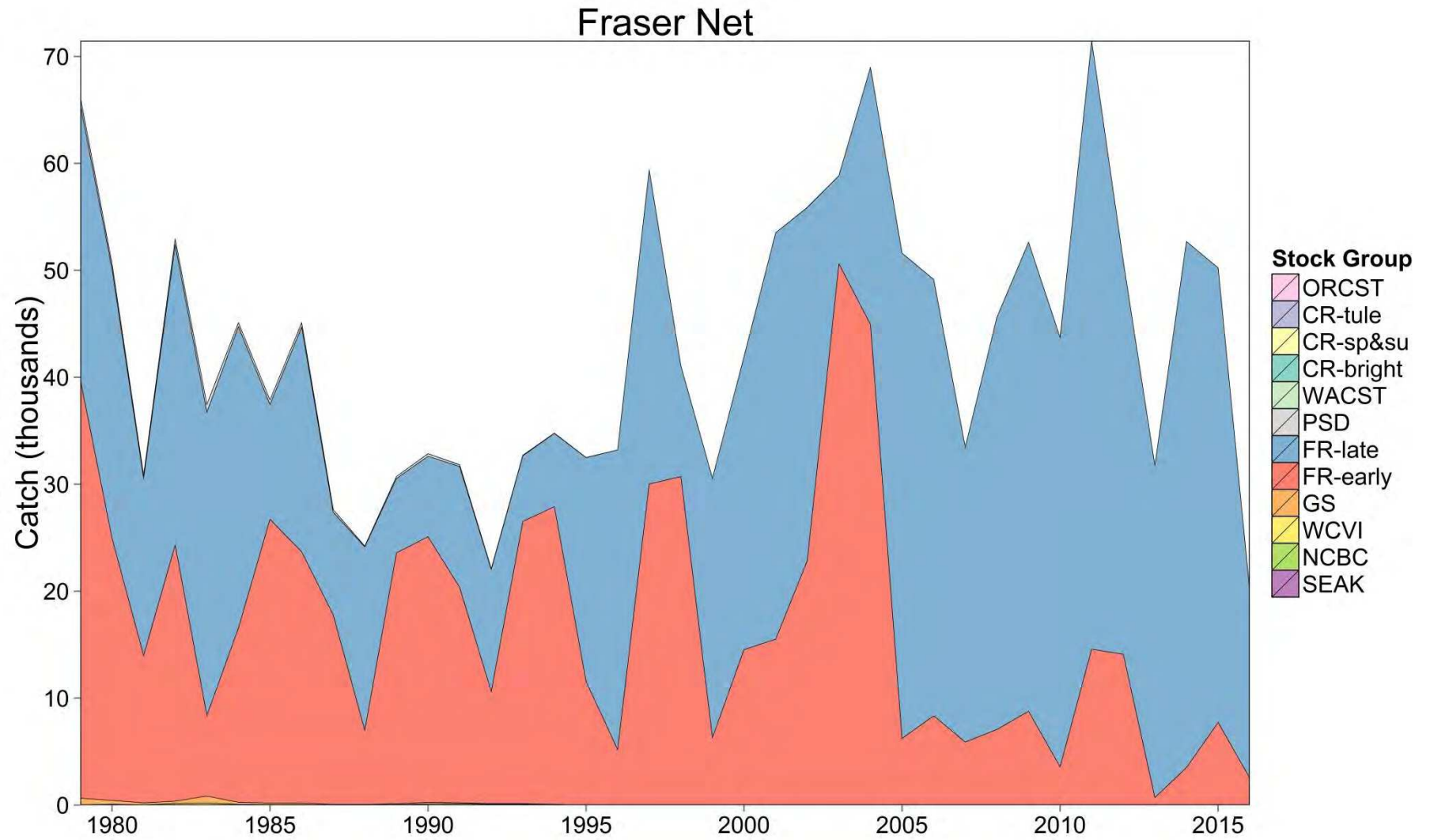
Note: An error was discovered after CLB1702 was adopted, which resulted in the landed stock composition of this fishery to be incorrect. The upper figure is from CLB1702, which had the error. Though the upper figure is wrong, it is included in this appendix because it is part of the official Model Calibration. The lower figure is from CLB1702_SUM_FP_Fix, which corrects the error.



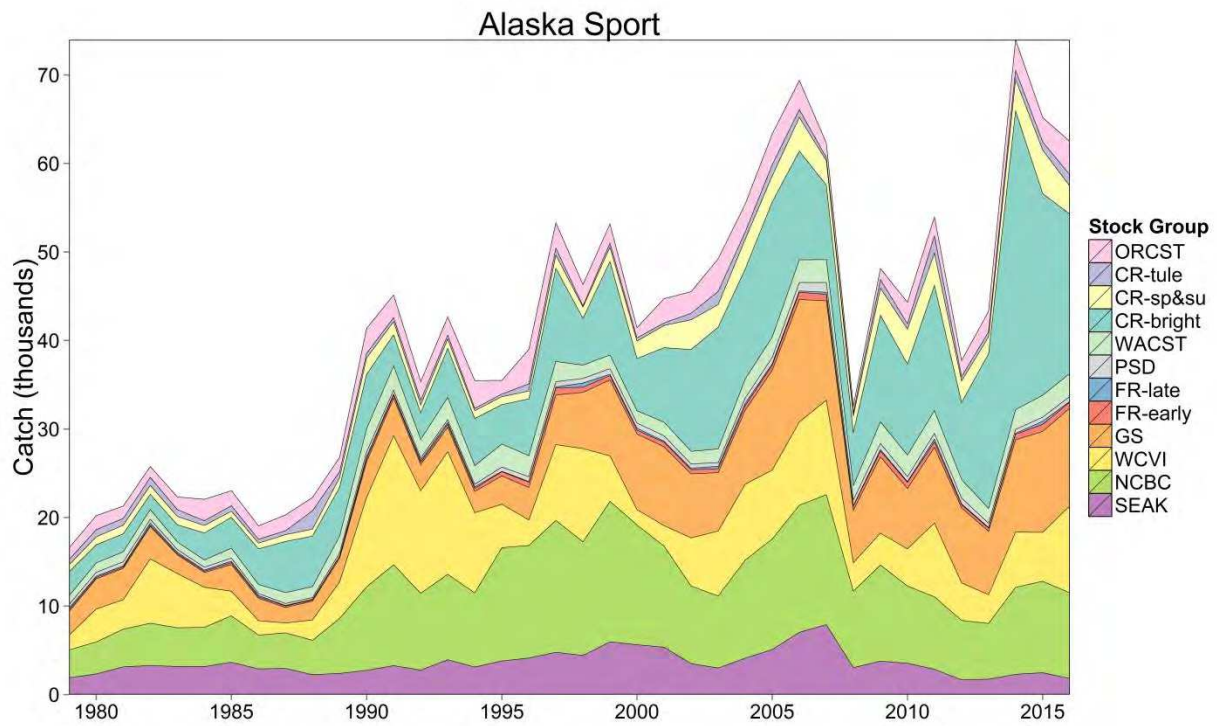
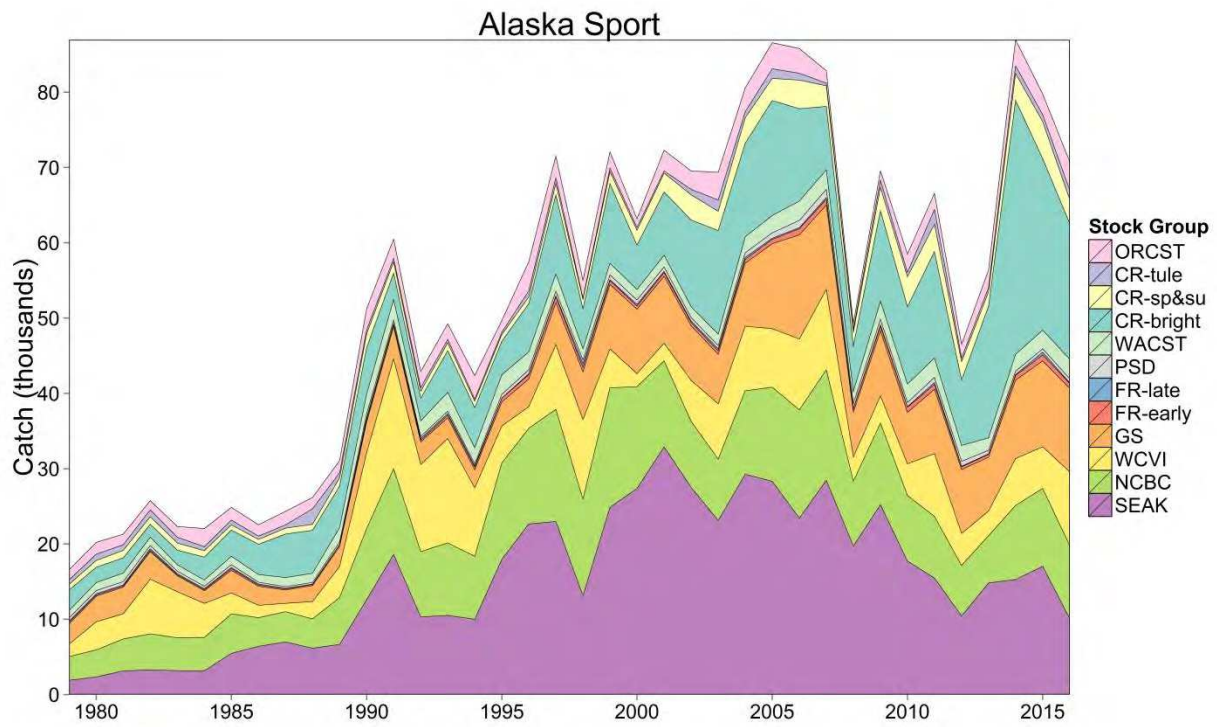
Johnstone Strait Net

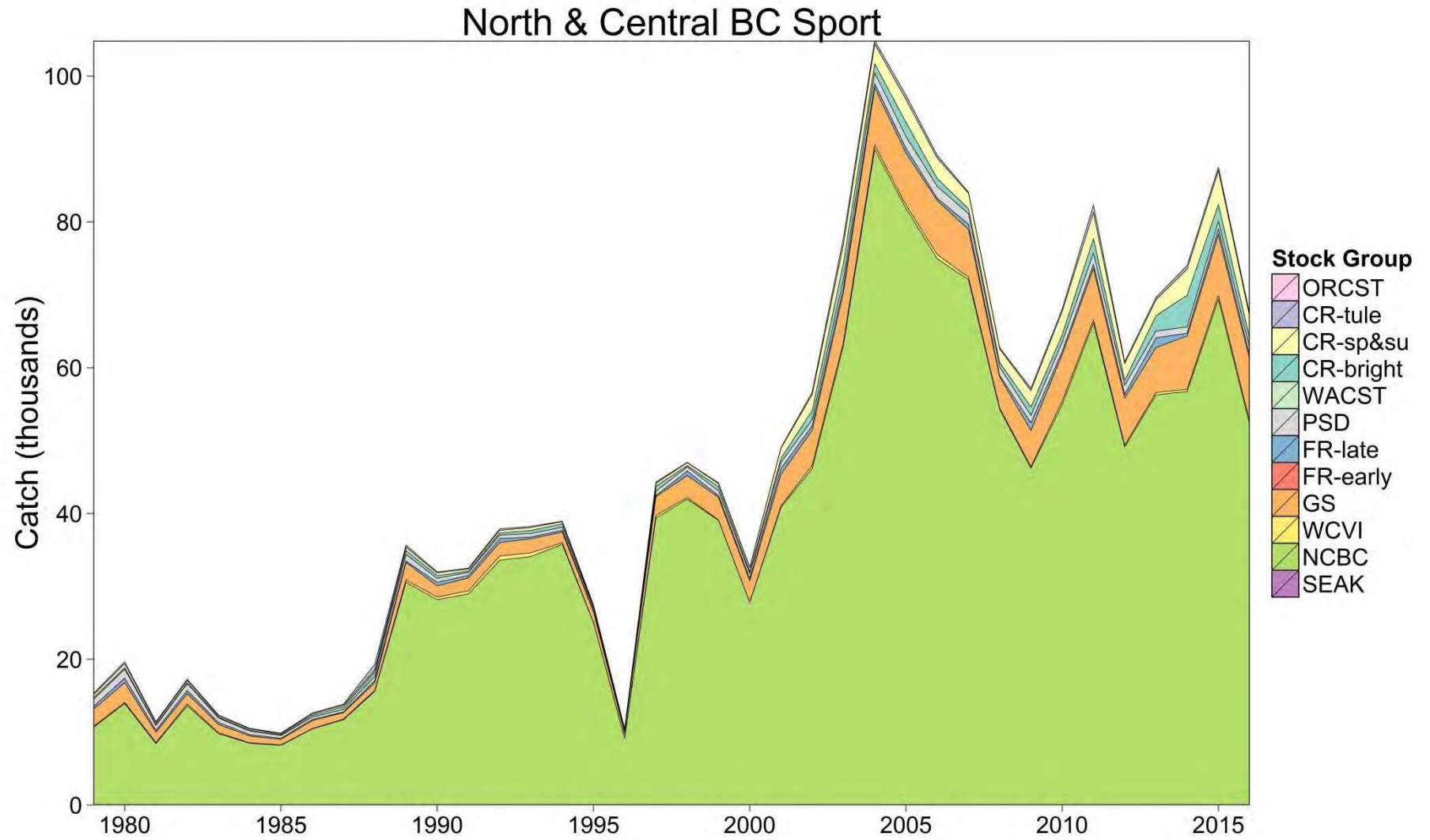


Appendix E17—Chinook Model Estimates of landed catch stock composition for Fraser River net, 1979–2016.

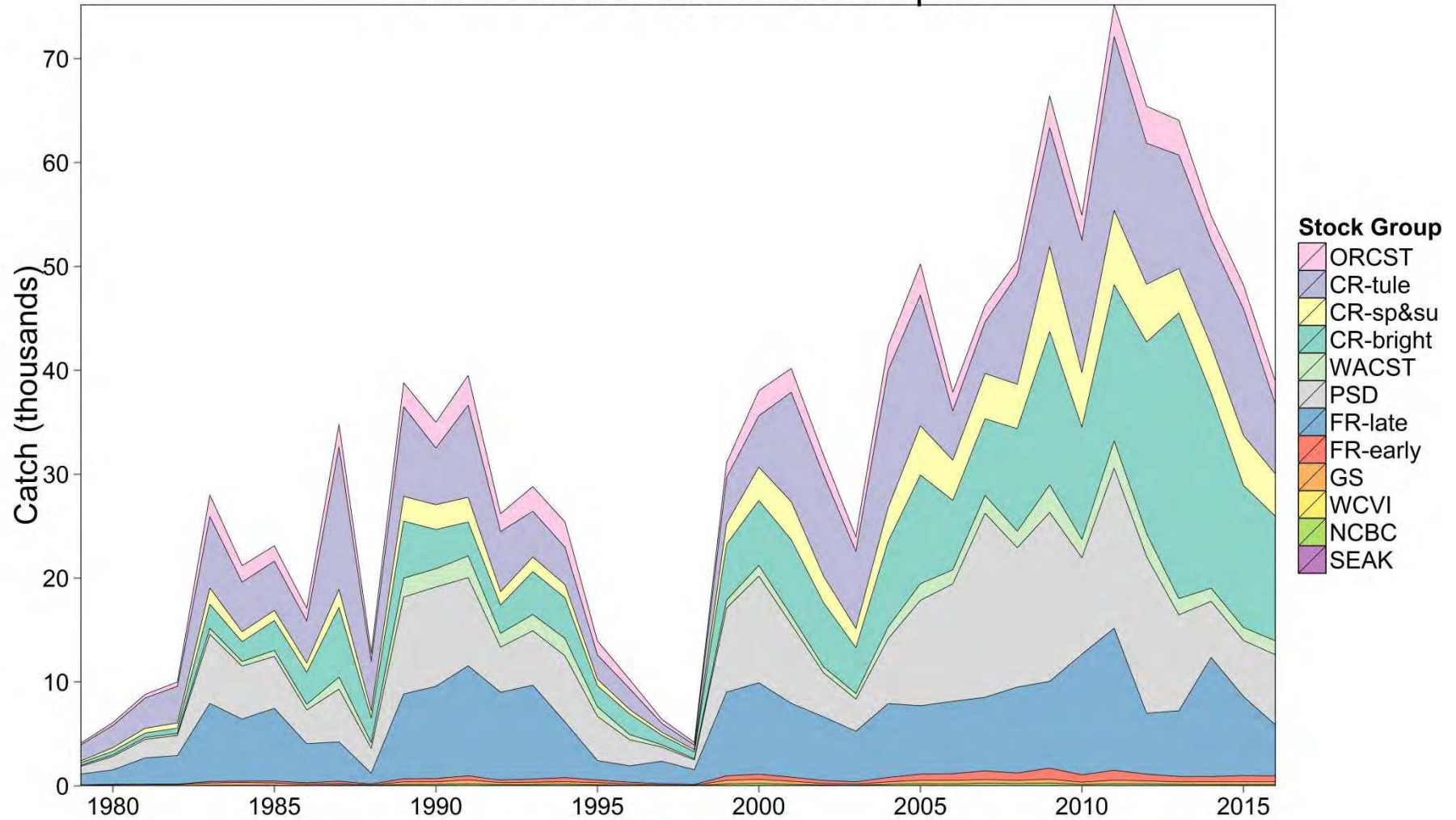


Appendix E18—Chinook Model Estimates of landed catch stock composition for Alaska sport with (upper) and without (lower) Alaska hatchery add-on and terminal exclusion, 1979–2016.

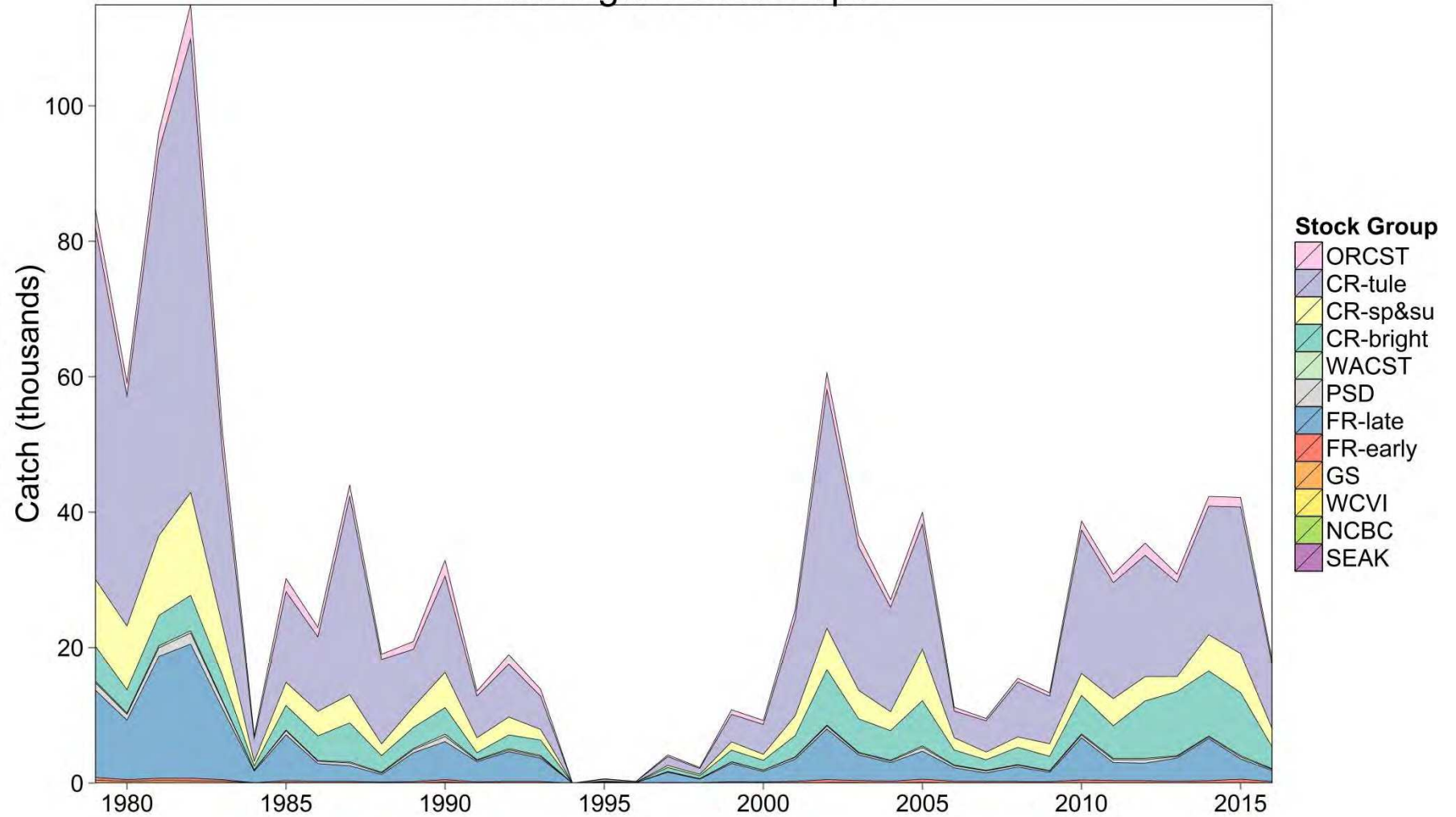




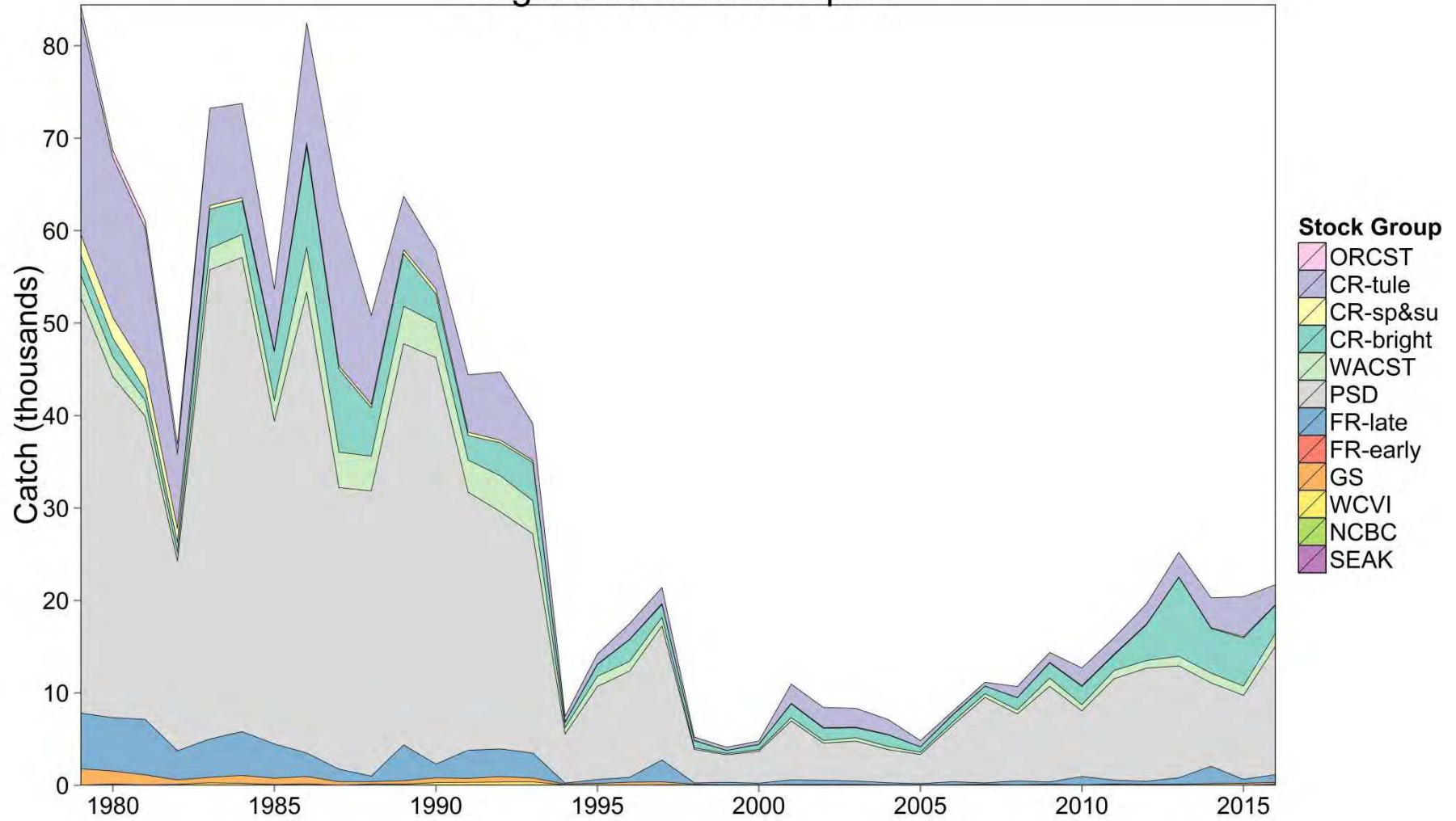
West Coast Vancouver Island Sport



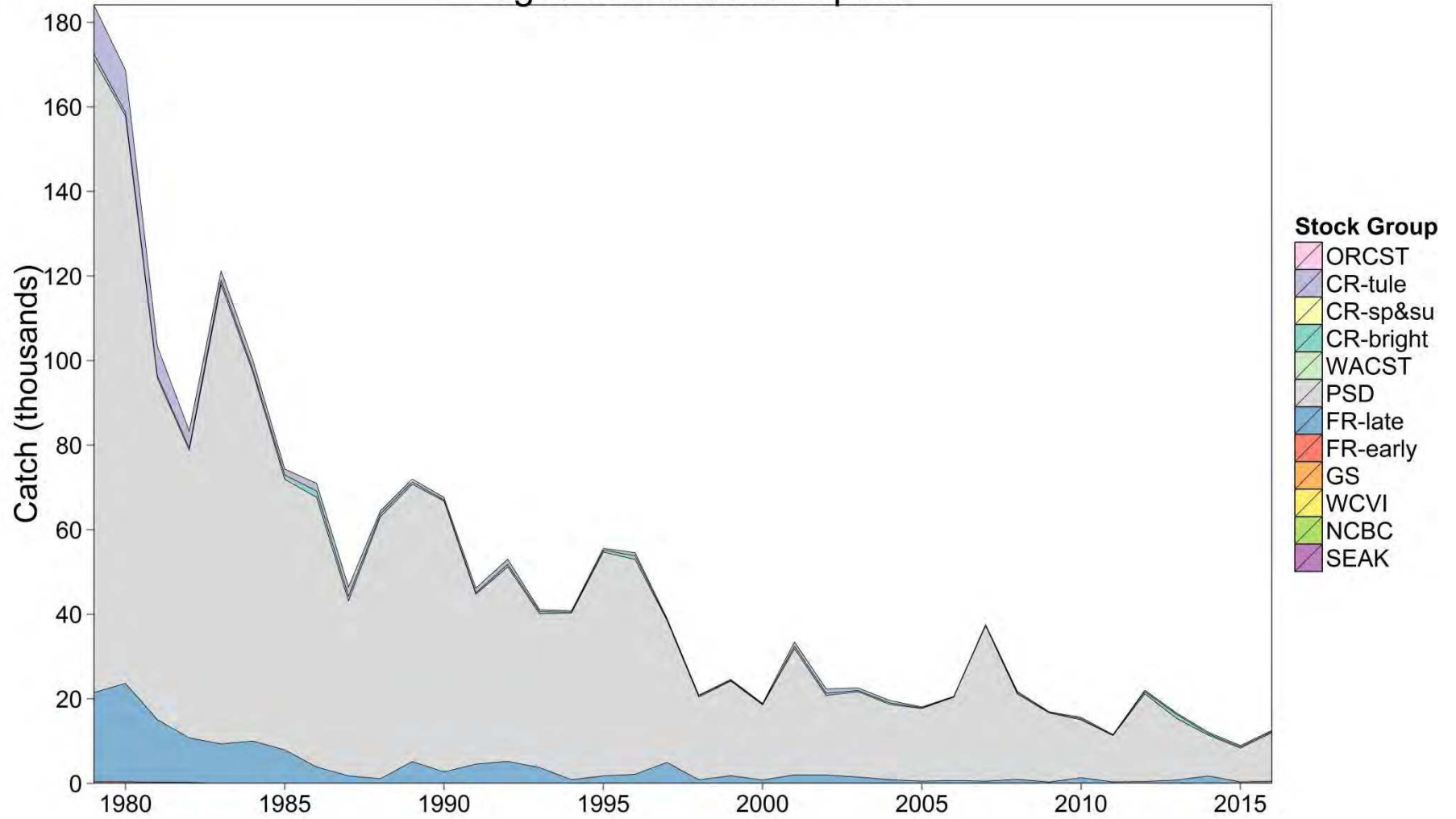
Washington Ocean Sport



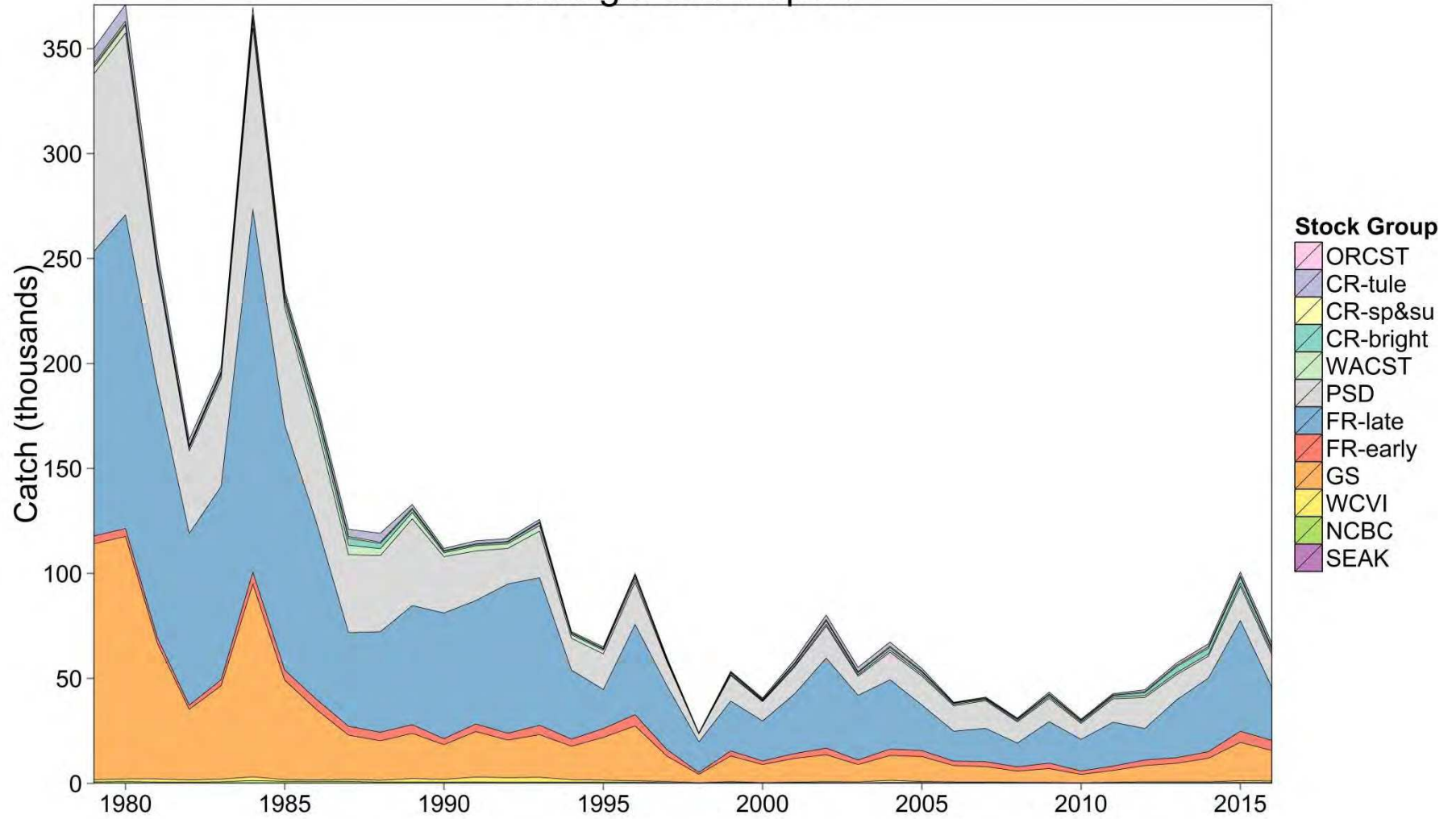
Puget Sound North Sport



Puget Sound South Sport

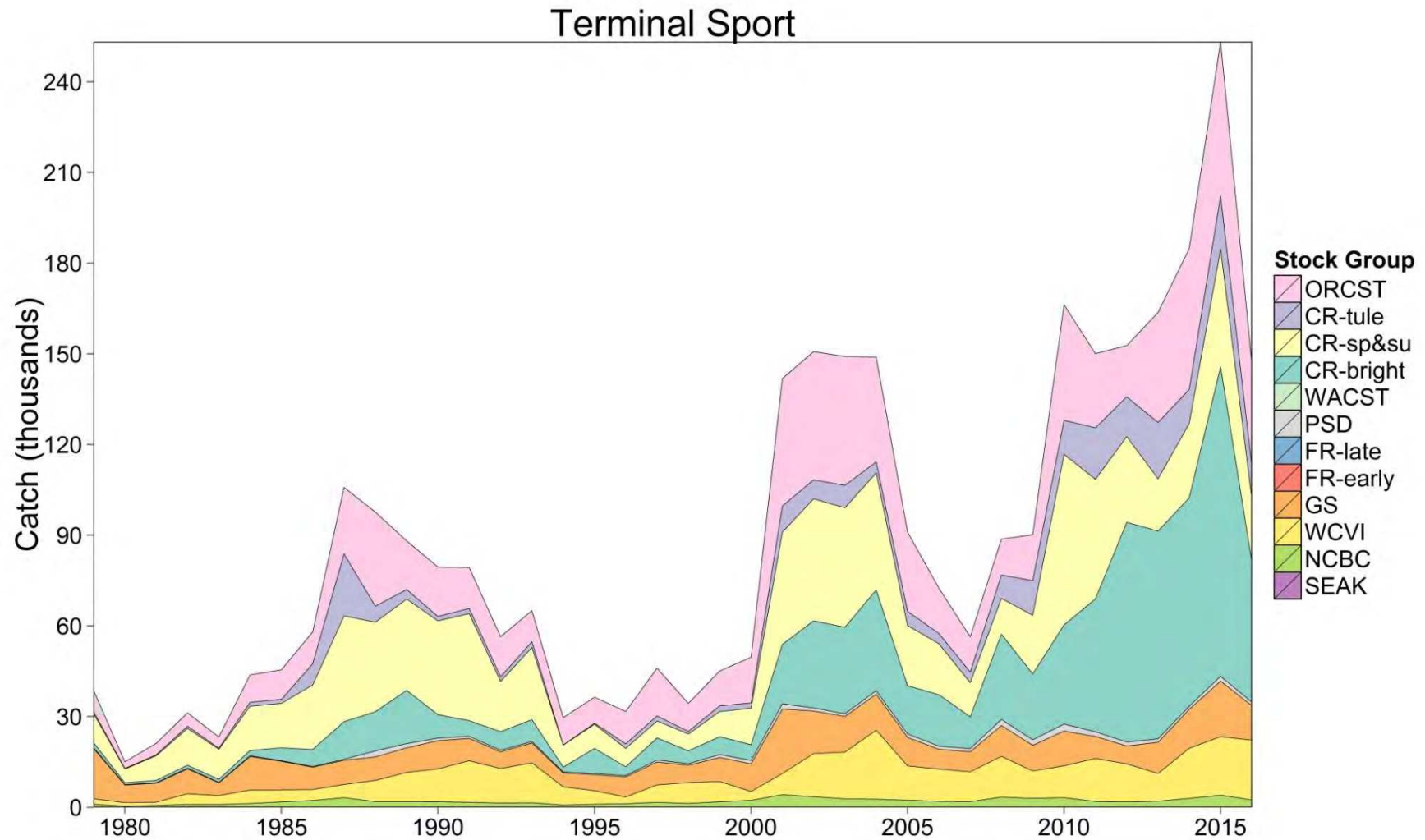


Georgia Strait Sport



Appendix E25—Chinook Model Estimates of landed catch stock composition for Terminal sport, 1979–2016.

Note: Fisheries in Terminal Sport are ISBM, AABM, terminal exclusion, or hatchery add-on and depends on stock; for Canadian stocks (in Fraser, Georgia St, N BC, and WCVI), terminal is ISBM, for Southern US stocks (in WA and OR Coastal and Puget Sound), terminal is ISBM, for Transboundary stocks (STI and TAK), terminal is terminal exclusion or AABM, and for SEAK stocks (AKS, CHK and UNU), terminal is AABM or hatchery add-on.



APPENDIX F: INCIDENTAL MORTALITY RATES APPLIED IN THE CTC MODEL

Appendix F. Incidental mortality rates applied in the CTC model. Rates in original model were applied to all years. In the current model, rates in some fisheries vary in accordance to changes in management regulations.

Fishery Number	Fishery	Rates in original Model			Rates applied in Model CLB1702			Applicable Years
		Sublegal Rate	Legal Rate	Dropoff	Sublegal Rate	Legal Rate	Dropoff	
1	Alaska T	0.3	0.3	0	0.255	0.211	0.008	All
2	North T	0.3	0.3	0	0.255	0.211	0.017	1979–1995
2	North T				0.220	0.185	0.016	1996–current
3	Centr T	0.3	0.3	0	0.255	0.211	0.017	1979–1995
3	Centr T				0.220	0.185	0.016	1996–current
4	WCVI T	0.3	0.3	0	0.255	0.211	0.017	1979–1997
4	WCVI T				0.220	0.185	0.016	1998–current
5	WA/OR T	0.3	0.3	0	0.255	0.211	0.017	1979–1983
5	WA/OR T				0.220	0.185	0.016	1984–current
6	Str of Geo T	0.3	0.3	0	0.255	0.211	0.017	1979–1985,1987–1996
6	Str of Geo T				0.220	0.185	0.016	1986, 1998–current
7	Alaska N	0.9	0.9	0	0.9	0.9	0	All
8	North N	0.9	0.9	0	0.9	0.9	0	All
9	Centr N	0.9	0.9	0	0.9	0.9	0	All
10	WCVI N	0.9	0.9	0	0.9	0.9	0	All
11	J De F N	0.9	0.9	0	0.9	0.9	0	All
12	PgtNth N	0.9	0.9	0	0.9	0.9	0	All
13	PgtSth N	0.9	0.9	0	0.9	0.9	0	All
14	WashCst N	0.9	0.9	0	0.9	0.9	0	All
15	Col R N	0.9	0.9	0	0.9	0.9	0	All
16	John St N	0.9	0.9	0	0.9	0.9	0	All
17	Fraser N	0.9	0.9	0	0.9	0.9	0	All
18	Alaska S	0.3	0.3	0	0.123	0.123	0.036	All
19	Nor/Cen S	0.3	0.3	0	0.123	0.123	0.036	All
20	WCVI S	0.3	0.3	0	0.123	0.123	0.069	All
21	WashOcn S	0.3	0.3	0	0.123	0.123	0.069	All
22	PgtNth S	0.3	0.3	0	0.123	0.123	0.145	All
23	PgtSth S	0.3	0.3	0	0.123	0.123	0.145	All
24	Str of Geo S	0.3	0.3	0	0.322	0.322	0.069	1979–1981
24	Str of Geo S				0.123	0.123	0.069	1982–current
25	Col R S	0.3	0.3	0	0.123	0.123	0.069	All

APPENDIX G: TIME SERIES OF ABUNDANCE INDICES

Appendix G. Time series of abundance indices from 1979 to 2017 for SEAK, NBC, and WCVI AABM fisheries as estimated by CTC Chinook Model calibrations CLB1702 .

Year	Alaska T	North T	WCVI T
1979	0.95	1.04	1.10
1980	1.04	1.00	0.97
1981	0.95	0.96	0.93
1982	1.06	1.00	1.00
1983	1.24	1.20	0.93
1984	1.46	1.36	1.00
1985	1.30	1.26	0.96
1986	1.46	1.44	1.02
1987	1.75	1.74	1.21
1988	2.11	1.82	1.14
1989	1.74	1.60	0.97
1990	1.77	1.56	0.88
1991	1.70	1.46	0.76
1992	1.61	1.36	0.79
1993	1.59	1.35	0.70
1994	1.47	1.19	0.53
1995	1.04	0.96	0.42
1996	0.97	0.96	0.50
1997	1.24	1.10	0.58
1998	1.15	0.97	0.57
1999	1.06	0.93	0.52
2000	0.96	0.92	0.52
2001	1.14	1.20	0.82
2002	1.74	1.69	1.18
2003	2.16	1.84	1.21
2004	1.92	1.68	1.03
2005	1.72	1.47	0.84
2006	1.48	1.22	0.65
2007	1.12	0.91	0.53
2008	0.89	0.82	0.57
2009	1.04	0.97	0.57
2010	1.15	1.13	0.78
2011	1.42	1.23	0.80
2012	1.13	1.11	0.70
2013	1.57	1.52	0.95
2014	2.19	1.82	1.11
2015	1.82	1.57	0.97
2016	1.65	1.39	0.70
2017	1.27	1.15	0.77
2018	1.18	1.10	0.81

Note: This time series is NOT the first postseason AI for each year and is for trend analysis only (Figures 3.10–3.12). For evaluation of overage and underage, use the first postseason AI instead (Source 1402 PABD).

APPENDIX H: ABUNDANCE INDICES IN TOTAL AND BY MODEL STOCK FOR AABM FISHERIES, FROM CALIBRATION 1702

LIST OF APPENDIX H TABLES

Appendix H1	Abundance indices (AIs) for the Southeast Alaska troll fishery by model stock and year (stock groups 1–15 this page; 16–30 on following page), from CLB 1702. Numbers shown represent the portion of the AI total estimated for each model stock; the summation across all 30 stock groups equals the AI total for each calendar year.	112
Appendix H2	Abundance indices (AIs) for the Northern BC troll fishery by stock and year (stock groups 1–15 this page; 16–30 on following page), from CLB 1702. Numbers shown represent the portion of the AI total estimated for each model stock; the summation across all 30 stock groups equals the AI total for each calendar year.	114
Appendix H3	Abundance indices (AIs) for the WCVI troll fishery by stock and year stock groups 1–15 this page; 16–30 on following page), from CLB 1702. Numbers shown represent the portion of the AI total estimated for each model stock; the summation across all 30 stock groups equals the AI total for each calendar year.	116

Appendix H1—Abundance indices (AIs) for the Southeast Alaska troll fishery by model stock and year (stock groups 1–15 this page; 16–30 on following page), from CLB 1702. Numbers shown represent the portion of the AI total estimated for each model stock; the summation across all 30 stock groups equals the AI total for each calendar year.

Year	Alaska South SE	North/Central	Fraser Early	Fraser Late	WCVI Hatchery	WCVI Natural	St. of Georgia Upper	St. of Georgia Lwr Nat	St. of Georgia Lwr Hat	Nooksack Fall	Pgt Sd Fing	Pgt Sd NatF	Pgt Sd Year	Nooksack Spring	Skagit Wild	AI Total
1979	0.03	0.12	0.06	0.00	0.05	0.07	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.95
1980	0.04	0.13	0.04	0.00	0.10	0.14	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.04
1981	0.05	0.13	0.04	0.00	0.08	0.11	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.95
1982	0.05	0.14	0.03	0.00	0.19	0.20	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.06
1983	0.06	0.16	0.04	0.00	0.30	0.14	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.24
1984	0.06	0.18	0.05	0.00	0.28	0.10	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.46
1985	0.07	0.20	0.06	0.00	0.15	0.05	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.30
1986	0.08	0.21	0.07	0.00	0.12	0.04	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.46
1987	0.08	0.23	0.07	0.00	0.09	0.03	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.75
1988	0.06	0.24	0.07	0.00	0.20	0.06	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.11
1989	0.04	0.25	0.06	0.00	0.25	0.06	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.74
1990	0.03	0.25	0.06	0.00	0.40	0.09	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.77
1991	0.04	0.26	0.06	0.00	0.53	0.12	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.70
1992	0.04	0.26	0.06	0.00	0.52	0.12	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.61
1993	0.04	0.24	0.06	0.00	0.48	0.12	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.59
1994	0.04	0.22	0.06	0.00	0.36	0.08	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.47
1995	0.03	0.22	0.07	0.00	0.15	0.04	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.04
1996	0.03	0.22	0.08	0.00	0.07	0.02	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.97
1997	0.03	0.23	0.09	0.00	0.18	0.05	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.24
1998	0.04	0.22	0.08	0.00	0.27	0.06	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.15
1999	0.04	0.23	0.06	0.00	0.14	0.03	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.06
2000	0.05	0.25	0.06	0.00	0.05	0.01	0.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.96
2001	0.05	0.24	0.08	0.00	0.07	0.01	0.07	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.14
2002	0.04	0.24	0.09	0.00	0.23	0.03	0.08	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.74
2003	0.04	0.23	0.10	0.00	0.34	0.03	0.07	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.16
2004	0.04	0.23	0.09	0.00	0.34	0.03	0.07	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.92
2005	0.04	0.23	0.08	0.00	0.25	0.02	0.08	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.72
2006	0.05	0.21	0.09	0.00	0.23	0.03	0.08	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.48
2007	0.05	0.20	0.08	0.00	0.23	0.03	0.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.12
2008	0.03	0.18	0.07	0.00	0.12	0.02	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.89
2009	0.03	0.17	0.08	0.00	0.09	0.01	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.04
2010	0.03	0.16	0.09	0.00	0.11	0.02	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.15
2011	0.02	0.15	0.08	0.00	0.23	0.03	0.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.42
2012	0.02	0.14	0.06	0.00	0.16	0.02	0.07	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.13
2013	0.02	0.15	0.07	0.00	0.14	0.01	0.07	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.57
2014	0.02	0.18	0.09	0.00	0.20	0.02	0.08	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.19
2015	0.02	0.18	0.10	0.00	0.16	0.02	0.08	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.82
2016	0.01	0.17	0.09	0.00	0.27	0.03	0.08	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.65
2017	0.01	0.16	0.09	0.00	0.21	0.03	0.08	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.27

-continued-

Table H1–Page 2 of 2 (stock groups 16–30).

Year	Stillaguamish Wild	Snohomish Wild	WA Coastal Hat	UpRiver Brights	Spring Creek Hat	Lwr Bonneville Hat	Fall Cowlitz Hat	Lewis R Wild	Willamette R	Spr Cowlitz Hat	Col R Summer	Oregon Coast	WA Coastal Wild	Lyons Ferry	Mid-Col R Brights	AI Total
1979	0.00	0.00	0.02	0.17	0.00	0.00	0.03	0.02	0.02	0.00	0.04	0.23	0.03	0.00	0.00	0.95
1980	0.00	0.00	0.03	0.13	0.00	0.00	0.03	0.02	0.03	0.00	0.03	0.21	0.03	0.00	0.00	1.04
1981	0.00	0.00	0.02	0.10	0.00	0.00	0.03	0.02	0.03	0.01	0.03	0.20	0.04	0.00	0.01	0.95
1982	0.00	0.00	0.02	0.07	0.00	0.00	0.03	0.01	0.03	0.00	0.02	0.16	0.03	0.00	0.01	1.06
1983	0.00	0.00	0.02	0.08	0.00	0.00	0.03	0.01	0.04	0.00	0.03	0.23	0.03	0.00	0.02	1.24
1984	0.00	0.00	0.01	0.20	0.00	0.00	0.03	0.01	0.04	0.00	0.03	0.37	0.03	0.00	0.02	1.46
1985	0.00	0.00	0.02	0.24	0.00	0.00	0.03	0.01	0.03	0.00	0.02	0.31	0.04	0.00	0.01	1.30
1986	0.00	0.00	0.02	0.33	0.00	0.00	0.03	0.01	0.04	0.00	0.03	0.32	0.05	0.00	0.02	1.46
1987	0.00	0.00	0.03	0.48	0.00	0.00	0.03	0.02	0.05	0.01	0.03	0.43	0.06	0.00	0.07	1.75
1988	0.00	0.00	0.05	0.50	0.00	0.00	0.14	0.03	0.06	0.00	0.03	0.40	0.07	0.00	0.13	2.11
1989	0.00	0.00	0.05	0.32	0.00	0.00	0.05	0.04	0.06	0.00	0.03	0.29	0.08	0.00	0.12	1.74
1990	0.00	0.00	0.04	0.24	0.00	0.00	0.02	0.02	0.07	0.00	0.02	0.31	0.07	0.00	0.08	1.77
1991	0.00	0.00	0.04	0.12	0.00	0.00	0.01	0.01	0.05	0.00	0.02	0.28	0.06	0.00	0.05	1.70
1992	0.00	0.00	0.05	0.10	0.00	0.00	0.02	0.01	0.03	0.00	0.02	0.25	0.05	0.00	0.04	1.61
1993	0.00	0.00	0.05	0.17	0.00	0.00	0.01	0.01	0.03	0.00	0.02	0.23	0.05	0.00	0.05	1.59
1994	0.00	0.00	0.04	0.21	0.00	0.00	0.01	0.01	0.02	0.00	0.02	0.27	0.05	0.00	0.05	1.47
1995	0.00	0.00	0.04	0.12	0.00	0.00	0.01	0.01	0.02	0.00	0.01	0.20	0.04	0.00	0.04	1.04
1996	0.00	0.00	0.04	0.13	0.00	0.00	0.02	0.01	0.01	0.00	0.02	0.20	0.04	0.00	0.05	0.97
1997	0.00	0.00	0.03	0.18	0.00	0.00	0.01	0.01	0.02	0.00	0.02	0.22	0.04	0.00	0.09	1.24
1998	0.00	0.00	0.02	0.11	0.00	0.00	0.00	0.01	0.02	0.00	0.02	0.15	0.03	0.00	0.06	1.15
1999	0.00	0.00	0.01	0.21	0.00	0.00	0.01	0.00	0.02	0.00	0.02	0.13	0.02	0.00	0.06	1.06
2000	0.00	0.00	0.01	0.17	0.00	0.00	0.01	0.01	0.03	0.00	0.04	0.12	0.02	0.00	0.05	0.96
2001	0.00	0.00	0.02	0.20	0.00	0.00	0.01	0.01	0.03	0.00	0.07	0.18	0.03	0.00	0.07	1.14
2002	0.00	0.00	0.02	0.33	0.00	0.00	0.02	0.02	0.07	0.00	0.10	0.26	0.03	0.00	0.16	1.74
2003	0.00	0.00	0.03	0.49	0.00	0.00	0.05	0.02	0.05	0.00	0.09	0.34	0.04	0.00	0.21	2.16
2004	0.00	0.00	0.03	0.38	0.00	0.00	0.03	0.02	0.06	0.00	0.09	0.31	0.04	0.00	0.15	1.92
2005	0.00	0.00	0.03	0.39	0.00	0.00	0.03	0.01	0.02	0.00	0.09	0.26	0.04	0.00	0.12	1.72
2006	0.00	0.00	0.03	0.26	0.00	0.00	0.02	0.02	0.03	0.00	0.08	0.19	0.04	0.00	0.11	1.48
2007	0.00	0.00	0.03	0.12	0.00	0.00	0.01	0.00	0.01	0.00	0.07	0.12	0.03	0.00	0.08	1.12
2008	0.00	0.00	0.02	0.12	0.00	0.00	0.01	0.00	0.01	0.00	0.06	0.07	0.03	0.00	0.08	0.89
2009	0.00	0.00	0.03	0.22	0.00	0.00	0.02	0.01	0.02	0.00	0.08	0.09	0.03	0.00	0.10	1.04
2010	0.00	0.00	0.03	0.22	0.00	0.00	0.01	0.01	0.05	0.00	0.09	0.14	0.03	0.00	0.09	1.15
2011	0.00	0.00	0.04	0.31	0.00	0.00	0.04	0.01	0.03	0.00	0.10	0.15	0.04	0.01	0.12	1.42
2012	0.00	0.00	0.04	0.19	0.00	0.00	0.01	0.01	0.03	0.00	0.08	0.15	0.04	0.01	0.11	1.13
2013	0.00	0.00	0.04	0.47	0.00	0.00	0.02	0.01	0.02	0.00	0.08	0.22	0.03	0.01	0.20	1.57
2014	0.00	0.00	0.04	0.74	0.00	0.00	0.02	0.03	0.03	0.00	0.11	0.24	0.03	0.01	0.35	2.19
2015	0.00	0.00	0.04	0.53	0.00	0.00	0.02	0.03	0.04	0.00	0.13	0.20	0.03	0.01	0.23	1.82
2016	0.00	0.00	0.04	0.42	0.00	0.00	0.02	0.01	0.01	0.00	0.10	0.21	0.03	0.01	0.14	1.65
2017	0.00	0.00	0.04	0.26	0.00	0.00	0.01	0.01	0.02	0.00	0.08	0.14	0.03	0.01	0.08	1.27

Appendix H2—Abundance indices (AIs) for the Northern BC troll fishery by stock and year (stock groups 1–15 this page; 16–30 on following page), from CLB 1702. Numbers shown represent the portion of the AI total estimated for each model stock; the summation across all 30 stock groups equals the AI total for each calendar year.

Year	Alaska South SE	North/Central	Fraser Early	Fraser Late	WCVI Hatchery	WCVI Natural	St. of Georgia Upper	St. of Georgia Lwr Nat	St. of Georgia Lwr Hat	Nooksack Fall	Pgt Sd Fing	Pgt Sd NatF	Pgt Sd Year	Nooksack Spring	Skagit Wild	AI Total
1979	0.00	0.08	0.07	0.01	0.04	0.05	0.06	0.02	0.02	0.01	0.00	0.00	0.00	0.02	0.01	1.04
1980	0.00	0.08	0.06	0.01	0.05	0.07	0.05	0.02	0.02	0.01	0.00	0.00	0.00	0.00	0.01	1.00
1981	0.00	0.09	0.05	0.01	0.06	0.08	0.06	0.01	0.02	0.01	0.00	0.00	0.00	0.00	0.01	0.96
1982	0.00	0.09	0.04	0.01	0.12	0.10	0.04	0.01	0.02	0.01	0.00	0.00	0.00	0.00	0.01	1.00
1983	0.00	0.11	0.05	0.01	0.16	0.08	0.04	0.01	0.01	0.01	0.00	0.00	0.00	0.00	0.01	1.20
1984	0.00	0.12	0.06	0.02	0.15	0.05	0.04	0.01	0.02	0.01	0.00	0.00	0.00	0.00	0.01	1.36
1985	0.00	0.13	0.07	0.01	0.09	0.03	0.06	0.01	0.02	0.01	0.00	0.00	0.00	0.00	0.01	1.26
1986	0.00	0.14	0.08	0.01	0.06	0.02	0.06	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.01	1.44
1987	0.00	0.15	0.09	0.01	0.07	0.02	0.06	0.01	0.01	0.00	0.00	0.00	0.00	0.00	0.00	1.74
1988	0.00	0.16	0.08	0.01	0.11	0.03	0.05	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.01	1.82
1989	0.00	0.17	0.08	0.01	0.16	0.04	0.06	0.01	0.01	0.00	0.00	0.00	0.00	0.00	0.00	1.60
1990	0.00	0.17	0.08	0.01	0.23	0.05	0.05	0.01	0.01	0.00	0.01	0.00	0.00	0.00	0.00	1.56
1991	0.00	0.17	0.07	0.01	0.29	0.07	0.05	0.01	0.01	0.00	0.00	0.00	0.00	0.00	0.00	1.46
1992	0.00	0.17	0.07	0.01	0.29	0.07	0.03	0.01	0.01	0.00	0.00	0.00	0.00	0.00	0.00	1.36
1993	0.00	0.16	0.07	0.01	0.26	0.06	0.03	0.01	0.01	0.00	0.00	0.00	0.00	0.00	0.00	1.35
1994	0.00	0.16	0.08	0.00	0.17	0.04	0.03	0.01	0.01	0.00	0.00	0.00	0.00	0.00	0.00	1.19
1995	0.00	0.14	0.08	0.00	0.08	0.02	0.03	0.01	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.96
1996	0.00	0.15	0.09	0.01	0.05	0.01	0.03	0.01	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.96
1997	0.00	0.16	0.10	0.01	0.12	0.03	0.04	0.01	0.01	0.00	0.00	0.00	0.00	0.00	0.00	1.10
1998	0.00	0.15	0.10	0.01	0.13	0.03	0.06	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.97
1999	0.00	0.16	0.08	0.01	0.07	0.01	0.07	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.93
2000	0.00	0.16	0.08	0.01	0.03	0.00	0.08	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.01	0.92
2001	0.00	0.17	0.09	0.01	0.06	0.01	0.09	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.00	1.20
2002	0.00	0.16	0.11	0.01	0.14	0.02	0.09	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	1.69
2003	0.00	0.16	0.12	0.01	0.18	0.02	0.09	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.01	1.84
2004	0.00	0.17	0.11	0.01	0.19	0.01	0.10	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.01	1.68
2005	0.00	0.16	0.10	0.01	0.13	0.01	0.10	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.01	1.47
2006	0.00	0.15	0.10	0.01	0.14	0.02	0.09	0.00	0.01	0.00	0.01	0.00	0.00	0.00	0.01	1.22
2007	0.00	0.14	0.10	0.00	0.11	0.01	0.07	0.00	0.01	0.00	0.01	0.00	0.00	0.00	0.00	0.91
2008	0.00	0.12	0.09	0.00	0.07	0.01	0.06	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.82
2009	0.00	0.12	0.09	0.00	0.05	0.01	0.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.97
2010	0.00	0.11	0.10	0.01	0.08	0.01	0.07	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.13
2011	0.00	0.11	0.11	0.01	0.12	0.01	0.08	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.23
2012	0.00	0.10	0.09	0.00	0.09	0.01	0.09	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	1.11
2013	0.00	0.11	0.09	0.01	0.09	0.01	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.52
2014	0.00	0.12	0.10	0.01	0.10	0.01	0.10	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	1.82
2015	0.00	0.13	0.12	0.01	0.11	0.01	0.10	0.01	0.01	0.00	0.00	0.00	0.00	0.00	0.00	1.57
2016	0.00	0.12	0.12	0.01	0.14	0.02	0.09	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.01	1.39
2017	0.00	0.12	0.11	0.01	0.12	0.02	0.12	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.15

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Table H2–Page 2 of 2 (stock groups 16–30).

Year	Stillaguamish Wild	Snohomish Wild	WA Coastal Hat	UpRiver Brights	Spring Creek Hat	Lwr Bonneville Hat	Fall Cowlitz Hat	Lewis R Wild	Willamette R	Spr Cowlitz Hat	Col R Summer	Oregon Coast	WA Coastal Wild	Lyons Ferry	Mid-Col R Brights	AI Total
1979	0.00	0.01	0.04	0.11	0.00	0.00	0.02	0.01	0.05	0.01	0.02	0.32	0.05	0.00	0.00	1.04
1980	0.00	0.01	0.04	0.08	0.00	0.00	0.02	0.01	0.06	0.01	0.02	0.29	0.06	0.00	0.00	1.00
1981	0.00	0.00	0.04	0.06	0.00	0.00	0.02	0.01	0.07	0.01	0.02	0.26	0.06	0.00	0.01	0.96
1982	0.00	0.00	0.03	0.05	0.00	0.00	0.02	0.01	0.08	0.01	0.02	0.25	0.05	0.00	0.01	1.00
1983	0.00	0.00	0.03	0.07	0.00	0.00	0.02	0.01	0.09	0.01	0.02	0.40	0.05	0.00	0.01	1.20
1984	0.00	0.00	0.03	0.14	0.00	0.00	0.02	0.01	0.08	0.01	0.02	0.49	0.06	0.00	0.01	1.36
1985	0.00	0.00	0.03	0.17	0.00	0.00	0.02	0.00	0.08	0.00	0.02	0.43	0.06	0.00	0.01	1.26
1986	0.00	0.00	0.04	0.24	0.00	0.00	0.02	0.01	0.10	0.01	0.02	0.48	0.08	0.00	0.02	1.44
1987	0.00	0.00	0.06	0.33	0.00	0.00	0.03	0.02	0.13	0.01	0.02	0.56	0.10	0.00	0.05	1.74
1988	0.00	0.00	0.08	0.32	0.00	0.00	0.08	0.02	0.14	0.01	0.02	0.49	0.12	0.00	0.09	1.82
1989	0.00	0.00	0.08	0.20	0.00	0.00	0.02	0.01	0.14	0.01	0.02	0.39	0.12	0.00	0.07	1.60
1990	0.00	0.00	0.07	0.15	0.00	0.00	0.01	0.01	0.14	0.00	0.01	0.39	0.11	0.00	0.05	1.56
1991	0.00	0.00	0.07	0.08	0.00	0.00	0.01	0.00	0.10	0.00	0.01	0.37	0.09	0.00	0.03	1.46
1992	0.00	0.00	0.08	0.07	0.00	0.00	0.01	0.01	0.07	0.01	0.01	0.32	0.08	0.00	0.03	1.36
1993	0.00	0.00	0.08	0.12	0.00	0.00	0.01	0.00	0.06	0.00	0.01	0.34	0.08	0.00	0.03	1.35
1994	0.00	0.00	0.07	0.13	0.00	0.00	0.01	0.01	0.05	0.00	0.01	0.32	0.07	0.00	0.03	1.19
1995	0.00	0.00	0.06	0.08	0.00	0.00	0.01	0.01	0.04	0.00	0.01	0.29	0.07	0.00	0.03	0.96
1996	0.00	0.00	0.05	0.09	0.00	0.00	0.01	0.00	0.04	0.00	0.01	0.27	0.06	0.00	0.04	0.96
1997	0.00	0.00	0.04	0.12	0.00	0.00	0.01	0.00	0.05	0.00	0.01	0.27	0.05	0.00	0.06	1.10
1998	0.00	0.00	0.03	0.08	0.00	0.00	0.00	0.00	0.05	0.00	0.02	0.21	0.04	0.00	0.04	0.97
1999	0.00	0.00	0.02	0.14	0.00	0.00	0.01	0.00	0.06	0.00	0.02	0.17	0.04	0.00	0.04	0.93
2000	0.00	0.00	0.02	0.11	0.00	0.00	0.00	0.00	0.07	0.00	0.04	0.21	0.04	0.00	0.03	0.92
2001	0.00	0.00	0.03	0.15	0.00	0.00	0.01	0.01	0.11	0.00	0.05	0.29	0.04	0.00	0.05	1.20
2002	0.00	0.00	0.04	0.24	0.00	0.00	0.02	0.01	0.15	0.00	0.06	0.44	0.05	0.00	0.11	1.69
2003	0.00	0.00	0.05	0.32	0.00	0.00	0.03	0.01	0.12	0.01	0.06	0.45	0.06	0.00	0.14	1.84
2004	0.00	0.00	0.05	0.25	0.00	0.00	0.01	0.01	0.10	0.01	0.06	0.40	0.07	0.00	0.09	1.68
2005	0.00	0.00	0.05	0.25	0.00	0.00	0.02	0.01	0.06	0.00	0.05	0.33	0.06	0.00	0.08	1.47
2006	0.00	0.00	0.05	0.16	0.00	0.00	0.01	0.00	0.05	0.01	0.05	0.22	0.05	0.00	0.07	1.22
2007	0.00	0.00	0.04	0.08	0.00	0.00	0.00	0.00	0.03	0.00	0.05	0.14	0.05	0.00	0.05	0.91
2008	0.00	0.00	0.04	0.09	0.00	0.00	0.01	0.00	0.04	0.00	0.05	0.10	0.04	0.00	0.06	0.82
2009	0.00	0.00	0.05	0.15	0.00	0.00	0.01	0.00	0.07	0.00	0.05	0.16	0.04	0.00	0.07	0.97
2010	0.00	0.00	0.06	0.16	0.00	0.00	0.01	0.00	0.10	0.00	0.06	0.22	0.05	0.01	0.06	1.13
2011	0.00	0.00	0.06	0.20	0.00	0.00	0.02	0.01	0.07	0.00	0.06	0.21	0.06	0.01	0.08	1.23
2012	0.00	0.00	0.06	0.15	0.00	0.00	0.01	0.01	0.05	0.00	0.06	0.24	0.06	0.01	0.07	1.11
2013	0.00	0.00	0.06	0.37	0.00	0.00	0.01	0.01	0.05	0.00	0.07	0.33	0.05	0.01	0.15	1.52
2014	0.00	0.00	0.06	0.51	0.00	0.00	0.01	0.02	0.07	0.00	0.07	0.32	0.05	0.01	0.22	1.82
2015	0.00	0.00	0.06	0.35	0.00	0.00	0.01	0.01	0.07	0.01	0.07	0.29	0.05	0.01	0.13	1.57
2016	0.00	0.00	0.06	0.28	0.00	0.00	0.01	0.01	0.03	0.01	0.07	0.26	0.05	0.01	0.09	1.39
2017	0.00	0.00	0.06	0.17	0.00	0.00	0.01	0.01	0.04	0.01	0.07	0.18	0.05	0.01	0.05	1.15

Appendix H3—Abundance indices (AIs) for the WCVI troll fishery by stock and year stock groups 1–15 this page; 16–30 on following page), from CLB 1702. Numbers shown represent the portion of the AI total estimated for each model stock; the summation across all 30 stock groups equals the AI total for each calendar year.

Year	Alaska South SE	North/Central	Fraser Early	Fraser Late	WCVI Hatchery	WCVI Natural	St. of Georgia Upper	St. of Georgia Lwr Nat	St. of Georgia Lwr Hat	Nooksack Fall	Pgt Sd Fing	Pgt Sd NatF	Pgt Sd Year	Nooksack Spring	Skagit Wild	AI Total
1979	0.00	0.00	0.01	0.27	0.01	0.02	0.00	0.01	0.01	0.08	0.04	0.03	0.02	0.00	0.02	1.10
1980	0.00	0.00	0.01	0.21	0.02	0.02	0.00	0.01	0.01	0.09	0.04	0.02	0.02	0.00	0.02	0.97
1981	0.00	0.00	0.00	0.24	0.02	0.03	0.00	0.00	0.01	0.08	0.04	0.02	0.02	0.00	0.02	0.93
1982	0.00	0.00	0.00	0.26	0.04	0.03	0.00	0.00	0.00	0.09	0.05	0.02	0.02	0.00	0.01	1.00
1983	0.00	0.00	0.00	0.23	0.05	0.02	0.00	0.00	0.00	0.10	0.06	0.03	0.02	0.00	0.01	0.93
1984	0.00	0.00	0.01	0.26	0.04	0.01	0.00	0.00	0.01	0.12	0.06	0.02	0.02	0.00	0.02	1.00
1985	0.00	0.00	0.01	0.27	0.03	0.01	0.00	0.00	0.01	0.10	0.05	0.02	0.01	0.00	0.01	0.96
1986	0.00	0.00	0.01	0.23	0.02	0.01	0.00	0.00	0.00	0.08	0.06	0.03	0.01	0.00	0.01	1.02
1987	0.00	0.00	0.01	0.13	0.02	0.01	0.00	0.00	0.00	0.06	0.08	0.03	0.01	0.00	0.01	1.21
1988	0.00	0.00	0.01	0.09	0.04	0.01	0.00	0.00	0.00	0.05	0.09	0.03	0.01	0.00	0.01	1.14
1989	0.00	0.00	0.01	0.17	0.05	0.01	0.00	0.00	0.00	0.06	0.10	0.03	0.02	0.00	0.01	0.97
1990	0.00	0.00	0.01	0.20	0.08	0.02	0.00	0.00	0.00	0.07	0.10	0.03	0.01	0.00	0.01	0.88
1991	0.00	0.00	0.01	0.17	0.09	0.02	0.00	0.00	0.00	0.04	0.07	0.02	0.01	0.00	0.00	0.76
1992	0.00	0.00	0.01	0.22	0.09	0.02	0.00	0.00	0.00	0.03	0.06	0.02	0.01	0.00	0.00	0.79
1993	0.00	0.00	0.01	0.19	0.08	0.02	0.00	0.00	0.00	0.03	0.06	0.01	0.01	0.00	0.00	0.70
1994	0.00	0.00	0.01	0.10	0.04	0.01	0.00	0.00	0.00	0.02	0.07	0.01	0.01	0.00	0.00	0.53
1995	0.00	0.00	0.01	0.05	0.02	0.00	0.00	0.00	0.00	0.02	0.08	0.01	0.01	0.00	0.00	0.42
1996	0.00	0.00	0.01	0.07	0.02	0.01	0.00	0.00	0.00	0.02	0.07	0.01	0.01	0.00	0.00	0.50
1997	0.00	0.00	0.01	0.16	0.04	0.01	0.00	0.00	0.00	0.03	0.07	0.01	0.01	0.00	0.01	0.58
1998	0.00	0.00	0.01	0.19	0.04	0.01	0.00	0.00	0.00	0.02	0.07	0.01	0.01	0.00	0.00	0.57
1999	0.00	0.00	0.01	0.12	0.01	0.00	0.00	0.00	0.00	0.03	0.08	0.02	0.01	0.00	0.01	0.52
2000	0.00	0.00	0.01	0.12	0.01	0.00	0.00	0.00	0.00	0.03	0.08	0.02	0.01	0.00	0.01	0.52
2001	0.00	0.00	0.01	0.14	0.02	0.00	0.00	0.00	0.00	0.04	0.09	0.02	0.01	0.00	0.01	0.82
2002	0.00	0.00	0.01	0.21	0.05	0.01	0.00	0.00	0.00	0.04	0.09	0.02	0.01	0.00	0.01	1.18
2003	0.00	0.00	0.01	0.23	0.05	0.00	0.00	0.00	0.00	0.02	0.09	0.01	0.02	0.00	0.01	1.21
2004	0.00	0.00	0.01	0.17	0.05	0.00	0.00	0.00	0.00	0.01	0.09	0.01	0.02	0.00	0.01	1.03
2005	0.00	0.00	0.01	0.10	0.04	0.00	0.00	0.00	0.00	0.02	0.10	0.01	0.02	0.00	0.01	0.84
2006	0.00	0.00	0.01	0.10	0.04	0.01	0.00	0.00	0.00	0.02	0.12	0.01	0.02	0.00	0.01	0.65
2007	0.00	0.00	0.01	0.08	0.03	0.00	0.00	0.00	0.00	0.02	0.12	0.01	0.03	0.00	0.01	0.53
2008	0.00	0.00	0.01	0.08	0.02	0.00	0.00	0.00	0.00	0.02	0.10	0.01	0.02	0.00	0.01	0.57
2009	0.00	0.00	0.01	0.07	0.02	0.00	0.00	0.00	0.00	0.02	0.09	0.01	0.02	0.00	0.00	0.57
2010	0.00	0.00	0.01	0.15	0.03	0.00	0.00	0.00	0.00	0.02	0.09	0.01	0.02	0.00	0.00	0.78
2011	0.00	0.00	0.01	0.14	0.04	0.00	0.00	0.00	0.00	0.03	0.10	0.01	0.02	0.00	0.01	0.80
2012	0.00	0.00	0.01	0.06	0.02	0.00	0.00	0.00	0.00	0.03	0.10	0.01	0.02	0.00	0.01	0.70
2013	0.00	0.00	0.01	0.09	0.03	0.00	0.00	0.00	0.00	0.02	0.09	0.01	0.02	0.00	0.01	0.95
2014	0.00	0.00	0.01	0.20	0.03	0.00	0.00	0.00	0.00	0.02	0.07	0.01	0.01	0.00	0.01	1.11
2015	0.00	0.00	0.01	0.16	0.03	0.00	0.00	0.00	0.00	0.02	0.06	0.01	0.01	0.00	0.01	0.97
2016	0.00	0.00	0.01	0.08	0.04	0.01	0.00	0.00	0.00	0.01	0.07	0.01	0.02	0.00	0.01	0.70
2017	0.00	0.00	0.01	0.10	0.03	0.00	0.00	0.00	0.00	0.01	0.09	0.01	0.02	0.00	0.01	0.77

-continued-

Table H3–Page 2 of 2 (stock groups 16–30).

Year	Stillaguamish Wild	Snohomish Wild	WA Coastal Hat	UpRiver Brights	Spring Creek Hat	Lwr Bonneville Hat	Fall Cowlitz Hat	Lewis R Wild	Willamette R	Spr Cowlitz Hat	Col R Summer	Oregon Coast	WA Coastal Wild	Lyons Ferry	Mid-Col R Brights	AI Total
1979	0.00	0.01	0.01	0.05	0.17	0.13	0.08	0.01	0.01	0.01	0.02	0.05	0.01	0.00	0.00	1.10
1980	0.00	0.01	0.01	0.04	0.14	0.10	0.08	0.01	0.01	0.02	0.02	0.04	0.01	0.00	0.00	0.97
1981	0.00	0.01	0.01	0.03	0.12	0.09	0.08	0.01	0.02	0.01	0.02	0.04	0.01	0.00	0.00	0.93
1982	0.00	0.01	0.01	0.03	0.13	0.10	0.09	0.01	0.02	0.01	0.01	0.04	0.01	0.00	0.01	1.00
1983	0.00	0.01	0.01	0.05	0.04	0.09	0.08	0.01	0.02	0.01	0.02	0.06	0.01	0.00	0.01	0.93
1984	0.00	0.01	0.01	0.08	0.05	0.08	0.08	0.01	0.02	0.01	0.02	0.08	0.01	0.00	0.00	1.00
1985	0.00	0.00	0.01	0.10	0.03	0.07	0.08	0.01	0.02	0.01	0.01	0.06	0.01	0.00	0.00	0.96
1986	0.00	0.00	0.01	0.15	0.02	0.12	0.09	0.01	0.02	0.01	0.02	0.07	0.02	0.00	0.01	1.02
1987	0.00	0.00	0.02	0.18	0.01	0.24	0.18	0.02	0.03	0.01	0.02	0.08	0.02	0.00	0.04	1.21
1988	0.00	0.00	0.02	0.14	0.03	0.12	0.27	0.02	0.03	0.01	0.02	0.07	0.03	0.00	0.04	1.14
1989	0.00	0.00	0.02	0.09	0.04	0.05	0.13	0.01	0.03	0.01	0.01	0.06	0.03	0.00	0.03	0.97
1990	0.00	0.00	0.01	0.06	0.04	0.02	0.06	0.01	0.03	0.01	0.01	0.06	0.02	0.00	0.02	0.88
1991	0.00	0.00	0.02	0.04	0.05	0.05	0.04	0.01	0.02	0.01	0.01	0.05	0.02	0.00	0.01	0.76
1992	0.00	0.00	0.02	0.05	0.04	0.06	0.05	0.01	0.01	0.01	0.01	0.05	0.02	0.00	0.01	0.79
1993	0.00	0.00	0.02	0.06	0.02	0.03	0.04	0.00	0.01	0.00	0.01	0.05	0.02	0.00	0.02	0.70
1994	0.00	0.00	0.01	0.05	0.02	0.02	0.02	0.01	0.01	0.00	0.01	0.05	0.02	0.00	0.01	0.53
1995	0.00	0.00	0.01	0.04	0.02	0.02	0.03	0.00	0.01	0.00	0.01	0.04	0.01	0.00	0.01	0.42
1996	0.00	0.00	0.01	0.06	0.03	0.02	0.04	0.00	0.01	0.00	0.01	0.04	0.01	0.00	0.02	0.50
1997	0.00	0.00	0.01	0.05	0.02	0.02	0.03	0.00	0.01	0.00	0.01	0.04	0.01	0.00	0.03	0.58
1998	0.00	0.00	0.01	0.05	0.02	0.02	0.02	0.00	0.01	0.00	0.01	0.03	0.01	0.00	0.02	0.57
1999	0.00	0.00	0.00	0.07	0.03	0.01	0.02	0.00	0.01	0.00	0.02	0.02	0.01	0.00	0.02	0.52
2000	0.00	0.00	0.01	0.06	0.02	0.02	0.02	0.01	0.01	0.00	0.03	0.03	0.01	0.00	0.02	0.52
2001	0.00	0.00	0.01	0.09	0.10	0.06	0.04	0.01	0.03	0.00	0.04	0.05	0.01	0.01	0.04	0.82
2002	0.00	0.00	0.01	0.14	0.18	0.08	0.07	0.01	0.03	0.01	0.06	0.07	0.01	0.01	0.06	1.18
2003	0.00	0.00	0.01	0.14	0.18	0.06	0.11	0.01	0.03	0.01	0.05	0.07	0.01	0.01	0.06	1.21
2004	0.00	0.00	0.01	0.13	0.17	0.04	0.09	0.01	0.02	0.01	0.05	0.06	0.01	0.01	0.04	1.03
2005	0.00	0.00	0.01	0.12	0.10	0.02	0.08	0.01	0.01	0.01	0.05	0.05	0.01	0.01	0.04	0.84
2006	0.00	0.00	0.01	0.07	0.03	0.01	0.04	0.00	0.01	0.01	0.05	0.03	0.01	0.01	0.03	0.65
2007	0.00	0.00	0.01	0.04	0.02	0.01	0.02	0.00	0.01	0.00	0.04	0.02	0.01	0.01	0.03	0.53
2008	0.00	0.00	0.01	0.07	0.06	0.01	0.03	0.00	0.01	0.00	0.04	0.02	0.01	0.01	0.03	0.57
2009	0.00	0.00	0.01	0.08	0.04	0.01	0.04	0.00	0.02	0.00	0.05	0.02	0.01	0.01	0.03	0.57
2010	0.00	0.00	0.01	0.10	0.09	0.02	0.05	0.00	0.02	0.00	0.05	0.03	0.01	0.01	0.03	0.78
2011	0.00	0.00	0.01	0.10	0.06	0.02	0.09	0.01	0.01	0.01	0.05	0.03	0.01	0.02	0.04	0.80
2012	0.00	0.00	0.01	0.11	0.06	0.03	0.04	0.01	0.01	0.01	0.04	0.04	0.01	0.02	0.05	0.70
2013	0.00	0.00	0.01	0.26	0.08	0.02	0.05	0.01	0.01	0.00	0.05	0.05	0.01	0.02	0.09	0.95
2014	0.00	0.00	0.01	0.26	0.11	0.02	0.06	0.01	0.02	0.01	0.07	0.05	0.01	0.03	0.10	1.11
2015	0.00	0.00	0.01	0.18	0.14	0.02	0.06	0.01	0.01	0.01	0.07	0.04	0.01	0.02	0.06	0.97
2016	0.00	0.00	0.01	0.14	0.05	0.01	0.05	0.01	0.01	0.01	0.05	0.04	0.01	0.02	0.04	0.70
2017	0.00	0.00	0.01	0.08	0.18	0.02	0.04	0.01	0.01	0.01	0.05	0.02	0.01	0.02	0.02	0.77

APPENDIX I: FISHERY EXPLOITATION RATE INDICES BY STOCK, AGE AND FISHERY, BASED ON CWT DATA

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Appendix I1–Alaska troll Stratified Proportion Fishery Index (SPFI) values as landed catch, based on CWT data.

YEAR	SPFI	WIN/SPR	JUNE OUT	JUNE IN	JULY OUT	JULY IN	FALL	ER Stock Identifiers			
1979	0.78	1.21	1.05	0.57	0.70	0.37	0.70	Alaska Southeast	Age 4	Age 5	Age 6
1980	1.29	0.63	0.95	1.45	1.58	1.84	1.58	Quinsam	Age 4	Age 5	
1981	1.13	1.21	1.12	0.91	1.10	0.87	1.10	Robertson Creek	Age 3	Age 4	Age 5
1982	0.79	0.96	0.89	1.07	0.62	0.92	0.62	Salmon River Hatchery	Age 4	Age 5	
1983	0.87	1.04	0.59	0.63	1.25	0.82	1.25	Columbia Upriver Brights	Age 4	Age 5	
1984	0.62	0.36	0.94	1.08	0.53	0.28	0.53	Willamette Spring Hatchery	Age 4	Age 5	
1985	0.67	0.45	0.59	0.82	0.82	0.71	0.82				
1986	0.45	0.44	0.15	0.39	1.25	0.54	1.25				
1987	0.47	0.59	0.17	0.54	0.62	1.31	0.62				
1988	0.41	1.37	0.00	0.14	0.64	1.16	0.64				
1989	0.50	0.83	0.20	0.42	0.54	0.50	0.54				
1990	0.70	0.63	0.11	0.87	1.16	1.08	1.16				
1991	0.60	1.35	0.22	0.88	0.79	0.50	0.79				
1992	0.38	1.02	0.06	0.49	0.40	0.21	0.40				
1993	0.46	0.73	0.02	0.27	0.92	0.25	0.92				
1994	0.40	0.65	0.04	0.12	0.67	0.15	0.67				
1995	0.48	0.46	0.05	0.32	0.79	0.91	0.79				
1996	0.43	0.56	0.09	0.57	0.55	0.48	0.55				
1997	0.59	0.63	0.15	0.56	1.48	0.08	1.48				
1998	0.39	0.81	0.05	0.15	0.95	0.38	0.95				
1999	0.57	0.80	0.11	0.25	0.97	0.11	0.97				
2000	0.44	0.87	0.09	0.10	1.43	0.05	1.43				
2001	0.38	0.53	0.07	0.13	0.64	0.12	0.64				
2002	0.49	0.39	0.06	0.11	1.11	0.14	1.11				
2003	0.45	0.68	0.06	0.13	0.86	0.30	0.86				
2004	0.40	0.81	0.06	0.16	0.96	0.27	0.96				
2005	0.45	0.90	0.11	0.21	1.22	0.39	1.22				
2006	0.59	1.49	0.11	0.64	1.36	0.11	1.36				
2007	0.58	1.23	0.14	0.84	1.16	0.17	1.16				
2008	0.44	0.81	0.08	0.71	0.69	0.09	0.69				
2009	0.57	0.72	0.15	0.33	1.08	0.15	1.08				
2010	0.34	1.13	0.04	0.26	0.74	0.07	0.74				
2011	0.38	1.03	0.05	0.25	0.83	0.13	0.83				
2012	0.61	1.62	0.09	0.18	1.15	0.08	1.15				
2013	0.33	0.80	0.09	0.44	0.50	0.12	0.50				
2014	0.56	1.26	0.08	0.53	1.04	0.13	1.04				
2015	0.44	1.14	0.09	1.33	0.67	0.34	0.67				

Appendix I2—Alaska troll Stratified Proportion Fishery Index (SPFI) values as total mortality, based on CWT data.

YEAR	SPFI	WIN/SPR	JUNE OUT	JUNE IN	JULY OUT	JULY IN	FALL	ER Stock Identifiers			
1979	0.76	1.17	1.04	0.55	0.67	0.36	0.67	Alaska Southeast	Age 4	Age 5	Age 6
1980	1.22	0.62	0.91	1.47	1.43	1.75	1.43	Quinsam	Age 4	Age 5	
1981	1.13	1.20	1.15	0.89	1.11	0.82	1.11	Robertson Creek	Age 3	Age 4	Age 5
1982	0.89	1.00	0.90	1.08	0.79	1.07	0.79	Salmon River Hatchery	Age 4	Age 5	
1983	0.99	1.01	0.60	0.68	1.68	0.75	1.68	Columbia Upriver Brights	Age 4	Age 5	
1984	0.66	0.37	0.93	1.07	0.63	0.43	0.63	Willamette Spring Hatchery	Age 4	Age 5	
1985	0.77	0.46	0.57	0.79	1.07	0.69	1.07				
1986	0.52	0.48	0.15	0.40	1.47	0.62	1.47				
1987	0.54	0.60	0.16	0.50	0.75	1.72	0.75				
1988	0.43	1.30	0.01	0.15	0.65	1.26	0.65				
1989	0.56	0.81	0.20	0.41	0.62	0.58	0.62				
1990	0.87	0.77	0.13	0.92	1.49	1.06	1.49				
1991	0.62	1.27	0.21	0.82	0.82	0.63	0.82				
1992	0.44	0.97	0.06	0.46	0.57	0.22	0.57				
1993	0.51	0.70	0.02	0.25	1.07	0.25	1.07				
1994	0.48	0.63	0.04	0.14	0.87	0.20	0.87				
1995	0.57	0.46	0.05	0.33	0.96	0.93	0.96				
1996	0.51	0.56	0.10	0.55	0.68	0.51	0.68				
1997	0.59	0.62	0.15	0.52	1.43	0.10	1.43				
1998	0.38	0.78	0.05	0.15	0.90	0.34	0.90				
1999	0.62	0.80	0.11	0.24	1.08	0.14	1.08				
2000	0.46	0.88	0.09	0.10	1.48	0.08	1.48				
2001	0.40	0.51	0.07	0.13	0.67	0.15	0.67				
2002	0.49	0.41	0.06	0.11	1.05	0.16	1.05				
2003	0.44	0.69	0.06	0.12	0.81	0.27	0.81				
2004	0.40	0.80	0.06	0.15	0.92	0.27	0.92				
2005	0.47	0.98	0.11	0.25	1.20	0.36	1.20				
2006	0.59	1.45	0.12	0.63	1.34	0.11	1.34				
2007	0.58	1.21	0.13	0.84	1.14	0.16	1.14				
2008	0.45	0.78	0.08	0.65	0.71	0.11	0.71				
2009	0.59	0.73	0.14	0.32	1.09	0.17	1.09				
2010	0.36	1.15	0.04	0.25	0.77	0.08	0.77				
2011	0.37	1.04	0.05	0.24	0.80	0.12	0.80				
2012	0.60	1.58	0.09	0.21	1.09	0.11	1.09				
2013	0.34	0.81	0.09	0.43	0.50	0.20	0.50				
2014	0.55	1.28	0.08	0.58	0.99	0.13	0.99				
2015	0.43	1.13	0.09	1.24	0.63	0.36	0.63				

Appendix I3–Landed catch exploitation rate indices by stock and age in the NBC troll fishery, based on CWT data. Base period is 1979–1982.

Year	ER Stock Identifiers ¹												Fishery Index
	AKS Age 4	QUI Age 3	QUI Age 4	RBT Age 3	RBT Age 4	RBT Age 5	SRH Age 3	SRH Age 4	SRH Age 5	URB Age 4	URB Age 5	WSH Age 4	
1979		0.55	0.89	1.15	0.83	0.48	1.17			1.10		0.65	0.83
1980		0.79	0.97	1.05	0.85	0.77		0.94		1.02	1.14	1.18	0.94
1981		1.78	1.42	0.85	1.04	1.75	1.27		1.00	1.27	1.50	1.53	1.28
1982	1.00	0.89	0.72	0.94	1.28		0.56	1.06		0.61	0.36	0.64	0.82
1983	1.59	1.22	1.50	0.98	0.73	0.75	0.58	1.24	0.23	1.23		1.27	0.80
1984	1.14	0.26	0.49	0.39	1.37	1.67		1.49	1.32	1.99		0.51	1.23
1985	0.76	0.24	0.60	0.92	1.87	1.70	0.42		1.31	1.59	1.49	0.22	1.23
1986	0.71	0.95	0.83		0.92		0.12	1.26		1.14	1.74		1.00
1987	0.60	0.35	0.61	0.45			0.20	0.88	1.08	1.61	1.80		0.95
1988	1.98	0.18	0.69	0.30	0.62			0.67	0.35	0.99	2.06	0.80	0.68
1989	0.91	0.43	0.44	0.37	0.88	1.05	0.14	0.61	1.01	0.94	3.69	0.37	0.97
1990	1.93	0.35	0.94	0.28	0.71	0.55	0.18	0.55	1.04	1.14	2.08	0.31	0.82
1991	0.64	0.42	0.65	0.35	0.71	1.10	0.14	0.86	1.04			0.28	0.77
1992	0.11		1.87	0.27	0.57	0.63	0.14	0.55	0.45			0.10	0.58
1993	0.27			0.14	0.62	0.83	0.13	1.28	1.16	1.06		0.21	0.83
1994	0.05			0.29	0.72	0.86	0.22	1.12	1.01	0.87	1.81	0.12	0.87
1995	0.00				0.41	0.20	0.13	0.00	0.39		0.50	0.16	0.29
1996	0.00			0.00			0.00	0.00	0.00	0.00		0.00	0.00
1997		0.38	0.25	0.21	0.31		0.18	0.22	0.18	0.50		0.13	0.25
1998	0.00	0.00	0.00		0.50		0.07	0.96	0.53		1.10	0.00	0.47
1999	0.00	0.16	0.18		0.35	0.55	0.10	0.42	0.22	1.10		0.00	0.35
2000	0.00	0.00	0.06				0.05	0.57	0.16	0.00	0.00	0.01	0.14
2001	0.00	0.00	0.01	0.00			0.05	0.36	0.40	0.00		0.02	0.19
2002	0.44		0.16	0.00	0.48		0.19	0.64	0.71	0.20		0.22	0.44
2003	0.00	0.00	0.00	0.04	0.05	0.00	0.05	0.67	0.25	0.69	0.95	0.05	0.25
2004	0.83	0.00	0.06	0.09	0.20	0.44	0.09	0.55	0.47	0.68	1.20	0.20	0.40
2005	0.17	0.07	0.04	0.03	0.33	0.11	0.11	0.96	0.47	1.37	0.92	0.10	0.43
2006	0.36	0.08	0.06	0.09	0.26	0.26		1.00	0.72	1.27	1.31	0.05	0.56
2007	0.09		0.43		0.46	0.43	0.00	1.17	0.66	1.07		0.00	0.57
2008	0.10			0.08	0.63	0.19	0.07	0.72				0.05	0.34
2009	0.91		0.11	0.19	0.21		0.01	1.34	0.97	1.77		0.03	0.69
2010	0.21	0.00		0.13	0.09		0.21	1.07	0.41			0.14	0.35
2011	0.00	0.00	0.00	0.00	0.32		0.06	0.90	0.54	0.55		0.15	0.36
2012	0.25		0.09	0.08	0.21	0.36	0.04	1.37	0.62	1.45	2.47	0.08	0.66
2013			0.12	0.01	0.19	0.14	0.02	0.92	0.73	0.84		0.11	0.42
2014	0.42	0.00	0.00		0.25		0.06	0.72	0.29	0.95	1.54	0.18	0.43
2015	0.16	0.00	0.00	0.03		0.00	0.02	0.45	0.41	0.39	0.93	0.17	0.27

¹ Stock Identifiers: AKS = ALASKA SPRING; QUI = QUINSAM; RBT = ROBERTSON CREEK; SRH = SALMON RIVER HATCHERY; URB = COLUMBIA UP RIVER BRIGHT; WSH = WILLAMETTE SPRING

Appendix I4–Total mortality exploitation rate indices by stock and age in the NBC troll fishery, based on CWT data. Base period is 1979–1982.

Year	ER Stock Identifiers ¹												Fishery Index	
	AKS Age 4	QUI Age 3	QUI Age 4	RBT Age 3	RBT Age 4	RBT Age 5	SRH Age 3	SRH Age 4	SRH Age 5	URB Age 4	URB Age 5	WSH Age 4		
1979		0.56	0.88	1.16	0.83	0.48	1.17				1.10		0.63	0.83
1980		0.79	0.97	1.02	0.85	0.77		0.94			1.03	1.14	1.14	0.94
1981		1.76	1.43	0.85	1.04	1.76	1.25		1.00		1.27	1.51	1.52	1.28
1982	1.00	0.89	0.72	0.96	1.28		0.57	1.06		0.60	0.35	0.70		0.83
1983	1.63	1.20	1.50	0.98	0.73	0.76	0.64	1.24	0.23	1.23			1.25	0.81
1984	1.15	0.27	0.50	0.49	1.37	1.68		1.50	1.32	1.98			0.50	1.22
1985	0.79	0.26	0.61	1.07	1.86	1.73	0.50			1.31	1.58	1.46	0.21	1.22
1986	0.72	0.92	0.84		0.91		0.16	1.27			1.15	1.71		0.99
1987	0.67	0.48	0.65	0.49			0.32	0.90	1.11	1.66	1.82			0.98
1988	2.19	0.29	0.71	0.35	0.64			0.70	0.36	1.04	2.09	0.91		0.71
1989	0.96	0.49	0.46	0.44	0.89	1.06	0.28	0.66	1.02	1.01	3.69	0.39		0.99
1990	2.36	0.54	0.98	0.38	0.74	0.56	0.33	0.59	1.06	1.22	2.13	0.34		0.86
1991	0.75	0.57	0.67	0.47	0.73	1.12	0.32	0.90	1.05				0.31	0.80
1992	0.21		1.93	0.41	0.60	0.66	0.19	0.57	0.47				0.12	0.61
1993	0.25			0.32	0.65	0.86	0.30	1.33	1.17	1.12			0.23	0.86
1994	0.12			0.51	0.75	0.88	0.41	1.16	1.02	0.90	1.86	0.14		0.90
1995	0.08				0.43	0.22	0.23	0.03	0.42		0.53	0.21		0.32
1996	0.13			0.07			0.04	0.02	0.03	0.06		0.06		0.04
1997		0.37	0.25	0.26	0.32		0.21	0.23	0.18	0.51		0.14		0.26
1998	0.00	0.00	0.00		0.51		0.19	0.98	0.53		1.08	0.00		0.48
1999	0.00	0.17	0.18		0.34	0.56	0.13	0.42	0.23	1.11		0.00		0.35
2000	0.00	0.00	0.06				0.07	0.57	0.16	0.00	0.00	0.01		0.13
2001	0.05	0.00	0.01	0.00			0.07	0.36	0.42	0.00		0.02		0.20
2002	0.57		0.16	0.04	0.49		0.25	0.65	0.71	0.21		0.25		0.45
2003	0.08	0.00	0.00	0.04	0.05	0.00	0.11	0.69	0.26	0.71	0.96	0.06		0.25
2004	0.91	0.00	0.06	0.13	0.21	0.46	0.17	0.58	0.49	0.69	1.25	0.21		0.42
2005	0.22	0.06	0.04	0.06	0.34	0.11	0.24	1.00	0.49	1.42	0.96	0.10		0.45
2006	0.45	0.07	0.06	0.13	0.26	0.26		1.02	0.72	1.29	1.31	0.07		0.56
2007	0.11		0.42		0.46	0.42	0.04	1.19	0.67	1.05		0.00		0.57
2008	0.09			0.12	0.65	0.18	0.13	0.74				0.06		0.35
2009	0.96		0.11	0.20	0.21		0.12	1.36	0.98	1.79		0.03		0.70
2010	0.23	0.00		0.16	0.09		0.26	1.08	0.41			0.14		0.35
2011	0.05	0.00	0.00	0.07	0.35		0.10	0.98	0.58	0.60		0.17		0.39
2012	0.32		0.09	0.14	0.22	0.38	0.09	1.39	0.62	1.42	2.47	0.09		0.67
2013			0.12	0.03	0.19	0.14	0.09	1.00	0.80	0.92		0.11		0.45
2014	0.45	0.00	0.00		0.25		0.10	0.73	0.29	0.97	1.53	0.17		0.43
2015	0.15	0.00	0.00	0.03		0.00	0.06	0.46	0.41	0.40	0.95	0.19		0.28

¹ Stock Identifiers: AKS = ALASKA SPRING; QUI = QUINSAM; RBT = ROBERTSON CREEK; SRH = SALMON RIVER HATCHERY; URB = COLUMBIA UP RIVER BRIGHT; WSH = WILLAMETTE SPRING

Appendix I5–Landed catch exploitation rate indices by stock and age in the WCVI troll fishery, based on CWT data. Base period is 1979–1982.

Year	ER Stock Identifiers ¹																							Fishery Index	
	CWF Age	GAD Age	GAD Age	LRH Age	LRH Age	LRW Age	RBT Age	RBT Age	RBT Age	SAM Age	SAM Age	SAM Age	SPR Age	SPR Age	SPS Age	SPS Age	SRH Age	SRH Age	SUM Age	URB Age	URB Age	UWA Age	UWA Age		WSH Age
1979				1.16			1.17	1.26			1.00	1.00	0.97	0.84		1.13	1.57			1.12	1.63	0.70	1.22	1.03	1.06
1980				0.55	0.90		1.41	1.43					1.17	1.39				1.10	0.69	1.10	0.98	1.38	0.85	1.11	1.02
1981	0.79	0.73		1.14	0.79	0.85	0.67	0.58	1.00				0.94	0.63	0.72		0.43		1.31		0.99	0.84	0.89	0.63	0.87
1982	1.21	1.27	1.00	1.15	1.31	1.16	0.75	0.73		1.00			0.93	1.14	1.29	0.87		0.90		0.78	0.39	1.07	1.05	1.23	1.05
1983	1.36		1.41	1.64	1.64	0.96	0.42	0.84	1.83		0.96		1.44	0.93	1.64	0.89	1.55			0.28	0.43	0.70	1.08	0.28	1.16
1984	1.29	2.08		2.12	2.89		1.31	1.11	1.04			1.08	1.30	1.38	1.60	0.96		0.41		0.62	1.21	1.74	0.73	0.72	1.41
1985	0.89		0.84	1.20	1.13		0.48	0.00					0.53	0.90	0.81	0.65				0.60	0.95	0.80	1.01	0.44	0.84
1986	1.27			1.11	1.22	0.47		1.10					1.19	1.00	0.89	1.07		0.20		1.05	1.29	0.84	1.09		1.05
1987	0.85			0.93		1.45	0.27						0.45		0.75	0.51	0.27	0.23		0.72	0.73	0.36	0.41		0.62
1988	0.84	0.43		1.11	1.37	1.05	0.44	0.57		0.60			0.98		0.28	0.68		0.65	1.23	0.06	1.75		0.77	0.88	0.90
1989	0.52	0.26	0.48	0.28	0.56	0.56	0.22	0.34	0.00	0.21	0.59		0.58	0.39	0.33	0.34	0.35		0.80		0.82			0.55	0.47
1990	0.71	1.00	0.94	1.13		1.21	0.67	0.51	1.49	0.41	0.85		0.91	0.72	0.73	0.76	0.73	0.46	1.64		1.50			0.85	0.91
1991			0.79	0.80		0.74	0.59	0.53	1.36	0.25	0.56	1.07	0.60	0.62	0.37	0.51	0.95	0.36	0.51					0.08	0.66
1992	1.14		0.31	0.65		0.32	1.54	2.41	5.08	1.05	0.26		0.43	0.74	0.68	0.69	1.37	2.66	0.94					0.17	0.80
1993			0.72	1.08	0.68		1.07	2.27	2.41	1.11	0.42		0.53	0.99	0.97	0.45	1.22	1.24		0.45	1.82			0.45	0.83
1994	0.12					0.22	0.59	0.66	1.28	0.06	0.69		0.81	0.63	0.19	0.41		0.39			0.88			0.26	0.52
1995		0.22				0.43		0.44	0.28	0.16	0.37		0.36	0.35	0.27	0.20	0.04							0.12	0.31
1996	0.00	0.00	0.00	0.00			0.00			0.00	0.00		0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1997	0.38		0.21	0.74			0.00	0.04		0.02	0.24		0.47	0.40	0.04	0.27	0.00	0.03	0.07		0.07	0.07		0.00	0.30
1998							0.00				0.08		0.05	0.00	0.00	0.03	0.00	0.00	0.00	0.01				0.04	0.03
1999		0.04	0.13	0.09					0.00		0.07		0.02		0.02	0.05	0.00	0.00	0.03		0.00			0.00	0.06
2000			1.11	0.09	1.73						1.10		0.05	0.76	0.03	0.64	0.00	0.00	0.22	0.09	0.47			0.08	0.67
2001		0.74	1.04	0.30		0.72	0.00			0.42	0.36		0.15	0.60	0.46	0.54	0.00	0.05	0.51	0.09	0.16			0.19	0.48
2002	0.57	0.17	0.62	0.29	0.39		0.02	0.00		0.26	0.40		0.28	0.69	0.39	0.44	0.00	0.00	0.58	0.06	0.24			0.30	0.42
2003	0.53	0.12	0.73	0.27	0.76	0.12	0.00	0.00			0.59		0.29	0.58	0.33	0.52	0.00	0.00	0.68	0.12	0.09			0.61	0.47
2004		0.08	1.18	0.38	1.04	0.12	0.03	0.02	0.00	0.18	0.58		0.35	0.81	0.35	0.79	0.19	0.27	0.33	0.12	0.45			2.33	0.60
2005	0.30	0.73	0.96	0.70	1.70	0.12	0.00	0.00		0.11	0.78		0.88	1.19	0.65	0.78	0.16	0.23	0.59	0.09	0.42			1.30	0.78
2006		0.27	0.87			0.46	0.00	0.00	0.00	0.38	0.75		0.57	1.40	0.52	0.71		0.28	0.42		0.66			1.59	0.70
2007		0.98	0.79	0.69			0.02			1.28	0.57		0.62	0.93	0.99	0.69	0.00		0.52		0.12			0.23	0.69
2008		0.48	0.37	0.42			0.00		0.00	0.71	0.33		0.21		0.49	0.31	0.24	0.00	0.26	0.22				0.18	0.32
2009	0.00	0.64	0.52	0.20	0.23			0.00		0.62	0.16		0.16	0.06	0.56	0.19	0.04	0.04	0.41		0.11			0.10	0.22
2010	0.11	0.98	0.44	0.34			0.04	0.26		0.97	0.12		0.25	0.37	0.47	0.12	0.00	0.00	0.32	0.09				0.23	0.28
2011	0.07	0.42	0.22	0.41	0.75		0.00	0.00		0.00	0.41		0.25	0.59	0.04	0.19	0.12	0.55	0.25	0.00	0.32			0.51	0.33
2012	0.20	0.30	0.24	0.16	0.00			0.00	0.17	0.34	0.05		0.11	0.45	0.35	0.16	0.04	0.42	0.33	0.08	0.31			1.16	0.21
2013	0.06	0.20	0.23	0.18	0.14		0.00			0.14	0.09		0.16	0.16	0.03	0.20	0.04	0.07	0.21	0.04	0.25			0.28	0.15
2014	0.13	0.18	0.27	0.26		0.21		0.18		0.70	0.26		0.12	0.31	0.45	0.24	0.11	0.26	1.07	0.05	0.43			1.19	0.31
2015		0.07	0.09	0.20	0.33		0.01				0.15		0.09	0.23	0.23	0.12	0.04	0.10	0.13	0.02	0.09			0.15	0.16

¹Stock Identifiers: CWF = COWLITZ FALL TULE; RBT = ROBERTSON CREEK; SRH = SALMON RIVER HATCHERY; WSH = WILLAMETTE SPRING; GAD = G ADAMS FALL FING; SAM = SAMISH FALL FING; SUM = COL RIVER SUMMERS; CHI = CHILLIWACK; LRH = LOWER RIVER TULE; SPR = SPRING CREEK TULE; URB = COLUMBIA UPRIVER BRIGHT; LRW = LEWIS RIVER WILD; SPS = SO SOUND FALL FING; UWA = U OF W FALL ACCEL (*discontinued*)

Investigation into Aspects of the SPFI

Various issues with the WCVI and NBC troll fishery SPFIs, as well as ongoing work by the CTC-AWG to develop updated 1979–1982 base period data for calibration of the PSC Coast Wide Chinook Model, prompted investigation in 2017 into data and methods used in SPFI calculations. One issue prompting the investigation was the large divergence occurring in a few years between the SPFI and both the ROM and Model FIs calculated for the WCVI troll fishery (see years 1987, 1988 and 1992 in TCCHINOOK (18)-01 Figures 3.16 and 3.17). A second issue was the large between-year changes in the WCVI SPFI (e.g. between 1988 and 1989 in TCCHINOOK (18)-01 Figures 3.16 and 3.17) compared to the other FIs and compared to FIs for the NBC and SEAK fisheries. A third issue was that in comparison with the SEAK troll fishery, there was little correlation between the Model FI and the WCVI and NBC SPFIs. A possible cause of these issues for the WCVI fishery was low or no actual landed catch, and therefore few CWT recoveries, in one or two of the three seasonal fishing periods. For the NBC fishery, changes in management of the fishery starting in 1999 to limit impacts on Canadian stocks of conservation concern (e.g., from the WCVI region) could have potentially affected the stock composition of the catch and thus the age-specific CWT data from stocks used in the SPFI calculations.

Recognition of these issues resulted in exploration of methods for imputing abundance in strata with low or zero catch. It also led to an updated analysis of the stock- and age- combinations meeting specified criteria for inclusion in the calculation of the SPFI for each AABM troll fishery. Rationale for this work was provided in the CTC's Harvest Rate Index Analysis report (CTC 2009a). The CTC described the need for imputation (see p. 98) but was only able to explore one imputation method (i.e., Average Proportion Correction) during the study leading to the report. The CTC also concluded that SPFI performance increased with contribution of data from more stocks (see p. 89). Results from the current work are described in the next sections with a focus on results for the WCVI and NBC fisheries.

Review of CWT Indicator Stocks Used in SPFI Calculations

Stocks used in the SPFI calculated for each AABM troll fishery were originally selected if an age-specific average of estimated CWTs in the fishery for years 1979–1995 exceeded 35 recoveries. For the updated analysis, the same average CWT recovery requirement was maintained but evaluated over years 1979–2015 with the exception that data from 1996, 1998 and 1999 were excluded. The three years were excluded because the NBC and WCVI troll fisheries were either closed (1996) or they were opened for only a limited portion of the year (1998–1999) and the CWT recoveries were unlikely to be representative of a more typical fishing year. The outcome of the updated analysis was that new stock-age combinations were found that met the criteria for inclusion in SPFI calculations for each troll fishery whereas some of those currently included were found to no longer meet the criteria (see Appendices I11 and I13). There was a net loss of 3 stock-age combinations from calculation of the WCVI troll SPFI and a net gain of 1 stock-age combination for the NBC troll SPFI.

SPFIs calculated with the new data set based on the updated list of stock-age combinations differed noticeably from values calculated with the current list of stock-age combinations. This was true for both the NBC and WCVI troll fisheries but most noticeable for the NBC fishery (Appendix I7 and I8). The CTC-AWG has identified the need for further work to understand how the selection of data affects the SPFI values. Selection criteria used to include or exclude year, stock and age combinations may also need reconsideration.

Investigation of Methods to Impute Abundance

Calculation of the SPFI requires an estimate of yearly harvest rate ($H_{.y}$) by AABM (Equation 1).

There are two possible equations to estimate $H_{.y}$, in the second option (Equation 2) the denominator equals the total yearly abundance across all fishery strata. Cases of low or no catch in a stratum can result in underestimates of total abundance ($N_{.y}$), leading to biased estimates of both the yearly harvest rate and the SPFI. To adjust for this influence, stratum-specific abundances estimated from years with low or no catch can be replaced by imputed values. Data imputation can be implemented by numerous statistical methods and currently the imputation of abundance has been evaluated using just three methods. The average proportion correction (APC) method was described in TCCHINOOK (09)-2¹, while the accrued average proportion correction (AAPC) method was a newly proposed variation of the APC, and finally the use of a linear regression model (LM) was evaluated.

r_{tysa} = CWT contribution in strata t, year y, stock s and age a.

c_{tysa} = Adult equivalent CWT contribution in strata t, year y, stock s, and age a.

h_{ty} = CWT harvest rate in strata t and year y.

T_{ty} = Treaty catch in strata t and year y.

N_{ty} = Abundance in strata t and year y.

$N_{.y}$ = Total abundance in year y across all strata (total yearly abundance).

$H_{.y}$ = Harvest rate in year y.

$S_{.y}$ = SPFI in year y.

$$S_{.y} = \frac{H_{.y}}{\left(\frac{\sum_{y=1979}^{1982} H_{.y}}{4} \right)}$$

Equation 1

¹ <http://www.psc.org/download/35/chinook-technical-committee/2120/tcchinook09-2.pdf>

$$H_{.y} = \frac{\sum_t \left[\left(\frac{\sum_s \sum_a c_{tysa}}{\sum_s \sum_a r_{tysa}} \right) * T_{ty} \right]}{N_{.y}}$$

Equation 2

Imputation by the Average Proportion Correction Method (APC)

Imputation using an average proportion correction method (APC) was described in TCCHINOOK (09)-2:

“For the application of the APC method, abundance estimates for all years in which all three strata had recorded catches were used to estimate the average percentage of the total yearly abundance that occurred in each stratum. The total yearly abundance was then estimated by dividing the sum of the abundances from the strata that could be estimated by the average percent of the total yearly abundance that these strata comprise. The total yearly abundance estimate was then substituted into the denominator of Equation 4-13 to produce the yearly HRI estimate...”

The APC method was considered for imputation of total yearly abundance for years when one or more strata contain catch estimates less than 1000. The APC method only allows for imputation of total annual abundance across strata. Thus, neither stratum-specific harvest rates nor the stratum fishery index can be estimated.

Imputation by the Accrued Average Proportion Correction Method (AAPC)

The AAPC method is a variation on the APC. While the APC method estimates the stratum specific average proportion (of total abundance) across all years with complete data, the AAPC relies on an expanding time series window of average proportion within each stratum. This approach likely better accommodates time series trends in strata proportions, which have been documented.

Imputation By Linear Models

A multivariate linear model (LM) provided the 3rd method to impute stratum-specific abundances. The natural logarithm of abundance was modelled as a function of the categorical variables: calendar year and fishery strata. Stratum-specific abundances were estimated (imputed) from this relationship. Application of this model necessitates more than one fishery stratum be available, which limits its use to the SEAK and WCVI AABMs (NBC has just one stratum). Unlike the APC and AAPC methods, the LM allows for imputation of stratum-specific abundance. Thus, the stratum-specific harvest rate and stratum fishery index can also be estimated.

Evaluation of Imputation Methods

The APC, AAPC, and LM imputation methods were evaluated by a jackknife approach. Only years with stratum catch exceeding a specified threshold and possessing an abundance

estimate for each stratum were retained for the evaluation. Unlike the intended application of imputation to strata with low catch values, the jackknife evaluation was applied to strata considered complete, thus allowing for the best likely estimation of performance metrics. While prior application of the APC relied on a minimum stratum catch threshold of 1000, the minimum catch for this evaluation was set at 4000.

The jackknife method was applied as follows:

1. Step through each unique year-stratum combination,
2. Reset the abundance in that year-stratum to NA (aka NULL),
3. Fit the model using the remaining data,
4. Predict an abundance estimate for the empty year-stratum,
5. Calculate the error between the predicted abundance and the 'known' value.

Model performance was compared using both mean percent error (MPE) and mean absolute percent error (MAPE). Performance metrics were calculated in two separate ways, one on stratum-specific abundance and the second on total annual abundance across strata. In both cases the percent error and absolute percent error was calculated annually, and the averages were then estimated across all yearly percent errors. The performance metrics specific to each method and AABM are presented in the following tables. The stratum-specific results indicate that the LM method had both the least uncertainty (MAPE) and bias (MPE) for both AABM's. Differences between methods, based on the annual total abundance errors, were negligible and the best method was not consistent across metrics or AABM. Based on the stratum-specific results it was determined that the LM was the best method for abundance imputation.

Appendix I7—*Imputation method performance metrics based on stratum-specific error estimates for the WCVI AABM troll fishery.*

Imputation Method	AABM	MAPE	MPE
AAPC	WCVI	35.6	-14.1
APC	WCVI	37.1	-12.1
LM	WCVI	33.3	-8.0
AAPC	SEAK	51.4	-28.0
APC	SEAK	49.4	-27.6
LM	SEAK	36.9	-11.1

Appendix I8. *Imputation method performance metrics based on yearly total error estimates for the WCVI AABM troll fishery.*

Imputation Method	AABM	MAPE	MPE
AAPC	WCVI	10.23	0.91
APC	WCVI	11.43	-0.12
LM	WCVI	10.86	0.35
AAPC	SEAK	5.60	-0.10
APC	SEAK	5.34	-0.03
LM	SEAK	5.12	0.86

Issues Associated with Imputation

The application of abundance imputation has not considered all possible conditions of data availability. If there is no estimate or a zero estimate of CWT recoveries within a year-stratum, the associated CWT harvest rate, stratum harvest rate, and stratum fishery index are unavailable or zero. However, estimates of the across stratum annual harvest rate and the SPFI can be impacted by the imputation rules of application. Under the conditions of zero or no CWT recoveries in a stratum, the numerator of equation 2 is unaffected. But, it is still possible to impute the abundance for a stratum without recoveries, which can be included in the annual total abundance summation. Total abundance is the denominator of the annual harvest rate equation. Thus, while strata lacking recoveries make no change to the numerator of equation 2, the denominator can increase, potentially resulting in underestimates of annual harvest rate and the SPFI.

There exist two variations on the assumed imputation procedure, both concerning strata with zero or no CWT recoveries (and thus no abundance estimate). The first variation is imputation for strata with catch below the threshold. The second variation is imputation of abundance regardless of catch size (also while abundance is unknown). Neither case will influence the stratum harvest rate or the stratum fishery index. Both cases will result in underestimates of annual harvest rate and the SPFI, but the extent of the impact is not clear. As the second case leads to imputing abundance for all catch levels, one could expect additional strata to be imputed when they would otherwise be excluded. Thus, the second case is likely to result in lower estimates of annual harvest rate and the SPFI than the first case.

Imputing abundance using LMs for strata with low catches was demonstrated to improve the accuracy of total annual abundance estimates. However, the specific rules of application to strata lacking recovery data likely requires further investigation.

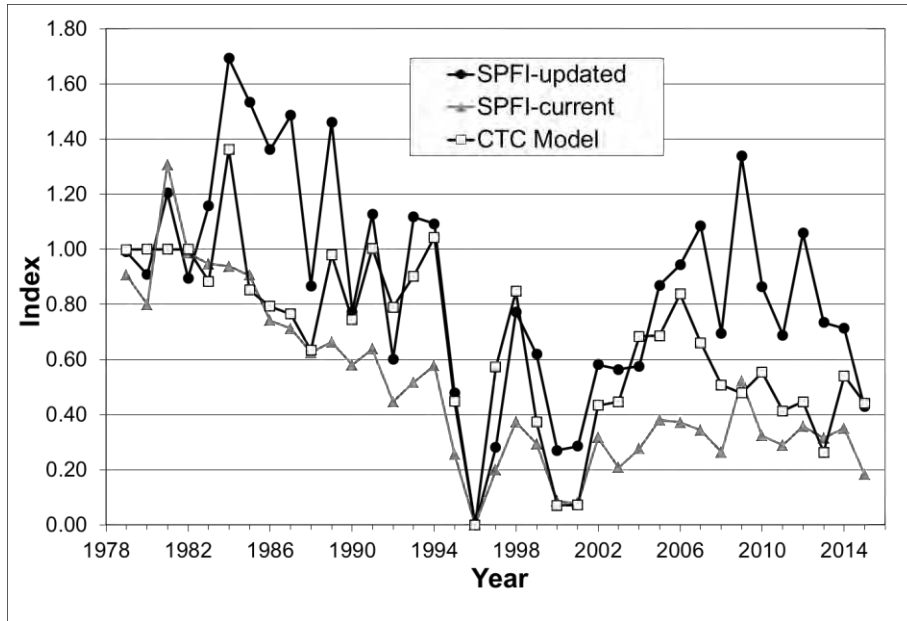
Implementation of the LM Imputation Method

Imputation is required in multiple strata for both the SEAK and WCVI AABM troll SPFIs. It is not required for the NBC fishery as the SPFI is based on a single stratum. The specific strata requiring imputation for calculation of the WCVI SPFI are provided in Appendix I14 along with the SPFI values calculated with and without imputation. Imputation can have a substantial effect on the estimated SPFI (Appendix I10). The imputation had the desired effect of reducing the magnitude of the SPFI calculated in a few years and in decreasing the difference between the SPFI and the Model FI (Appendix I10). The WCVI SPFI based on the updated list of contributing stock-age combinations and using the LM imputation was closer to the Model FI in most years although the value calculated for 2007 is an exception. The NBC SPFI based on the updated list of contributing stock-age combinations was closer to the Model FI from 1990 to 2006 (Appendix I9). In other years, it was noticeably different compared to SPFI calculated with the current stock-age list. As noted previously, the CTC anticipates further consideration of the approach used to select stock-age combinations.

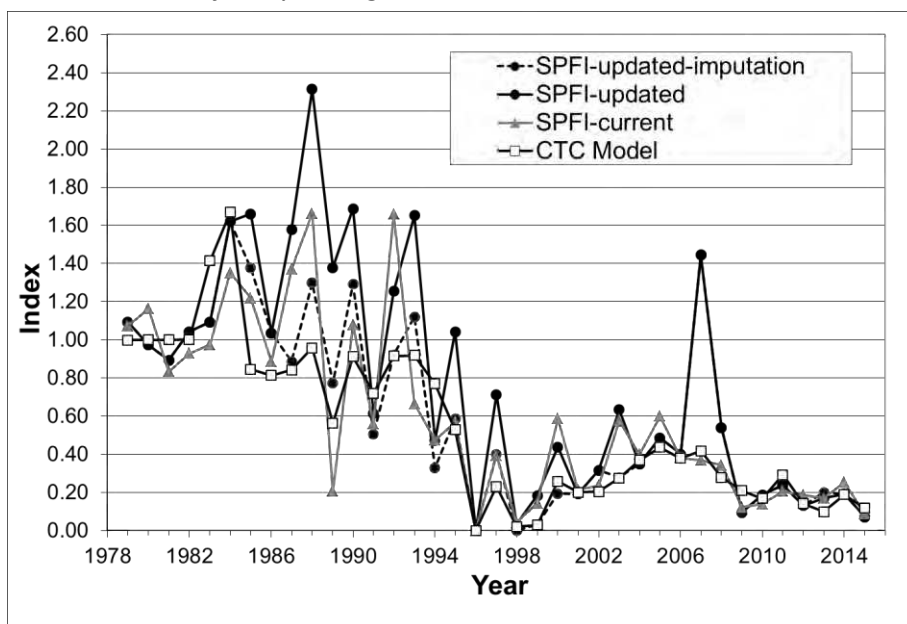
SPFIs and CTC Model FIs based on landed catch only have been presented in Appendix I9 and I10 to illustrate the effects of imputation of abundance in strata without catch and of changing

the included stock-age combinations. Similar effects are reflected in the FIs based on total mortality and the values are provided in Appendices I11 and I13.

Appendix I9—Estimated SPFIs based on the current set of stock-age combinations and an updated list, and model landed catch fishery indices for the NBC troll fishery through 2015.



Appendix I10—Estimated SPFIs based on the current set of stock-age combinations, on an updated list, on an updated list with LM imputation and model landed catch fishery indices for the WCVI troll fishery through 2015.



Appendix I11–NBC troll fishery Stratified Proportion Fishery Index (SPFI) values as landed catch and total mortality, based on CWT data and computed with the current set of selected stock-age combinations and an updated set of selected stock-age combinations.

Year	Total Mortality		Landed Catch	
	Current	Updated	Current	Updated
1979	0.91	0.99	0.91	0.99
1980	0.79	0.91	0.80	0.91
1981	1.32	1.19	1.31	1.20
1982	0.99	0.91	0.99	0.90
1983	0.96	1.22	0.95	1.16
1984	0.93	1.71	0.94	1.69
1985	0.89	1.55	0.91	1.53
1986	0.74	1.45	0.74	1.36
1987	0.80	1.61	0.71	1.49
1988	0.68	0.91	0.62	0.87
1989	0.74	1.46	0.66	1.46
1990	0.65	0.79	0.58	0.77
1991	0.64	1.13	0.64	1.13
1992	0.50	0.63	0.45	0.60
1993	0.56	1.16	0.52	1.12
1994	0.56	1.09	0.58	1.09
1995	0.27	0.51	0.26	0.48
1996*	0.00	0.00	0.00	0.00
1997	0.19	0.28	0.20	0.28
1998	0.36	0.77	0.37	0.77
1999	0.28	0.60	0.29	0.62
2000	0.10	0.27	0.09	0.27
2001	0.10	0.30	0.08	0.29
2002	0.34	0.60	0.32	0.58
2003	0.22	0.57	0.21	0.56
2004	0.30	0.62	0.28	0.58
2005	0.38	0.89	0.38	0.87
2006	0.37	0.94	0.37	0.94
2007	0.35	1.07	0.34	1.09
2008	0.29	0.76	0.26	0.70
2009	0.52	1.33	0.52	1.34
2010	0.36	0.90	0.32	0.86
2011	0.32	0.75	0.29	0.69
2012	0.40	1.12	0.36	1.06
2013	0.37	0.85	0.32	0.74
2014	0.35	0.72	0.35	0.71
2015	0.18	0.43	0.18	0.43

Appendix I12–Stock-age combinations used for estimation of NBC Stratified Proportion Fishery Index (SPFI).

ER Stock Identifiers	Current Stock-Ages			Updated Stock-Ages		
	Age 3	Age 4	Age 5	Age 3	Age 4	Age 5
Alaska Southeast		X				
Quinsam	X	X				
Robertson Creek	X	X	X	X	X	X
Salmon River Hatchery	X	X	X		X	X
Columbia Upriver Brights	X	X	X		X	
Willamette Spring Hatchery		X			X	
Elk River					X	
Queets Fall Fingerling					X	X
Lower Shuswap Summer				X	X	
Columbia River Summers					X	X

Appendix I13–WCVI troll fishery Stratified Proportion Fishery Index (SPFI) values as landed catch and total mortality based on CWT data and computed with the current set of selected stock-age combinations, an updated set of selected stock-age combinations and the updated stock-age combinations with imputation for strata with low or no catch.

Year	Total Mortality			Landed Catch			Imputed Strata ²
	No Imputation		Imputation	No Imputation		Imputation	
	Current	Updated	Updated	Current	Updated	Updated	
1979	1.06	1.08	1.08	1.07	1.09	1.09	
1980	1.16	0.97	0.97	1.16	0.97	0.97	
1981	0.85	0.90	0.90	0.83	0.89	0.89	
1982	0.94	1.05	1.05	0.93	1.04	1.04	
1983	0.95	1.11	1.11	0.98	1.09	1.09	
1984	1.36	1.65	1.65	1.35	1.62	1.62	
1985	1.21	1.67	1.38	1.22	1.66	1.38	10
1986	0.88	1.05	1.05	0.89	1.04	1.04	
1987	1.56	1.83	1.03	1.37	1.58	0.89	10, 11
1988	1.76	2.41	1.35	1.66	2.31	1.30	10, 11
1989	0.24	1.51	0.85	0.21	1.38	0.77	10, 11
1990	1.11	1.76	1.34	1.08	1.69	1.29	10
1991	0.60	0.67	0.56	0.56	0.61	0.51	10
1992	1.71	1.32	0.97	1.66	1.25	0.92	11
1993	0.69	1.73	1.18	0.67	1.65	1.12	11
1994	0.48	0.48	0.34	0.47	0.47	0.33	11
1995	0.67	1.28	0.72	0.57	1.04	0.59	10, 11
1996 ¹	0.00	0.00	0.00	0.00	0.00	0.00	
1997	0.38	0.69	0.39	0.39	0.71	0.40	10, 11
1998 ¹	0.04	0.03	0.00	0.04	0.03	0.00	
1999	0.14	0.17	0.03	0.14	0.18	0.03	11, 12
2000	0.55	0.42	0.18	0.59	0.44	0.19	12
2001	0.20	0.18	0.18	0.22	0.19	0.19	
2002	0.22	0.30	0.30	0.24	0.32	0.32	
2003	0.54	0.61	0.27	0.57	0.63	0.28	12
2004	0.38	0.33	0.33	0.40	0.35	0.35	
2005	0.57	0.46	0.46	0.60	0.49	0.49	
2006	0.36	0.38	0.38	0.38	0.40	0.40	
2007	0.35	1.38	1.38	0.37	1.44	1.44	
2008	0.32	0.51	0.51	0.34	0.54	0.54	
2009	0.12	0.09	0.09	0.12	0.10	0.10	
2010	0.13	0.18	0.18	0.14	0.19	0.19	
2011	0.20	0.23	0.23	0.21	0.24	0.24	
2012	0.18	0.13	0.13	0.19	0.13	0.13	
2013	0.16	0.16	0.19	0.17	0.17	0.20	12
2014	0.24	0.18	0.18	0.25	0.19	0.19	
2015	0.08	0.07	0.07	0.09	0.07	0.07	

Note: SPFI values were calculated including CWT estimate from the Chilliwack Hatchery stock. Data for this stock could not be included in the calculation of the ROM indices due to lack of CWT recoveries in the 1979-82 base period.

Appendix I14–Stock-age combinations used for estimation of WCVI Stratified Proportion Fishery Index (SPFI).

ER Stock Identifiers	Current Stock-Ages			Updated Stock-Ages		
	Age 3	Age 4	Age 5	Age 3	Age 4	Age 5
Chilliwack River Hatchery	X	X		X	X	
George Adams Fall Fingerling	X	X		X	X	
Columbia Lower River Hatchery	X	X		X	X	
Robertson Creek	X	X	X	X	X	
Samish Fall Fingerling	X	X		X	X	
Spring Creek Tule	X	X		X	X	
South Puget Sound Fingerling	X	X		X	X	
Columbia River Summers		X			X	X
Upriver Brights	X	X			X	
Willamette Spring Hatchery		X			X	
Cowlitz Fall Tule		X				
Lewis River Wild		X				
Salmon River Hatchery	X	X	X			

APPENDIX J: PRESEASON FORECASTS INCLUDING 2017 AND POSTSEASON ESTIMATES FOR PSC MODEL STOCKS, 1999-2016

Note: there was no CTC consensus on the 2015 and 2016 model calibrations (CLB 1503 and 1601). Outputs from CLB 1503 were used by the Commission to configure AABM fisheries in 2015. Abundances indices for AABM fisheries generated from CLB 1601 were accepted by the Commission. For each stock group in Appendix J, preseason PSC Model forecasts for 2015 are from CLB 1503 and forecasts for 2016 are from CLB 1601.

Data in Appendix J are used to evaluate Chinook Model and Agency Forecasts. The following terminology is used:

- **Model Forecast.** The Model forecast for a stock is from that year's calibration (e.g., 2017 is from CLB1702). These data do not change from year-to-year and can be found in a given year's model calibration out files. [source: stage 2 checkCLB.out file]
- **Agency Forecast.** The Agency forecast for a stock is what was provided to the CTC for use with that year's Model calibration. These data do not change from year-to-year and can be found in a given year's model calibration input file. [source: OCNyear.FCS files]
- **Postseason Return.** The postseason return is the most up to date estimate of either the terminal return or the escapement, depending on how the stock is reported in the FCS file. [source: checkCLB.out or FCS file]

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Stock	Year	Model Forecast	Agency Forecast	Postseason Return	Model Fcst/ Agency Fcst	Agency Fcst/ Postseason	Model Fcst/ Postseason
AKS ¹ (Alaska SSE)	1999	11,866	NA	12,219	NA	NA	97%
	2000	18,967	NA	16,164	NA	NA	117%
	2001	22,130	NA	21,590	NA	NA	103%
	2002	15,650	NA	18,679	NA	NA	84%
	2003	22,316	NA	14,576	NA	NA	153%
	2004	11,880	NA	17,107	NA	NA	69%
	2005	25,204	NA	15,235	NA	NA	165%
	2006	17,966	NA	20,730	NA	NA	87%
	2007	25,653	NA	15,012	NA	NA	171%
	2008	14,626	NA	13,780	NA	NA	106%
	2009	14,362	NA	10,463	NA	NA	137%
	2010	16,445	NA	15,674	NA	NA	105%
	2011	17,065	NA	11,808	NA	NA	145%
	2012	12,557	NA	6,826	NA	NA	184%
	2013	4,838	NA	8,337	NA	NA	58%
	2014	4,239	NA	10,588	NA	NA	40%
	2015	6,812	NA	9,961	NA	NA	68%
	2016	7,099	NA	5,997	NA	NA	118%
2017	4,896	NA		NA			
	AVG				NA	NA	112%
NTH ² (North/ Central BC)	1999	149,387	NA	154,294	NA	NA	97%
	2000	159,818	NA	188,482	NA	NA	85%
	2001	189,088	NA	212,176	NA	NA	89%
	2002	228,073	NA	147,381	NA	NA	155%
	2003	154,103	NA	165,029	NA	NA	93%
	2004	171,070	NA	153,292	NA	NA	112%
	2005	154,552	NA	132,480	NA	NA	117%
	2006	132,710	NA	151,915	NA	NA	87%
	2007	156,017	NA	123,388	NA	NA	126%
	2008	131,262	NA	112,038	NA	NA	117%
	2009	119,761	NA	127,131	NA	NA	94%
	2010	136,998	NA	114,904	NA	NA	119%
	2011	119,323	NA	95,091	NA	NA	125%
	2012	98,010	NA	80,339	NA	NA	122%
	2013	86,819	NA	94,564	NA	NA	92%
	2014	94,878	NA	95,975	NA	NA	99%
	2015	95,587	NA	154,141	NA	NA	62%
	2016	146,607	NA	99,656	NA	NA	147%
2017	108,254	104,935		103%			
	AVG				103%	NA	108%
RBH+RBT ² (WCVI Hatchery + Natural)	1999	77,836	68,400	105,402	114%	65%	74%
	2000	21,040	15,040	39,227	140%	38%	54%
	2001	33,702	30,633	89,209	110%	34%	38%
	2002	128,068	109,882	167,548	117%	66%	76%
	2003	111,430	105,801	217,662	105%	49%	51%
	2004	166,548	144,180	261,827	116%	55%	64%
	2005	244,768	218,840	157,906	112%	139%	155%
	2006	152,483	138,878	197,866	110%	70%	77%
	2007	151,925	117,321	121,232	129%	97%	125%
	2008	67,347	60,255	99,325	112%	61%	68%
	2009	76,063	58,382	92,944	130%	63%	82%
	2010	75,748	61,586	95,366	123%	65%	79%
	2011	98,929	74,708	163,092	132%	46%	61%
	2012	70,838	54,765	82,131	129%	67%	86%
	2013	32,180	NA ⁴	181,138	NA	NA	18%
	2014	205,989	216,727	120,473	95%	180%	171%
	2015	91,710	105,003	209,263	87%	50%	44%
	2016	235,776	224,119	165,589	105%	135%	142%
2017	172,885	163,568		106%			
	AVG				115%	75%	81%

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Stock	Year	Model Forecast	Agency Forecast	Postseason Return	Model Fcst/ Agency Fcst	Agency Fcst/ Postseason	Model Fcst/ Postseason
GSQ ¹ (Upper Strait of Georgia)	1999	16,450	NA	26,783	NA	NA	61%
	2000	19,452	NA	35,101	NA	NA	55%
	2001	25,828	NA	42,436	NA	NA	61%
	2002	41,492	NA	41,022	NA	NA	101%
	2003	36,882	NA	40,500	NA	NA	91%
	2004	39,766	NA	31,803	NA	NA	125%
	2005	38,798	NA	28,490	NA	NA	136%
	2006	39,171	NA	50,989	NA	NA	77%
	2007	41,711	NA	24,877	NA	NA	168%
	2008	30,065	NA	19,392	NA	NA	155%
	2009	26,173	NA	31,323	NA	NA	84%
	2010	26,624	NA	22,480	NA	NA	118%
	2011	23,998	NA	18,751	NA	NA	128%
	2012	25,756	NA	42,830	NA	NA	60%
	2013	31,498	NA	40,341	NA	NA	78%
	2014	30,162	NA	41,418	NA	NA	73%
	2015	26,699	NA	37,253	NA	NA	72%
	2016	26,084	NA	38,648	NA	NA	67%
2017	40,981		39,106		105%		
	AVG				105%	NA	95%
GSH ² (Lower Strait of Georgia Hatchery)	1999	22,896	NA	23,015	NA	NA	99%
	2000	19,165	NA	21,322	NA	NA	90%
	2001	17,547	NA	29,633	NA	NA	59%
	2002	25,051	NA	22,064	NA	NA	114%
	2003	21,222	NA	21,496	NA	NA	99%
	2004	16,573	NA	20,852	NA	NA	79%
	2005	21,046	NA	25,941	NA	NA	81%
	2006	18,169	NA	22,109	NA	NA	82%
	2007	24,378	NA	12,733	NA	NA	191%
	2008	11,765	NA	12,011	NA	NA	98%
	2009	17,551	NA	13,380	NA	NA	131%
	2010	7,999	NA	11,605	NA	NA	69%
	2011	14,671	NA	11,480	NA	NA	128%
	2012	10,104	NA	8,462	NA	NA	119%
	2013	5,568	NA	8,242	NA	NA	68%
	2014	6,116	NA	15,665	NA	NA	39%
	2015	18,566	NA	9,888	NA	NA	188%
	2016	5,475	NA	10,236	NA	NA	53%
2017	10,414		11,820		88%		
	AVG				88%	NA	99%
GST ¹ (Lower Strait of Georgia Natural)	1999	14,236	NA	8,715	NA	NA	163%
	2000	11,094	NA	8,223	NA	NA	135%
	2001	7,955	NA	8,569	NA	NA	93%
	2002	8,833	NA	7,812	NA	NA	113%
	2003	8,088	NA	5,903	NA	NA	137%
	2004	5,157	NA	3,642	NA	NA	142%
	2005	4,459	NA	4,870	NA	NA	92%
	2006	4,070	NA	4,880	NA	NA	83%
	2007	7,782	NA	4,778	NA	NA	163%
	2008	6,823	NA	5,646	NA	NA	121%
	2009	5,701	NA	3,106	NA	NA	184%
	2010	2,972	NA	5,763	NA	NA	52%
	2011	10,778	NA	7,595	NA	NA	142%
	2012	11,433	NA	6,291	NA	NA	182%
	2013	8,267	NA	5,440	NA	NA	152%
	2014	11,910	NA	6,579	NA	NA	181%
	2015	13,177	NA	9,840	NA	NA	134%
	2016	7,469	NA	10,639	NA	NA	70%
2017	11,163		10,639		105%		
	AVG				105%	NA	130%

-continued-

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Stock	Year	Model Forecast	Agency Forecast	Postseason Return	Model Fcst/ Agency Fcst	Agency Fcst/ Postseason	Model Fcst/ Postseason
FRE ² (Fraser Early)	1999	162,865	NA	105,473	NA	NA	154%
	2000	118,058	NA	116,233	NA	NA	102%
	2001	122,333	NA	154,175	NA	NA	79%
	2002	170,232	NA	189,335	NA	NA	90%
	2003	202,363	NA	191,700	NA	NA	106%
	2004	185,450	NA	147,813	NA	NA	125%
	2005	151,591	NA	135,177	NA	NA	112%
	2006	141,517	NA	203,460	NA	NA	70%
	2007	196,060	NA	110,555	NA	NA	177%
	2008	128,347	NA	149,048	NA	NA	86%
	2009	153,593	NA	136,201	NA	NA	113%
	2010	144,214	NA	203,948	NA	NA	71%
	2011	174,183	NA	161,748	NA	NA	108%
	2012	175,729	NA	77,285	NA	NA	227%
	2013	83,719	NA	165,166	NA	NA	51%
	2014	176,008	NA	159,656	NA	NA	110%
	2015	173,286	NA	236,551	NA	NA	73%
	2016	258,884	NA	126,975	NA	NA	204%
2017	180,300	184,349		98%			
	AVG				98%	NA	114%
FRL ¹ (Fraser Late)	1999	84,686	82,650	188,873	102%	44%	45%
	2000	187,970	220,400	133,998	85%	164%	140%
	2001	141,745	131,800	192,693	108%	68%	74%
	2002	132,946	160,100	172,451	83%	93%	77%
	2003	127,144	114,780	308,769	111%	37%	41%
	2004	104,597	97,227	206,892	108%	47%	51%
	2005	121,315	108,061	130,229	112%	83%	93%
	2006	115,489	116,682	116,985	99%	100%	99%
	2007	122,402	107,311	110,736	114%	97%	111%
	2008	125,100	116,038	88,667	108%	131%	141%
	2009	119,892	91,391	100,220	131%	91%	120%
	2010	119,953	118,891	195,898	101%	61%	61%
	2011	353,646	284,604	182,777	124%	156%	193%
	2012	107,738	93,652	70,362	115%	133%	153%
	2013	70,178	73,584	106,463	95%	69%	66%
	2014	131,118	118,361	112,963	111%	105%	116%
	2015	88,165	72,037	145,486	122%	50%	61%
	2016	57,236	51,903	93,941	110%	55%	61%
2017	112,272	107,065		105%			
	AVG				108%	88%	95%
NKS ¹ (Nooksack Spring)	1999	1,048	NA	989	NA	NA	106%
	2000	834	NA	1,526	NA	NA	55%
	2001	982	NA	2,452	NA	NA	40%
	2002	1,216	NA	4,030	NA	NA	30%
	2003	1,301	NA	3,061	NA	NA	43%
	2004	1,708	NA	1,849	NA	NA	92%
	2005	1,549	NA	2,167	NA	NA	71%
	2006	583	677	1,539	86%	44%	38%
	2007	582	575	1,620	101%	35%	36%
	2008	371	378	1,584	98%	24%	23%
	2009	336	315	2,197	107%	14%	15%
	2010	374	390	2,421	96%	16%	15%
	2011	340	309	1,236	110%	25%	28%
	2012	271	243	1,225	112%	20%	22%
	2013	1,331	NA	1,466	NA	NA	91%
	2014	1,361	1,273	1,273	107%	100%	107%
	2015	1,192	1,119	1,119	107%	100%	107%
	2016	1,308	1,324	1,324	99%	100%	99%
2017	1,297	1,291		100%			
	AVG				102%	48%	57%

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Stock	Year	Model Forecast	Agency Forecast	Postseason Return	Model Fcst/ Agency Fcst	Agency Fcst/ Postseason	Model Fcst/ Postseason
NKF ² (Nooksack/ Samish Fall Fingerling)	1999	27,206	27,000	43,709	101%	62%	62%
	2000	21,277	19,000	35,630	112%	53%	60%
	2001	33,974	36,450	71,437	93%	51%	48%
	2002	50,361	54,420	62,519	93%	87%	81%
	2003	48,259	45,750	33,339	105%	137%	145%
	2004	37,980	34,200	18,118	111%	189%	210%
	2005	19,808	19,523	20,703	101%	94%	96%
	2006	16,795	16,899	38,455	99%	44%	44%
	2007	22,086	18,834	39,390	117%	48%	56%
	2008	34,392	35,271	33,750	98%	105%	102%
	2009	26,072	23,014	25,884	113%	89%	101%
	2010	32,061	32,627	41,239	98%	79%	78%
	2011	39,144	37,902	40,678	103%	93%	96%
	2012	45,719	43,973	41,557	104%	106%	110%
	2013	50,065	48,257	37,525	104%	129%	133%
	2014	46,771	44,046	32,053	106%	137%	146%
	2015	40,315	39,739	23,696	101%	168%	170%
2016	29,171	28,611	15,988	102%	179%	182%	
2017	21,922	21,997		100%			
	AVG				103%	103%	107%
SKG ² (Skagit Summer/ Fall Wild)	1999	8,967	7,600	5,139	118%	148%	174%
	2000	6,988	7,300	16,266	96%	45%	43%
	2001	9,064	9,183	14,193	99%	65%	64%
	2002	12,635	13,455	18,114	94%	74%	70%
	2003	11,906	11,348	10,583	105%	107%	113%
	2004	18,761	20,359	22,144	92%	92%	85%
	2005	16,220	19,493	22,784	83%	86%	71%
	2006	22,402	21,811	21,246	103%	103%	105%
	2007	12,324	14,252	12,646	86%	113%	97%
	2008	18,598	18,302	14,254	102%	128%	130%
	2009	22,193	20,400	10,977	109%	186%	202%
	2010	9,894	11,853	7,926	83%	150%	125%
	2011	12,556	13,044	8,382	96%	156%	150%
	2012	10,020	8,337	15,422	120%	54%	65%
	2013	7,287	13,018	13,312	56%	98%	55%
	2014	15,221	17,874	12,777	85%	140%	119%
	2015	9,820	11,387	13,315	86%	86%	74%
2016	14,336	14,361	17,426	100%	82%	82%	
2017	15,947	14,429		111%			
	AVG				96%	106%	101%
STL ¹ (Stillaguamish Summer/Fall Wild)	1999	1,303	NA	1,194	NA	NA	109%
	2000	1,370	1,500	1,612	91%	93%	85%
	2001	1,328	1,360	1,351	98%	101%	98%
	2002	1,372	1,449	1,564	95%	93%	88%
	2003	1,860	2,050	990	91%	207%	188%
	2004	1,795	NA	1,509	NA	NA	119%
	2005	1,377	NA	1,036	NA	NA	133%
	2006	1,113	1,169	1,253	95%	93%	89%
	2007	1,424	1,510	607	94%	249%	235%
	2008	689	637	1,671	108%	38%	41%
	2009	1,268	1,086	1,001	117%	108%	127%
	2010	898	817	783	110%	104%	115%
	2011	812	783	1,018	104%	77%	80%
	2012	569	395	1,534	144%	26%	37%
	2013	1,393	1,328	854	105%	156%	163%
	2014	1,000	850	432	118%	197%	231%
	2015	514	525	459	98%	114%	112%
2016	346	299	595	116%	50%	58%	
2017	360	266		135%			
	AVG				107%	114%	117%

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Stock	Year	Model Forecast	Agency Forecast	Postseason Return	Model Fcst/ Agency Fcst	Agency Fcst/ Postseason	Model Fcst/ Postseason
SNO ² (Snohomish Wild)	1999	5,804	5,600	2,524	104%	222%	230%
	2000	5,997	6,000	3,269	100%	184%	183%
	2001	5,876	5,760	6,742	102%	85%	87%
	2002	6,524	6,700	7,422	97%	90%	88%
	2003	6,033	5,450	5,786	111%	94%	104%
	2004	12,845	15,700	10,994	82%	143%	117%
	2005	10,161	NA	4,963	NA	NA	205%
	2006	7,824	8,729	7,180	90%	122%	109%
	2007	11,153	12,289	2,832	91%	434%	394%
	2008	6,103	6,541	6,986	93%	94%	87%
	2009	8,503	8,410	1,830	101%	460%	465%
	2010	8,050	9,858	3,488	82%	283%	231%
	2011	8,281	7,600	1,414	109%	537%	586%
	2012	2,506	2,775	3,361	90%	83%	75%
	2013	3,835	3,161	2,684	121%	118%	143%
	2014	3,416	3,327	2,375	103%	140%	144%
	2015	3,809	4,159	2,329	92%	179%	164%
	2016	3,586	3,339	4,386	107%	76%	82%
2017	3,775	3,412		111%			
	AVG				99%	197%	194%
PSF+PSY ² (Puget Sound Fingerling + Yearling)	1999	66,260	69,285	146,471	96%	47%	45%
	2000	67,306	69,800	100,425	96%	70%	67%
	2001	102,899	105,955	145,822	97%	73%	71%
	2002	114,889	124,608	147,447	92%	85%	78%
	2003	114,275	133,850	144,177	85%	93%	79%
	2004	127,902	132,300	143,731	97%	92%	89%
	2005	104,084	110,542	155,325	94%	71%	67%
	2006	107,292	113,486	191,623	95%	59%	56%
	2007	127,115	135,714	221,341	94%	61%	57%
	2008	166,071	159,200	160,626	104%	99%	103%
	2009	138,299	133,187	136,695	104%	97%	101%
	2010	138,238	140,074	144,296	99%	97%	96%
	2011	172,415	168,642	155,941	102%	108%	111%
	2012	153,462	153,989	192,714	100%	80%	80%
	2013	189,645	184,783	182,276	103%	101%	104%
	2014	191,307	188,039	80,047	102%	235%	239%
	2015	128,255	131,300	96,003	98%	137%	134%
	2016	109,207	96,430	120,939	113%	80%	90%
2017	142,320	144,238		99%			
	AVG				98%	94%	93%
PSN ² (Puget Sound Natural)	1999	28,536	28,400	23,215	100%	122%	123%
	2000	15,364	10,000	17,882	154%	56%	86%
	2001	19,938	18,900	26,107	105%	72%	76%
	2002	20,008	19,801	25,009	101%	79%	80%
	2003	25,743	26,600	9,233	97%	288%	279%
	2004	24,616	23,200	16,023	106%	145%	154%
	2005	22,208	17,715	10,903	125%	162%	204%
	2006	20,182	21,301	13,095	95%	163%	154%
	2007	18,964	17,014	12,094	111%	141%	157%
	2008	23,118	21,100	18,637	110%	113%	124%
	2009	24,698	23,073	6,772	107%	341%	365%
	2010	14,734	15,128	6,745	97%	224%	218%
	2011	18,115	15,997	6,893	113%	232%	263%
	2012	14,396	13,860	10,213	104%	136%	141%
	2013	12,079	8,767	7,770	138%	113%	155%
	2014	9,253	8,125	7,354	114%	110%	126%
	2015	7,797	7,478	9,546	104%	78%	82%
	2016	7,801	7,066	8,368	110%	84%	93%
2017	8,901	8,040		111%			
	AVG				111%	148%	160%

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Stock	Year	Model Forecast	Agency Forecast	Postseason Return	Model Fcst/ Agency Fcst	Agency Fcst/ Postseason	Model Fcst/ Postseason
WCH ² (Washington Coastal Hatchery)	1999	35,221	42,752	13,535	82%	316%	260%
	2000	16,244	NA	22,571	NA	NA	72%
	2001	15,792	NA	23,166	NA	NA	68%
	2002	23,678	NA	34,243	NA	NA	69%
	2003	20,755	18,222	41,766	114%	44%	50%
	2004	28,900	NA	39,651	NA	NA	73%
	2005	28,626	NA	40,458	NA	NA	71%
	2006	36,950	NA	51,155	NA	NA	72%
	2007	41,801	40,497	22,669	103%	179%	184%
	2008	34,841	31,251	26,397	111%	118%	132%
	2009	41,756	42,595	38,162	98%	112%	109%
	2010	38,347	NA	41,498	NA	NA	92%
	2011	38,208	NA	63,942	NA	NA	60%
	2012	45,128	44,300	40,311	102%	110%	112%
	2013	33,629	25,304	44,091	133%	57%	76%
	2014	40,866	42,907	51,226	95%	84%	80%
	2015	42,604	38,120	54,902	112%	69%	78%
	2016	57,443	52,174	31,983	110%	163%	180%
2017	47,587	47,079		101%			
	AVG				106%	125%	102%
WCN ² (Washington Coastal Natural)	1999	42,107	43,780	25,065	96%	175%	168%
	2000	34,741	NA	26,507	NA	NA	131%
	2001	34,563	35,306	34,747	98%	102%	99%
	2002	33,902	33,489	36,183	101%	93%	94%
	2003	32,785	NA	39,947	NA	NA	82%
	2004	28,185	NA	57,917	NA	NA	49%
	2005	34,857	NA	41,461	NA	NA	84%
	2006	43,866	NA	38,246	NA	NA	115%
	2007	35,695	32,362	26,270	110%	123%	136%
	2008	32,187	26,923	31,219	120%	86%	103%
	2009	35,485	31,318	27,215	113%	115%	130%
	2010	39,215	NA	40,293	NA	NA	97%
	2011	32,205	NA	49,824	NA	NA	65%
	2012	45,153	41,500	40,637	109%	102%	111%
	2013	35,464	34,023	34,086	104%	100%	104%
	2014	44,952	46,275	32,459	97%	143%	138%
	2015	48,297	50,360	52,225	96%	96%	92%
	2016	48,034	41,095	27,085	117%	152%	177%
2017	39,456	36,705		107%			
	AVG				106%	117%	110%
CWS ² (Cowlitz Spring)	1999	3,363	3,950	4,799	85%	82%	70%
	2000	4,922	6,050	6,132	81%	99%	80%
	2001	3,684	4,849	7,182	76%	68%	51%
	2002	5,534	6,800	11,644	81%	58%	48%
	2003	9,550	11,700	25,584	82%	46%	37%
	2004	20,802	27,350	28,696	76%	95%	72%
	2005	18,349	24,850	16,227	74%	153%	113%
	2006	12,838	15,250	19,685	84%	77%	65%
	2007	9,945	10,600	19,519	94%	54%	51%
	2008	9,544	12,400	6,838	77%	181%	140%
	2009	6,413	14,400	7,867	45%	183%	82%
	2010	18,927	19,409	12,211	98%	159%	155%
	2011	9,654	10,602	7,946	91%	133%	121%
	2012	9,287	8,724	15,429	106%	57%	60%
	2013	9,348	7,727	11,244	121%	69%	83%
	2014	9,569	9,400	11,452	102%	82%	84%
	2015	15,530	14,100	27,941	110%	50%	56%
	2016	35,176	30,977	26,786	114%	116%	131%
2017	24,763	21,300		116%			
	AVG				90%	98%	83%

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Stock	Year	Model Forecast	Agency Forecast	Postseason Return	Model Fcst/ Agency Fcst	Agency Fcst/ Postseason	Model Fcst/ Postseason
WSH ² (Willamette Spring)	1999	46,181	49,875	57,787	93%	86%	80%
	2000	57,202	61,211	61,292	93%	100%	93%
	2001	59,207	59,600	85,695	99%	70%	69%
	2002	73,151	77,434	127,613	94%	61%	57%
	2003	108,530	112,521	132,199	96%	85%	82%
	2004	113,708	112,701	157,126	101%	72%	72%
	2005	105,111	122,280	68,642	86%	178%	153%
	2006	48,880	52,388	64,044	93%	82%	76%
	2007	44,542	61,071	43,301	73%	141%	103%
	2008	20,185	40,851	32,628	49%	125%	62%
	2009	44,161	41,205	42,088	107%	98%	105%
	2010	70,960	66,360	118,187	107%	56%	60%
	2011	117,375	109,600	85,975	107%	127%	137%
	2012	105,098	88,202	70,153	119%	126%	150%
	2013	58,436	65,982	53,062	89%	124%	110%
	2014	58,496	64,189	51,794	91%	124%	113%
	2015	54,162	55,440	87,071	98%	64%	62%
2016	73,333	70,100	49,768	105%	141%	147%	
2017	38,756	40,190		96%			
	AVG				95%	103%	96%
SUM ² (Columbia River Summer)	1999	21,653	20,900	21,867	104%	96%	99%
	2000	27,214	28,038	22,595	97%	124%	120%
	2001	27,029	24,500	52,960	110%	46%	51%
	2002	70,290	77,700	89,524	90%	87%	79%
	2003	97,280	87,600	83,058	111%	105%	117%
	2004	83,246	78,569	65,623	106%	120%	127%
	2005	66,190	62,400	60,272	106%	104%	110%
	2006	75,848	78,512	77,573	97%	101%	98%
	2007	56,948	45,555	37,035	125%	123%	154%
	2008	50,171	52,000	55,532	96%	94%	90%
	2009	68,114	70,700	53,881	96%	131%	126%
	2010	81,403	88,800	72,364	92%	123%	112%
	2011	89,000	91,900	80,574	97%	114%	110%
	2012	91,202	91,200	58,300	100%	156%	156%
	2013	72,042	73,500	67,603	98%	109%	107%
	2014	69,644	67,500	78,304	103%	86%	89%
	2015	76,664	73,000	126,882	105%	58%	60%
2016	105,748	93,300	91,048	113%	102%	116%	
2017	75,738	63,100		120%			
	AVG				104%	104%	107%
BON+CWF ² (Bonneville + Cowlitz Hatcheries)	1999	26,112	34,800	39,881	75%	87%	65%
	2000	17,095	23,700	26,971	72%	88%	63%
	2001	28,732	32,200	94,240	89%	34%	30%
	2002	100,401	137,600	156,411	73%	88%	64%
	2003	100,196	115,900	154,960	86%	75%	65%
	2004	64,696	77,100	108,308	84%	71%	60%
	2005	65,971	74,100	73,861	89%	100%	89%
	2006	49,173	55,800	58,317	88%	96%	84%
	2007	49,219	54,900	32,689	90%	168%	151%
	2008	58,557	59,000	60,268	99%	98%	97%
	2009	91,519	88,800	76,738	103%	116%	119%
	2010	95,581	90,600	103,055	105%	88%	93%
	2011	139,873	133,430	108,961	105%	122%	128%
	2012	132,629	126,999	84,798	104%	150%	156%
	2013	86,456	94,600	103,213	91%	92%	84%
	2014	98,459	110,000	101,827	90%	108%	97%
	2015	84,204	94,900	128,705	89%	74%	65%
2016	131,890	133,700	81,860	99%	163%	161%	
2017	85,726	92,400		93%			
	AVG				91%	101%	93%

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Stock	Year	Model Forecast	Agency Forecast	Postseason Return	Model Fcst/ Agency Fcst	Agency Fcst/ Postseason	Model Fcst/ Postseason
SPR ² (Spring Creek Hatchery)	1999	63,203	65,800	50,189	96%	131%	126%
	2000	17,335	21,900	20,528	79%	107%	84%
	2001	56,089	56,600	124,954	99%	45%	45%
	2002	153,070	144,400	160,836	106%	90%	95%
	2003	89,116	96,900	180,592	92%	54%	49%
	2004	124,820	138,000	175,245	90%	79%	71%
	2005	92,021	114,100	93,145	81%	122%	99%
	2006	43,421	50,000	27,918	87%	179%	156%
	2007	19,421	21,800	14,549	89%	150%	133%
	2008	87,109	87,200	79,433	100%	110%	110%
	2009	46,652	59,300	48,970	79%	121%	95%
	2010	167,251	169,000	128,554	99%	131%	130%
	2011	105,900	116,400	70,531	91%	165%	150%
	2012	72,135	63,800	56,947	113%	112%	127%
	2013	36,276	38,000	86,703	95%	44%	42%
	2014	108,724	115,100	127,586	94%	90%	85%
	2015	145,389	160,500	166,359	91%	96%	87%
	2016	84,230	89,600	44,555	94%	201%	189%
2017	158,396	158,400		100%			
	AVG				93%	113%	104%
URB ² (Columbia Upriver Bright)	1999	173,712	147,500	165,889	118%	89%	105%
	2000	212,317	171,100	156,553	124%	109%	136%
	2001	150,973	127,200	232,491	119%	55%	65%
	2002	249,721	281,000	276,948	89%	101%	90%
	2003	246,890	280,400	373,191	88%	75%	66%
	2004	246,943	292,200	362,804	85%	81%	68%
	2005	318,535	352,200	278,339	90%	127%	114%
	2006	231,319	253,900	230,390	91%	110%	100%
	2007	168,594	182,400	114,064	92%	160%	148%
	2008	151,839	162,500	196,881	93%	83%	77%
	2009	259,415	259,900	212,047	100%	123%	122%
	2010	296,816	310,800	324,908	96%	96%	91%
	2011	388,138	398,200	322,234	97%	124%	120%
	2012	365,693	353,500	297,827	103%	119%	123%
	2013	437,422	432,500	778,254	101%	56%	56%
	2014	874,989	973,300	683,461	90%	142%	128%
	2015	489,123	500,300	795,915	98%	63%	61%
	2016	568,210	589,000	406,572	96%	145%	140%
2017	253,016	260,000		97%			
	AVG				98%	103%	101%
LYF ¹ (Snake River Wild) Time series reworked per TAC guidance November 2016	1999	523	NA	905	NA	NA	58%
	2000	1,243	NA	1,148	NA	NA	108%
	2001	733	734	5,163	100%	14%	14%
	2002	2,066	NA	2,116	NA	NA	98%
	2003	2,493	2,185	3,856	114%	57%	65%
	2004	4,323	3,725	2,983	116%	125%	145%
	2005	4,453	4,000	2,602	111%	154%	171%
	2006	8,285	3,500	2,483	237%	141%	334%
	2007	3,128	2,700	2,016	116%	134%	155%
	2008	2,718	2,534	2,222	107%	114%	122%
	2009	5,743	6,952	1,431	83%	486%	401%
	2010	2,609	2,610	9,583	100%	27%	27%
	2011	9,199	8,006	7,895	115%	101%	117%
	2012	10,401	8,683	12,797	120%	68%	81%
	2013	15,154	14,900	20,425	102%	73%	74%
	2014	31,106	31,642	14,172	98%	223%	219%
	2015	18,072	NA	16,212	NA	NA	111%
	2016	15,912	12,800	9,772	124%	131%	163%
2017	11,091	8,100		137%			
	AVG				119%	132%	137%

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Stock	Year	Model Forecast	Agency Forecast	Postseason Return	Model Fcst/ Agency Fcst	Agency Fcst/ Postseason	Model Fcst/ Postseason
MCB ² (Mid-Columbia Bright) Post season return Reworked per TAC guidance November 2016	1999	37,951	38,300	50,800	99%	75%	75%
	2000	53,460	50,600	37,200	106%	136%	144%
	2001	45,055	43,500	76,600	104%	57%	59%
	2002	102,085	96,200	108,400	106%	89%	94%
	2003	126,698	104,800	150,300	121%	70%	84%
	2004	94,895	90,400	122,600	105%	74%	77%
	2005	93,837	89,400	97,900	105%	91%	96%
	2006	90,780	88,300	80,471	103%	110%	113%
	2007	77,470	68,000	47,575	114%	143%	163%
	2008	59,481	54,000	75,489	110%	72%	79%
	2009	99,685	94,400	73,069	106%	129%	136%
	2010	82,454	72,600	78,937	114%	92%	104%
	2011	108,005	100,000	87,235	108%	115%	124%
	2012	100,809	90,800	61,392	111%	148%	164%
	2013	113,333	105,200	249,588	108%	42%	45%
	2014	377,357	360,100	203,175	105%	177%	186%
	2015	156,711	113,300	170,620	138%	66%	92%
2016	115,632	101,000	88,299	114%	114%	131%	
2017	62,130	45,600		136%			
	AVG				111%	100%	109%
LRW ² (Lewis River Wild) Time series reworked per TAC guidance November 2016	1999	3,068	2,600	3,349	118%	78%	92%
	2000	4,053	3,500	10,234	116%	34%	40%
	2001	16,574	16,700	15,721	99%	106%	105%
	2002	18,910	18,200	24,948	104%	73%	76%
	2003	25,820	24,600	26,021	105%	95%	99%
	2004	24,590	24,100	22,327	102%	108%	110%
	2005	21,937	20,200	16,767	109%	120%	131%
	2006	19,818	16,600	17,896	119%	93%	111%
	2007	10,306	10,100	4,276	102%	236%	241%
	2008	4,479	3,800	7,120	118%	53%	63%
	2009	9,363	8,500	7,533	110%	113%	124%
	2010	11,034	9,700	11,491	114%	84%	96%
	2011	13,429	12,500	15,376	107%	81%	87%
	2012	17,806	16,200	12,112	110%	134%	147%
	2013	16,713	14,200	25,841	118%	55%	65%
	2014	42,365	34,200	25,805	124%	133%	164%
	2015	32,374	18,900	32,403	171%	58%	100%
2016	29,122	22,200	13,034	131%	170%	223%	
2017	19,063	12,500		153%			
	AVG				117%	101%	115%
ORC ¹ (Oregon Coastal) Observed return reworked per ODFW review November 2016	1999	65,249	72,084	82,084	91%	88%	79%
	2000	61,457	63,259	67,771	97%	93%	91%
	2001	58,062	66,412	130,795	87%	51%	44%
	2002	73,055	73,914	171,904	99%	43%	42%
	2003	101,310	85,483	183,183	119%	47%	55%
	2004	135,716	131,904	138,150	103%	95%	98%
	2005	133,886	167,213	106,632	80%	157%	126%
	2006	125,550	136,373	109,112	92%	125%	115%
	2007	108,338	131,195	46,242	83%	284%	234%
	2008	53,417	70,101	39,887	76%	176%	134%
	2009	32,254	48,072	53,550	67%	90%	60%
	2010	51,234	59,806	72,206	86%	83%	71%
	2011	73,043	78,199	99,247	93%	79%	74%
	2012	82,789	80,749	91,655	103%	88%	90%
	2013	70,385	80,095	117,203	88%	68%	60%
	2014	81,984	109,029	133,614	75%	82%	61%
	2015	63,642	94,715	144,548	67%	66%	44%
2016	110,710	119,374	103,789	93%	115%	107%	
2017	80,529	87,243		92%			
	AVG				89%	102%	88%

¹ Escapement; ² Terminal Run; ³ Puget Sound run sizes for 2015 are preliminary postseason projections based on partial return information; ⁴ An agency forecast was provided in 2013 for the WCVI aggregate (27,339) but the decision was made by the CTC to exclude it from the Model calibration. The Model forecast was 32,180 and both forecasts were large under-forecasts.

APPENDIX K: ISSUES WITH AND CHANGES TO THE EXPLOITATION RATE ANALYSIS

Changes to data and analysis involved in the ERA

In 2014, a standardized fishery structure of 186 fisheries across all PST jurisdictions was implemented in the CAS database for the ERA. Formerly, the fishery structure used to create the Cfiles, a text file summarizing the estimated recoveries for an individual CWT, was agency-specific. Implementation of the expanded fishery strata required extensive review and modifications to the fishery definition tables in the CAS database. Three strata for escapement completed the output to the Cfiles for a total of 189 reporting strata. Since that time 8 additional fisheries have been added to the standardized structure and 2 have been removed resulting in the current total of 195 strata.

In 2017, the 195 Cfile reporting strata are mapped to a total of 80 PSC reporting strata for output from the cohort analysis procedure. The 80 reporting strata (with the 80th being escapement to the stream of origin) is an increase from the 69 strata put into place in 2014 which was an increase from 33 strata that existed prior to that time. The 2017 expanded reporting strata continue to improve upon the definitions of stock-specific terminal fisheries, as well as country-specific designation of the true terminal fisheries for each CWT indicator. Previous to 2014, terminal freshwater fishery impacts were grouped under a single *terminal sport* or *terminal net* fishery regardless of whether the impacts occurred in the watershed of origin for the stock or in another watershed, or possibly even in the other country. Improved reporting strata for terminal fishery impacts will result in improved stock- and country-specific estimates of ISBM fishery impacts.

New and previously undefined strata for the estimated CWT recoveries were introduced in 2014 to make up the list of 189 Cfile reporting strata and the 69 PSC reporting strata. These included Alaska Terminal Troll, and four categories for recoveries in freshwater areas outside of the watershed of origin (i.e., strays). The four stray categories introduced in 2014 were 1) any recovery in a freshwater fishery in Canada outside the terminal area defined for a stock, 2) any recovery in a freshwater fishery in BC outside the terminal area defined for a stock, 3) any escapement recovery in Canada outside the stream of origin, and 4) any escapement recovery in the US outside the stream of origin. These stray fishery and escapement reporting strata required modifications to the cohort analysis program. In 2017, two of the stray categories were removed, and four Canadian transboundary river fisheries and four Alaska troll MSF fisheries were added. Modifications to the Visual Basic compute code have been made so that the estimated recoveries in the stray categories were included in the estimation of the cohort sizes at age but were excluded from calculation of the true terminal fishery harvest rates. The structure of output files from the cohort analysis was modified to include the new stray categories to facilitate their use in subsequent calculations such as the ISBM indices. Prior to 2014, if stray recoveries were included at all, and they occurred outside the other country of origin, they counted in the ISBM index of the home country.

Programs that process output from the cohort analysis of the CWT recoveries also required modification to read the new expanded list of 80 PSC reporting strata and to process the stray categories as required (e.g., the program used to generate the mortality distribution tables).

APPENDIX L: ISSUES WITH AND CHANGES TO THE PSC CHINOOK MODEL CALIBRATION

Changes to data inputs to the Chinook Model calibration

Changes to escapement or terminal run data in the FCS (forecast) file:

- In 2017 Canada (DFO) began to supply forecasts (using ForecastR) of escapement/terminal return
- FRL - entire escapement time series beyond the base period (1983 onwards) was updated
- GSQ – escapement from 1994-2015 updated
- NKF – terminal run updated for 1979-2015
- PSF – terminal run time series was updated from 1979 onwards
- PSN – terminal run time series was updated from 1979 onwards
- SNO – terminal run time series was updated from 1979 onwards
- NOC – entire escapement time series beyond the base period (1983 onwards) was updated; these were mostly increases in escapement for unsurveyed areas in many years but also age structure was re-evaluated for all years

The 2017 calibration that was agreed upon (1702) by the Commission used terminal Columbia River Net fishery FP values that were subsequently discovered to have been incorrectly calculated and also associated to the incorrect stock identification code. Calibration 1702 supplied an AI to set the allowable catch for the North BC Troll AABM fishery (AI=1.15) that was found to be slightly overestimated compared to a later recalibration (1703; AI=1.14). Calibration 1703 did not result in a change to the AI for the SEAK and WCVI AABM fisheries.

Changes to data inputs to the Chinook Model calibration

Changes to escapement or terminal run data in the FCS (forecast) file:

- FRL – entire escapement time series outside of the base period from 1985 onwards was updated
- RBT – entire terminal run time series from 1979 onwards was reviewed and updated
- GSQ – escapement from 2008 onwards was updated
- GST – escapement time series from 2010 onwards was updated
- PSF – entire terminal run time series was updated
- LYF – escapement time series from 2005 onwards was updated

Stock-specific FP values were calculated and entered into the Northern Troll FPA file to represent changes in impacts that have occurred given the DFO management objective of limiting impacts on WCVI-origin Chinook salmon since 2000.

Three variants of the forecast for the WCVI stock aggregate were provided by Diana Dobson (DFO) this year in addition to the standard forecast. The standard forecast has been based on a fixed set of fishery scalars relative to fishery impacts observed in the 1979–1981 base period, with the expansion to the total aggregate based on high quality terminal run data available for the Somass River stock, the watershed-of-origin for the Robertson Creek CWT indicator. The decision was made by the CTC to use a variant forecast, which was based on fishery scalars reflecting recent exploitation rates, with separate expansions for each of the three large hatchery systems and the natural systems, to obtain the total aggregate forecast. The variant forecast was almost twice the magnitude of the standard forecast (216,728 vs 111,550 for the aggregate terminal return) but was considered to better represent the trends in abundance of the contributing stocks.

The agency forecast for 2013 was used as input in the model forecast (.FCS) file in place of the observed return in 2013 for some stocks. The 2013 return was not available in time for the model calibration for three of the stocks (PSN, WCH and WCN) but was available for three others (CWS, SNO and STL). The 2013 forecast and observed return for the latter stocks is as follows:

CWS (forecast for 2013 = 7727; 2013 observed return = 12147)
SNO (forecast for 2013 = 3161; 2013 observed return = 3294)
STL (forecast for 2013 = 1328; 2013 observed return = 854)