

CHAPTER I - ABUNDANCE PROJECTIONS

Abundance expectations in 2009 are summarized for key Chinook and coho salmon stocks in Tables I-1 and I-2, respectively. A cursory comparison of preseason forecast and postseason abundance estimates for selected stocks is presented in Figures I-1 and I-2. More detailed analyses of this subject are covered in Chapter II (Chinook) and III (coho). Information on pink salmon abundance, which is only significant in odd-numbered years, is contained in Chapter IV. Council Salmon Fishery Management Plan (FMP) management goals are presented in Table I-3 and Appendix A, Table A-1.

In addition to the key stocks with abundance projections listed in Tables I-1 and I-2, Council management decisions for the 2009 ocean salmon fishing seasons may be constrained by other stocks, such as those listed under the ESA or subject to the PSC agreement, which may not have abundance projections made, or do not have abundance projections available in time for inclusion in this report. These include the following ESU's: Sacramento River Winter, Central Valley Spring, California Coastal, Lower Columbia River, and Snake River Fall Chinook; and Central California and Southern Oregon/Northern California coho, as well as Interior Fraser (including Thompson River) coho.

Table I-3 provides a summary of Salmon FMP stock forecasts for 2009 under 2008 regulations, as well as postseason estimates of these quantities for earlier years, which are compared to FMP conservation objectives. For some stocks, postseason estimates of these metrics were either incomplete or unavailable when the Review of 2008 Ocean Salmon Fisheries was published. A preliminary determination of stock status under the FMP Overfishing Criteria was available for some of these stocks in time for this report; however, some estimates are still unavailable. The STT will report to the Council on stocks not meeting conservation objectives at the March 2009 Council meeting, and may further update the status of stocks present in Table I-3 at that time.

A number of stocks are not subjected to the FMP Overfishing Criteria, including ESA listed stocks and stocks minimally impacted by Council-area ocean fisheries. However, the status of several stocks listed in Table I-3 that are subject to the FMP Overfishing Criteria should be noted at this stage of the management process. In particular:

- Western Strait of Juan de Fuca natural coho failed to meet its FMP conservation objective for three consecutive years (2005-2007); a 2008 spawning escapement estimate was not available in time for this report.
- Grays Harbor and Queets natural coho failed to meet their FMP conservation objectives in 2006 and 2007; 2008 spawning escapement estimates were not available in time for this report.
- Oregon coastal Chinook failed to meet its FMP conservation objective in 2007 and 2008; a forecast for 2009 was not available.
- Stillaguamish and Snohomish natural coho are forecast to fall short of their FMP conservation objectives in the absence of fishing in 2009, which would trigger a Conservation Alert under terms of the FMP. Because these stocks fall under the *U.S. v. Washington* agreement, the Council may allow fishing impacts on these stocks in 2009 if annual management objectives are agreed to by the Parties; however, it should be noted that Snohomish natural coho failed to achieve their FMP conservation objective in 2007 and 2008, and could trigger an Overfishing Concern in 2009 if the forecast proves accurate.
- Sacramento River fall Chinook (SRFC) failed to meet its FMP conservation objectives in 2007 and 2008 and are forecast to be only slightly above their FMP conservation objectives in 2008 in the absence of fishing.
- Skagit natural coho are forecast to be only slightly above their FMP conservation objectives in 2008 in the absence of fishing.

TABLE I-1. Preseason adult Chinook salmon stock forecasts in thousands of fish. (Page 1 of 3)

Production Source and Stock or Stock Group	2001	2002	2003	2004	2005	2006	2007	2008	2009	Methodology for 2009 Prediction and Source
Sacramento Index										
Fall Chinook	NA	NA	NA	NA	NA	NA	NA	54.6 ^{a/}	122.2	Linear regression analysis of jack escapement on SI of the following year. Data point 2005 excluded for 2009 SI forecast. CDFG staff.
Klamath River (Ocean Abundance)										
Fall Run	435.5	362.5	310.2	216.3	239.8	110.0	546.2	190.7	505.7	Linear regression analysis of age-specific ocean abundance estimates on river runs of same cohort. KRTAT.
Oregon Coast										
North and South/Local Migrating										None.
Columbia River (Ocean Escapement)										
Upriver Spring	364.6	333.7	145.4	360.7	254.1 ^{b/}	88.4	78.5	269.3	298.9	Age-specific linear regressions of cohort returns in previous run years. WDFW staff.
Willamette Spring	61.0	73.8	109.8	109.4	116.9	46.5	52.0	34.0	22.8	Age-specific linear regressions of cohort returns in previous run years. ODFW staff.
Sandy Spring	4.0	4.3	4.8	5.2	7.4	8.2	7.9	6.8	5.2	Recent year average. ODFW staff.
Cowlitz Spring	1.0	3.1	4.9	15.9	12.7	3.0	6.4	5.2	4.1	Age-specific linear regressions of cohort returns in previous run years. WDFW staff.
Kalama Spring	1.0	1.6	3.6	6.0	4.5	1.5	4.0	3.7	0.9	Age-specific linear regressions of cohort returns in previous run years. WDFW staff.
Lewis Spring	2.8	2.0	3.1	5.4	7.6	1.8	5.9	3.5	2.2	Age-specific linear regressions of cohort returns in previous run years. WDFW staff.
Upriver Summer	24.5	77.7	87.6	102.8	62.4 ^{b/}	49.0	45.6	52.0	70.7	Age-specific average cohort ratios/cohort regressions. Columbia River TAC.
URB Fall	127.2	281.0	280.4	292.2	352.2	253.9	182.4	162.5	259.9	Age-specific average cohort ratios/cohort regressions. Columbia River TAC.
SCH Fall	56.6	144.4	96.9	138.0	114.1	50.0	21.8	87.2	59.3	Age-specific average cohort ratios/cohort regressions. Columbia River TAC.
LRW Fall	16.7	18.7	24.6	24.1	20.2	16.6	10.1	3.8	8.5	Age-specific average cohort ratios/cohort regressions. Columbia River TAC.
LRH Fall	32.2	137.6	115.9	77.1	74.1	55.8	54.9	59.0	88.8	Age-specific average cohort ratios/cohort regressions. Columbia River TAC.
MCB Fall	43.5	96.2	104.8	90.4	89.4	88.3	68.0	54.0	94.5	Age-specific average cohort ratios/cohort regressions. Columbia River TAC.

TABLE I-1. Preseason adult Chinook salmon stock forecasts in thousands of fish. (Page 2 of 3)

Production Source and Stock or Stock Group		2001	2002	2003	2004	2005	2006	2007	2008	2009	Methodology for 2009 Prediction and Source
Washington Coast (Ocean Escapement)											
Willapa Bay	Natural	4.3	3.7	2.4	4.1	3.2	2.0	2.0	2.5	2.0	Mean return per release by age class adjusted for brood performance through 2007 return year. WDFW staff.
	Hatchery	17.8	18.8	14.2	14.7	17.4	29.8	29.8	27.0	34.8	Mean return per release by age class adjusted for brood performance through 2007 return year. WDFW staff.
Quinault Spring/Summer	Natural	NA	NA	NA	NA	NA	NA	NA	NA	NA	
Quinault Fall	Hatchery	NA	NA	NA	NA	NA	NA	NA	NA	NA	
Queets Spring/Summer	Natural	NA	NA	NA	NA	NA	NA	NA	NA	0.4	
Queets Fall	Natural	NA	NA	NA	NA	NA	NA	NA	NA	NA	
	Hatchery	NA	NA	NA	NA	NA	NA	NA	NA	NA	
Hoh Spring/Summer	Natural	NA	1.6	1.9	1.5	1.5	1.4	1.6	0.9	1.1	Age specific mean cohort ratios and linear regression analysis using recent 5 year mean.
	Hatchery	NA	1.6	1.9	1.5	1.5	1.4	1.6	0.9	1.1	Age specific mean cohort ratios and linear regression analysis
Hoh Fall	Natural	3.1	4.2	3.1	4.2	3.8	4.0	2.7	2.9	2.6	Age specific mean cohort ratios and linear regression analysis
Quillayute Spring	Hatchery	0.8	1.2	1.0	1.4	1.2	1.7	1.3	1.7	2.0	Mean return per release using most recent 4 years, adjusted means for age-5 and age-6.
Quillayute Summer/Fall	Natural	5.9	6.7	7.4	7.8	6.7	6.8	7.7	6.0	6.8	Summer: Recent 5 year mean return per spawner. Fall: Recent 3 year mean return rates from cohort analysis.
Puget Sound^{ef}											
Nooksack/Samish	Hatchery	34.9	52.8	45.8	34.2	19.5	16.9	18.8	35.3	23.0	Brood release times average return/release rate (2006-2008 return years).
East Sound Bay	Hatchery	1.6	1.6	1.6	0.8	0.4	0.4	0.4	0.8	0.1	Brood release times average return/release rate (2006-2008 return years).
Skagit	Natural	9.1	13.8	13.7 ^{df}	20.4 ^{df}	23.4 ^{df}	24.1 ^{df}	15.0 ^{df}	23.8 ^{df}	23.4 ^{df}	Age-specific average cohort return rate method, averaged with environmental predictor model-based forecast.
	Hatchery	0.0	0.0	0.0 ^{df}	0.5 ^{df}	0.7 ^{df}	0.6 ^{df}	1.1 ^{df}	0.7 ^{df}	0.6 ^{df}	Product of average brood age return rate and appropriate year smolt releases.
Stillaguamish	Natural	1.7 ^{ef}	2.0 ^{ef}	2.0 ^{ef}	3.3 ^{ef}	2.0 ^{ef}	1.6 ^{ef}	1.9 ^{ef}	1.1 ^{ef}	1.7 ^{ef}	Natural plus supplemental production from average of FRAM CWT reconstruction and an independent environmental model. FRAM CWT reconstruction uses BY 1993-2003 tagged fish survival rates for supplemental forecast, and BY 1986-1993 recruits/spawner for the natural return.
Snohomish	Natural	5.8 ^{ef}	6.7 ^{ef}	5.5 ^{ef}	15.7 ^{ef}	14.2 ^{ef}	8.7 ^{ef}	12.3 ^{ef}	6.5 ^{ef}	8.4 ^{ef}	Average of 1998-2002 brood recruits/spawner applied to the 2004-2007 parent escapements. Hatchery forecasts based on average CWT survival rates from Wallace Hatchery applied to releases (yearlings: BY 1996-97; fingerlings: BY 2002-2002).
	Hatchery	4.1	6.8 ^{ef}	9.4 ^{ef}	10.1 ^{ef}	9.9 ^{ef}	9.6 ^{ef}	8.7 ^{ef}	8.8 ^{ef}	4.9 ^{ef}	Yearlings based on CWT groups for Wallace Hatchery (BYs 1987 and 1992-1996). Fingerlings based on survival estimate from Tulalip Hatchery.

TABLE I-1. Preseason adult Chinook salmon stock forecasts in thousands of fish. (Page 3 of 3)

Production Source and Stock or Stock Group		2001	2002	2003	2004	2005	2006	2007	2008	2009	Methodology for 2009 Prediction and Source
Tulalip	Hatchery	5.5	5.8 ^{e/}	6.0 ^{e/}	7.6 ^{e/}	9.2 ^{e/}	10.0 ^{e/}	8.1 ^{e/}	4.1 ^{e/}	4.0 ^{e/}	CWT survival rates (1986-1991) multiplied by release numbers for brood years 2002-2005, adjusted by the ratio actual/expected 2007 escapement.
South Puget Sound	Natural	16.2	16.9	19.6	17.5	17.7	21.3	17.0	21.1	17.2	Puyallup R. based on age-specific return per spawner rates for 1996-2007 return year. For Nisqually, recent age-4 average (2004-2007) of runsizes. Green R. based on average recruits/spawner for escapements between 3,000 and 7,000.
	Hatchery	73.7	90.8	86.6	86.5	83.1	85.8	92.1	101.3	93.0	Average return at age multiplied by cohort release for Green, Carr Inlet, and Area 10E. Nisqually based on return rates/spawner for age-3 and age-5; age-4/3 sibling relationship for age-4.
Hood Canal	Natural	2.7	2.9 ^{d/}	3.6 ^{d/}	2.4 ^{d/}	3.1 ^{d/}	2.5 ^{d/}	3.8 ^{d/}	2.6 ^{d/}	2.5 ^{d/}	Natural fish based on the Hood Canal terminal run reconstruction-based relative contribution of the individual Hood Canal management units in the 2005-2008 return years.
	Hatchery	22.6	21.1 ^{d/}	30.2 ^{d/}	27.2 ^{d/}	27.5 ^{d/}	27.7 ^{d/}	43.6 ^{d/}	34.2 ^{d/}	40.1 ^{d/}	Brood 2004 fingerling lbs released from WDFW facilities in 2005, multiplied by the average of postseason estimated terminal area return rates (total terminal run / hatchery fingerling lbs released three years previous) for the last eight return years (2000-2007), excluding return year 2005 in which the return rate was a statistical outlier.
Hoko	Natural								1.1 ^{e/}	1.0	Sibling regressions;
Strait of Juan de Fuca	Natural	3.5	3.6 ^{d/}	3.4 ^{d/}	3.6 ^{d/}	4.2 ^{d/}	4.2 ^{d/}	4.4 ^{d/}	3.2 ^{d/}	2.4 ^{d/}	Four-year average 2005-2008 of terminal run size. Elwha estimate is a combination of hatchery and wild fish.
	Hatchery	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	

a/ Does not include the river harvest component. SI forecasts after 2008 include river harvest.

b/ Beginning in 2005, the upriver spring/summer designation was changed, with stream type Snake Basin summer fish being combined with the spring stock.

c/ Unless otherwise noted, forecasts are for Puget Sound run size available to U.S. net fisheries. Does not include fish caught in troll and recreational fisheries.

d/ Terminal run forecast.

e/ Expected spawning escapement without fishing.

TABLE I-2. Preseason adult coho salmon stock forecasts in thousands of fish. (Page 1 of 2)

Production Source and Stock or Stock Group		2001	2002	2003	2004	2005	2006	2007	2008	2009	Methodology for 2009 Prediction and Source
OPI Area (Total Abundance)		1,758.7	434.1	984.6	777.9	542.9	460.2	870.7	289.5	1,317.4	Sum of stock component estimates.
(California and Oregon Coasts and Columbia River)											
OPI Public	Hatchery	1,707.6	361.7	863.1	623.9	389.9	398.8	593.6	216.1	1,073.1	A new method was developed beginning in 2008 to estimate coho abundances for the hatchery components of the Columbia River and the Oregon Coast. This method is based on the 86-97 base period and "backwards" FRAM runs for recent years. See text in Chapter III for details.
	Columbia River Early	1,036.5	161.6	440.0	313.6	284.6	245.8	424.9	110.3	672.7	
	Columbia River Late	491.8	143.5	377.9	274.7	78.0	113.8	139.5	86.4	369.7	
	Coastal N. of Cape Blanco	127.3	36.6	29.3	16.6	11.5	8.6	7.0	1.7	7.3	
	Coastal S. of Cape Blanco	52.0	20.0	15.9	19.0	15.8	30.6	22.2	17.7	23.4	
Lower Columbia River	Natural	NA	NA	NA	NA	NA	NA	21.5	13.4	32.7	A new method was developed beginning in 2008 to estimate LCR wild coho. This method relies on the 86-97 base period and "backward" FRAM runs for recent years.
Oregon Coast (OCN)	Natural	50.1	71.8	117.9	150.9	152.0	60.8	255.4	60.0	211.6	A new method was developed to estimate OCN wild coho. This method relies on the 86-97 base period and "backward" FRAM runs for recent years. See text in Chapter III for details.
STEP ^{a/}	Hatchery	1.0	0.6	3.6	3.1	1.0	0.6	0.2	-	-	No forecast for 2008 and 2009; releases discontinued.
Washington Coast											
Willapa	Natural	21.6	21.6	31.8	36.7	35.9	30.3	24.4	35.1	33.5	A variety of methods were used for 2009, primarily based on smolt production and survival. See text in Chapter III for details.
	Hatchery	36.1	40.4	57.5	55.0	56.4	37.7	37.2	25.5	59.4	
Grays Harbor	Natural	51.3	55.4	58.0	117.9	91.1	67.3	59.4	42.7	59.2	
	Hatchery	67.1	56.8	64.0	67.8	54.4	52.4	74.0	53.1	63.5	
Quinault	Natural	8.7	29.4	47.7	50.5	44.9	28.8	18.6	17.4	16.3	
	Hatchery	10.8	12.3	20.6	18.2	33.6	34.5	22.7	24.5	26.2	
Queets	Natural	12.0	12.5	24.0	18.5	17.1	8.3	13.6	10.2	NA	
	Hatchery	10.0	16.0	24.9	17.1	17.4	11.9	19.1	10.3	13.5	
	Supplemental ^{b/}	NA	2.0	1.3	2.5	2.4	-	-	-	-	
Hoh	Natural	8.5	8.5	12.5	8.1	7.6	6.4	5.4	4.3	9.5	
Quillayute Fall	Natural	23.0	22.3	24.9	21.2	18.6	14.6	10.8	10.5	19.3	
	Hatchery	15.3	15.0	15.2	20.9	22.1	10.4	18.1	13.0	39.5	

TABLE I-2. Preseason adult coho salmon stock forecasts in thousands of fish. (Page 2 of 2)

Production Source and Stock or Stock Group		2001	2002	2003	2004	2005	2006	2007	2008	2009	Methodology for 2009 Prediction and Source	
Quillayute Summer	Natural	0.6	1.2	1.8	1.1	0.8	1.1	1.0	1.1	2.2	A variety of methods were used for 2009, primarily based on smolt production and survival. See text in Chapter III and Joint WDFW and tribal annual reports on Puget Sound Coho Salmon Forecast Methodology for details.	
	Hatchery	5.3	4.9	5.4	6.1	6.1	4.0	6.4	4.2	12.9		
North Coast Independent Tributaries	Natural	8.1	6.4	14.8	12.7	8.5	8.1	3.2	3.2	11.1		
	Hatchery	8.1	8.1	11.0	4.3	5.6	3.2	4.1	5.0	14.1		
WA Coast Total	Natural	133.8	157.3	215.5	266.7	224.5	164.9	136.4	124.5	NA		
	Hatchery	152.7	155.5	199.9	191.9	198.0	154.1	181.6	135.7	229.1		
Puget Sound												
Strait of Juan de Fuca	Natural	21.4	21.2	20.1	35.7	20.7	26.1	29.9	24.1	20.5		
	Hatchery	14.4	14.0 ^{b/}	24.0 ^{b/}	28.7 ^{b/}	26.5 ^{b/}	20.5	18.4	9.5	7.0		
Nooksack-Samish	Natural	12.4	22.0	16.4	27.5	17.0	18.3	5.2	14.8	7.0		
	Hatchery	44.4	105.4	66.2	75.5	89.5	81.1	53.1	47.1	25.5		
Skagit	Natural	87.2	98.5	116.6	155.8	61.8	106.6	26.8	61.4	33.4		
	Hatchery	10.1	14.1	10.4	22.8	9.1	22.5	8.9	18.3	11.7		
Stillaguamish	Natural	24.4	19.7	37.8	38.0	56.7	45.0	69.2	31.0	13.4		
	Hatchery	-	-	1.3	0.5	0.2	1.2	0.0	0.1	0.0		
Snohomish	Natural	129.6	123.1	203.0	192.1	241.6	139.5	98.9	92.0	67.0		
	Hatchery	60.9	60.3	35.4	48.3	59.1	96.4	25.7	53.5	53.6		
South Sound	Natural	29.5	40.4	103.6	61.3	45.7	45.3	18.2	27.3	53.6		
	Hatchery	172.6	222.5	315.6	288.4	222.2	256.1	181.7	170.0	188.8		
Hood Canal	Natural	62.0	34.9	32.4	98.7	98.4	59.4	42.4	30.4	48.6		
	Hatchery	33.5	31.3 ^{b/}	48.0 ^{b/}	43.1 ^{b/}	60.6 ^{b/}	57.9	54.8	35.0	52.0		
Puget Sound Total	Natural	366.5	359.8	529.9	609.2	541.9	440.2	290.6	281.0	243.5		
	Hatchery	335.9	447.6	501.0	507.3	465.2	535.7	342.6	333.5	338.6		

a/ Program ended in 2005.

b/ Strait of Juan de Fuca and Hood Canal Hatchery numbers in 2002-2005 include natural coho from secondary (hatchery) management zones.

TABLE I-3. Achievement of conservation objectives for key stocks listed in Table 3-1 of the Pacific Coast Salmon Plan. Bolded numbers indicate a failure to meet the conservation objective. Stocks listed under the Endangered Species Act are not included. (Page 1 of 2)

CHINOOK	2001	2002	2003	2004	2005	2006	2007	2008 ^{ai}	2009 ^{bi}	Overfishing Criteria		
										Alert ^{ci}	Concern ^{di}	Exception ^{ei}
Sacramento River Fall 122.0 - 180.0 adult spawners	594.8	768.4	521.6	283.5	394.0	268.0	87.9	66.3	122.1	No	No	No
Klamath River Fall - < 66%-67% avg. spawner reduction rate but no less than 35.0 adult natural spawners annually	77.8	65.6	87.6	24.1	26.8	30.2	60.7	30.9	51.8	No	Yes	No
Southern, Central and Northern Oregon Coast Spring and Fall No less than 60 adult spawners/mile ^f	165.2	222.8	230.6	171.7	72.6	63.8	39.2	33.8	NA	No	No	No
Upper Columbia River Bright Fall 43.5 adults over McNary Dam Council area base period impacts <4%	110.5	141.7	180.0	170.6	134.8	91.0	58.7	101.9	>43.5	No	No	Exp. Rate
Columbia River Summer Chinook 80.0 to 90.0 adults over Bonneville Dam Council area base period impacts <2%	76.2	127.4	114.8	NA	NA	NA	NA	NA	NA	No	No	Exp. Rate
In 2004 state and tribal co-managers changed the stock definition from Chinook passing Bonneville Dam after May 31 to Chinook passing Bonneville Dam after June 14, with a goal of 29,000 at the river mouth	54.9	92.8	83.1	65.4	60.1	76.2	37.2	55.4	>29.0	No	No	Exp. Rate
Grays Harbor Fall - 14.6 adult spawners (MSP)	9.5	11.3	19.4	29.3	19.5	17.1	12.4	NA	NA ^g	No	No	Exp. Rate
Grays Harbor Spring - 1.4 adult spawners	2.9	2.6	1.9	5.0	2.1	2.5	0.7	1.0	NA ^g	No	No	Exp. Rate
Queets Fall - no less than 2.5 adult spawners (MSY)	2.3	2.1	4.1	3.6	3.1	2.3	1.9	NA	NA ^g	No	No	Exp. Rate
Queets Spring/Summer - no less than 0.7 adult spawners	0.5	0.7	0.2	0.6	0.3	0.3	0.4	0.3	0.4	Limited ^{ei}	No	Exp. Rate
Hoh Fall - no less than 1.2 adult spawners (MSY)	2.6	4.4	1.6	3.2	4.2	1.5	1.6	1.8	2.6	No	No	Exp. Rate
Hoh Spring/Summer - no less than 0.9 adult spawners	1.2	2.5	1.2	1.8	1.2	0.9	0.8	0.5	1.1	No	No	Exp. Rate
Quillayute Fall - no less than 3.0 adult spawners (MSY)	5.1	6.1	7.4	3.8	6.4	5.6	3.1	4.3	5.6	No	No	Exp. Rate
Quillayute Spring/Summer - 1.2 adult spawners (MSY)	1.2	1.0	1.2	1.1	0.9	0.6	0.5	0.9	1.2	Limited ^{ei}	No	Exp. Rate

TABLE I-3. Achievement of conservation objectives for key stocks listed in Table 3-1 of the Pacific Coast Salmon Plan. Bolded numbers indicate a failure to meet the conservation objective. Stocks listed under the Endangered Species Act are not included. (Page 2 of 2)

Stock and Conservation Objective (thousands of spawners; spawners per mile; impact or replacement rate)											Overfishing Criteria		
	COHO	2001	2002	2003	2004	2005	2006	2007	2008 ^{a/}	2009 ^{b/}	Alert ^{c/}	Concern ^{d/}	Exception ^{e/}
Grays Harbor - 35.4 adult spawners (MSP)	80.1	110.1	85.0	61.7	45.1	14.5	24.3	NA	>35.4	No	No	No	
Queets - 5.8 to 14.5 adult spawners (MSY range) Includes supplemental adults prior to 2006.	23.9	13.8	9.8	7.5	6.5	5.7	4.6	NA	NA	No	No	No	
Hoh - 2.0 to 5.0 adult spawners (MSY range)	10.8	9.0	6.3	4.7	4.7	1.3	2.3	2.4	>2.0	No	No	No	
Quillayute Fall - 6.3 to 15.8 adult spawners (MSY range)	18.9	23.0	14.8	13.4	11.5	5.2	6.2	6.9	>6.3	No	No	No	
Western Strait of Juan de Fuca - 11.9 adult spawners	26.5	17.1	13.8	12.0	6.8	2.0	4.4	NA	>10.9	No	Yes	No	
Eastern Strait of Juan de Fuca - 0.95 adult spawners	2.5	3.0	3.2	7.8	3.4	1.8	3.1	NA	>3.2	No	No	No	
Hood Canal - 21.5 adult spawners (MSP)	94.8	69.3	170.3	146.9	38.1	13.8	46.7	NA	>21.5	No	No	No	
Skagit - 30.0 adult spawners (MSP)	87.0	56.0	69.2	138.8	34.7	7.7	52.0	41.5	>30	No	No	No	
Stillaguamish - 17.0 adult spawners (MSP)	73.6	27.3	45.7	59.2	25.8	8.5	38.7	12.9	<17	Yes^{e/}	No	No	
Snohomish - 70.0 adult spawners (MSP)	261.8	161.6	182.7	252.8	109.0	75.8	18.6	35.1	<70	Yes^{e/}	No	No	

a/ Preliminary data.

b/ Preliminary approximations based on preseason abundance projections and last year's regulations or season structures.

c/ Conservation Alert - triggered during the annual preseason process if a natural stock or stock complex, listed in Table 3-1 of the salmon FMP, is projected to fall short of its conservation objective (MSY, MSY proxy, MSP, or floor in the case of some harvest rate objectives [e.g., 35,000 natural Klamath River fall Chinook spawners]).

Actions for Stocks that are not Exceptions - The Council will close salmon fisheries within its jurisdiction which impact the stocks, except in the case of Washington coastal and Puget Sound salmon stocks and fisheries managed under U.S. District Court orders. In these cases, the Council may allow fisheries which meet annual spawner targets developed through relevant U.S. v. Washington, Hoh v. Baldrige, and subsequent U.S. District Court ordered processes and plans, that may vary from the MSY or MSP conservation objectives. For all natural stocks that meet the conservation alert criteria, the Council will notify pertinent fishery and habitat managers, advising that the stock may be temporarily depressed or approaching an overfishing concern (depending on its recent conservation status), and request state and tribal fishery managers identify the probable causes, if known. If the stock has not met its conservation objective in the previous two years, the Council will request state and tribal managers to do a formal assessment of the primary factors leading to the shortfalls and report to the Council no later than the March meeting prior to the next salmon season.

d/ Overfishing concern - triggered if, in three consecutive years, the postseason estimates indicate a natural stock, listed in Table 3-1 of the salmon FMP, has fallen short of its conservation objective (MSY, MSP, or spawner floor as noted for some harvest rate objectives).

Actions required for Stocks that are not Exceptions - Within one year, the STT to recommend and the Council to adopt management measures to end the overfishing concern and recover the stock in as short a time as possible, preferably within ten years or less. The HC to provide recommendations for habitat restoration and enhancement measures within a suitable time frame.

e/ Exception -application of the conservation alert and overfishing criteria and subsequent Council actions do not apply for (1) hatchery stocks, (2) natural stocks with a cumulative adult equivalent exploitation rate of less than 5% in ocean fisheries under Council jurisdiction during the FRAM base periods, and (3) stocks listed under the ESA.

Conservation Alert and Overfishing Concern Actions for Natural Stocks that are Exceptions (those with exploitation rates limited to less than 5% in base period Council-area ocean fisheries) - Use the expertise of STT and HC to confirm negligible impacts of proposed Council fisheries, identify factors which have led to the decline or low abundance (e.g., fishery impacts outside Council jurisdiction, or degradation or loss of essential fish habitat) and monitor abundance trends and total harvest impact levels. Council action will focus on advocating measures to improve stock productivity, such as reduced interceptions in non-Council managed fisheries, and improvements in spawning and rearing habitat, fish passage, flows, and other factors affecting overall stock survival.

f/ Based on the sum of south/local and north migrating spawners per mile weighted by the total number of miles surveyed for each of the two components (2.2 miles for south/local and 7.5 miles for northern stocks).

g/ Preseason forecasts are not available for some of Washington coastal Chinook stocks.

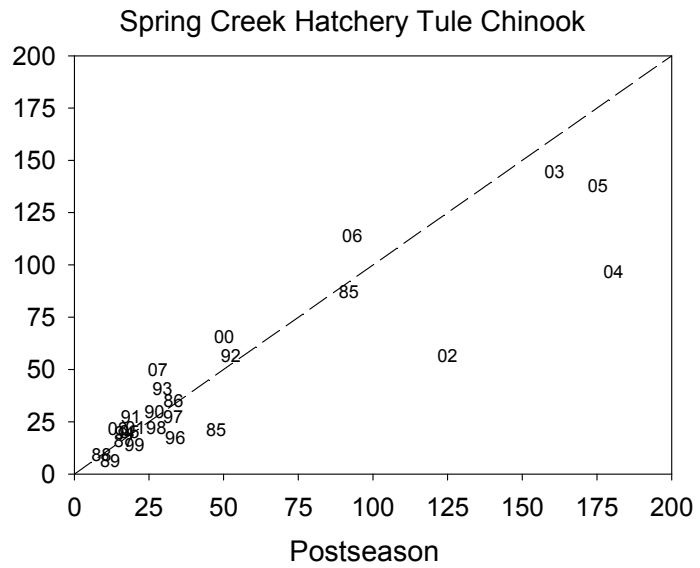
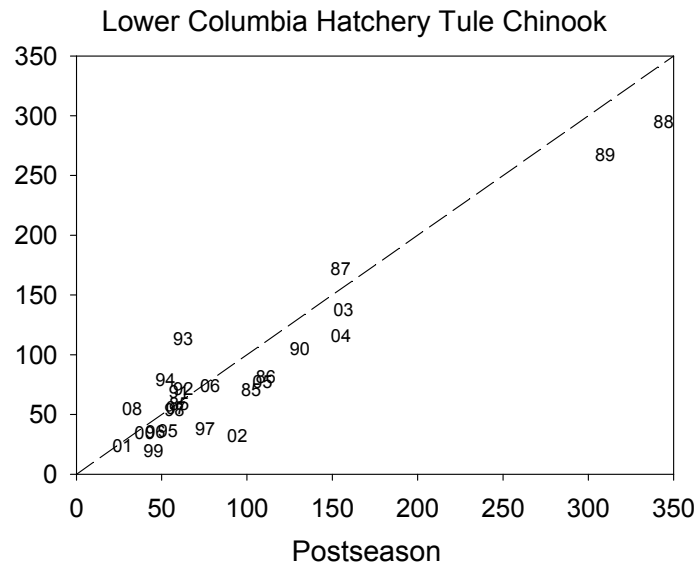
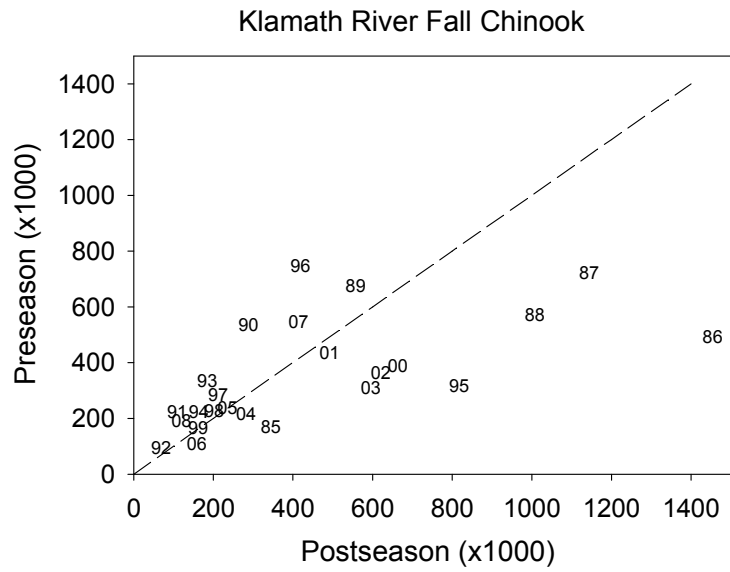


FIGURE I-1. Selected preseason vs. postseason forecasts for Chinook stocks with significant contribution to Council area fisheries.

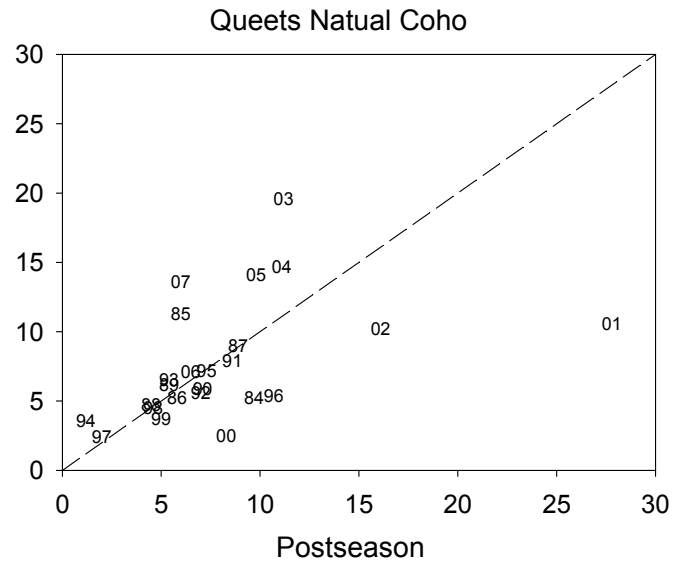
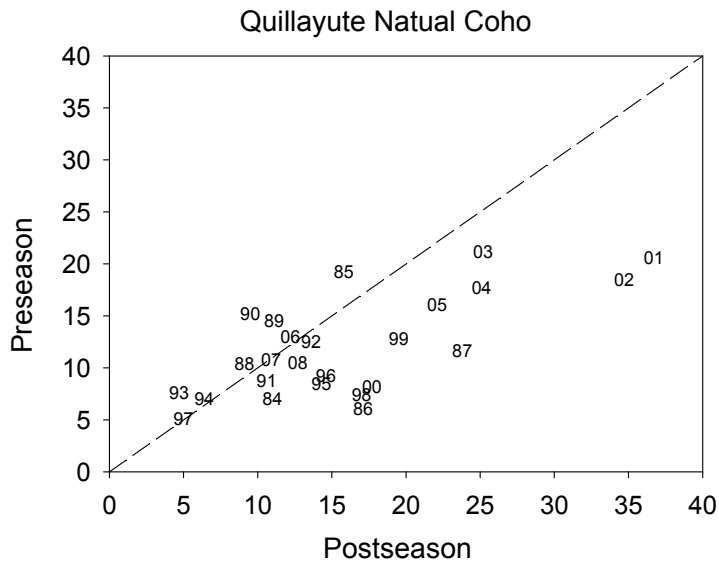
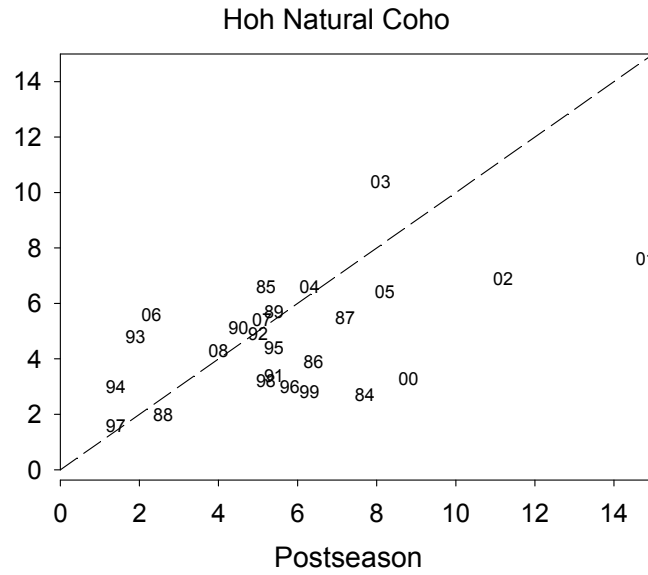
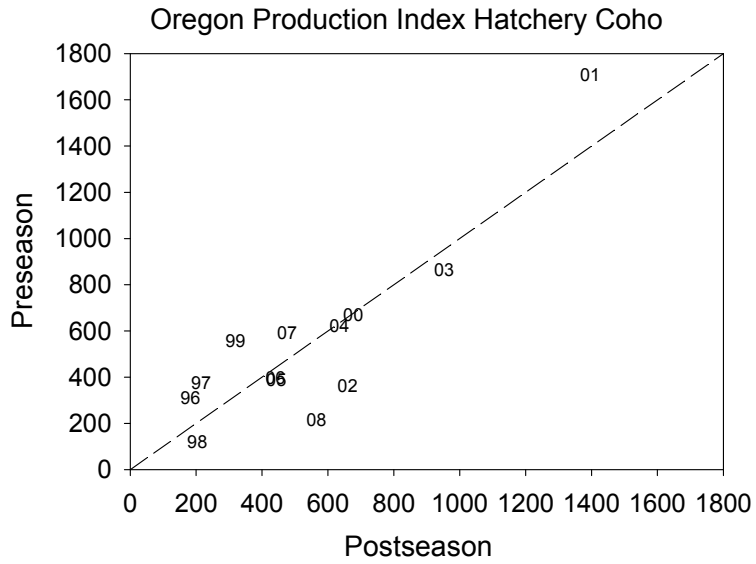


FIGURE I-2a. Selected preseason vs. postseason forecasts for coho stocks with significant contribution to Council area fisheries.

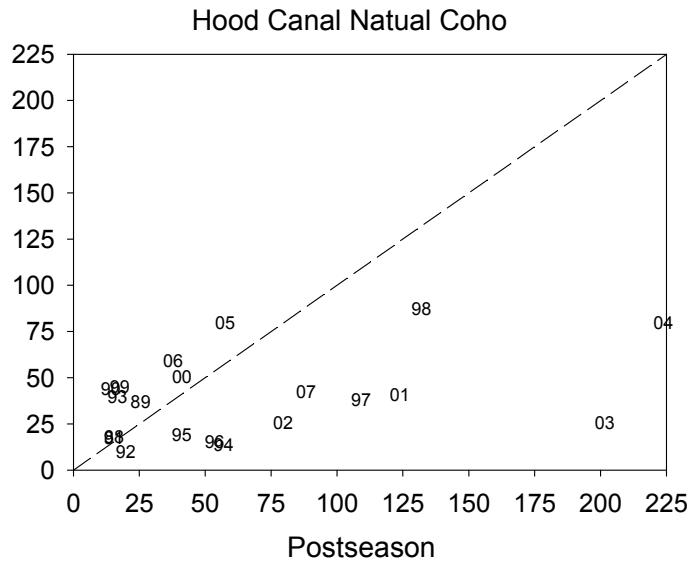
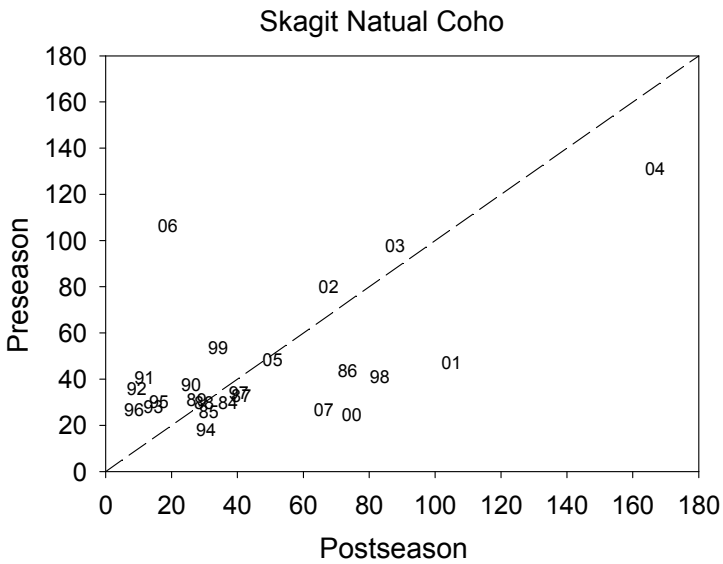
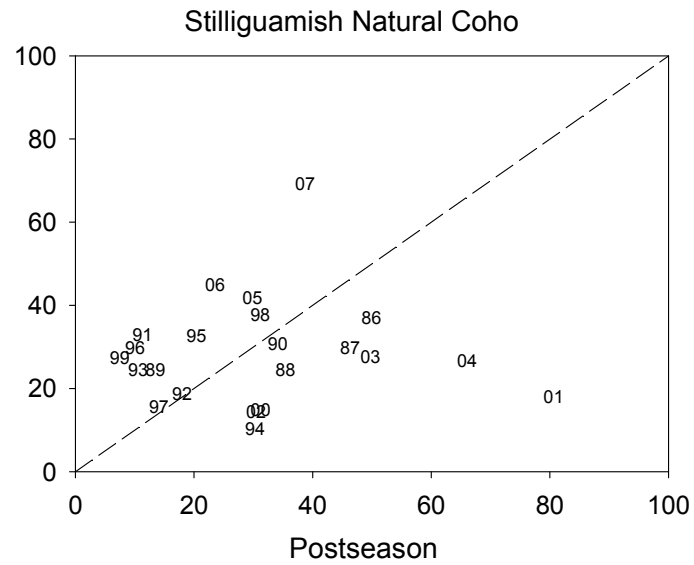
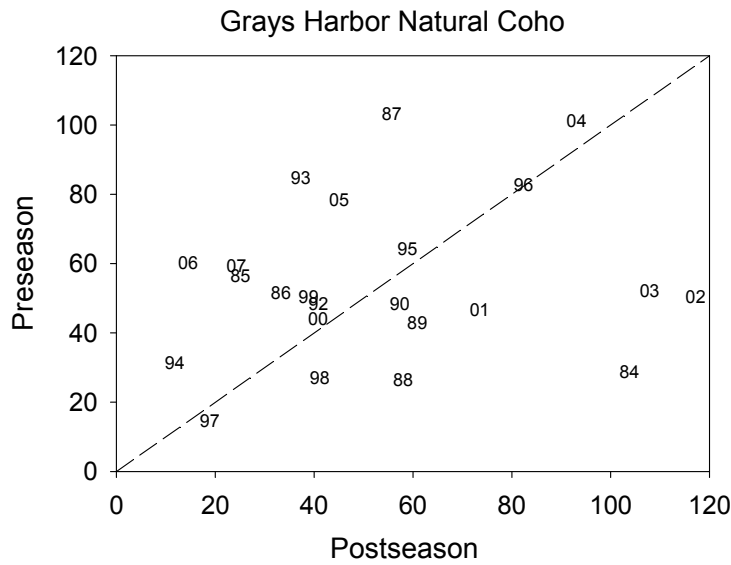


FIGURE I-2b. Selected preseason vs. postseason forecasts for coho stocks with significant contribution to Council area fisheries.