

CHAPTER I - ABUNDANCE FORECASTS

Abundance forecasts in 2010 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 and forecasts, which are 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 forecasts listed in Tables I-1 and I-2, Council management decisions for the 2010 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 forecasts made, or do not have abundance forecasts 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 spawning escapement projections for 2010 under 2009 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 2009 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 2010 Council meeting, and may further update the status of stocks present in Table I-3 at that time.

A number of stocks are not subject 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 four consecutive years (2005-2008); a 2009 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, and 2008; 2009 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, but met the objective in 2009; a forecast for 2010 was not available.
- Sacramento River fall Chinook (SRFC) failed to meet its FMP conservation objectives in 2007, 2008, and 2009, triggering an Overfishing Concern under the terms of the Salmon FMP

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

Production Source and Stock or Stock Group	2002	2003	2004	2005	2006	2007	2008	2009	2010	Methodology for 2010 Prediction and Source
Sacramento Index										
Fall	-	-	-	-	-	-	54.6 ^{a/}	122.2	245.5	Linear regression analysis of jack escapement on SI of the following year. STT
Klamath River (Ocean Abundance)										
Fall	362.5	310.2	216.3	239.8	110.0	546.2	190.7	505.7	331.5	Linear regression analysis of age-specific ocean abundance estimates on river runs of same cohort. KRTT.
Oregon Coast										
North and South/Local Migrating										None.
Columbia River (Ocean Escapement)										
Upriver Spring	333.7	145.4	360.7	254.1 ^{b/}	88.4	78.5	269.3	298.9	470.0	Age-specific linear regressions of cohort returns in previous run years. WDFW staff.
Willamette Spring	73.8	109.8	109.4	116.9	46.5	52.0	34.0	37.6	62.7	Age-specific linear regressions of cohort returns in previous run years. ODFW staff.
Sandy Spring	4.3	4.8	5.2	7.4	8.2	7.9	6.8	5.2	3.7	Recent year average. ODFW staff.
Cowlitz Spring	3.1	4.9	15.9	12.7	3.0	6.4	5.2	4.1	12.5	Age-specific linear regressions of cohort returns in previous run years. WDFW.
Kalama Spring	1.6	3.6	6.0	4.5	1.5	4.0	3.7	0.9	0.9	Age-specific linear regressions of cohort returns in previous run years. WDFW.
Lewis Spring	2.0	3.1	5.4	7.6	1.8	5.9	3.5	2.2	6.0	Age-specific linear regressions of cohort returns in previous run years. WDFW.
Upriver Summer	77.7	87.6	102.8	62.4 ^{b/}	49.0	45.6	52.0	70.7	88.8	Age-specific average cohort ratios/cohort regressions. Columbia River TAC subgroup and WDFW
URB Fall	281.0	280.4	292.2	352.2	253.9	182.4	162.5	259.9	310.8	Age-specific average cohort ratios/cohort regressions. Columbia River TAC subgroup and WDFW
SCH Fall	144.4	96.9	138.0	114.1	50.0	21.8	87.2	59.3	169.0	Age-specific average cohort ratios/cohort regressions. Columbia River TAC subgroup and WDFW
LRW Fall	18.7	24.6	24.1	20.2	16.6	10.1	3.8	8.5	9.7	Age-specific average cohort ratios/cohort regressions. Columbia River TAC subgroup and WDFW
LRH Fall	137.6	115.9	77.1	74.1	55.8	54.9	59.0	88.8	90.6	Age-specific average cohort ratios/cohort regressions. Columbia River TAC subgroup and WDFW
MCB Fall	96.2	104.8	90.4	89.4	88.3	68.0	54.0	94.5	72.6	Age-specific average cohort ratios/cohort regressions. Columbia River TAC subgroup and WDFW

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

Production Source and Stock or Stock Group		2002	2003	2004	2005	2006	2007	2008	2009	2010	Methodology for 2010 Prediction and Source
Washington Coast (Ocean Escapement)											
Willapa Bay Fall	Natural	3.7	2.4	4.1	3.2	2.0	2.0	2.5	2.0	2.0	Based on average 1987-2006 returns/spawner applied to Brood Years 2005-2008. WDFW staff.
	Hatchery	18.8	14.2	14.7	17.4	29.8	29.8	27.0	34.8	31.1	Based on average 1996-2006 returns/release applied to Brood Years 2005-2008, adjusted by brood performance. 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	0.4	NA	
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	1.6	1.9	1.5	1.5	1.4	1.6	0.9	1.1	0.8	Age specific mean cohort ratios and linear regression analysis using recent 5 year mean.
	Hatchery	NA	NA	NA	NA	NA	NA	NA	NA	NA	
Hoh Fall	Natural	4.2	3.1	4.2	3.8	4.0	2.7	2.9	2.6	3.3	Age specific mean cohort ratios and linear regression analysis using recent 5 year mean.
Quillayute Spring	Hatchery	1.2	1.0	1.4	1.2	1.7	1.3	1.7	2.0	1.5	Mean return per release using most recent 4 years, adjusted means for age-5 and age-6.
Quillayute Summer/Fall	Natural	6.7	7.4	7.8	6.7	6.8	7.7	6.0	6.8	7.5	Summer: Recent 5 year mean return per spawner. Fall: Recent 3 year mean return rates from cohort analysis.
	Hatchery	NA	NA	NA	NA	NA	NA	NA	NA	NA	
Puget Sound^{cl}											
Nooksack/Samish	Hatchery	52.8	45.8	34.2	19.5	16.9	18.8	35.3	23.0	30.3	Brood release times average return/release rate (2006-2008 return years).
East Sound Bay	Hatchery	1.6	1.6	0.8	0.4	0.4	0.4	0.8	0.1	2.3	Brood release times average return/release rate (2005-2008 return years).
Skagit Summer/Fall	Natural	13.8	13.7 ^{dl}	20.4 ^{dl}	23.4 ^{dl}	24.1 ^{dl}	15.0 ^{dl}	23.8 ^{dl}	23.4 ^{dl}	13.0 ^{dl}	Age-specific average return rate per spawner adjusted with brood year sibling return method.
	Hatchery	0.0	0.0 ^{dl}	0.5 ^{dl}	0.7 ^{dl}	0.6 ^{dl}	1.1 ^{dl}	0.7 ^{dl}	0.6 ^{dl}	0.9 ^{dl}	Age-specific average return rate per smolt and appropriate year smolt releases.
Stillaguamish	Natural	2.0 ^{el}	2.0 ^{el}	3.3 ^{el}	2.0 ^{el}	1.6 ^{el}	1.9 ^{el}	1.1 ^{el}	1.7 ^{el}	1.4 ^{el}	Natural plus supplemental production from average of FRAM CWT reconstruction and an independent environmental model to link to return rates of specific age classes. 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	6.7 ^{el}	5.5 ^{el}	15.7 ^{el}	14.2 ^{el}	8.7 ^{el}	12.3 ^{el}	6.5 ^{el}	8.4 ^{el}	9.9 ^{el}	Recent year average brood recruits/spawner applied to the 2005-2008 parent escapements. Hatchery forecasts based on average CWT survival rates from Wallace Hatchery applied to releases (yearlings: BY 1996-97; fingerlings: BY 2000-2003).
	Hatchery	6.8 ^{el}	9.4 ^{el}	10.1 ^{el}	9.9 ^{el}	9.6 ^{el}	8.7 ^{el}	8.8 ^{el}	4.9 ^{el}	5.6 ^{el}	Yearlings based on CWT groups for Wallace Hatchery (BYs 1987 and 1992-1996). Fingerlings based on survival estimate from Tulalip Hatchery 1998-2003.

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

Production Source and Stock or Stock Group		2002	2003	2004	2005	2006	2007	2008	2009	2010	Methodology for 2010 Prediction and Source
Tulalip	Hatchery	5.8 ^{d/}	6.0 ^{d/}	7.6 ^{d/}	9.2 ^{d/}	10.0 ^{d/}	8.1 ^{b/}	4.1 ^{d/}	4.0 ^{d/}	3.4 ^{d/}	CWT survival rates (1998-2003) multiplied by release numbers for brood years 2005-2008.
South Puget Sound	Natural	16.9	19.6	17.5	17.7	21.3	17.0	21.1	17.2	12.7	
	Hatchery	90.8	86.6	86.5	83.1	85.8	92.1	101.3	93.0	97.4	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	2.9 ^{d/}	3.6 ^{d/}	2.4 ^{d/}	3.1 ^{d/}	2.5 ^{d/}	3.8 ^{d/}	2.6 ^{d/}	2.5 ^{d/}	2.4 ^{d/}	Natural fish based on the Hood Canal terminal run reconstruction-based relative contribution of the individual Hood Canal management units in the 2006-2009 return years.
	Hatchery	21.1 ^{d/}	30.2 ^{d/}	27.2 ^{d/}	27.5 ^{d/}	27.7 ^{d/}	43.6 ^{d/}	34.2 ^{d/}	40.1 ^{d/}	42.6 ^{d/}	
Hoko	Natural	-	-	-	-	-	-	1.1 ^{e/}	1 ^{e/}	1.8 ^{e/}	Sibling regressions.
Strait of Juan de Fuca	Natural	3.6 ^{d/}	3.4 ^{d/}	3.6 ^{d/}	4.2 ^{d/}	4.2 ^{d/}	4.4 ^{d/}	3.2 ^{d/}	2.4 ^{d/}	1.9 ^{d/}	Dungeness and Elwha hatchery estimated by four-year average 2004-2007 releases times average return rates. Dungeness wild estimated by smolts times average hatchery return rate. Elwha estimate separates hatchery and wild fish based on 2008 otolith sampling.
	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 (4B) 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		2002	2003	2004	2005	2006	2007	2008	2009	2010	Methodology for 2010 Prediction and Source
OPI Area (Total Abundance) (California and Oregon Coasts and Columbia River)		434.1	984.6	777.9	542.9	460.2	849.2	276.1	1,284.7	556.0	Abundance of all OPI components based on cohort reconstruction including all fishery impacts using Mixed Stock Model (MSM); prior to 2008 only fishery impacts south of Leadbetter Point were used (traditional OPI accounting). OPITT, see Chapter III for details.
OPI Public	Hatchery	361.7	863.1	623.9	389.9	398.8	593.6	216.1	1,073.1	408.0	OPIH: 1969-2008 Columbia River jacks adjusted for delayed smolt releases and total OPI jacks regressed on 1970-2009 adults. Columbia/Coastal proportions based on jacks; Coastal early/late proportions based on jacks; Coastal N/S proportions based on smolts.
	Columbia River Early	161.6	440.0	313.6	284.6	245.8	424.9	110.3	672.7	245.3	
	Columbia River Late	143.5	377.9	274.7	78.0	113.8	139.5	86.4	369.7	144.2	
	Coastal N. of Cape Blanco	36.6	29.3	16.6	11.5	8.6	7.0	1.7	7.3	4.4	
	Coastal S. of Cape Blanco	20.0	15.9	19.0	15.8	30.6	22.2	17.7	23.4	14.1	
Lower Columbia River	Natural	NA	NA	NA	NA	NA	21.5	13.4	32.7	15.1	Oregon: recent 3-year average; Washington: natural smolt production multiplied by 2007 brood marine survival rate. Abundance is subset of early/late hatchery abundance above.
Oregon Coast (OCN)	Natural	71.8	117.9	150.9	152.0	60.8	255.4	60.0	211.6	148.0	Rivers: Bakun upwelling anomaly, January sea surface temperature anomaly, and ocean regime index regressed on MSM ocean recruits; Lakes: recent three year average return.
STEP ^{af}	Hatchery	0.6	3.6	3.1	1.0	0.6	0.2	-	-	-	No forecast since 2007; releases discontinued.
Washington Coast											A variety of methods were used for 2010, primarily based on smolt production and survival. See text in Chapter III for details.
Willapa	Natural	21.6	31.8	36.7	35.9	30.3	24.4	35.1	33.5	20.4	
	Hatchery	40.4	57.5	55.0	56.4	37.7	37.2	25.5	59.4	78.7	
Grays Harbor	Natural	55.4	58.0	117.9	91.1	67.3	59.4	42.7	59.2	NA	
	Hatchery	56.8	64.0	67.8	54.4	52.4	74.0	53.1	63.5	NA	
Quinault	Natural	29.4	47.7	50.5	44.9	28.8	18.6	17.4	16.3	16.7	
	Hatchery	12.3	20.6	18.2	33.6	34.5	22.7	24.5	26.2	26.6	
Queets	Natural	12.5	24.0	18.5	17.1	8.3	13.6	10.2	31.4	NA	
	Hatchery	16.0	24.9	17.1	17.4	11.9	19.1	10.3	13.5	NA	
	Supplemental ^{bf}	2.0	1.3	2.5	2.4	-	-	-	-	-	
Hoh	Natural	8.5	12.5	8.1	7.6	6.4	5.4	4.3	9.5	7.6	
Quillayute Fall	Natural	22.3	24.9	21.2	18.6	14.6	10.8	10.5	19.3	22.0	
	Hatchery	15.0	15.2	20.9	22.1	10.4	18.1	13.0	39.5	17.7	

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

Production Source and Stock or Stock Group		2002	2003	2004	2005	2006	2007	2008	2009	2010	Methodology for 2010 Prediction and Source	
Quillayute Summer	Natural	1.2	1.8	1.1	0.8	1.1	1.0	1.1	2.2	2.8		A variety of methods were used for 2010, 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	4.9	5.4	6.1	6.1	4.0	6.4	4.2	12.9	3.2		
North Coast Independent Tributaries	Natural	6.4	14.8	12.7	8.5	8.1	3.2	3.2	11.1	4.2		
	Hatchery	8.1	11.0	4.3	5.6	3.2	4.1	5.0	14.1	5.7		
WA Coast Total	Natural	157.3	215.5	266.7	224.5	164.9	136.4	124.5	182.5	73.7		
	Hatchery	155.5	199.9	191.9	198.0	154.1	181.6	135.7	229.1	131.9		
Puget Sound												
Strait of Juan de Fuca	Natural	21.2	20.1	35.7	20.7	26.1	29.9	24.1	20.5	8.5		
	Hatchery	14.0 ^{b/}	24.0 ^{b/}	28.7 ^{b/}	26.5 ^{b/}	20.5	18.4	9.5	7.0	7.8		
Nooksack-Samish	Natural	22.0	16.4	27.5	17.0	18.3	5.2	14.8	7.0	9.6		
	Hatchery	105.4	66.2	75.5	89.5	81.1	53.1	47.1	25.5	36.0		
Skagit	Natural	98.5	116.6	155.8	61.8	106.6	26.8	61.4	33.4	95.9		
	Hatchery	14.1	10.4	22.8	9.1	22.5	8.9	18.3	11.7	9.5		
Stillaguamish	Natural	19.7	37.8	38.0	56.7	45.0	69.2	31.0	13.4	25.9		
	Hatchery	-	1.3	0.5	0.2	1.2	0.0	0.1	0.0	5.4		
Snohomish	Natural	123.1	203.0	192.1	241.6	139.5	98.9	92.0	67.0	99.4		
	Hatchery	60.3	35.4	48.3	59.1	96.4	25.7	53.5	53.6	24.5		
South Sound	Natural	40.4	103.6	61.3	45.7	45.3	18.2	27.3	53.6	25.3		
	Hatchery	222.5	315.6	288.4	222.2	256.1	181.7	170.0	188.8	186.4		
Hood Canal	Natural	34.9	32.4	98.7	98.4	59.4	42.4	30.4	48.6	33.2		
	Hatchery	31.3 ^{b/}	48.0 ^{b/}	43.1 ^{b/}	60.6 ^{b/}	57.9	54.8	35.0	52.0	51.2		
Puget Sound Total	Natural	359.8	529.9	609.2	541.9	440.2	290.6	281.0	243.5	297.8		
	Hatchery	447.6	501.0	507.3	465.2	535.7	342.6	333.5	338.6	320.8		

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)

Stock and Conservation Objective (thousands of spawners; spawners per mile; impact or replacement rate)											Overfishing Criteria		
	CHINOOK	2002	2003	2004	2005	2006	2007	2008	2009 ^{aj}	2010 ^{bj}	Alert ^{cl}	Concern ^{dl}	Exception ^{el}
Sacramento River Fall 122.0 - 180.0 adult spawners	769.9	523.0	286.9	396.0	269.2	87.9	64.5	39.5	245.4	No	Yes	No	
Klamath River Fall - < 66%-67% avg. spawner reduction rate but no less than 35.0 adult natural spawners annually	65.6	87.6	24.1	26.8	30.2	60.7	30.9	44.6	86.1	No	Yes	No	
Southern, Central and Northern Oregon Coast Spring and Fall No less than 60 adult spawners/mile ^{fl}	222.8	230.6	171.7	89.1	63.8	39.2	34.1	60.7	NA	No	No	No	
Upper Columbia River Bright Fall 43.5 adults over McNary Dam Council area base period impacts <4%	141.7	180.0	170.6	134.8	91.0	58.7	101.9	104.5	>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%	127.4	114.8	NA	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	92.8	83.1	65.5	60.4	77.9	37.0	55.5	53.9	>29.0	No	No	Exp. Rate	
Grays Harbor Fall - 14.6 adult spawners (MSP)	11.3	19.4	29.3	19.5	17.1	12.4	15.3	NA ^{gj}	NA ^{gj}	No	No	Exp. Rate	
Grays Harbor Spring - 1.4 adult spawners	2.6	1.9	5.0	2.1	2.5	0.7	1.0	NA ^{gj}	NA ^{gj}	No	No	Exp. Rate	
Queets Fall - no less than 2.5 adult spawners (MSY)	2.6	5.0	5.1	4.6	3.1	0.9	3.1	NA ^{gj}	NA ^{gj}	No	No	Exp. Rate	
Queets Spring/Summer - no less than 0.7 adult spawners	0.7	0.2	0.6	0.3	0.3	0.4	0.3	0.5	0.5	Limited ^{gj}	No	Exp. Rate	
Hoh Fall - no less than 1.2 adult spawners (MSY)	4.4	1.6	3.2	4.2	1.5	1.6	2.8	1.5	3.3	No	No	Exp. Rate	
Hoh Spring/Summer - no less than 0.9 adult spawners	2.5	1.2	1.8	1.2	0.9	0.8	0.7	0.9	0.8	No	No	Exp. Rate	
Quillayute Fall - no less than 3.0 adult spawners (MSY)	6.1	7.4	3.8	6.4	5.6	3.1	3.6	3.1	6.5	No	No	Exp. Rate	
Quillayute Spring/Summer - 1.2 adult spawners (MSY)	1.0	1.2	1.1	0.9	0.6	0.5	0.9	0.9	1.2	Limited ^{gj}	No	Exp. Rate	

Stock and Conservation Objective

(thousands of spawners; spawners per mile; impact or replacement rate)

COHO											Overfishing Criteria		
	2002	2003	2004	2005	2006	2007	2008	2009 ^{a/}	2010 ^{b/}	Alert ^{c/}	Concern ^{d/}	Exception ^{e/}	
Grays Harbor - 35.4 adult spawners (MSP)	110.1	85.0	61.7	45.1	14.5	24.3	34.1	NA	>35.4	No	Yes	No	
Queets - 5.8 to 14.5 adult spawners (MSY range) Includes supplemental adults prior to 2006.	13.8	9.8	7.5	6.5	5.7	4.7	4.6	NA	>5.8	No	Yes	No	
Hoh - 2.0 to 5.0 adult spawners (MSY range)	9.0	6.3	4.7	4.7	1.3	3.1	2.5	4.6	>2.0	No	No	No	
Quillayute Fall - 6.3 to 15.8 adult spawners (MSY range)	23.0	14.8	13.4	11.5	5.2	6.2	6.9	8.4	>6.3	No	No	No	
Western Strait of Juan de Fuca - 11.9 adult spawners	17.1	13.8	12.0	6.8	2.0	4.4	2.4	NA	h/i/	No	Yes	No	
Eastern Strait of Juan de Fuca - 0.95 adult spawners	3.0	3.2	7.8	3.4	1.8	3.1	1.2	NA	h/i/	No	No	No	
Hood Canal - 21.5 adult spawners (MSP)	69.3	171.2	146.9	38.1	13.7	46.7	11.8	NA	i/	No	No	No	
Skagit - 30.0 adult spawners (MSP)	56.0	88.7	118.5	34.7	7.7	52.0	24.1	NA	i/	No	No	No	
Stillaguamish - 17.0 adult spawners (MSP)	27.3	45.7	59.2	25.8	8.5	38.7	12.9	22.2	i/	No	No	No	
Snohomish - 70.0 adult spawners (MSP)	161.6	182.7	252.8	109.0	75.8	18.6	35.1	99.0	i/	No	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.

h/ As a result of Council action in 2009, the Eastern and Western Strait of Juan de Fuca stocks have been combined into a single stock beginning in 2010.

i/ As a result of Council action in 2009, this stock will be managed consistent with the PST allowable exploitation rates for Puget Sound coho management units beginning in 2010. Conservation objectives for this stock for the purpose of determining an overfishing concern are under review, and will likely be modified during 2010.

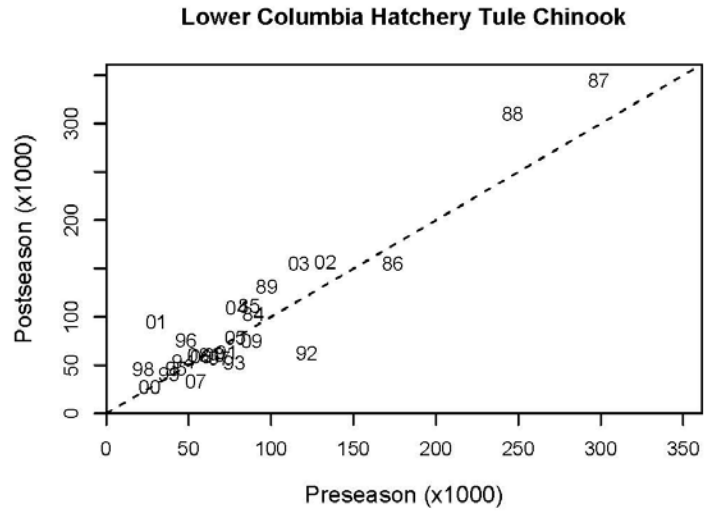
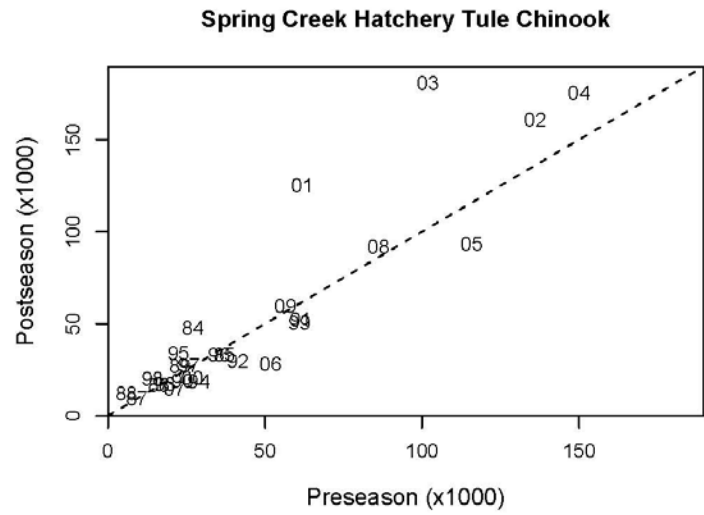
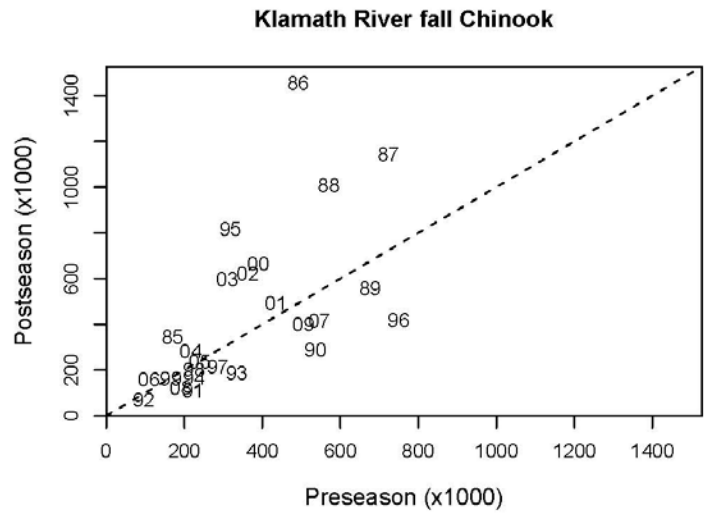


FIGURE I-1. Selected preseason vs. postseason forecasts for Chinook stocks with significant contribution to Council area fisheries.

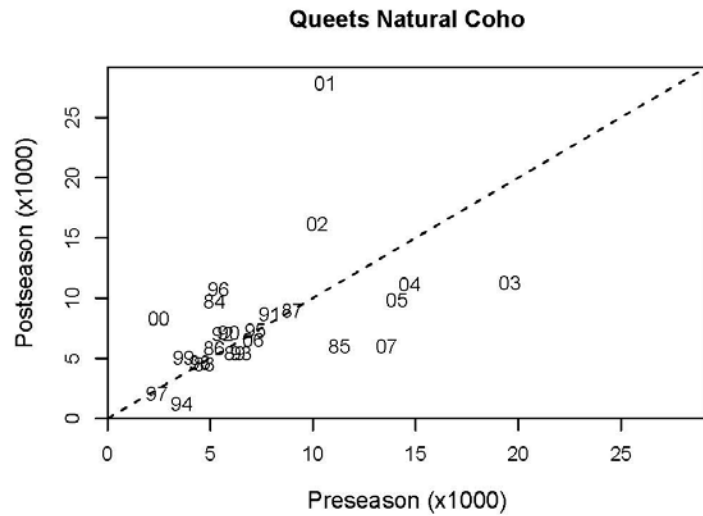
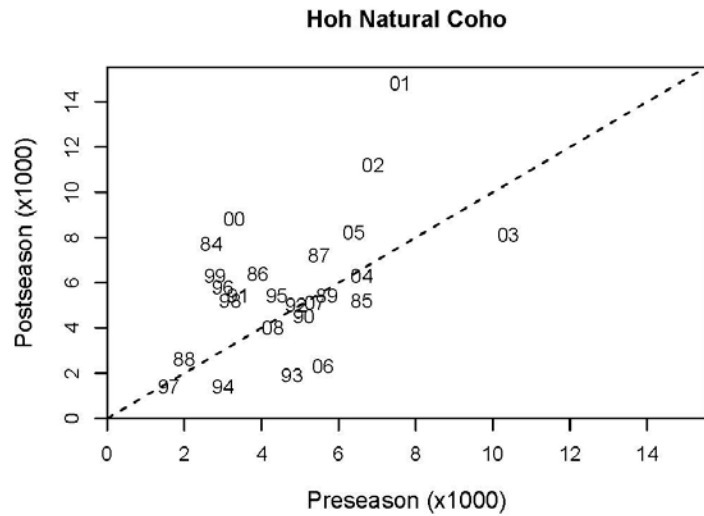
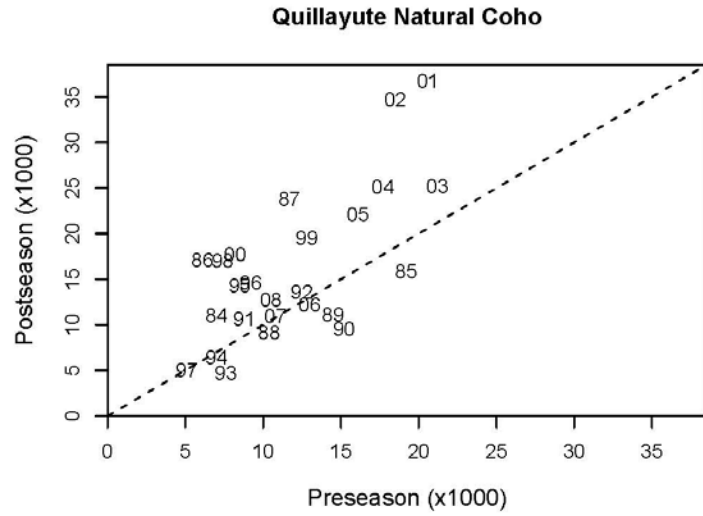
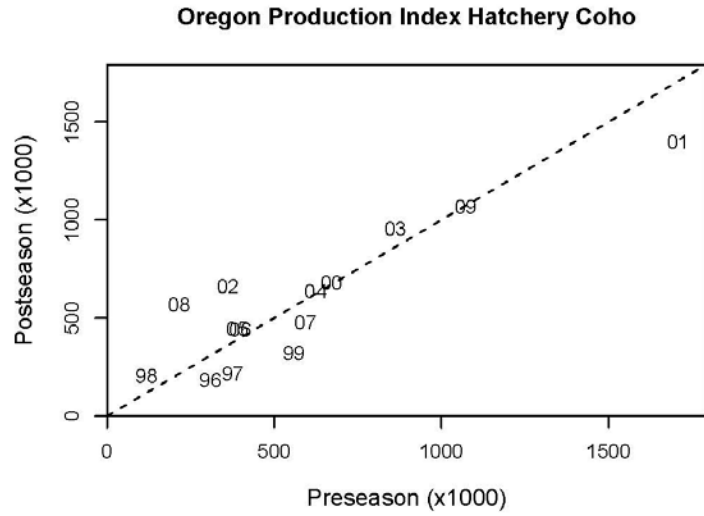


FIGURE I-2a. Selected preseason vs. postseason forecasts for coho stocks with significant contribution to Council area fisheries.

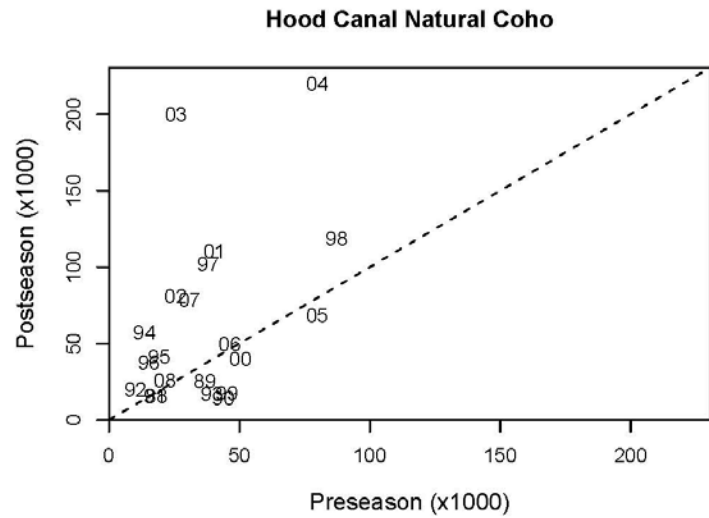
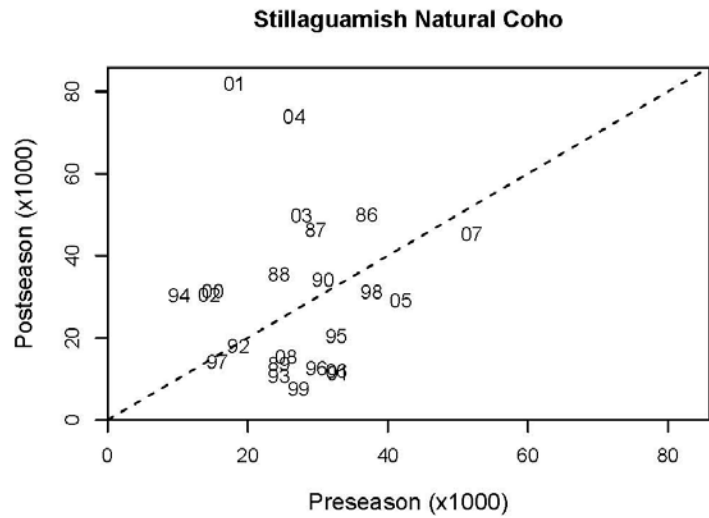
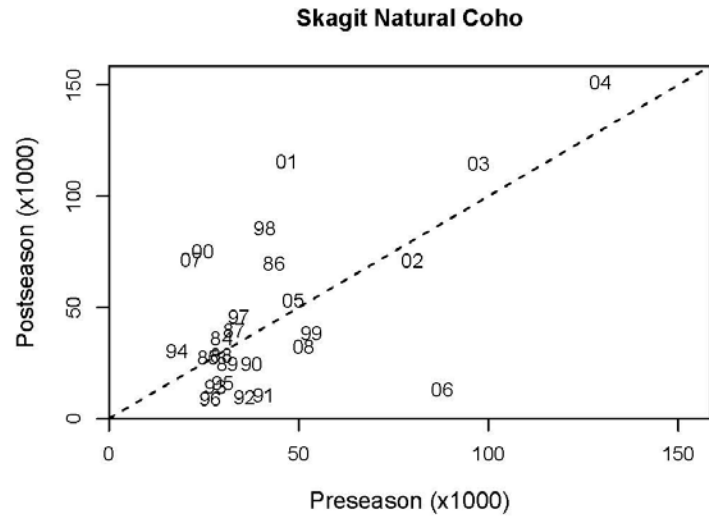
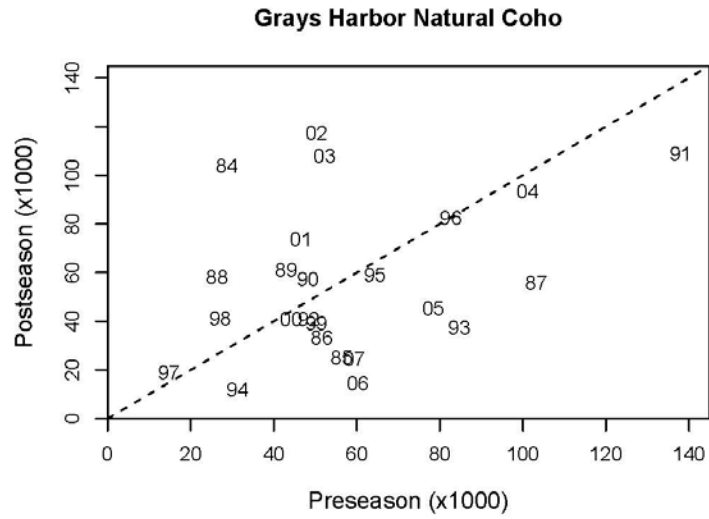


FIGURE I-2b. Selected preseason vs. postseason forecasts for coho stocks with significant contribution to Council area fisheries.