_		Legal	Legal	Sublegal	Sublegal	Total	Total UM	
Area	Category	Marked	Unmarked	Marked	Unmarked	Encounters	Encounters	Criteria
6	Estimated	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!		
6	FRAM	991	268	599	444	2,302		Season/ 2,302 Total Encounters
	Difference	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!		
	%	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!		
7	Estimated	1,332	533	1,065	133	3,063	666	
1	FRAM	4,019	1,504	2,983	1,383	9,889	2,887	Season/3,176 UM &/or 11,865 Total Encounters
	Difference	2,687	971	1,918	1,250	6,826	2,221	
	%	33%	35%	36%	10%	31%	23%	
		470		0.15		4.407		
8-1 & 8-2	Estimated	1/2	114	915	286	1,487		
8-1 & 8-2	FRAM	1,107	252	3,311	822	5,492		Season/6,650 Total Encounters
	Difference	935	138	2,396	536	4,005		
	%	15%	45%	28%	35%	27%		
9-Nov	Estimated	621	155	2,950	621	4,347		-
9-Nov	FRAM	3,008	817	5,296	1,932	11,053		Season
	Difference	2,387	662	2,346	1,311	6,706		
	%	21%	19%	56%	32%	39%		
9-Jan-Apr	Estimated	0	0	0	0	0		
9-Jan-Apr	FRAM	3,008	817	5,296	1,932	11,053		Total Encounters
	Difference	3,008	817	5,296	1,932	11,053		
	%	0%	0%	0%	0%	0%		
9-Total	Estimated	621	155	2,950	621	4,347		
9-Total	FRAM	3,008	817	5,296	1,932	11,053		Season/12,264 Total Encounters
	Difference	2,387	662	2,346	1,311	6,706		
	%	21%	19%	56%	32%	39%		
10	Estimated	189	44	1,195	379	1,807		
10	FRAM	476	108	4,101	664	5,349		Season/6,410 Total Encounters
	Difference	287	64	2,906	285	3,542		
	%	40%	40%	29%	57%	34%		
Grand Total	Estimated	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!		
Grand Total	FRAM	9,601	2,949	16,290	5,245	34,085		
	Difference	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!		
	%	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!		

Preliminary In-Season Estimates of Effort and Salmon Catch (Retained and Released) from Private Boats										
Γ	During th	e Area 7 V	Winter Ma	ark-selective	e Chinook	Fishery, J	anuary	1, 2018 - A	pril 30, 20	18.
Month	Stat	Stratum	Stratum	Effo	ort	Retained	Chinook	Release	d Chinook	Chinook
	Weeks	Start Date	End Date	Boats	Anglers	AD	UM	AD	UM	Encounters Total
	1	Jan-01	Jan-07	566	1,174	406	0	434	233	1,073
	2	Jan-08	Jan-14	633	1,309	511	0	546	294	1,351
Jan	3	Jan-15	Jan-21	43	102	17	0	18	10	45
	4	Jan-22	Jan-28							
	5	Jan-29	Feb-04							
	6	Feb-05	Feb-11							
Eab	7	Feb-12	Feb-18							
Feb	8	Feb-19	Feb-25							
	9	Feb-26	Mar-04							
	10	Mar-05	Mar-11							
N de r	11	Mar-12	Mar-18							
Mar -	12	Mar-19	Mar-25							
	13	Mar-26	Apr-01							
	14	Apr-02	Apr-08							
	15	Apr-09	Apr-15							
Apr	16	Apr-16	Apr-22							
	17	Apr-23	Apr-29							
	18	Apr-30	Apr-30							
Resurrection Salmon Derby	1	5-Jan	7-Jan	104	339	53	0	38	30	121
Roche Harbor Salmon Derby	3	19-Jan	20-Jan	100	357	179	0	191	103	473
Friday Harbor Classic	7	8-Feb	10-Feb							
Jan - Apr Total:			1,446	3,281	1,166	0	1,227	670	3,063	
	Variance:			553,503	2,273,156	285,845	0	1,096,857	107,175	2,357,525
Standard Error:				744	1,508	535	0	1,047	327	1,535
CV (%):				60%	58%	57%	NaN%	105%	61%	62%
	95% CI:				-370-5,540	-115-1,981	0-0	124-3,050	42-1,178	174-5,477

Area 7 Selective Chinook Fishery, January 1, 2018 - April 30, 2017										
	Number Chinook Encounters by Size and Mark Status in Test Fishing									
		Chino	ok Encour		Overall					
Data Description		LM	LU	SM	SU	Total	Legal-size Mark Rate	Mark Rate		
Total Number 1, 20	Chin. Encounters, January 18 - April 30, 2018:	10	4	8	1	23	71.4%	78.3%		
December - /	April Encounter Rates (LM, LU, SM, SU) <sup>2/</sup> :	43.5%	17.4%	34.8%	4.3%	100.0%				
<sup>1/</sup> LM=Legal size (22 inches total length and larger) and marked; LU=Legal size and unmarked; SM=Sublegal size and marked; SU=Sublegal size and unmarked.										
<sup>2′</sup> VTR-based proportions of Chinook encounters by size/mark status (LM, LU, SM, and SU; calculated from pooled Area 7 Chinook encounters on VTRs) were applied to estimate total-area Chinook encounters in Area 7 from January 1, 2018 - April 30, 2018 (see previous tab) using the Conrad and McHugh (2008) method.										

#### Preliminary In-Season Estimates of Effort and Salmon Catch (Retained and Released) from Private Boats 1g the Area 8-1 Winter Mark-selective Chinook Fishery, November 1- November 12, 2017 and February 16 - April 30, 2

	Stat	Stratum	Stratum	Effo	ort	Retained	Chinook	Released	Chinook	Chinook
Month	Weeks	Start Date	End Date	Boats	Anglers	AD	UM	AD	UM	Encounters Total
Nov	45	Nov-01	Nov-05	40	84	30	2	185	77	294
INOV	46	Nov-06	Nov-12	67	141	24	5	150	59	238
Ech	7	Feb-16	Feb-18							
Feb	8	Feb-19	Feb-25							
	9	Feb-26	Mar-04							
	10	Mar-05	Mar-11							
Mar	11	Mar-12	Mar-18							
	12	Mar-19	Mar-25							
	13	Mar-26	Jan-01							
	14	Apr-02	Apr-08							
	15	Apr-09	Apr-15							
Apr	16	Apr-16	Apr-22							
	17	Apr-23	Apr-29							
	18	Apr-30	Apr-30							
Everett Derby	45	4-Nov	5-Nov	48	69	20	0	126	54	200
Stanwood Derby										
	Season Total:			155	294	74	7	461	190	732
	Variance:			899	4,038	177	42	43,628	6,155	104,645
	Standard Error:			30	64	13	7	209	78	323
	CV (%):				28%	25%	91%	62.20%	57.60%	60.70%
	95% CI:				101-350	27-80	0-20	78-745	8-290	104-1167

Preliminary In-Season Estimates of Effort and Salmon Catch (Retained and Released) from Private Boats og the Area 8-2 Winter Mark-selective Chinook Fishery, November 1 - November 12, 2017 and February 16 - April 30,

	Stat	Stratum	Stratum	Effe	ort	Retained	Chinook	Released	Chinook	Chinook
Month	Weeks	Start Date	End Date	Boats	Anglers	AD	UM	AD	UM	Encounters Total
Nev	45	Nov-01	Nov-05	63	115	19	0	119	51	189
INOV	46	Nov-06	Nov-12	131	263	29	0	181	77	287
Eob	7	Feb-16	Feb-18							
Teb	8	Feb-19	Feb-25							
	9	Feb-26	Mar-04							
	10	Mar-05	Mar-11							
Mar	11	Mar-12	Mar-18							
	12	Mar-19	Mar-25							
	13	Mar-26	Jan-01							
	14	Apr-02	Apr-08							
	15	Apr-09	Apr-15							
Apr	16	Apr-16	Apr-22							
	17	Apr-23	Apr-29							
	18	Apr-30	Apr-30							
Everett	45	4-Nov	5-Nov	83	164	28	0	176	75	279
Stanwood										
Derby										
	Season	Total:		277	542	76	0	476	203	755
	Variar	ice:		2,672	9,391	113	0	33,667	4,775	80,558
	Standard	Error:		52	97	11	0	183	69	284
	CV (%	<b>%):</b>		27%	26%	22%	NaN%	61%	54%	60%
95% CI:				93-295	188-568	27-69	0-0	247-659	2-264	317-1032
8-1	8-1 & 8-2 Season Total:			432	836	150	7	937	393	1,487

Area 8-1 Selective Chir	nook Fishe	ery, Nover April	nber 1 - N 30 2018	ovember	12, 2017 a	nd Febru	ary 16 -		
Number C	hinook Er	counters	by Size a	nd Mark S	Status in S	STRs			
Table 2 Total Chinock e	ncountered	d (retained	and releas	ed) by priv	nte-hoat a	nalers logo	ing their		
trips on salmon trip repor	rts (STRs)	in the Area	a 8-1 mark-	selective (	Chinook fis	herv, Nove	mber 1,		
	· · ·	2016 - A	pril 30, 201	7.			-		
	Chinoo	k Encoun	ters by Si	ze/Mark S	tatus <sup>1/</sup>	Legal-	Overall		
Data Description	LM	LU	SM	SU	Total	Size	Mark		
Total Number Chin.						Wark	Rale		
Encounters on STRs, November 1, 2017 - April 30, 2018:	0	0	7	2	9	#DIV/0!	77.8%		
Encounter Rates (LM, LU, SM, SU) <sup>2/</sup> :	0.0%	0.0%	77.8%	22.2%	100.0%				
<sup>1/</sup> LM=Legal size (22 inches to	otal length a	and larger)	and marke	d; LU=Lega	al size and u	unmarked;			
SM=Sublegal size and marke	ed; SU=Sub	legal size a	and unmark	ed.					
pooled Area 11 Chinook enco	ounters on S	STRs) were	e applied to	estimate to	otal-area Cl	hinook enco	ounters in		
Area 8-1 from November 1, 2	017 - April 3	30, 2018 (s	ee previous	tab) using	the Conrac	d and McHu	gh (2008)		
mom 0.2									
Area 8-2 Selective Chir	nook Fishe	ry, Nover	nber 1 - N	ovember	12, 2017 a	nd Febru	ary 16 -		
Number C	hinook Fr	April	30, 2018 by Size a	nd Mark 9	Status in S	TRs			
Table 2. Total Chinook e	encountered	d (retained	and releas	ed) by priv	/ate-boat a	nglers logo	ing their		
trips on salmon trip repor	rts (STRs)	in the Area	a 8-2 mark-	selective C	Chinook fis	hery, Nove	mber 1,		
2016 - April 30, 2017.									
Data Description	Chinook Encounters by Size/Mark Status "				Legal-	Overall Mark			
	LM	LU	SM	SU	Total	Mark	Rate		
Total Number Chin. Encounters on STRs, November 1, 2017 - April 30, 2018:	3	2	9	3	17	60.0%	70.6%		
Encounter Rates (LM, LU, SM, SU) <sup>2/</sup> :	17.6%	11.8%	52.9%	17.6%	100.0%				
<sup>1/</sup> LM=Legal size (22 inches to	otal length a	and larger)	and marke	d; LU=Lega	al size and u	unmarked;			
SM=Sublegal size and marke	ed; SU=Sub	legal size a	and unmark	ed.	TU, SM ar	ום גם כאורי	llated from		
pooled Area 11 Chinook enco Area 8-1 from November 1, 2	ounters on 3 017 - April 3	STRs) were 30, 2018 (s	e applied to ee previous	estimate to tab) using	otal-area Cl the Conrac	hinook enco d and McHu	ounters in gh (2008)		
8-1 & 8-2 Selectiv	e Chinook	c Fishery,	Novembe	r 1, 2017 -	April 30,	2018 Tota	ls		
	Chinoo	k Encoun	ters by Si	ze/Mark S	tatus <sup>1/</sup>	Legal-	Overall		
Data Description	LM	LU	SM	SU	Total	size Mark	Mark Rate		
Total Number Chin. Encounters on STRs, November 1, 2017 - April 30, 2018:	3	2	16	5	26	60.0%	73.1%		
Encounter Dates / M									
LU, SM, SU) <sup>2/</sup> :	11.5%	7.7%	61.5%	19.2%	100.0%				

Preliminary In-Season Estimates of Effort and Salmon Catch (Retained and Released) from Private Boats										
During the	he Area	9 Winter Mar	k-selective	Chinook Fis	hery, Novem	ber 1 - Nove	mber 12, 20	017 and Febr	uary 16 - Apri	l 15, 2018.
Month	Stat	Stratum	Stratum	Ef	fort	Retained	Retained Chinook		Released Chinook	
WOITH	Weeks	Start Date	End Date	Boats	Anglers	AD	UM	AD	UM	Total
Nov	45	Nov-01	Nov-05	310	521	122	0	686	176	984
INOV	46	Nov-06	Nov-12	714	1,365	354	5	1,985	504	2,848
	7	Feb-16	Feb-18							
Feb	8	Feb-19	Feb-25							
	9	Feb-26	Mar-04							
	10	Mar-05	Mar-11							
Mor	11	Mar-12	Mar-18							
IVICI	12	Mar-19	Mar-25							
	13	Mar-26	Apr-01							
Apr	14	Apr-02	Apr-08							
Арг	15	Apr-09	Apr-15							
Everett Derby	45	4-Nov	5-Nov	138	273	64	0	359	92	515
Olympic Penninsula Derby	10	9-Mar	11-Mar							
Everett Derby	11	17-Mar	18-Mar							
	Seas	on Total:		1,162	2,159	540	5	3,030	772	4,347
	Va	riance:		240,938	798,209	97,234	12	4,757,189	236,987	9,556,396
	Stand	ard Error:		491	893	312	3	2,181	487	3,091
	C	V (%):		48%	47%	66%	72%	82%	72%	81%
	95	5% CI:		62-1,986	134-3,637	126-1,087	2-11	922-6,946	246-1,634	1848-9,890
				<u>Area 9 Cl</u>	PUE, Through V	Veek 46:				
Retained Chinook/Angler Trip: 0.2										

<u>Area 9</u> Selective Chinook Fishery, November 1 - November 12, 2017 and February 16, - April 15, 2018								
Number Chinook Encounters by Size and Mark Status in the Test Fishery								
	Chinoo	k Encoun	ters by Si	ze/Mark S	tatus <sup>1/</sup>	Legal-	Overall	
Data Description	LM	LU	SM	SU	Total	size Mark	Mark Rate	
January - April Chin. Encounters, November 1 - November 30, 2017 and January 16 - April 15, 2018:	4	1	19	4	28	80.0%	82.1%	
Encounter Rates (LM, LU, SM, SU) <sup>2/</sup> : 14.3% 3.6% 67.9% 14.3% 100.0%								
<sup>1/</sup> LM=Legal size (22 inches total length and larger) and marked; LU=Legal size and unmarked; SM=Sublegal size and marked; SU=Sublegal size and unmarked.								

Preliminary In-Season Estimates of Effort and Salmon Catch (Retained and Released) from Private Boats										
	Durir	ng the Area ?	10 Winter M	ark-selective	e Chinook Fi	shery, Nov	ember 1, 2	017 - Februa	ry 28, 2018	•
										Chinaak
Month	Stat	Stratum	Stratum	Eff	ort	Retained	Chinook	Released Chinook		Encounters
	Weeks	Start Date	End Date	Boats	Anglers	AD	UM	AD	UM	Total
	45	Nov-01	Nov-05	46	88	4	0	28	9	41
	46	Nov-06	Nov-12	213	345	17	0	120	38	175
Nov	47	Nov-13	Nov-19	111	118	15	0	112	36	163
	48	Nov-20	Nov-26	21	21	0	0	0	0	0
	49	Nov-27	Dec-03	47	76	0	0	0	0	0
	50	Dec-04	Dec-10	61	99	21	0	149	47	217
Dee	51	Dec-11	Dec-17	48	94	9	0	69	22	100
Dec	52	Dec-18	Dec-24	51	84	0	0	0	0	0
	53	Dec-25	Dec-31	74	154	12	0	87	28	127
	1	Jan-01	Jan-07	47	111	53	0	394	139	586
Jan	2	Jan-08	Jan-14	82	147	36	0	269	93	398
Jan	3	Jan-15	Jan-21	0	0	0	0	0	0	0
	4	Jan-22	Jan-28							
	5	Jan-29	Feb-04							
	1	Feb-05	Feb-11							
Feb	2	Feb-12	Feb-18							
	3	Feb-19	Feb-25							
	4	Feb-26	Feb-28							
Everett Derby	45	4-Nov	5-Nov	7	14	0	0	0	0	0
	Sea	son Total:		808	1,351	167	0	1,228	412	1,807
	V	ariance:		14,901	57,463	1,806	0	211,479	24,577	450,897
	Stan	dard Error:		122	240	42	0	460	157	671
		CV (%):		15%	18%	25%	NaN%	37%	37%	37%
	9	95% CI:		561-1,039	866-1,806	84-251	0-0	337-2,140	122-736	519-3,151
				Area 10 Cl	PUE, Through	Week 3:				
Retained Chinook/Angler Trip:										

Area 10 Selective Chinook Fishery, November 1, 2017 - February 28, 2018.								
Number Chinook Encounters by Size and Mark Status in the Test Fishery								
	Chinook Encounters by Size/Mark Status <sup>1/</sup> Legal-							
Data Description	LM	LU	SM	SU	Total	size Mark	Mark Rate	
Total Number Chin. Encounters, November 1, 2017 - February 28, 2018:	13	3	82	26	124	81.3%	76.6%	
Encounter Rates (LM, LU, SM, SU) <sup>2/</sup> : 10.5% 2.4% 66.1% 21.0% 100.0%								
<sup>1/</sup> LM=Legal size (22 inches total length and larger) and marked; LU=Legal size and unmarked; SM=Sublegal size and marked; SU=Sublegal size and unmarked.								

# Puget Sound Chinook Harvest Management Plan

### January 19, 2018



### **Presentation Overview**

- Background on the Puget Sound Chinook ESA listing and ESA coverage for fisheries
- Conservation concerns and challenges with ESA plan for 2018 and beyond
- Summary of long-term plan submitted to NOAA last month
  - Details on Stillaguamish management objectives
- What has changed since Plan submission?
- Next steps

# **Puget Sound Chinook ESA listing**

- March 1999 Puget Sound Chinook ESA listed
- July 2000 ESA 4(d) rule issued
- 2001 2013 ESA coverage for Puget Sound fisheries obtained through a series of co-manager plans under limit 6 of the 4(d) rule
- 2014 2017 ESA coverage obtained through annual Section 7 consultations through the Bureau of Indian Affairs
- 2016 ESA coverage and fisheries delayed due to lack of comanager agreement on fisheries package at the end of North of Falcon process

# **Puget Sound Chinook ESA listing**

- 2016 Meet and refer request, co-managers began mediation process
- The focus of mediation in 2017 was completion of a new multi-year plan by December 1. The NOAA evaluation/ administrative process is expected to take ~18 months, so meeting the December 1 deadline was expected to result in the new long-term plan going into effect in May 2019.
- Coverage for 2018 fisheries was planned to be through another one-year Section 7 consultation with BIA, presumably with the same objectives developed for the 10-year plan.

### ESA Coverage – What's at stake and what's required?

- Without ESA coverage, fisheries that "take" listed Puget Sound Chinook – incidentally or directly – violate the ESA Section 9 "take" prohibition.
- An approved Chinook Plan provides ESA "take" coverage.
  - Fundamentally, this allows co-managers to access harvestable hatchery Chinook, and other salmon species, that are intermixed with ESA protected Chinook (primarily natural origin Chinook).
- Fundamentally, the Chinook Plan is not a recovery plan.
  - Accordingly, the question is NOT: How, if at all, can harvest contribute to recovery?
- The Chinook Plan is essentially a request for permission to continue impacting listed Chinook by taking them in fisheries.
  - Approval requires convincing analysis that implementing fisheries will not appreciably reduce the likelihood that Puget Sound Chinook will continue to survive and ultimately recover.

### ESA Coverage – What's at stake and what's required?

- Formulating a long-term Chinook Plan is more challenging than ever.
  - Chinook stocks have continued to decline since the last plan.
  - Many stocks now chronically hover at critically low abundance
  - A longer term plan is inherently riskier.
  - Listed Orcas need Chinook as a source of food in order to survive, and Orcas have declined in abundance over the last 20 years.
- The question is not whether harvest actions in the past have done a good job or sufficient job of contributing to salmon conservation.
- The question is: Considering the status of both listed Chinook and Orcas, can we continue to impact Chinook via harvest of other salmon stocks?
  - Maintaining the status quo on harvest is not workable here.
  - When we look for a balance between conservation, ESA limits, and proposed harvest, we're going to have to look for impact reductions, even at the margins, and/or additional forms of mitigation.
  - Alternate mitigation needs to be real, not speculative. Pointing at impacts elsewhere (e.g. lost habitat) is deflection, and won't work. Making mitigation real, as part of a Chinook Plan, can help.

### Puget Sound Chinook ESA coverage

• The goal of past multi-year plans, and the Plan recently submitted to NOAA, is to:

"Ensure that fishery-related mortality will not impede rebuilding of natural Puget Sound Chinook salmon populations, consistent with the capacity of properly functioning habitat, to levels that will sustain fisheries, enable ecological functions, and are consistent with treaty-reserved fishing rights."



### Conservation concerns with 2018+ plan

Chinook abundance has not improved since ESA listing



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## Conservation concerns with 2018+ plan

- Chinook have been identified as a primary food source for Southern Resident Killer Whales (SRKW)
- Abundance of SRKW has declined in recent years, increasing scrutiny on activities that affect prey abundance
- NOAA recently updated their analyses of the maximum rates at which individual stocks can be impacted without negatively impacting their likelihood of recovery (Rebuilding Exploitation Rate, or RER), with decreases to estimated maximum rates for several stocks
- Exploitation rates in Northern fisheries exceed NOAA's RER for some stocks (e.g. Nooksack), meaning that risk to those populations will be high

## Challenges with 2018+ plan

- Additional constraints on fisheries are likely needed in the new plan given decline in abundances and lower RER values. This is a hard message to accept given that majority of Puget Sound recreational fisheries are mark-selective for Chinook, and that many of the impacts on Puget Sound stocks occur in fisheries in Alaska and British Columbia
- Completion of a co-manager plan required reaching agreement with 17 tribes on management objectives for 15 Management Units and 22 populations
- Needed to meet December 1 submission deadline if long-term was coverage to be in place for 2019 fisheries

# Challenges with 2018+ plan

- Co-managers completed the Plan through the mediation process and submitted it to NOAA on December 1, but negotiations were ongoing through November 29<sup>th</sup>, leaving one day to complete & submit plan
- NOAA expressed concern during development of the Plan that they needed to review pieces of the plan as they were completed, so that they could evaluate & comment on sufficiency prior to submission
- Ultimately, the pace of negotiations did not provide an opportunity for NOAA to conduct its sufficiency review prior to submission of the Plan
- NOAA's initial comments indicate that they need more information to evaluate whether the Plan represents an acceptable level of risk for Puget Sound Chinook

# Summary of 2018+ Plan

- Plan submitted to cover fisheries from 2019 through 2028
- Structure of plan similar to past plans
  - Body of plan includes chapters on:
    - Fisheries and Jurisdictions
    - Population structure & aggregation for management
    - Management objectives
    - Implementation
    - Conservative management
    - Monitoring and Assessment
  - Appendices includes 'Management Unit Profiles'
    - Watershed by watershed overview of habitat issues, hatchery production, stock data and status, and description of management objectives

### Summary of 2018+ Plan

- Notable changes in the Plan
  - Points of instability identified for several stocks
  - Total ER ceilings implemented for Snohomish and Stillaguamish
  - Escapement goals rather than maximum ER ceilings identified for Puyallup, White, Green and Lake Washington
  - SUS ER ceilings that vary by abundance identified for Stillaguamish natural-origin and hatchery-origin Chinook

### NOAA initial review of Plan

- Exploitation Rates in the comanager plan are higher than NOAA's calculated Rebuilding Exploitation Rates for all stocks except the North Fork Stillaguamish
  - Part of the difference may be due to the methods used to convert the RERs, which are calculated using estimates of past exploitation rates from Chinook Technical Committee analysis, to fishery model (FRAM) rates that we use for planning
  - NOAA's total RER is lower than the ER in northern fisheries for several stocks
- NOAA has asked for better explanations of how the Plan meets 4(d) rule requirements, including:
  - How the proposed ERs and abundance thresholds relate to viable and critical thresholds
  - How the Plan's management objectives affect all four Viable Salmonid Population criteria – abundance, population growth rate, population spatial structure and diversity
  - Expected total impacts on populations that have a Southern US ER ceiling, but no total ER ceiling

Management	Population (Tier)	Status	2010-2014	NMFS	Comanager
Unit			NOR /2005-	RER	proposed ER
			2009 NOR	(total)	(total expected)
Nooksack	NF Nooksack (1)	critical	-44/-64%	4%	10-16% SUS (41-
	SF Nooksack (1)				47%)
Skagit sp	Suiattle (1)	above	<mark>+38%</mark>	25%	38%
	U. Sauk (1)	<mark>above</mark>	<mark>+68%</mark>	19%	38%
	Cascade (1)	<mark>above</mark>	<mark>+1%</mark>	25%	38%
Skagit S/F	Upper Skagit (1)	above	<mark>-31%</mark>	40%	47%
	L. Sauk (1)	above	<mark>-24%</mark>	39%	47%
	L. Skagit (1)	<mark>between</mark>	<mark>-34%</mark>	23%	47%
Snohomish	Skykomish (2)	<mark>above</mark>	<mark>-29%</mark>	14%	21%
	Snoqualmie (3)	<mark>above</mark>	<mark>-32%</mark>	19%	21%
Stillaguamish	NF Stilly (2)	above	<mark>+4%</mark>	24%	24%
	SF Stilly (2)	critical	-30%	18%	24%
Green	Green (2)	<mark>between</mark>	- <mark>33%</mark>	18%	18% SUS
1 \A/A	Sammamich (2)	critical	A E 9/	100/8	(2770) 190/ SLIS
L. WA	Sammannish (S)	Citucal	-4.370	1970	(27%)
	Cedar (3)	<mark>between</mark>	<mark>-16%</mark>	19% <sup>a</sup>	18% SUS
					(27%)
Puyallup	Puyallup (3)	above	-25%	30% <sup>0</sup>	30% SUS (43%)
White	White (1)	<mark>between</mark>	<mark>-59%</mark>		22% SUS (26%)
Nisqually	Nisqually (1)	<mark>between</mark>	<mark>+19%</mark>	30% <sup>b</sup>	47%
Skokomish	Skokomish (1)	critical	-49%	30%	50%
МНС	MHC (1)	critical	<mark>+60%</mark>	4% <sup>c</sup>	12-15% SUS
					(24-29%)
Elwha	Elwha (1)	critical	-15%	4% <sup>c</sup>	6-10% SUS (19-23%)
Dungeness	Dungeness (1)	critical	-27%	4% <sup>c</sup>	6-10% SUS
					(19-23%)

Management	Population (Tier)	Status	2010-2014	NMFS	Comanager
Unit			NOR /2005-	RER	proposed ER
			2009 NOR	(total)	(total expected)
Nooksack	NF Nooksack (1)	critical	<mark>-44/-64%</mark>	4%	10-16% SUS (41-
	SF Nooksack (1)				47%)
Skagit sp	Suiattle (1)	above	<mark>+38%</mark>	25%	38%
	U. Sauk (1)	<mark>above</mark>	<mark>+68%</mark>	19%	38%
	Cascade (1)	<mark>above</mark>	<mark>+1%</mark>	25%	38%
Skagit S/F	Upper Skagit (1)	<mark>above</mark>	<mark>-31%</mark>	40%	47%
	L. Sauk (1)	above	-24%	39%	47%
	L. Skagit (1)	<mark>between</mark>	<mark>-34%</mark>	23%	47%
Snohomish	Skykomish (2)	<mark>above</mark>	<mark>-29%</mark>	14%	21%
	Snoqualmie (3)	<mark>above</mark>	<mark>-32%</mark>	19%	21%
Stillaguamish	NF Stilly (2)	above	<mark>+4%</mark>	24%	24%
	SF Stilly (2)	critical	<mark>-30%</mark>	18%	24%
Green	Green (2)	<mark>between</mark>	<mark>-33%</mark>	18%	18% SUS
					(27%)
L. WA	Sammamish (3)	critical	<mark>-45%</mark>	19% <sup>a</sup>	18% SUS
					(27%)
	Cedar (3)	<mark>between</mark>	-16%	19% <sup>a</sup>	18% SUS
			_		(27%)
Puyallup	Puyallup (3)	above	-25%	30%°	30% SUS (43%)
White	White (1)	<mark>between</mark>	<mark>-59%</mark>		22% SUS
					(26%)
Nisqually	Nisqually (1)	<mark>between</mark>	<mark>+19%</mark>	30% <sup>b</sup>	47%
Skokomish	Skokomish (1)	<u>critical</u>	<mark>-49%</mark>	30%	50%
МНС	MHC (1)	critical	<mark>+60%</mark>	4% <sup>c</sup>	12-15% SUS
					(24-29%)
Elwha	Elwha (1)	critical	-15%	4% <sup>c</sup>	6-10% SUS
					(19-23%)
Dungeness	Dungeness (1)	critical	-27%	4% <sup>c</sup>	6-10% SUS
					(19-23%)

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# Status of Stillaguamish Chinook

- Two populations within the watershed Summer (or North Fork) population and Fall (or South Fork) population
- NOAA analysis shows:
  - South Fork population natural origin escapement has declined over last 10 years, is in critical status, averaging ~100 spawners
  - North Fork population showed stable natural origin escapement over last 10 years, is above its rebuilding threshold on average
  - RERs of 24% for the North Fork population and 18% for the South Fork population
- Lower summer river flows, high winter river flows and sediment load are negatively affecting productivity of population
- There are conflicting views on the productivity of the populations, and the benefit of increasing escapement at lower abundances to decrease risk to the populations.

### North Fork Stillaguamish River peak flows



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# Status of Stillaguamish Chinook – Supplementation Programs

- Harvey Creek / Whitehorse Ponds summer Chinook program
  - Target release of 220,000 sub-yearling per year
  - Conservation program to boost numbers of the stock and reduce risk of extinction
  - Releases are adipose clipped and coded-wire tagged as a Pacific Salmon Commission (PSC) indicator stock, allowing monitoring of harvest distribution
- Brenner Creek Hatchery fall Chinook program
  - Captive brood program juveniles collected from the wild & raised to adults for spawning
  - 200,000 sub-yearling release goal program growing, averaging 35,000 release
  - Releases are adipose clipped and coded-wire tagged for development as a PSC indicator stock – currently modeling assumes same harvest distribution for summer and fall Chinook

- Stillaguamish is likely to be one of the most constraining stocks under the plan
- Level of fishery constraint depends on abundance. At lower abundances, the constraints are tighter
- Natural-origin constraints
  - The lower tier exploitation rate ceiling is 8% in Southern US fisheries on natural-origin Stillaguamish Chinook, and 12% on hatchery-origin Stillaguamish Chinook
  - Allowable SUS ER's increase to 13% on natural-origin, and no limit on hatchery-origin at higher abundances

- Hatchery-origin constraints
  - Limit to hatchery-origin impact is reflective of the importance of the hatchery conservation program to spawning escapement, particularly at low abundances
  - There may be options for increasing hatchery production and altering marking to increase escapement and limit the effect of the hatchery-origin ER limit

- The low abundance ER limit of 8% is slightly above the most recent 6-year average of post-season FRAM estimates of exploitation rates on natural-origin Stillaguamish Chinook
- Recent annual pre-season fishery plans have had expected exploitation rates on Stillaguamish Chinook ranging from 10-15%
- Fisheries plans are developed annually through North of Falcon process to meet objectives preseason – modeling accurate predictions for all fishery impacts will be key.

### Table 1. Pre-season predicted exploitation rates on unmarked Stillaguamish Chinook by fishery in Southern US fisheries using new FRAM base period from 2013-2017.

Fishery Name	Time Step	Average	2017	2016	2015	2014	2013
Freshwater Net	July-Sept	3.6%	4.3%	2.6%	4.7%	2.5%	3.7%
Tr 3:4 Trl	Oct-Apr	1.7%	1.4%	2.9%	1.1%	1.2%	2.0%
Ar 7 Sport	July-Sept	1.2%	0.8%	2.5%	0.9%	0.9%	0.9%
Ar 7 Sport	Oct-Apr	0.9%	0.4%	0.9%	0.9%	0.4%	1.8%
Tr 3:4 Trl	May-June	0.8%	0.5%	0.7%	1.0%	0.8%	0.9%
Tr TulaNet	July-Sept	0.6%	0.6%	0.5%	0.5%	0.6%	0.6%
Ar 8-1 Spt	Oct-Apr	0.5%	0.4%	0.7%	0.6%	0.6%	0.2%
Ar 9 Sport	Oct-Apr	0.4%	0.4%	0.6%	0.3%	0.3%	0.6%
A 11 Sport	Oct-Apr	0.4%	0.1%	0.2%	0.1%	0.1%	1.6%
FW Sport	July-Sept	0.4%	0.5%	0.1%	0.6%	0.4%	0.2%
Ar 6 Sport	Oct-Apr	0.3%	0.2%	0.6%	0.2%	0.3%	0.4%
Tr StSnNet	July-Sept	0.3%	0.0%	0.1%	0.7%	0.1%	0.3%
Ar 9 Sport	July-Sept	0.3%	0.2%	0.3%	0.2%	0.2%	0.3%
Ar 5 Sport	Oct-Apr	0.2%	0.2%	0.1%	0.3%	0.2%	0.4%
Ar 5 Sport	July-Sept	0.2%	0.3%	0.3%	0.2%	0.2%	0.1%
Ar 3:4 Spt	July-Sept	0.2%	0.2%	0.2%	0.2%	0.1%	0.2%

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### Table 2. Pre-season predicted exploitation rates on marked Stillaguamish Chinook by fishery in Southern US fisheries using new FRAM base period from 2013-2017.

Fishery Name	Time Step	Average	2017	2016	2015	2014	2013
Freshwater Net	July-Sept	3.3%	3.3%	2.4%	4.1%	2.4%	4.0%
Ar 7 Sport	Oct-Apr	3.2%	3.3%	3.7%	5.4%	2.5%	1.2%
Tr 3:4 Trl	Oct-Apr	1.9%	2.6%	2.8%	1.3%	1.3%	1.2%
Ar 7 Sport	July-Sept	1.4%	2.2%	2.2%	1.1%	1.0%	0.5%
Ar 8-1 Spt	Oct-Apr	1.3%	1.5%	1.3%	1.2%	1.2%	1.0%
Ar 9 Sport	Oct-Apr	1.0%	1.8%	1.0%	0.6%	0.6%	0.8%
Ar 6 Sport	Oct-Apr	0.8%	0.8%	1.2%	0.9%	0.7%	0.5%
Tr 3:4 Trl	May-June	0.8%	0.8%	0.7%	1.2%	0.8%	0.5%
Ar 5 Sport	July-Sept	0.6%	0.9%	0.8%	0.6%	0.5%	0.3%
Ar 9 Sport	July-Sept	0.6%	1.1%	0.7%	0.5%	0.4%	0.3%
Tr TulaNet	July-Sept	0.5%	0.6%	0.5%	0.4%	0.6%	0.6%
A 11 Sport	July-Sept	0.4%	0.9%	0.3%	0.4%	0.3%	0.3%
Ar 5 Sport	Oct-Apr	0.4%	0.5%	0.3%	0.5%	0.4%	0.2%
A 11 Sport	Oct-Apr	0.3%	0.5%	0.2%	0.3%	0.3%	0.5%
FW Sport	July-Sept	0.3%	0.4%	0.1%	0.5%	0.4%	0.3%
Tr StSnNet	July-Sept	0.3%	0.1%	0.1%	0.8%	0.1%	0.2%
Ar 3:4 Spt	July-Sept	0.2%	0.3%	0.2%	0.3%	0.2%	0.1%
Ar 6 Sport	July-Sept	0.2%	0.4%	0.3%	0.2%	0.2%	0.0%
A 10 Sport	July-Sept	0.2%	0.4%	0.2%	0.1%	0.1%	0.1%

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Table 3. Management abundance thresholds and corresponding allowable exploitation rates for Stillaguamish Chinook

THRESHOLD LEVEL	FORECASTED TRS	SUS NOR ER CEILING	HOR % diff	SUS HOR ER CEILING	TOTAL NOR ER*		
BELOW LBT	< 900	LBT GUI	LBT GUIDELINES IMPLEMENTED				
LBT	900	8.0%	4.0%	12.0%	24.0%		
	1000	8.0%	4.2%	12.2%	24.0%		
	1100	8.0%	4.4%	12.4%	24.0%		
LAT	1200	10.0%	4.8%	14.8%	24.0%		
	1300	11.0%	5.2%	16.2%	24.0%		
	1400	12.0%	5.6%	17.6%	24.0%		
UMT	1500	13.0%	6.0%	19.0%	24.0%		
ABOVE UMT	1500+	13.0%	no con	straint	24.0%		
* Total NOR ER not to be exceeded w/ consideration of Northern Fisheries, which may cause SUS impacts to be lowered from defined ceiling rates.							

- Future abundances of Stillaguamish Chinook are unknown; the corresponding management responses will depend on the forecast in a given year
- Modeling work has been done exploring what changes to fisheries planned in recent years would be necessary at various abundance forecasts, but it is impossible to know what changes actually would have been negotiated through the North of Falcon process in each scenario
- Changes that would have been required range from no changes at higher abundance, to significant reductions in treaty and nontreaty fisheries at low abundance.

### **Puget Sound Marine Catch Areas**



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### Why the 8 percent limit in low abundance years?

- 8% in low abundance years is a very conservative approach
  - Considers importance of the Stillaguamish population for ESA purposes
  - Reflects the fact that a 10-year ESA plan may call for less risk to listed Chinook
  - Extirpation of this population is not an option for the Stillaguamish Tribe and the State

### Why the 8 percent limit in low abundance years?

- NOAA's RER analysis completed in 2017
  - There is some productivity in the watershed at low escapements
  - High stream flows and high sediment levels from landslides have major negative effects on Chinook survival and productivity
    - In years with less severe winter flows, maximizing escapement should lead to increased abundance in subsequent brood years
- In light of continued Chinook declines, the new plan takes a harder look at conservation when populations are consistently at low abundances
- 8% represented a rate slightly above the actual recent-year average ER on Stillaguamish Chinook in SUS fisheries
  - Idea was to not increase SUS fishery impact on the stock above the rates of recent years

### Why the 8 percent limit in low abundance years?

- Are there alternative perspectives on Stillaguamish productivity?
  - WDFW developed independent spawner recruit analysis during development of the plan, showing different productivity estimates
- The differences in the analyses led us to ask questions like:
  - Is there an escapement level above which increased escapement does not result in an increased number of recruits?
  - Is there an escapement level below which providing additional escapement through fishery constraints provides minimal benefit?
  - If benefits to the population from fishery constraints are minimal, what other tools are available to rebuild the population?

# What are the tools for balancing conservation and harvest?

- Accepting higher levels of risk should be paired with mitigation
  - This is an approach used in prior plans where harvest rates were higher than NOAA was comfortable with as a starting point
- Development of additional mitigation may be an option
  - Hatchery production
  - Hatchery marking strategy
  - Habitat improvements

### **350 Public Comments received**

- Habitat and Harvest
  - 100+ form letters said that habitat is the problem with Stillaguamish Chinook and that fisheries cannot improve returns
  - 55 individual comments said that habitat is the problem
- Economic impact 75
- Transparency 75
- General opposition 40
- Multiple other concerns
  - 40 forwarded or provided support for Puget Sound Anglers' comments
  - Tribal/commercial fisheries are the problem
  - Mark-selective fisheries are a responsible approach, shouldn't be affected

# What has changed since Plan submission?

- Lack of sufficiency
  - All 13 Management Unit Profiles need additional work
    - Have received comments from NOAA on 9, waiting for 4 more
  - Additional work needed to achieve sufficiency likely pushes implementation of long-term plan to 2020
    - There are still critical deadlines, but there is time to explore options
- Ongoing technical work on conversion of NOAA's RERs to FRAM exploitation rates
- While RMP constraints are under revision, comanagers must submit management objectives for 2018 that will get one-year approval from NOAA
  - 2018 constraints not necessarily the same as the RMP
  - One-year plan may tolerate more risk than long-term plan

### Next steps

- Continue work with NOAA and co-managers to revise the Plan
  - Continue mediated process to completion
  - Communicate with Commission regarding RMP development on all conference calls and at all scheduled meetings
  - Build in stakeholder workshop opportunity
- The ~18-month NOAA review process won't start until the revised Plan is deemed sufficient by NOAA
- Comanagers need to finalize management objectives for 2018 fisheries by late February

# Questions?

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January 23, 2018 Contact: Commission Office, 360-902-2267



#### Commission advises WDFW on chinook plan that would guide Puget Sound salmon fisheries

OLYMPIA – The Washington Fish and Wildlife Commission advised state fishery managers to strike a better balance between conservation and harvest opportunities as they work with tribal co-managers to revise a proposed plan for managing chinook harvest in Puget Sound.

During a conference call Tuesday, the commission – a citizen panel appointed by the governor to set policy for the Washington Department of Fish and Wildlife (WDFW) – instructed state fishery managers to explore a variety of options as they revisit catch rates and other pieces of the updated Puget Sound Chinook Harvest Management Plan.

The plan defines conservation goals for state and tribal fisheries that have an impact on wild Puget Sound chinook salmon, which are listed for protection under the federal Endangered Species Act (ESA). Under that law, no fisheries affecting Puget Sound chinook can occur without a conservation plan approved by NOAA Fisheries.

"Ultimately, we would all like to see salmon runs restored in Puget Sound, but severely restricting fisheries isn't the only path to achieving that goal," said Brad Smith, chair of the commission. "For that reason, we advised WDFW staff to explore other salmon recovery options, including improvements to habitat and hatchery operations."

State and treaty tribal co-managers initially submitted the proposed plan to NOAA Fisheries on Dec. 1, 2017. The plan would reduce state and tribal fisheries in Washington, especially in years with expected low salmon returns. For example, increased protections for wild chinook salmon returning to the Stillaguamish and Snohomish rivers would likely restrict numerous fisheries because those fish are caught in many areas of Puget Sound.

Despite the restrictive nature of the plan, NOAA has already informed the state and treaty tribes that the plan is insufficient, noting that several key salmon stocks would not meet new — more restrictive — federal conservation objectives.

"Over the last few weeks, we've heard from many people who are concerned this plan could result in the closure of all Puget Sound sport fisheries, but that's not the case," Smith said. "Yes, the plan does call for reductions to some fisheries, especially in years of low salmon abundance. But we have an opportunity – given the need to revise the plan – to use various mitigation tools to offset impacts from fisheries when and where appropriate."

Mitigation tools the commission asked WDFW to explore include:

- Increasing habitat restoration efforts.
- Improving hatchery operations, including increasing production to support salmon recovery efforts.
- Reducing populations of predators, such as seals and sea lions.

NOAA has indicated its review process will take 18 months once the federal agency deems the plan is sufficient for a full review, making it likely the 10-year plan won't be in place until the 2020-2021 fishing season. There will be opportunities for public comment during that review process.

State fishery managers believe that a long-term management plan will reduce uncertainty in the annual salmon season-setting process, providing more stability for recreational and commercial fisheries.

In the meantime, state and tribal co-managers are working on conservation objectives to guide this year's salmon season-setting process. During its call Tuesday, the commission asked state fishery managers to continue to discuss the possibility of using the 2017 conservation objectives for this year's upcoming planning efforts.

The commission directed state fishery managers to provide regular updates as the negotiations of this year's objectives and the 10-year plan continue. State fishery managers will also provide updates throughout the process to citizen advisors during open public meetings.

The plan, along with feedback from NOAA, is available on WDFW's website at <u>https://wdfw.wa.gov/conservation/fisheries/chinook/</u>.

#### North of Falcon Setting 2018-2019 Salmon Fishing Seasons

#### 2018-19 Salmon Seasons

#### February 26

#### 2018 Willapa Bay – Grays Harbor Salmon Forecasts and Fishing Opportunities

- 6 p.m. to 8 p.m.; Montesano City Hall, 112 N. Main St., Montesano.
- WDFW presents salmon abundance forecasts for Willapa Bay and Grays Harbor. Fishery management objectives and preliminary fishing opportunities for 2018 are discussed.

#### February 27

#### 2018 Salmon Forecasts and Fishing Opportunities

- 9 a.m. to 3 p.m.; Lacey Community Center, 6729 Pacific Ave. SE, Olympia.
- WDFW presents Puget Sound, coastal Washington and Columbia River salmon abundance forecasts. Fishery management objectives and preliminary fishing opportunities for 2018 are discussed.

#### March 9-14

#### **Pacific Fishery Management Council Meeting**

- DoubleTree by Hilton Sonoma, One Doubletree Drive, Rohnert Park, Calif.
- The PFMC adopts a range of ocean fishery options, including catch quotas for sport and commercial fisheries <u>see agenda</u>.

#### March 15

#### **Puget Sound Recreational Fisheries Discussion**

- 7 p.m. to 9 p.m.; Trinity Methodist Church, 100 S. Blake Ave., Sequim.
- Public discussion of pre-season forecasts and possible salmon fisheries.

#### March 19

#### **Columbia River Fisheries Discussion**

- 9 a.m. to 3 p.m.; Room 102A of Region 5 Headquarters, 5525 S. 11th St., Ridgefield.
- Public meeting to present results of state-tribal negotiations and analyses of Columbia River fisheries proposals. With public participation, preferred seasons are developed for the Columbia River area sport and commercial fisheries.

#### Grays Harbor Fisheries Advisory Group (Public meeting)

- 6 p.m. to 8 p.m.; Large Conference room, Region 6 Headquarters, 48 Devonshire Rd, Montesano.
- Grays Harbor Advisory Group discussion of pre-season forecasts and possible salmon fisheries; meeting is open to the public.

#### March 20

#### **First North of Falcon Meeting**

- 9 a.m. to 3 p.m.; DSHS Office Building 2 Auditorium, 1115 Washington St SE, Olympia.
- Parking is available in the visitor lot of the Natural Resources Building, 1111 Washington St. SE, Olympia (see map).
- Discussion of management objectives and preliminary fishery proposals for sport and commercial fisheries in Puget Sound and coastal Washington, with limited discussion of the Columbia River and ocean fisheries.

#### March 22

#### Willapa Bay Fisheries Advisory Group (Public meeting)

- 6 p.m. to 8 p.m.; Large Conference room, Region 6 Headquarters, 48 Devonshire Road, Montesano.
- Willapa Bay Advisory Group discussion of pre-season forecasts and possible salmon fisheries; meeting is open to the public.

#### March 26

#### Public Hearing on Ocean Salmon Management Options

- 7 p.m.; Chateau Westport Beach Room, 710 W. Hancock, Westport.
- Public hearing, sponsored by the Pacific Fishery Management Council, to receive comments on the proposed ocean salmon fishery management options adopted by the council during its early March meeting.

#### March 27

#### Mid-Columbia/Snake rivers Fisheries Discussion

- 6 p.m. to 8 p.m.; Walla Walla Community College, Clarkston Campus Auditorium, 1470 Bridge St., Clarkston.
- Public discussion of management objectives and preliminary options for Columbia River sport fisheries.

#### Puget Sound (South Sound – Hood Canal) Recreational Fisheries Discussion

- 6 p.m. to 8 p.m.; Lacey Community Center, 6729 Pacific Ave. SE, Olympia.
- Public discussion of pre-season forecasts and possible salmon fisheries.

#### **Grays Harbor Fisheries Discussion**

- 6 p.m. to 8 p.m.; Montesano City Hall, 112 N. Main St., Montesano.
- Public meeting for discussion of pre-season forecasts and possible salmon fisheries in Grays Harbor and associated watersheds of the Humptulips and Chehalis rivers.

#### March 28

#### **Mid-Columbia River Fisheries Discussion**

- 6 p.m. to 8 p.m.; Chelan PUD, 327 N. Wenatchee Ave., Wenatchee.
- Public discussion of management objectives and preliminary options for Columbia River sport fisheries.

#### **Puget Sound Recreational Fisheries Discussion**

- 6 p.m. to 8 p.m.; Region 4 Headquarters Office, 16018 Mill Creek Blvd., Mill Creek.
- Public discussion of pre-season forecasts and possible salmon fisheries.

#### March 29

#### **Columbia River Public Meeting**

- 6 p.m. to 8 p.m.; Kennewick Irrigation District Boardroom, 2015 S. Ely Street, Kennewick.
- Public discussion of management objectives and preliminary options for Columbia River fall commercial and sport fisheries.

#### Willapa Bay Fisheries Discussion

- 6 p.m. to 8 p.m.; Raymond Elks Club, 326 3rd St., Raymond.
- Public discussion for discussion of pre-season forecasts and possible salmon fisheries in Willapa Bay and its associated watersheds.

#### April 2

#### **Columbia River and Ocean Fisheries Discussion**

- 10 a.m. to 3 p.m.; Room 102A, Region 5 Headquarters 5525 S 11th St., Ridgefield
- Public meeting to present results of state-tribal negotiations and analyses of ocean and Columbia River fisheries proposals. With public participation, preferred seasons are developed for ocean and Columbia River area sport and commercial fisheries.

#### April 3

#### North of Falcon Meeting

- 9:30 a.m. to 5 p.m.; Lynnwood Embassy Suites, 20610 44th Ave. W., Lynnwood.
- Public meeting to present results of state-tribal negotiations and analyses of preliminary fishery proposals. With public participation, preferred options are developed for Puget Sound sport and commercial fisheries.

#### April 6-11

#### **Final Pacific Fishery Management Council Meeting**

• <u>Sheraton Portland Airport Hotel</u>, 8235 NE Airport Way, Portland, Ore.

PFMC adopts final ocean fisheries regulations and state-tribal fishing plans are finalized for all inside area commercial and sport salmon fisheries; advisory bodies begin meeting 4/5/2018, salmon begins  $4/6/2018 - \frac{1}{2018} - \frac{1}{2018}$