

Columbia River

2022 Adult Returns and 2023 Expectations

Draft – December 14, 2022

	2022 Results	2023 Expectations
Willamette Spring Chinook	51,200 predicted adult return to CR (27% wild) 55,391 actual adult return (108% of forecast; 19% wild) 1,926 jack return (93% of 5-yr avg. 2,064) 52,732 adult return to Willamette R 37,057 adult/1,572 jack count at Willamette Falls 6,432 return (6,142 adult) to Clackamas	71,000 CR adult return +2,000 jacks ~6,600 adults to Clackamas
Sandy River	5,600 predicted adult CR return; ~3,800 hatchery plus strong natural return	TBD
Cowlitz River	4,100 predicted adult CR return vs. 7,146 actual to CR	9,000 CR return
Kalama River	2,000 predicted adult CR return vs. 3,148 actual to CR	2,400 CR return
Lewis River	2,400 predicted adult CR return vs. 6,875 actual to CR	4,700 CR return
Wind River	4,200 predicted adult trib. return vs. 6,530 actual to trib.	4,400 to trib.
Drano (LWS)	3,800 predicted adult trib. return vs. 11,491 actual to trib.	8,000 to trib.
Klickitat	1,800 predicted adult trib. return vs. 2,088 actual to trib.	1,400 to trib.
Upriver Spring Chinook	122,900 predicted adult return 185,209 actual (151% of forecast; highest since 2016) 23,957 jacks @BON (1.5x 2021 passage; 133% of 10-yr avg.)	198,600 predicted highest since 2015 132% of 10-yr avg.
Upper Columbia Summer Chinook	56,300 predicted adult return 78,444 actual (139% of forecast; 114% of 10-yr avg.) 10,777 BON jacks (105% of 10-yr avg.) Adult mark rate ~48% @ BON	84,800 predicted 29,000 escapement goal (at CR mouth)
Sockeye	198,700 predicted return 664,935 actual (334% of forecast, highest return since 1938)	234,500 CR return 2,600 SR stock;
Upriver Summer Steelhead	99,700 predicted return at BON 123,871 @ BON (124% of forecast; 44% of 20-yr (277K))	TBD
Bright Fall Chinook	319,700 predicted adult return Preliminary return similar to forecast	TBD
Tule Fall Chinook	165,800 predicted adult return Preliminary LRH return similar to forecast, BPH much larger	TBD
Coho	683,700 predicted adult return Preliminary return ~70% of forecast	TBD
Shad	6.4 million minimum run vs. 10-yr avg. of 4.2 million	Strong run expected
Smelt	Spawning-stock biomass estimate ~18,300,000 pounds (highest SSB estimate on record (since 2011))	Run expected to be similar to 2022
White Sturgeon (Lower Col River)	TBD - Stock assessment to be completed in December 2022.	TBD

Recreational Fisheries

	2022 Results	2023 Expectations
Oregon Tributary Spring Chinook		
Lower Willamette River	Open 7 d/week under permanent regs; two poles allowed beginning 3/1 62,258 trips (3/1-7/3) 8,802 adults kept (1,410 rel; 86% mark rate)	Permanent regs likely
Clackamas River	878 trips <River Mill Dam (5/16-7/3) 13 adults kept (13 rel)	Permanent regs likely
Sandy River	~1,100 adults kept	Permanent regs likely
Washington Tributary Spring Chinook		
Cowlitz River	7 d/wk 1/1-2/28 2 fish bag; 3/1-4/30 and 5/29-7/31 1 fish bag; closed 5/1-5/28 ~1,040 adults kept	Season TBD
Kalama River	7 d/wk 1/1-2/28 and 6/9-7/31 2 fish bag; 3/1-6/8 1 fish bag ~830 adults kept	Season TBD
Lewis River	7 d/wk 1/1-4/30 and 5/14-6/16 1 fish bag; 6/17-7/31 2 fish bag; closed 5/1-5/13 ~870 adults kept	Season TBD
Columbia River Fisheries		
Spring Season LCR	Chinook open: B10-I-5 Bridge; Jan-Feb; 7 d/wk; 2 Chinook bag B10-BON: 3/1-4/6 - Bank only Beacon R to BON TP-BON: 5/12-5/22, 5/24-6/3 - Bank only Beacon R to BON TP-BON: 6/4-6/15 2 fish/1 hatchery Chinook bag; 2 hatchery Chinook 6/4-6/15 88,445 trips (highest since 2018) 12,675 adult Chinook kept (4,103 rel) 1,209 STH kept (415 rel); 375 SOK rel STH opened <15 Bridge May 16 per perm. rule	Season TBD
Spring Season BON to McN	Chinook open 4/1-5/3, 5/26, 5/28, 6/4-6/15 2 fish/1 hatchery Chinook bag; 2 hatchery Chinook 6/4-6/15 5,167 trips; 1,199 adult Chinook kept (475 rel)	Season TBD
Spring Season McN-OR/WA	Chinook open same as BON-McN 2 fish/1 hatchery Chinook bag; 2 hatchery Chinook 6/4-6/15 24 adult Chinook kept (10 rel)	Season TBD
Spring Season Snake River (WA waters)	IH section open May 4-5, 11-12, 18-19, 25; LGO open May 3, 6, 10, 13, 17, 20, 24, 27, Jun 10 ~5,000 angler trips; 1,388 adult Chinook kept (327 wild 25 hatchery rel)	Season TBD
Summer Season LCR	Chinook open 6/16-6/22 and 7/1-7/31 Astoria Br.- BON STH open 6/16-7/31, SOK open 7/1-7/31 Astoria Br. - BON 2 fish/1 STH bag (hatchery Chinook/hatchery STH/SOK) 31,684 trips 3,244 adult Chinook kept – 6 th highest (2,032 rel) 1,077 SOK kept (1,441 rel) 2,938 STH kept (1,879 rel)	Season TBD at NOF

Summer Season BON-Hwy 395	Chinook/STH open 6/16-7/31, SOK open 7/1-7/31 2 fish/1 STH bag (hatchery Chinook/STH) 1,565 trips; 62 adult Chinook, 102 SOK, 66 STH kept 53 adult Chinook, 6 SOK, 122 STH released	Season TBD at NOF
Summer Season Hwy 395 - PRD	Chinook/SOK open 6/16-8/15; STH closed Jun 2 fish, Jul 3 fish (2 hatchery Chinook) 13,201 trips; 222 adult Chinook, 7,702 SOK kept 67 Chinook, 8 SOK, 0 STH released	Season TBD at NOF
Summer Season Upstream of PRD	Chinook open with MSF regs in various locations (including tribs), 7/1-10/15 2 hatchery Chinook and 4 SOK 43,275 trips; 6,355 adult Chinook, 55,540 SOK kept 1,373 Chinook, 526 SOK, 0 STH released	Season TBD at NOF
Fall Season Buoy 10	Chinook open 8/1-24 (MSF), 8/25-8/30, 10/1-10/7 2 fish/1 CHF 8/1-8/30; 2 Coho 8/25-9/1; 3 Coho 9/15-30; 3 Fish/1 CHF 10/1-10/7, 3 Coho 10/8-12/31 Coho open 8/1-9/1, 9/15-12/31 STH retention closed Aug-Oct 85,072 trips, 28,789 Chinook kept – 4 th highest (21,905 rel) 8,904 Coho kept (5,282 rel) LRH handle higher than preseason expectation	Season TBD at NOF
Fall Season LCR	Chinook and Coho open WPI - Warrior R. 8/1-9/1, 10/1-10/7, Coho only 10/8-10/31 Warrior R. - BON: 8/1-9/1, 10/1-10/7, Coho only 10/8-10/31 E. Reed Is. - BON open 9/15-30 STH retention closed Aug-Oct 52,539 trips Aug-Oct 9,495 adult Chinook kept 887 rel 1,582 Coho kept 540 rel 3 STH kept (452 rel H+W) SRW and LRH handle lower than preseason expectation	Season TBD at NOF
Fall Season BON - McNary	Chinook and Coho open 8/1-10/7 1 CHF bag, Coho only 10/8-12/31 STH closed Aug-Oct BON Pool; Sep-Mar TDA/JD/McN pools 25,143 trips Aug-Dec 31; 7,897 adult Chinook kept (1,498 rel) 4,839 Coho kept (420 rel); 12 STH kept (56 rel H+W) SRW HR much higher than preseason expectation	Season TBD at NOF
Fall Season McNary-Hwy 395	Same season as JD-McN 447 trips; 140 Chinook, 78 Coho and 45 STH kept 27 Chinook, 7 Coho and 170 STH (H+W) released	Season TBD at NOF
Fall Season Hanford Reach	Fall Chinook open 8/16-10/31; 6 fish/2 adults 28,844 trips; 10,485 adults and 946 jack Chinook kept; 187 Coho kept ~10% decrease in Chinook harvest from 2021 fishery	Season TBD at NOF
Sturgeon LCR B10-BON	Below Wauna 1,920 fish guideline; 44-50-inches FL; 11 retention days (2d/wk + holiday): May 11, 14, 18, 21, 25, 28, 30, June 1, 4, 8, 11 11,960 trips; 1,292 kept (67% of guideline); 2,500 over-legal Above Wauna 800 fish guideline; 44-50-inches FL; 3 retention days: Sept. 10, 14, 17 7,592 trips; 885 kept (111% of guideline) Lower Willamette 480 fish guideline; no fishery	2023 season and guidelines TBD

Sturgeon BON-McNary	BO Pool: 1/1-1/29, 3/9; 622 kept (92% of guideline) TD Pool: 1/1-3/21 (3d/wk); 204 kept (107% of guideline) JD Pool: 1/1-3/9; 94 kept (90% of guideline)	BO/TD Pool: Jan 1 then 3d/wk (M, W, Sa) through Mar 22 (BO) and Mar 4 (TD); 11/22 Hearing JD Pool: opens Jan 1 perm rule
Shad	LCR: 13,723 trips; 160,240 kept LWR: 3,370 trips (5/23-6/26); 19,756 kept	Large population No changes to fishery
Smelt	One day season (3/5) in Cowlitz R. 169,543 lbs landed.	TBD

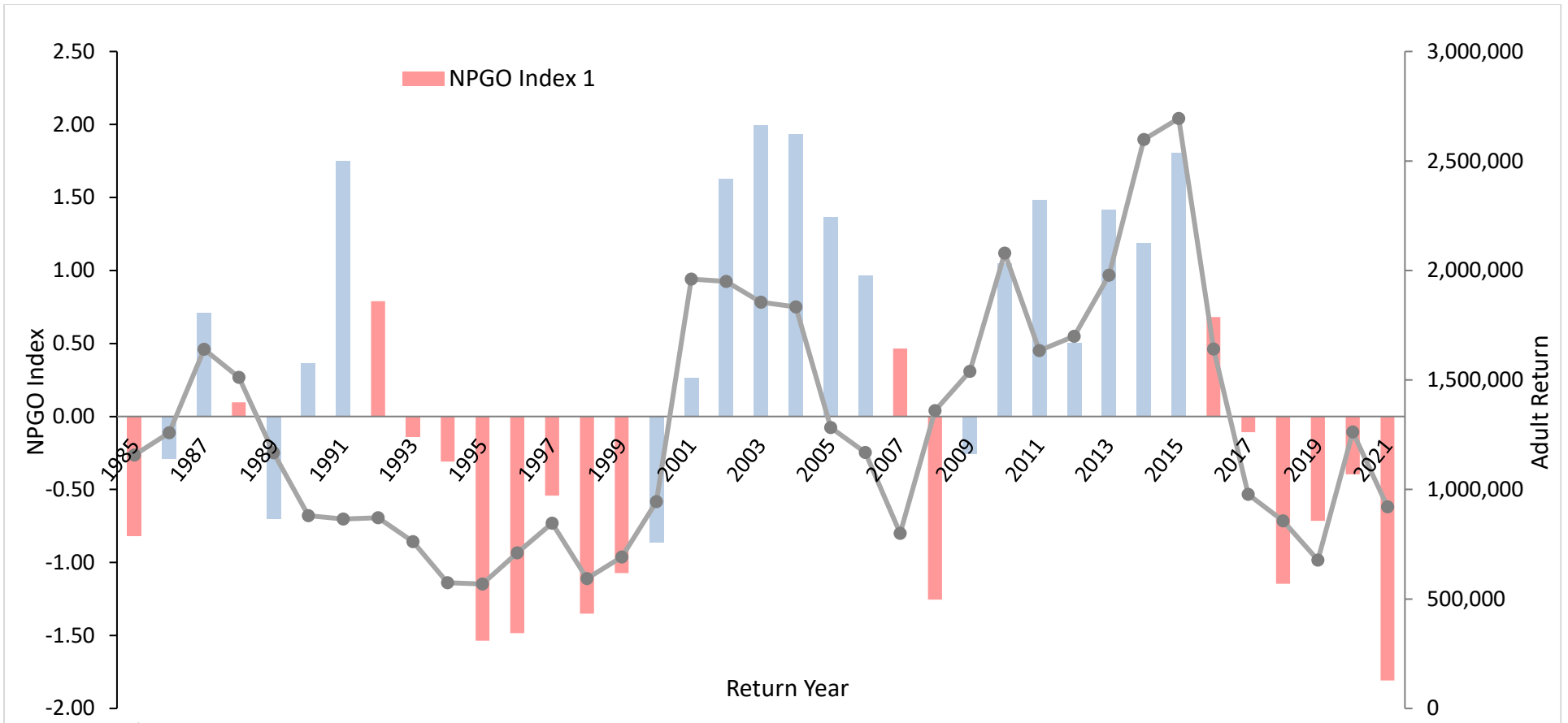
Commercial Fisheries

	2022 Results	2023 Expectations
Columbia River Fisheries		
Spring	May 23 10 AM-9 PM Z4-5 (Hayden Is.-Beacon Rock) Tangle net, live capture regulations - 19 Adults 9 jacks landed	TBD
Summer	No fishery	TBD
August (Early Fall)	Aug 10–Sept 2, 8 periods; 9 hrs each Zones 4-5; 9-inch min. mesh 13-62 deliveries per period 24,232 CHF, 930 Coho, 184 WSTG	TBD at NOF
Late Fall	25 tangle net periods (Sep 26-Oct 28) 0-15 deliveries/period 3,797 hatchery Coho (<2% jacks) & 221 CHF 7 large mesh Z4-5 periods (Sep 18-Oct 6) 4-47 del/period 6,495 CHF, 1,218 Coho, 85 WSTG	TBD at NOF
Seine and/or Pound Net	No fishery	TBD at NOF
Shad	Area 2S fishery open 5/10-6/20 (perm regs) 1,564 shad landed	Area 2S fishery
Smelt	23 periods; Jan 26-Mar 18, 27,398 lbs landed Highest CPUE since 2003	2023 Eulachon abundance expected to be similar to 2022
Select Area Fisheries		
Winter/Spring	Above avg. season (190%/176% of 5/10-yr avg.) Winter – 1,303 Chinook; 37 WSTG Spring – 10,386 Chinook; 120 WSTG	22,100 Select Area-origin predicted vs 16,726 actual in 2022 Season TBD (likely similar to 2022)
Summer	Above avg. season (298%/304% of 5/10-yr avg.) 7,012 Chinook; 103 WSTG, 27 SOK	Season TBD (likely similar to 2022)
Fall	Mixed season (CHF below avg. but COH 6 th highest) 6,167 Chinook (104%/47% of 5/10-yr. avg.) 78,504 Coho (185%/157% of 5/10-yr avg.) <1% Coho jacks 168 WSTG; sales closed 9/18	Season TBD (structure expected to be similar to 2022)

NOAA ocean condition scorecard for outmigrating salmon with ratings from 1 (best) to 24 (worst). The years shown correspond to the years the smolts entered the ocean.

Ecosystem Indicators	Year																								
	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
PDO (Sum Dec-March)	22	8	4	16	9	24	15	20	17	12	6	1	19	5	3	10	13	25	23	21	14	18	11	7	2
PDO (Sum May-Sept)	13	6	8	7	14	20	19	21	15	17	3	12	9	5	2	10	23	25	24	18	16	22	11	4	1
ONI (Average Jan-June)	24	1	1	9	16	18	17	20	10	14	3	13	21	6	8	10	12	22	25	15	7	23	19	5	4
SST NDBC buoys (°C; May-Sept)	20	7	9	5	6	13	25	14	2	16	1	12	3	8	10	18	23	22	21	15	17	24	11	4	19
Upper 20 m T (°C; Nov-Mar)	24	13	10	12	7	18	19	16	15	6	1	11	21	5	4	9	3	25	23	22	17	20	2	8	14
Upper 20 m T (°C; May-Sept)	16	11	13	5	1	3	25	20	9	10	2	6	17	8	7	18	23	19	14	12	15	24	22	4	21
Deep temperature (°C; May-Sept)	24	7	9	5	1	11	13	17	12	6	2	8	15	10	4	16	23	21	14	19	20	18	25	3	22
Deep salinity (May-Sept)	24	4	12	5	6	19	20	13	8	2	3	17	22	15	16	14	25	18	10	9	7	11	23	1	21
Copepod richness anom. (no. species; May-Sept)	23	3	1	10	9	18	17	22	19	13	11	12	21	6	8	4	14	24	25	20	16	15	7	5	2
N. copepod biomass anom. (mg C m ⁻³ ; May-Sept)	23	18	13	14	6	20	17	24	19	15	9	12	11	3	5	7	8	21	25	22	10	4	2	1	16
S. copepod biomass anom. (mg C m ⁻³ ; May-Sept)	25	2	7	4	3	17	19	24	16	13	1	9	20	12	10	8	14	22	23	21	15	18	11	5	6
Biological transition (day of year)	22	14	9	3	12	18	15	23	17	4	1	2	20	5	13	7	7	24	24	21	16	18	9	11	6
Nearshore Ichthyoplankton Log(mg C 1,000 m ⁻³ ; Jan-Mar)	20	4	13	7	1	24	25	19	10	21	3	16	2	9	5	12	22	17	18	15	11	23	8	6	14
Nearshore & offshore Ichthyoplankton community index (PCO axis 1 scores; Jan-Mar)	11	6	5	8	10	13	19	23	1	16	3	12	17	4	2	7	9	21	24	25	20	22	18	15	14
Chinook salmon juvenile catches Log(no. km ⁻² ; June)	22	2	7	19	6	10	18	24	14	12	1	8	5	16	3	4	9	17	21	25	20	15	23	13	11
Coho salmon juvenile catches Log(no. km ⁻² ; June)	23	12	20	5	7	6	22	24	18	2	4	9	10	19	14	1	11	17	16	25	3	15	21	13	8
Mean of ranks	21.0	7.4	8.8	8.4	7.1	15.8	19.1	20.3	12.6	11.2	3.4	10.0	14.6	8.5	7.1	9.7	14.9	21.3	20.6	19.1	14.0	18.1	13.9	6.6	11.3
Rank of the mean rank	24	5	8	6	3	18	20	22	13	11	1	10	16	7	3	9	17	25	23	20	15	19	14	2	12
<i>Ecosystem Indicators not included in the mean of ranks or statistical analyses</i>																									
Physical Spring Trans. UI based (day of year)	4	8	23	20	5	15	18	24	15	1	7	3	10	13	21	11	22	12	6	19	13	15	9	2	25
Physical Spring Trans. Hydrographic (day of year)	24	4	14	9	6	13	16	25	7	10	1	10	20	4	12	2	18	8	19	23	16	15	21	2	21
Upwelling Anomaly (April-May)	12	4	20	8	11	17	15	24	12	6	9	10	18	20	18	14	22	1	3	23	7	5	15	2	25
Length of Upwelling Season UI based (days)	6	2	22	14	1	16	12	25	5	3	9	3	18	21	18	17	23	13	8	15	7	10	20	10	23
Copepod Community Index (MDS axis 1 scores; May-Sept)	24	5	7	10	4	19	17	23	20	12	1	9	16	11	8	6	14	22	25	21	15	18	13	3	2

*Note: this table is easier to interpret if printed in color. Green represents more favorable indicators. Yellow is intermediate and Red indicates unfavorable. If printed in black and white, red will appear very dark.



¹ Average of May–July NPGO values two years prior to adult return; adjusted to return year.

Figure X. Annual return of adult salmonids to the Columbia River mouth and corresponding NPGO Index, 1985–2021. Positive (blue) NPGO (cool) ocean conditions and negative (red) NPGO represents relatively poor (warm) ocean conditions.

2023 Columbia River Process Schedule (Preliminary Draft – Dates and Times are Tentative)

Dec 14, 2022 2-4p	NSIA Annual Meeting • 2022 results and 2023 expectations	virtual
Dec 21, 2022 9-11a	Meeting with Conservations Groups • 2022 results and 2023 expectations	virtual
Jan 11, 2023 4-6p	Columbia River Recreational Advisor Group Meeting • Sturgeon, smelt, 2023 forecasts, 2022 fall review, etc.	virtual
Jan 12, 2023 10a-noon	Columbia River Commercial Advisor Group Meeting • Sturgeon, smelt, 2023 forecasts, 2022 fall review, etc.	hybrid (WDFW Ridgefield?)
Jan 17, 2023 7-8p	Select Area Commercial Fisheries Meeting • 2022 results; 2023 season structure discussion	TBD
Jan. 18, 2023 1p	Sturgeon Management Task Force	TBD
Jan 24, 2023 10a	Columbia River Compact Hearing • Smelt, Treaty Winter Gillnet	Teleconference
TBD	Columbia River Commercial Advisor Group Meeting • TBD	TBD
Feb 8, 2023 4-6p	Columbia River Recreational Advisor Group Meeting • Spring Chinook, potential fall season discussion	TBD
Feb 14, 2023 10a	Columbia River Compact Hearing • Select Area commercial, Treaty	Teleconference
Feb 22, 2023 10a	Columbia River Joint State Hearing • Recreational Spring Chinook	TBD

2023 Ocean Fishery Process Schedule (Preliminary Draft – Dates are Tentative)

TBD - late Feb.	Ocean Salmon Industry Group <ul style="list-style-type: none"> • 2023 forecasts • Initial discussions of 2023 season options 	Newport, OR/Hybrid
TBD	WDFW Public Meeting <ul style="list-style-type: none"> • 2023 forecasts and fishing opportunities 	TBD
Mar 5-10	Pacific Fishery Management Council (PFMC) <ul style="list-style-type: none"> • Adopt initial 2023 ocean salmon options for public review 	Seattle, WA
Mar 14 10a	2023 Columbia R North of Falcon public meeting	TBD
TBD	Northeast of McNary – North of Falcon	TBD
Mar 22 (WA) Mar 23 (OR)	PFMC Public Options Hearings <ul style="list-style-type: none"> • Public input on 2023 season options 	TBD
Apr 2-7	Pacific Fishery Management Council (PFMC) <ul style="list-style-type: none"> • Adopt 2023 ocean salmon fishery regulations 	Foster City, CA
Apr 21	Oregon Fish and Wildlife Commission <ul style="list-style-type: none"> • Adopt state water ocean salmon fishery regulations 	TBD