

Fishery Management Issues: 2020 North of Falcon debrief

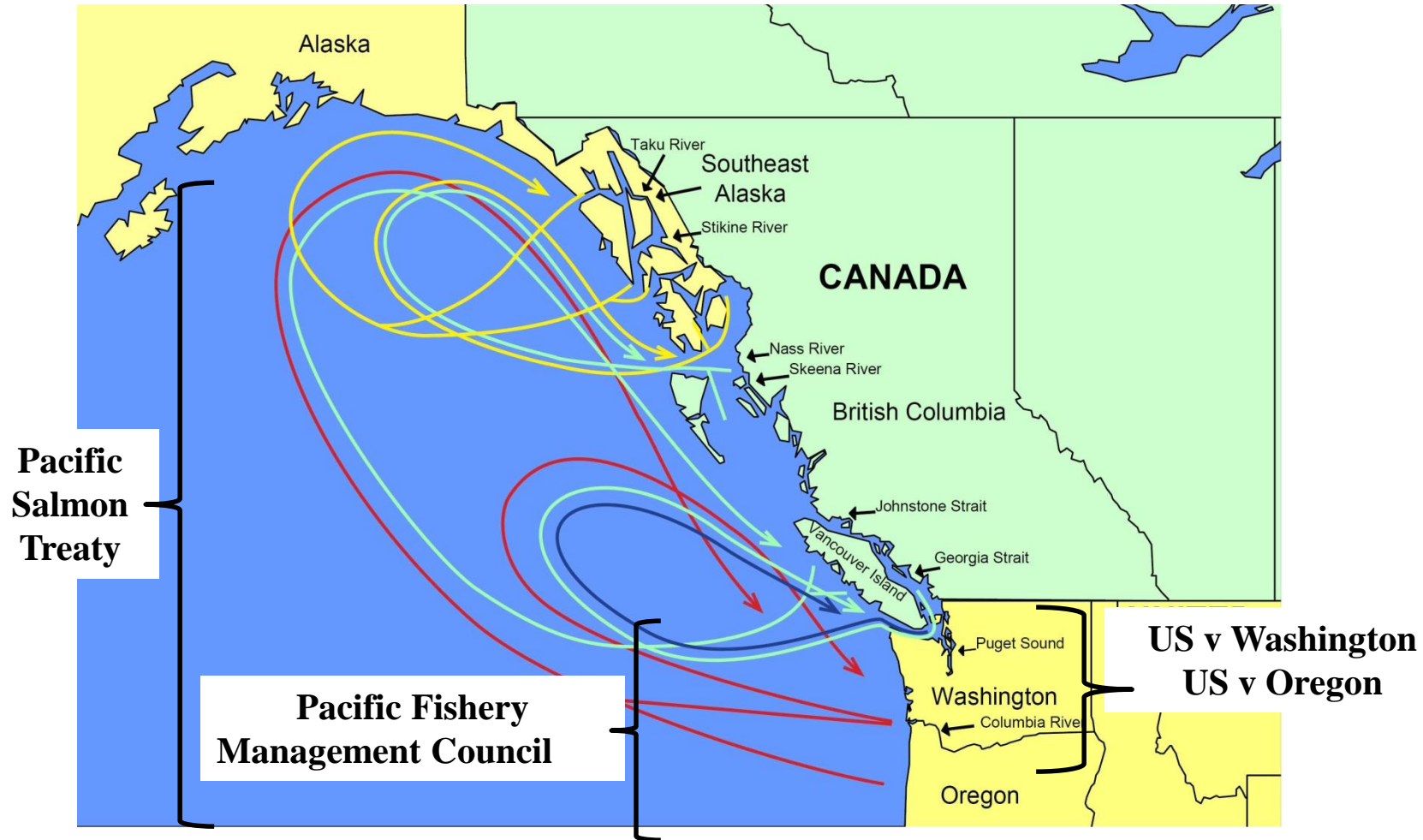


Presentation Overview

- Salmon Management Landscape
- North of Falcon Process
- 2020 Challenges and Outcomes
- Beyond 2020



Management landscape



2020 Challenges

- COVID-19 Outbreak and resulting virtual meeting schedule
- Uncertainty in ability to implement fisheries during “Stay Home and Stay Healthy” order
- Continued poor ocean conditions for smolts entering ocean
- Poor expected returns of Coho to Columbia River, Puget Sound and Coastal Rivers
- Poor summer Chinook and Steelhead forecasts for the Columbia River
- Poor expected returns of Chum to Puget Sound
- No co-manager agreement on Management Objective for Mid Hood Canal Chinook



2020 Timeline

February 28

2020 Salmon Forecasts and Fishing Opportunities

March 3-9

Pacific Fishery Management Council Meeting

March 16

First North of Falcon Meeting

March 17

Columbia River Fisheries Discussion

March 23

Public Hearing on Ocean Salmon Management Options

March 25

Puget Sound Recreational Fisheries Discussion

March 30

Upper Columbia River Fisheries Discussion

Snake River Fisheries Discussion

Mid-Columbia River Public Meeting

March 31

North of Falcon Meeting

April 1

Columbia River and Ocean Fisheries Discussion

April 4-10

Final Pacific Fishery Management Council Meeting

*All meetings in yellow were conducted virtually



2020 Challenges

- COVID-19 Outbreak and resulting virtual meeting schedule
- Multiple meeting platforms – it was a learning process for staff and public to adapt to each one
- Allowed more engagement with stakeholders that may not have been able to travel to in-person meetings
- Allowed for very structured & orderly public questions and input at larger meetings

Washington Department of Fish and Wildlife State Delegation Meetings April 5-9, 2020 PFMC Meeting

PFMC has made a virtual meeting room available for the Washington State Delegation during the April council meeting. We will be meeting daily. Please see the schedule below for start times. The meeting will begin each day with discussion of the items on the Council agenda for that day. Discussions on non-Council fisheries will occur after that. The room may be used by other subgroups throughout each day as needed. WDFW staff will be coordinating times for those meetings and notifying appropriate people as they develop. Please keep in mind that another group maybe wrapping up a meeting in this room as you join for your meeting, so please mute your computer/phone as you join and unmute as needed.

Here are details for connecting to WA delegation room:

From your computer, tablet or smartphone.
<https://global.gotomeeting.com/join/809967581>

You can also dial in using your phone.
 United States: [+1 \(571\) 317-3112](tel:+15713173112) Access Code: 809-967-581

New to GoToMeeting? Get the app now and be ready when your first meeting starts:
<https://global.gotomeeting.com/install/809967581>

Anticipated WA Delegation Meetings Schedule

| | Sun | Mon | Tue | Wed | Thu |
|---|--|---|--|--|---|
| CPS, Groundfish, Halibut, Admin. | No discussion | 7:00 AM | | | |
| | | D.3 Sardines | G.3 Whiting G.4 Harvest Specifications | H.1 Halibut troll limits G.5 EM G.6 Mgt. Meas. PPA | G.6 Mgt. Meas. PPA (if continued) G.6 Inseason I.4 Planning |
| Salmon | 8:00 AM | | 7:30 AM | | |
| | E.1 Tent. Adopt 2020 Mgt. Meas. for analysis. | E.3 S. OR/N. CA Coho ESA E.4 Clarify Direction | E.7 Further Direction | Further Direction | E.9 Final Action |

Link to Council agenda: <https://www.pcouncil.org/documents/2020/03/april-2020-meeting-notice-and-detailed-agenda.pdf/>



Salmon Indicators: **Bad** -> **Fair** -> **Good**

| Indicator Category | Indicator Name | Year | | | | | | | | | | | | | | | | | | | | | |
|------------------------------|---|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| | | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 |
| Basin-scale physical indices | Ecosystem Indicators | | | | | | | | | | | | | | | | | | | | | | |
| | PDO (Sum Dec-March) | 19 | 6 | 3 | 13 | 7 | 21 | 12 | 17 | 14 | 9 | 5 | 1 | 16 | 4 | 2 | 8 | 10 | 22 | 20 | 18 | 11 | 15 |
| | PDO (Sum May-Sept) | 10 | 4 | 6 | 5 | 11 | 17 | 16 | 18 | 12 | 14 | 2 | 9 | 7 | 3 | 1 | 8 | 20 | 22 | 21 | 15 | 13 | 19 |
| Regional physical indices | ONI (Average Jan-June) | 21 | 1 | 1 | 7 | 14 | 16 | 15 | 17 | 9 | 12 | 3 | 11 | 18 | 4 | 6 | 8 | 10 | 19 | 22 | 13 | 5 | 20 |
| | SST NDBC buoys (°C; May-Sept) | 17 | 6 | 8 | 4 | 5 | 11 | 22 | 12 | 2 | 14 | 1 | 10 | 3 | 7 | 9 | 16 | 20 | 19 | 18 | 13 | 15 | 21 |
| | Upper 20 m T (°C; Nov-Mar) | 21 | 11 | 8 | 10 | 6 | 15 | 16 | 13 | 12 | 5 | 1 | 9 | 18 | 4 | 3 | 7 | 2 | 22 | 20 | 19 | 14 | 17 |
| | Upper 20 m T (°C; May-Sept) | 16 | 11 | 13 | 4 | 1 | 3 | 22 | 19 | 8 | 10 | 2 | 5 | 17 | 7 | 6 | 18 | 20 | 9 | 14 | 12 | 15 | 21 |
| | Deep temperature (°C; May-Sept) | 22 | 6 | 8 | 4 | 1 | 10 | 12 | 16 | 11 | 5 | 2 | 7 | 14 | 9 | 3 | 15 | 21 | 19 | 13 | 18 | 20 | 17 |
| Regional biological indices | Deep salinity (May-Sept) | 21 | 3 | 11 | 4 | 5 | 18 | 19 | 12 | 7 | 1 | 2 | 16 | 20 | 15 | 14 | 13 | 22 | 17 | 9 | 8 | 6 | 10 |
| | Copepod richness anom. (no. species; May-Sept) | 20 | 2 | 1 | 7 | 6 | 15 | 14 | 19 | 16 | 10 | 8 | 9 | 18 | 4 | 5 | 3 | 11 | 21 | 22 | 17 | 13 | 12 |
| | N. copepod biomass anom. (mg C m ⁻³ ; May-Sept) | 20 | 15 | 11 | 12 | 4 | 17 | 14 | 21 | 16 | 13 | 7 | 10 | 9 | 1 | 3 | 5 | 6 | 18 | 22 | 19 | 8 | 2 |
| | S. copepod biomass anom. (mg C m ⁻³ ; May-Sept) | 22 | 2 | 5 | 4 | 3 | 15 | 16 | 21 | 14 | 10 | 1 | 7 | 17 | 9 | 8 | 6 | 11 | 19 | 20 | 18 | 13 | 12 |
| | Biological transition (day of year) | 19 | 11 | 6 | 7 | 8 | 15 | 12 | 20 | 14 | 3 | 1 | 2 | 17 | 4 | 9 | 5 | 10 | 21 | 21 | 18 | 13 | 15 |
| | Nearshore Ichthyoplankton (mg C 1,000 m ⁻³ ; Jan-Mar) | 17 | 3 | 11 | 6 | 1 | 21 | 22 | 15 | 8 | 17 | 3 | 13 | 2 | 7 | 5 | 10 | 19 | 14 | 15 | 12 | 9 | 20 |
| | Nearshore & offshore Ichthyoplankton community index (PCO axis 1 scores; Jan-Mar) | 11 | 6 | 5 | 9 | 8 | 13 | 16 | 20 | 1 | 14 | 3 | 12 | 15 | 4 | 2 | 7 | 10 | 18 | 21 | 22 | 17 | 19 |
| | Chinook salmon juvenile catches (no. km ⁻¹ ; June) | 20 | 4 | 5 | 17 | 8 | 12 | 18 | 21 | 13 | 11 | 1 | 6 | 7 | 16 | 2 | 3 | 10 | 14 | 19 | 22 | 15 | 9 |
| | Coho salmon juvenile catches (no. km ⁻¹ ; June) | 20 | 8 | 14 | 6 | 7 | 3 | 17 | 21 | 18 | 4 | 5 | 10 | 11 | 16 | 19 | 1 | 13 | 9 | 15 | 22 | 2 | 12 |
| Mean of ranks | 18.5 | 6.2 | 7.3 | 7.4 | 5.9 | 13.9 | 16.4 | 17.6 | 10.9 | 9.5 | 2.9 | 8.6 | 13.1 | 7.1 | 6.1 | 8.3 | 13.4 | 17.7 | 18.3 | 16.6 | 11.8 | 15.1 | |
| Rank of the mean rank | 22 | 4 | 6 | 7 | 2 | 15 | 17 | 19 | 11 | 10 | 1 | 9 | 13 | 5 | 3 | 8 | 14 | 20 | 21 | 18 | 12 | 16 | |

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**2019 =
Ranked 16th**



2020 Challenges

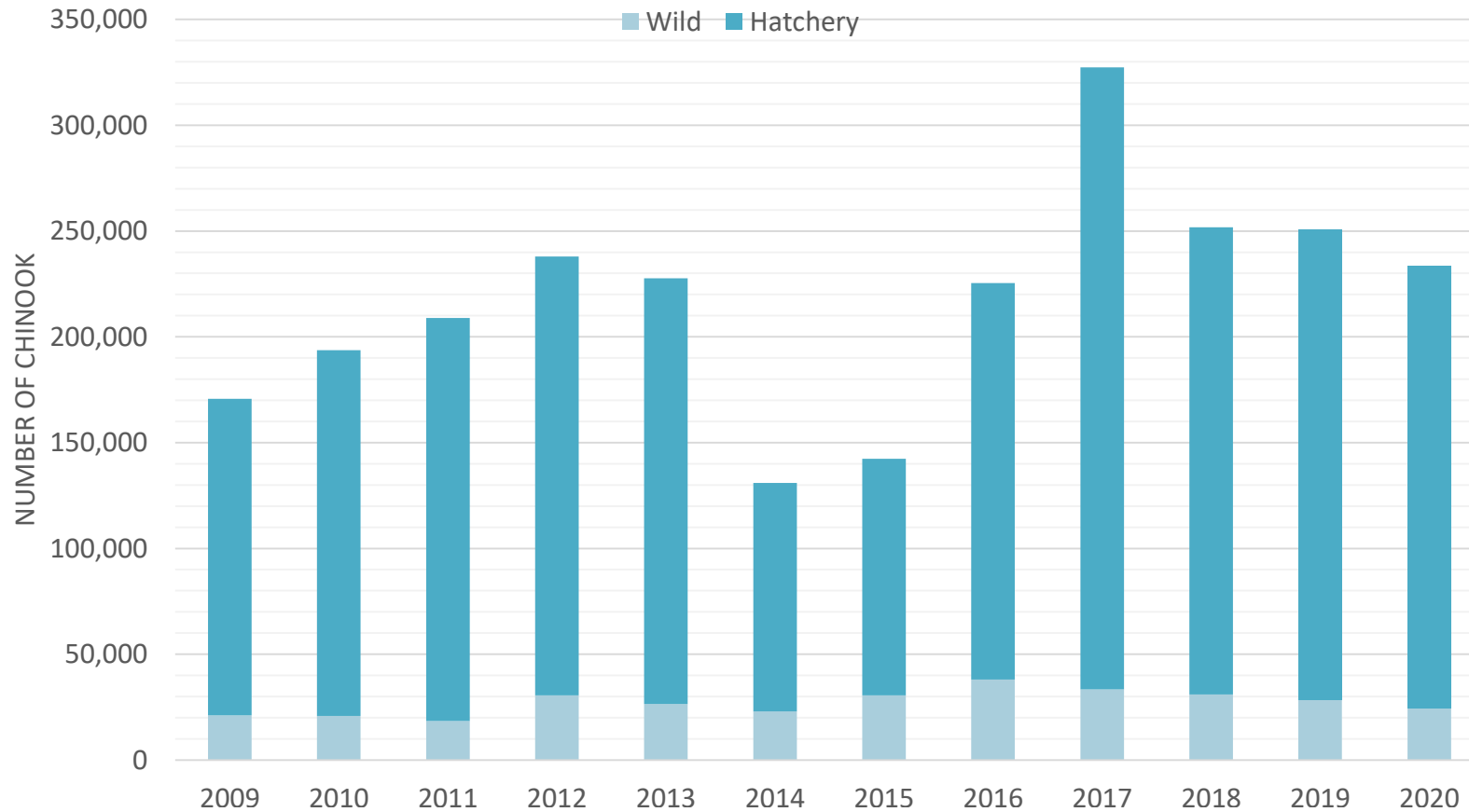
Columbia River

- Director Delegation / maintaining concurrent regulations with Oregon
- Poor summer Chinook, coho and Steelhead forecasts
- Fall Chinook forecasts still down from highs seen in 2013-2015, but improved from 2018-2019.
 - Planning fall fisheries prior to the run update on URB to the lower harvest rate, with anticipation of fully accessing available harvest after the run update
 - Tule Chinook impacts were limited and affected Buoy 10 primarily to fully access URB.
- Sockeye forecasts are up (Okanagan stock) and provide harvest through out the river.



Puget Sound Chinook Forecast Summary

- Hatchery stocks **↑ 14%** from recent 10 year avg
- Wild stocks **↓ 6%** from recent 10 year avg



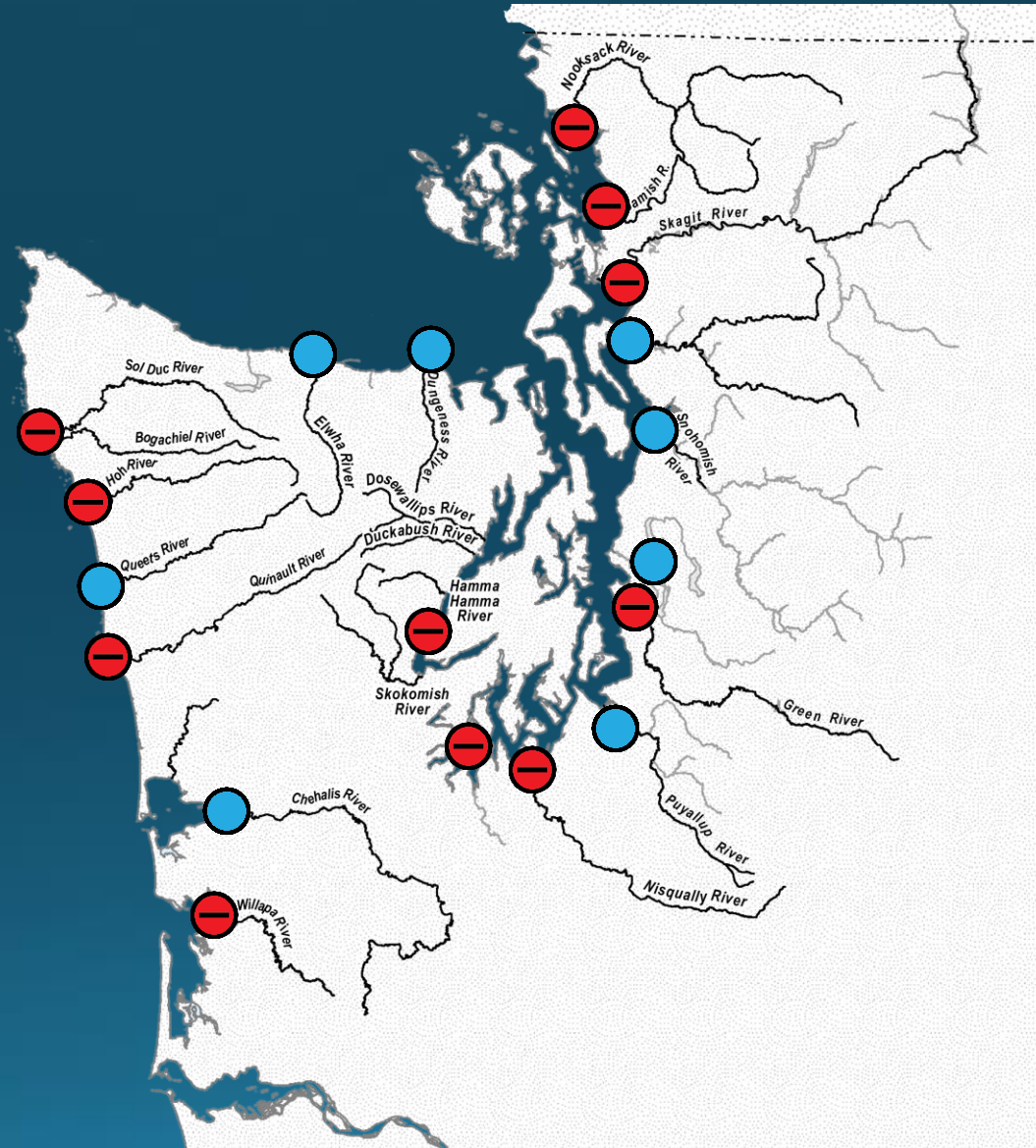
2020 Wild Coho Forecasts



- Forecasts range from **Poor** to **Neutral** across Puget Sound; **↓ 48%**
- **Poor** to **Neutral** on coast; **↓ 25%**

Relative to Recent 10yr Avg. Runsize

- ⊕ Good > 125%
- Neutral 75-125%
- ⊖ Poor < 75%



2020 Season development

- Harvest limits are defined as exploitation rates (ER), or the percentage of the population that can be impacted by fisheries within a year
- Starting point for planning fisheries was modeling of 2019 fisheries with 2020 forecasts
 - Snohomish Chinook SUS ER: 9.2% vs 8.0% limit
 - Stillaguamish marked Chinook SUS ER: 15.4% vs 12% limit
 - Mid Hood Canal Chinook PTSUS ER: 12.6% vs 12-12.4% limit
 - Skagit spring Chinook SUS ER: 23.3% vs 10.3% limit
 - Coho model would not run with 2019 fisheries due to decreased abundances
- Snohomish natural coho forecast below escapement goal
- Poor coho returns shaped ocean fishery – coho quota one of lowest in last 20 years
- Coastal tribes did not settle on a single set of ocean fishery recommendations for the Pacific Fishery Management Council until the final day of the April meeting



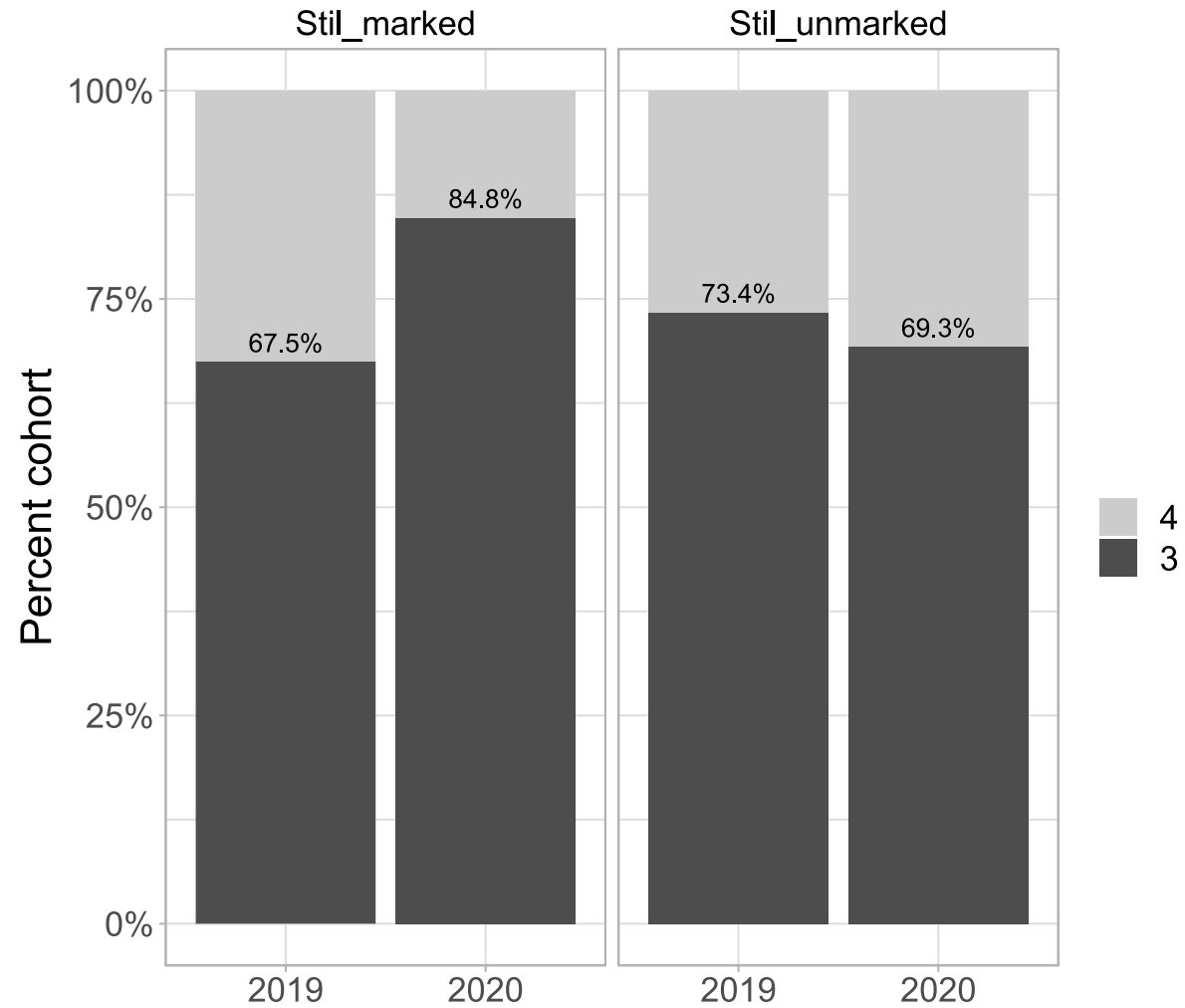
Why were Stillaguamish Chinook such a constraint this year?

- Although abundances for Stillaguamish Chinook were similar to 2019 forecasts, the age composition of the forecasts played a large role in the projected exploitation rates from FRAM.
- A majority of the projected impacts on Stillaguamish Chinook will be on 2 and 3 year old fish, hence higher impacts in winter fisheries targeting juvenile fish.

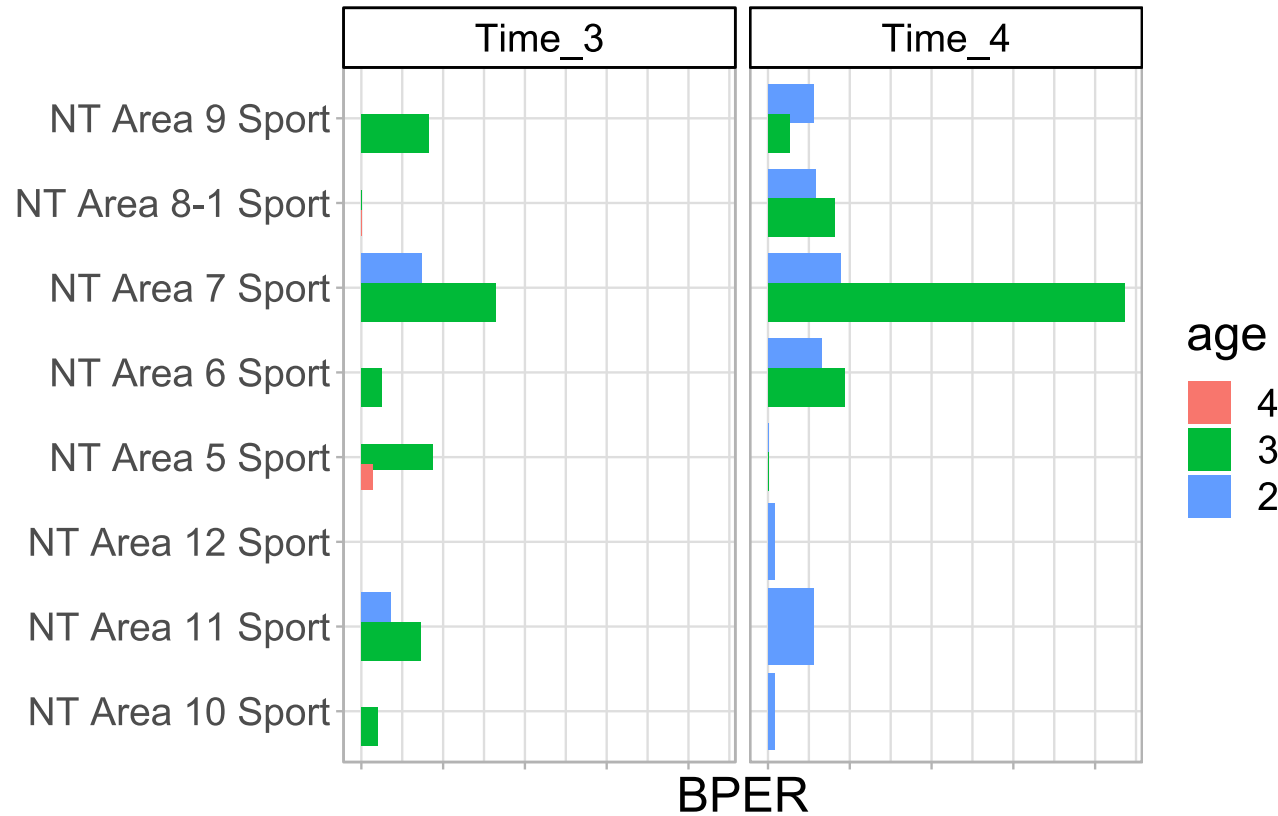


Stillaguamish Chinook

FRAM starting cohort age composition of 3s & 4s



Stillaguamish marked Chinook FRAM Base Period ERs



**Age 3 fish drive
Stillaguamish
marked impacts in
Puget Sound sport**

(3yo CWTs had greatest
relative abundance in these
fisheries during 2007-13 base
period)



2020-2021 Puget Sound Recreational Chinook and Coho Seasons by Marine Areas

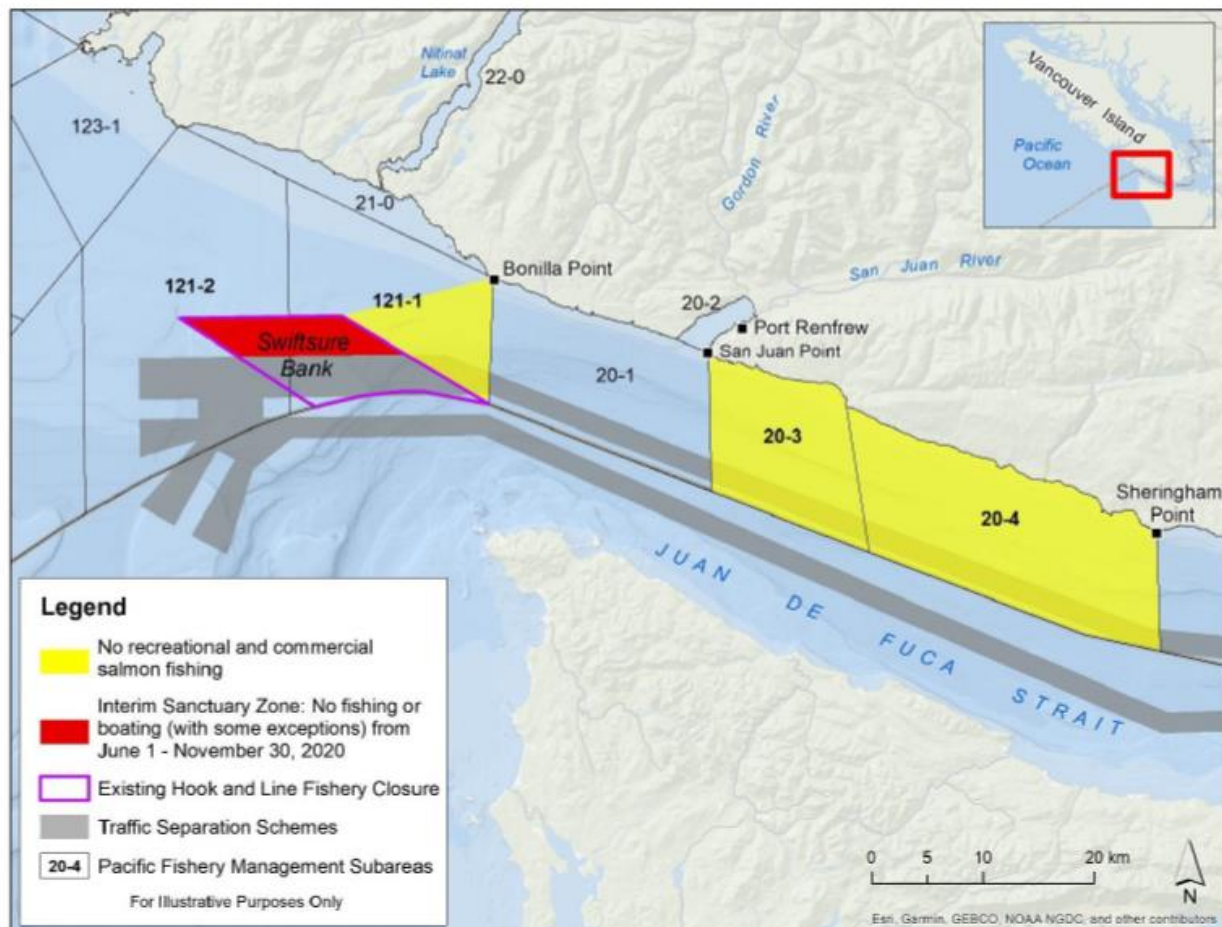
| Marine Areas | Fishery | May | June | July | August | September | October | Novmber | December | January | February | March | April |
|----------------------|---------|-----|------|------|--------|-----------|---------|---------|----------|---------|----------|-------|-------|
| 5 | Chinook | | | | | | | | | | | | |
| | Coho | | | | | | | | | | | | |
| 6 | Chinook | | | | | | | | | | | | |
| | Coho | | | | | | | | | | | | |
| 7 | Chinook | | | | * | | | | | | | | |
| | Coho | | | | ** | ** | | | | | | | |
| 8-1 | Chinook | | | | | | | | | | | | |
| | Coho | | | | | | | | | | | | |
| 8-2 | Chinook | | | | | | | | | | | | |
| | Coho | | | | | | | | | | | | |
| 9 | Chinook | | | | | | | | | | | | |
| | Coho | | | | | | | | | | | | |
| 10 | Chinook | | | | | | | | | | | | |
| | Coho | | | | | | | | | | | | |
| 11 | Chinook | | | | | | | | | | | | |
| | Coho | | | | | | | | | | | | |
| 12 North of Ayock | Chinook | | | | | | | | | | | | |
| | Coho | | | | | | | | | | | | |
| 12 South of Ayock | Chinook | | | | | | | | | | | | |
| | Coho | | | | | | | | | | | | |
| 13 | Chinook | | | | | | | | | | | | |
| | Coho | | | | | | | | | | | | |

| | | | | | |
|--|--|--|---|----|---|
| | Closed | | Non-Selective: Anglers may keep either wild or hatchery fish. | | Mark-Selective: Anglers may keep hatchery salmon only and must release wild salmon. |
| | Non-retention: Anglers may fish for salmon but may not retain the species. | | OPEN to salmon fishing in 2019-20, CLOSED in 2020-21 | | CLOSED to salmon fishing in 2019-20, OPEN in 2020-21 |
| | Mark-Selective in 2019-20, Non-retention in 2020-21 | | | * | Chinook non-retention |
| | | | | ** | Coho non-selective |

| | Management Criteria | | | Model Prediction | | | |
|------------------------------|---------------------|------------|---------|------------------|---------------------|---------------------|---------------------|
| Stock | Abundance Tier | ER Ceiling | ER Type | Escapement | Total ER | SUS ER | PT-SUS ER |
| Spring/Early: | | | | | | | |
| Nooksack - Total | | 10.5% | SUS | | 32.1% | <u>10.5%</u> | 3.6% |
| North/Middle Fork | < LAT | | | 138 | | | |
| South Fork | > LAT | | | 232 | | | |
| Skagit - Total | > LAT | 10.3% | SUS | 1,508 | 20.8% | <u>9.0%</u> | 3.5% |
| Upper Sauk | > LAT | | | 871 | | | |
| Upper Cascade | < LAT | | | 168 | | | |
| Suiattle | > LAT | | | 469 | | | |
| White | > UMT | 22.0% | SUS | 2,125 | 23.3% | <u>15.7%</u> | 3.9% |
| Dungeness | > LAT | 10.0% | SUS | 793 | 16.2% | <u>3.4%</u> | 3.1% |
| Summer/Fall: | | | | | | | |
| Skagit - Total | > LAT | 48.0% | Total | 9,560 | <u>48.0%</u> | 24.1% | 3.7% |
| Upper Skagit | > LAT | | | 7,051 | | | |
| Sauk | > LAT | | | 445 | | | |
| Lower Skagit | > LAT | | | 1,717 | | | |
| Stillaguamish - Total | 900-1200 | 22.0% | Total | 990 | | | |
| Unmarked ER | | 8.0% | UM SUS | | <u>18.4%</u> | <u>7.2%</u> | 3.5% |
| Marked ER | | 12.0% | M SUS | | 28.2% | <u>12.0%</u> | 8.7% |
| Snohomish - Total | < LAT | | | 2,989 | 21.1% | <u>7.7%</u> | 6.5% |
| Skykomish | | 8.0% | SUS | 1,766 | | | |
| Snoqualmie | | | | 1,223 | | | |
| Lake WA (Cedar R.) | > UMT | 13.0% | PT-SUS | 855 | 34.2% | 22.4% | <u>10.5%</u> |
| Green | > UB | 13.0% | PT-SUS | 4,001 | 51.9% | 40.0% | <u>10.5%</u> |
| | | | | 6,377 | | | |
| Puyallup | > UMT | 13.0% | PT-SUS | 2,633 | 46.4% | 34.6% | <u>10.5%</u> |
| | | | | 4,176 | | | |
| Nisqually | > LAT | 47% | Total | 9,423 | <u>48.8%</u> | 39.82% | 13.32% |
| Western Strait-Hoko | > UMT | 10% | SUS | 2,170 | 22.5% | <u>2.3%</u> | 2.3% |
| Elwha | > LAT | 10% | SUS | 3,319 | 15.7% | <u>3.3%</u> | 3.3% |
| Mid-Hood Canal | < LAT | TBD | PT-SUS | 39 | 22.9% | 12.4% | <u>12.2%</u> |
| Skokomish | > UMT | 50% | Total | 2,749 | <u>48.3%</u> | 37.8% | 12.5% |
| | | | | 23,482 | | | |



Strait of Juan de Fuca – Fishery Closures

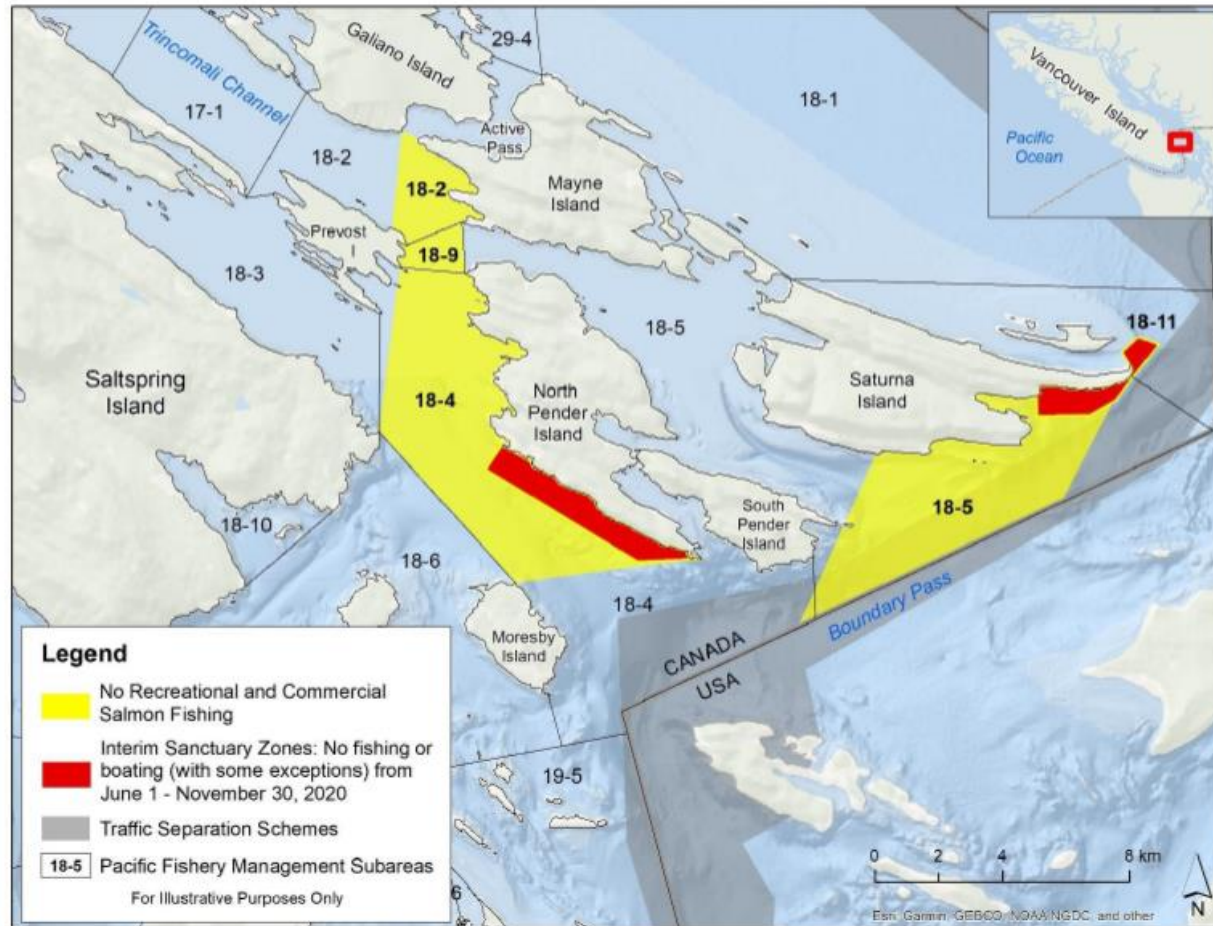


Strait of Juan de Fuca:
Fishery Closures (Subareas
20-3, 20-4 and portion of
121-1):

- Fishery closures for recreational and commercial salmon (yellow area) in effect through the summer and fall
 - Specific dates will be announced in June
- Addition of 121-1 in 2020 compared to 2019



Gulf Islands – Fishery Closures



Gulf Islands Fishery Closures (Subarea 18-9 and portions of Subareas 18-2, 18-4, 18-5 and 18-11):

- Fishery closures for recreational and commercial salmon in effect through the summer and fall (**yellow** area)
 - Specific dates will be announced in June
- Addition of 18-11 in 2020 compared to 2019



Key Outcomes for 2020

- Provide fishing opportunities consistent with expected abundances and conservation goals for all species
- Reduced recreational fisheries in winter time periods, maintained or improved summer fisheries in Puget Sound
- State & Tribal agreement for all salmon fisheries
- ESA authorization for Puget Sound fisheries
 - Chinook
 - SRKW



Beyond 2020

- Updates to FRAM are needed. Those updates will have an effect on exploitation rate estimates for many stocks, and may require revisiting management objectives for some stocks.
- Past updates led to the comanager disagreement on the management objective for Mid Hood Canal Chinook – more work needed for future management objectives.
- The MHC situation in 2020 highlights the importance of adaptive management provisions for any long-term RMP.
- Continued work on new Comprehensive Chum Management Plan.



Questions?

