

BRIEFING NOTE FOR INFORMATION

DATE: March 15, 2023

PREPARED FOR: Honourable Nathan Cullen, Minister of Water, Land and Resource Stewardship

ISSUE: British Columbia (B.C.)'s position on proposed mark-selective chinook fisheries

KEY POINTS:

- In 2022, Fisheries and Oceans Canada (DFO) developed a mass marking (MM) and mark-selective fisheries (MSF) discussion paper that B.C. provided feedback on. Feedback was developed based on expertise from public servants across B.C. natural resource ministries and was supported by the previous Minister of Land, Water and Resource Stewardship.
- In February 2023 DFO requested input by March 3, 2023, on proposed pilot chinook mark-selective fisheries (MSF) for the recreational sector starting in April 2023 that would expand recreational retention rules temporarily to include hatchery-marked chinook (1), but is not yet supported by mass marking or a hatchery policy framework.
- B.C. has reviewed the DFO's proposal and is aware of both concerns from conservation stakeholders and support from harvest sectors and the Sport Fishing Advisory Board (SFAB) and is evaluating how best to respond to DFO's request for input.

BACKGROUND:

- In 2022, DFO developed a MM and MSF discussion paper that B.C. provided feedback on. Feedback was developed based on expertise from a variety of public servants across B.C. natural resource ministries and was supported by the previous Minister of Water, Land and Resource Stewardship.
- B.C.'s feedback has thus far been to encourage expansion of MSF where risk to stocks of concern is low or negligible and MM is in use, in order to provide for more selective and consistent fishing opportunities for all harvesters (recreational, commercial and First Nations).
- B.C. has been clear that MSF needs to be managed in a way that provides certainty to the sectors and communities reliant on fisheries but reduces risks to stocks of concern.
- Currently, DFO is seeking input on proposed pilot "mark-selective fishing" opportunities in the South Coast region for the 2023 fishing season that would allow limited retention of hatchery-reared chinook.
- These MSF pilots were tabled in 2019 at the Integrated Harvest Planning Committee (made up of sport and commercial fishermen, the Marine Conservation Caucus (MCC), the Province, DFO, and other stakeholders) and have since undergone reviews by DFO Stock Assessment and DFO Science teams to ensure avoidance of Fraser stocks of concern.
- DFO is currently in the process of developing an approach to MSF through the Pacific Salmon Strategy Initiative (PSSI) and its Salmonid Enhancement Program (SEP), and this pilot is in advance of that framework.
- The MCC sent a letter to Minister Murray opposing the proposed openings based on potential increased impact to at-risk chinook stocks, a lack of detailed monitoring plans, limited engagement, and impacts to food supply for Southern Resident Killer Whales (SRKW) (2).
- The Island Marine Aquatic Working Group (IMAWG), a group of 15 First Nations, criticized the DFO proposal for similar reasons, and noted the low hatchery marking rates of the proposed target stocks, and concerns about the impact on reconciliation, and that the proposal would undermine other conservation efforts that DFO is leading (3).
- The SFAB (made up of recreational fishing stakeholders, the BC Wildlife Federation, the Steelhead Society, and other organizations) is strongly supportive of the proposed pilot MSFs.

DISCUSSION:

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NEXT STEPS

- Seeking confirmation of Minister's support to include feedback on the MSF pilots in the annual 2023 B.C feedback on salmon IFMP.
- Submit the letter and discuss with DFO at various advisory tables and committees.
- Encourage DFO to further develop the hatchery MSF and MM policy, and continue to support through Fisheries, Aquaculture and Wild Salmon (FAWS) policy team at WLRS.

Attachment(s):

Attachment 1: Southern BC Chinook - 2023 MSF Pilots

Attachment 2: 2023 02 14 MCC letter to Min Murray regarding MSF Chinook

Attachment 3: 2023 February IMAWG Feedback to Proposed Mark Selective Fisheries

Attachment 4: 29676_ADM_Response_Request for Feedback on MSF pilots - to be included in 2023 IFMP letter

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	Initials	Date
DM	LH	March 20, 2023
ADM	JM	March 15, 2023
Program Dir/Mgr.	DT	March 15, 2023



Photo credit: Maxime Veilleux



Mark-Selective Fisheries

Proposed New or Modified Pilots for Spring 2023

February 2023



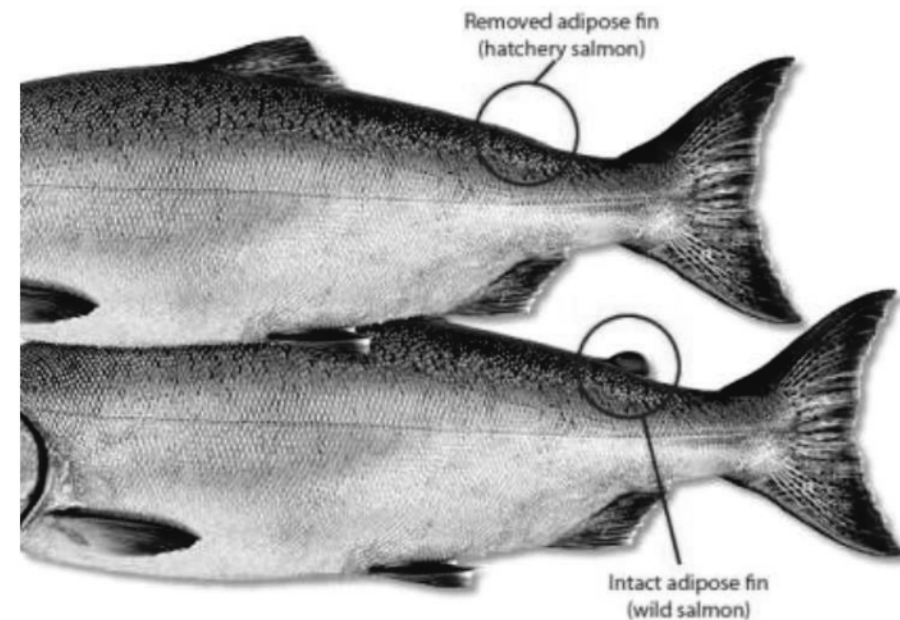


Overview

This presentation is intended to provide an overview on proposed new pilot mark-selective fisheries (MSF) for implementation beginning in Spring 2023 as part of the Pacific Salmon Strategy Initiative (PSSI).

Purpose of presentation:

- Identify proposed MSF pilots and information to support provision of feedback from First Nations and stakeholders on concerns, possible mitigations and level of support to inform decision making





Context

- The Pacific Salmon Strategy Initiative (PSSI) provides new investments to support potential implementation of Chinook mass marking (MM) and mark-selective fisheries (MSF) as part of this integrated management approach.
- MM and MSF are tools that can be used independently or together to help support DFO's objectives to conserve wild Chinook Salmon, effectively manage hatchery genetics, and to sustainably manage fisheries.
- MM and MSF will be implemented within a regulatory and policy framework for Pacific salmon that includes;
 - Fish Stock Provisions under the new Fisheries Act
 - Wild Salmon Policy
 - Allocation Policy for Pacific Salmon, and
 - Other regulations and policies guiding salmon management decision making



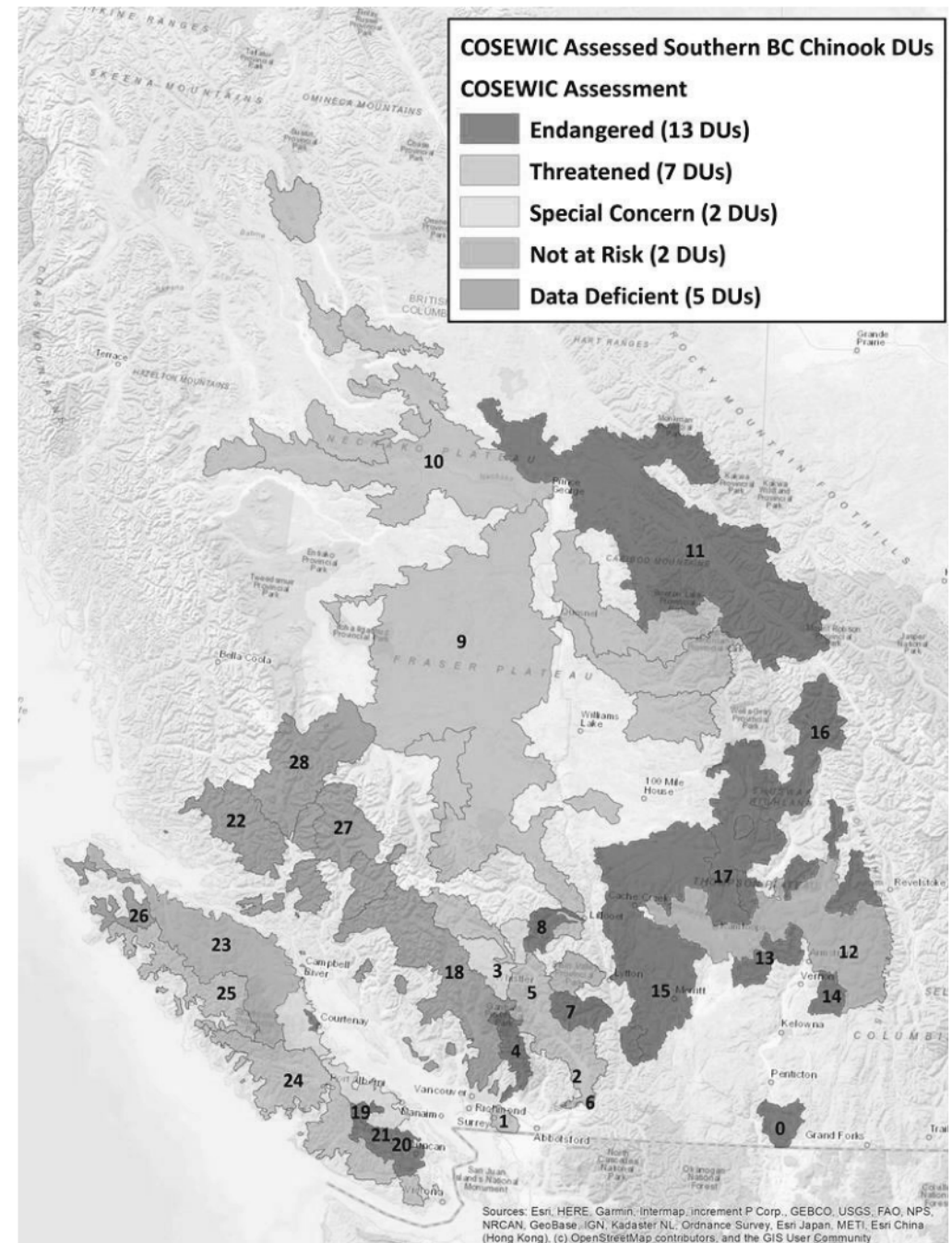


Southern BC Chinook Status

Pressures and threats to salmon stocks are diverse and require significant action through an integrated management approach addressing habitat, harvest, hatcheries and other factors.

A total of **29 Southern BC Chinook populations** have been assessed by the Committee on the Status of Endangered Wildlife in Canada (COSEWIC), with **13 assessed as Endangered**, **seven Threatened**, **two Special Concern**, **two Not at Risk**, and **five Data Deficient**.

These widespread conservation concerns require a **continued precautionary fisheries management to limit fishery mortalities on wild Chinook** consistent with Departmental Policy and legislation.





What are the broad Departmental objectives in considering MM and MSF?

1. Improve the conservation of wild salmon by reducing the genetic risk of hatchery production.
2. Maintain and create potential for sustainable fishery opportunities.
3. Use the best available scientific information and Indigenous knowledge to inform decision-making.





What is the status of the Discussion Paper on MM and MSF?

- DFO released a discussion paper on June 27, 2022, to initiate a dialogue on the benefits and challenges associated with the use of MM and MSF as tools to meet conservation and sustainable use goals
- The Department received considerable feedback that was collated in an engagement summary report released on Jan 24th, 2023.
- To further advance this work, the Department has initiated technical work (including an initial workshop with external participants) to discuss technical challenges and solutions associated with implementation of MM and MSF. Further work is planned over the course of the next year to inform longer term implementation plans
- For 2023, the Department is also proposing a number of pilot MSF fishery opportunities to provide an opportunity to further test and gather information on the implementation of MSF to support longer term planning
- This presentation focuses on the proposed MSF pilots under consideration for 2023.





2023 Transitional Approach

- Explore opportunities to test limited MSF opportunities in 2023 with associated monitoring/assessment **while** work on a broader implementation approach for MM and MSF is being completed.
 - This may include changing fisheries from non-selective (hatchery + wild) retention to MSF to reduce fishery impacts on wild stocks
- Review interim evaluation criteria to support MSF pilot(s)
- Apply adaptive management to adjust MSF based on analysis of results – i.e. a “learn by doing” approach





Criteria to support short term MSF decision making

Interim Criteria	Approach
1. Fishery mortality risks to wild stocks or species of concern evaluated and expected to be low (including SRKW)	Fisheries in times/areas where encounters with stocks of concern are low and/or ecosystem impacts can be avoided or mitigated
2. Provides a benefit in terms of reduction of hatchery genetic input to wild stocks, and/or	Adipose fin clipped fish are easily identifiable during broodstock collection
3. Provides access to abundant marked stocks (high mark rate)	Fisheries targeted in times/areas where marked stocks are more abundant (see mark rate table)
4. Monitoring plan in place for MSF and assessment programs adjusted to provide appropriate data	Increased fishery monitoring and sampling
5. First Nations and stakeholders consulted on proposal and concerns considered in decision-making	Consultation and engagement with First Nations and stakeholders to discuss proposals and gather input to inform decision making.





What areas are being considered for pilots in Spring 2023?

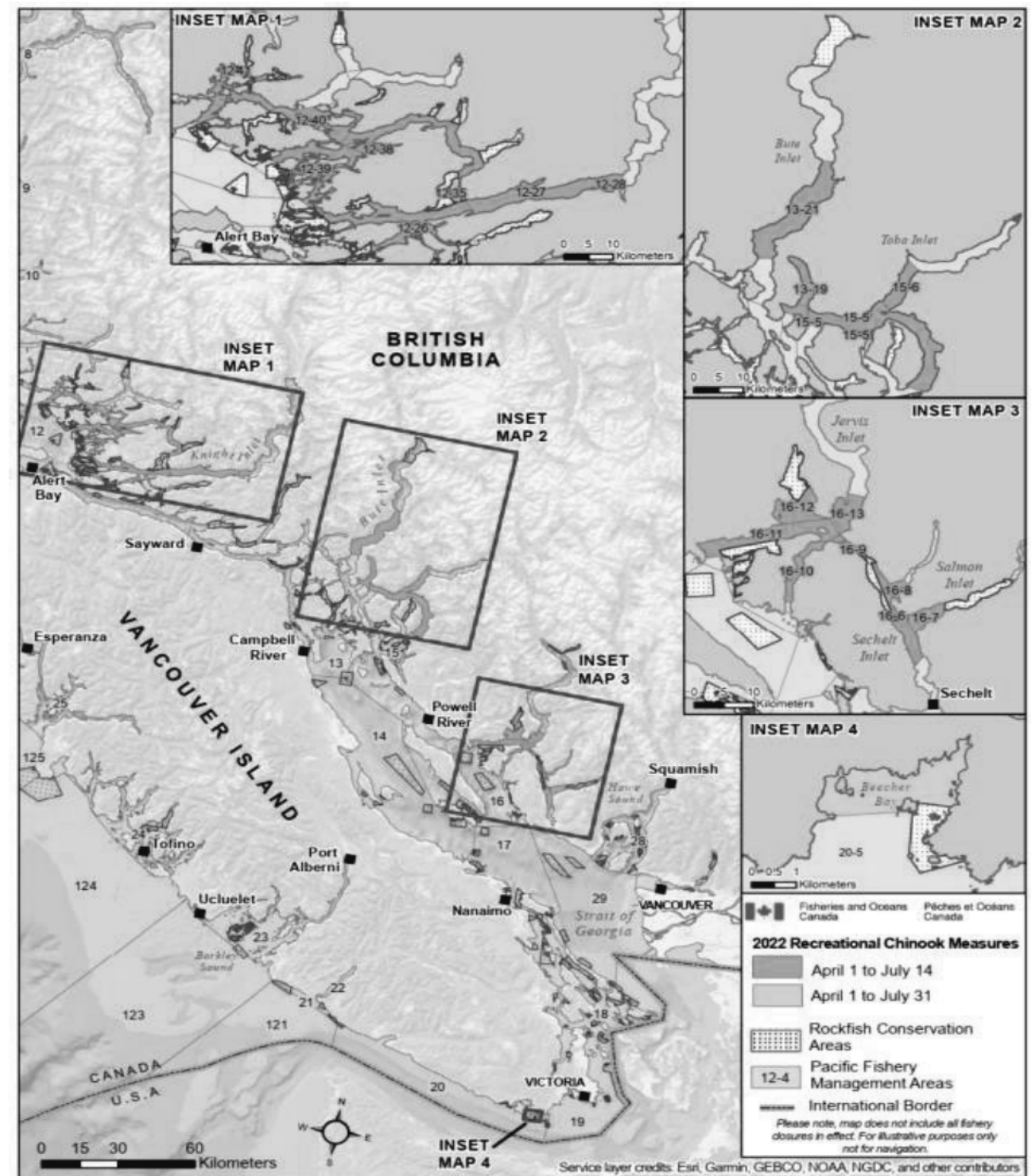
1. MSF that were previously approved in the 2022/23 southern BC salmon IFMP for the 2022 season
2. Proposed New MSF pilots for consideration beginning Spring 2023
 - Slides to follow provide details for each area





Approved Recreational MSF - 2022

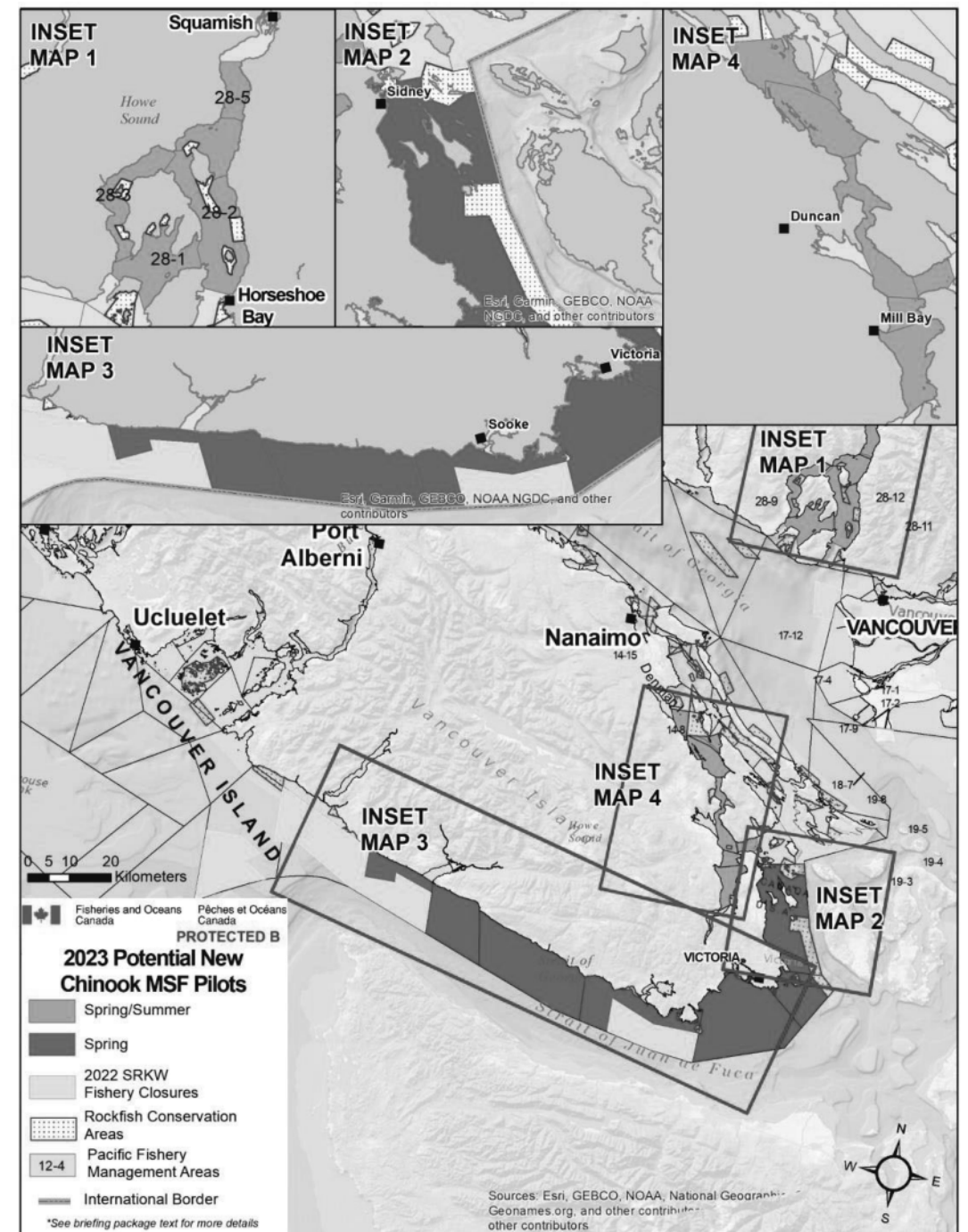
- Portions of Areas 12, 13, 15, and 16 (mainland inlets) – One (1) Chinook per day, maximum 80 cm on unmarked Chinook (no maximum size on hatchery-marked Chinook) from April 1 to July 14;
- Portion of Area 20 (Beecher Bay) – One (1) Chinook per day, hatchery-marked only from April 1 to July 31.
- We are proposing to continue with these MSF in 2023.
- We are also looking to **modify Area 16 regulations** to hatchery-marked only retention commencing in Spring 2023.





Proposed modified/new MSF pilots - Spring 2023

- Portions of Area 16 (Sechelt and Jervis Inlets) - One (1) Chinook per day, **hatchery-marked only**, from April 1 to July 14. Unmarked retention prohibited;
- Portions of Area 17, 18, and 19 (Saanich-Gulf Islands) – One (1) Chinook per day, **hatchery-marked only**, from April 1 to July 14 or 31 (Area dependent). Unmarked retention prohibited;
- Portions of Area 28 (Howe Sound) - One (1) Chinook per day, **hatchery-marked only (maximum 80 cm)**, from April 1 to May 31. Unmarked retention prohibited;
- Portions of Areas 19 and 20 (Haro and Juan de Fuca Straits) – One (1) Chinook per day, **hatchery-marked only** from April 1 – 30 or April 1 to May 31. Unmarked retention prohibited.





Area 16

Sechelt Inlet & Jervis Inlet

Previous MSF regulations: 1 Chinook / day from April 1 to July 14: Unmarked retention, maximum 80 cm size limit; and marked only retention greater than 62 cm.

2023 Pilot Proposal: April 1 to July 14: Marked only retention >62 cm. Unmarked retention prohibited.

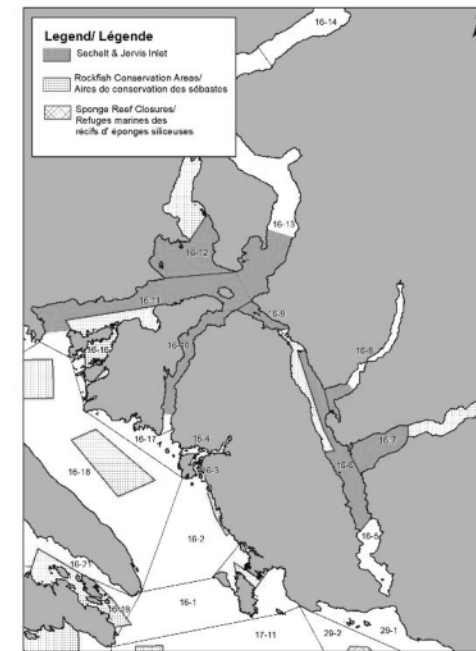
Main stocks contributing to fishery: Mixed stocks including ECVI and US stocks (Puget Sound). Small number of Fraser Fall 4(1) Chinook observed.

Potential impacts on stocks of concern: Estimated impact on stocks of concern is low. CWT samples within proposed subareas do not reveal any stocks of concern. Low prevalence of stocks of concern based on DNA samples. A modest increase in effort is unlikely to have an impact of stocks of concern. Small sample sizes to produce CWT and DNA information.

Mark rates: low (average 28.5% March to September; lowest in May at 15.6% and highest in March at 69.8%). These mark rates may be overestimates because they are based on encounters in the entire PFMA.

Current monitoring information: Recent effort and catch in the proposed area (creel subarea 16B, J, K, and N) are available for 2009-2022 from May through July. Effort prior to 2019 has been low (from 100-600 boat days) compared to the short duration fishery in July 2020 with about 1,250 boat days. Effort increased to 2,730 boat trips for this area in 2021 (June 1-July 14). Preliminary data from 2022 indicate similar effort at 2,750 boat trips over a longer timeframe (April 1 – July 14) but a reduction to 1,750 in the June 1- July 14 period.

Anticipated 2023 Effort: Some evidence of reduced effort in 2022 due to lower CPUE on Chinook. Response to pure MSF likely to be neutral or negative with respect to boat trips while CPUE more likely to influence effort.



DFO Review / Suggested Mitigations

Stocks of concern: Overall low risk based on low catch, low effort, DNA data (2014-2021) and CWT recoveries (1980-2021).

Ecosystem issues: None noted.

Monitoring issues: Biological GSI sampling to confirm stock composition in area. Expansion of the creel program would be required to understand the catch and effort.

Compliance issues: Concerted effort will be required by Conservation and Protection to enforce this remote area.

Other issues (e.g. allocation, gear conflict): Fishery assumes FSC is permitted.

Suggested mitigations: Many local stocks are intermittently monitored and data deficient, and many have incomplete GSI baseline information. Recommend assessment and sampling of local Chinook populations to evaluate status and to ensure proposed fishing plans do not negatively impact their production.

Canada



Portions of Area 17 to 19

Gulf Islands & Saanich Inlet

Previous regulations: Chinook non-retention April 1 to July 14 (Area 17); Non-retention April 1 to July 31 (Areas 18 and 19).

2023 Proposed Pilot: April 1 to July 14 or 31 (Area dependent): Marked-only retention > 62 cm. Daily limit: One (1) Chinook per day, Two (2) possession.

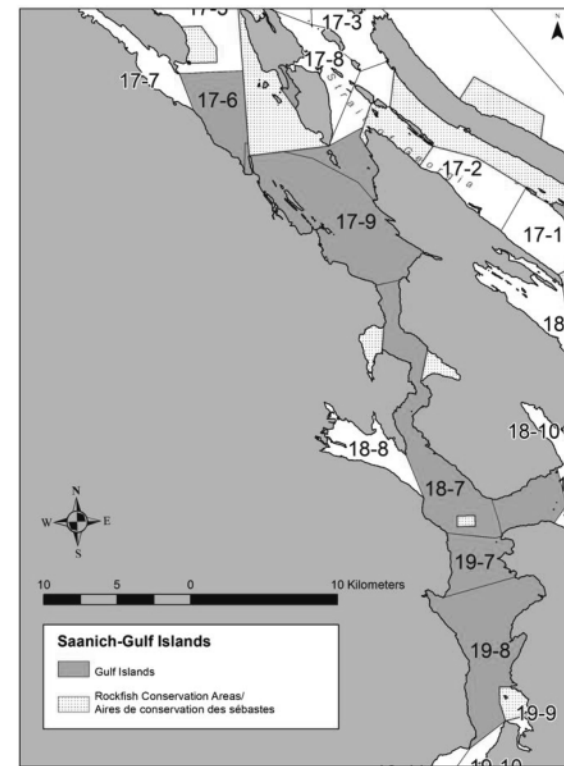
Main stocks contributing to fishery: Mixed stocks including ECVI, LWFR, and US stocks (Puget Sound). Puget Sound and other US stocks make up more than 70% of catch.

Potential impacts on stocks of concern: Estimate a very low impact to Fraser stocks of concern and local stocks.

Mark rates: low (37.2% February to October, Area 17); moderate (55.7% December to September, Area 18); moderate (61.6% January to December, Area 19). These mark rates may be overestimates because they are based on encounters in the entire PFMA.

Current monitoring information: Recent catches in the proposed area (creel subareas 17J and K, 18A and B, and 19A) are available for 2009-2022 from April through July. Fishing effort within the Gulf Islands is generally low relative to other areas with an average of 500-1500 trips per month. From April to July, on average less than 500 Chinook are caught. Low catch numbers limit the amount of DNA samples available for the proposed area; limited recent samples due to non-retention regulations.

Anticipated 2023 Effort: Potential to draw effort to area(s) where retention is permitted.



DFO Review / Suggested Mitigations

Stocks of concern: Low impact to Fraser stocks of concern or local stocks.

Ecosystem issues: None noted.

Monitoring issues: Increase biological GSI sampling to confirm stock composition in area.

Compliance issues: Different retention measures in adjacent PFMA's can pose compliance challenges.

Other issues (e.g. allocation, gear conflict): SRKW sanctuary closures. Proposal assumes FSC permitted.

Suggested mitigations: Limited bio-samples from this area should be augmented by sampling encounters (kept and released) to improve data resolution.

Canada



Portions of Subareas 28-1 to 28-5 - Howe Sound

Previous regulations: April 1 to July 31: Chinook non-retention.

2023 Proposed Pilot: April 1 to May 31: One (1) Chinook per day, marked-only retention > 62 cm, maximum 80 cm. Unmarked retention not permitted.

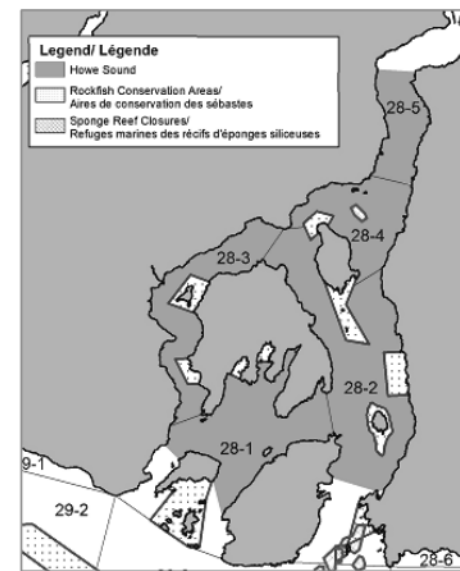
Main stocks contributing to fishery: mixed stocks including rearing ECVI, NEVI, LWFR, US stocks and migrating summer run to Southern Mainland Inlets

Potential impacts on stocks of concern: Fraser stocks of concern are encountered, though likely in small proportions relative to other stocks in the area. Likely that exploitation rates would be Very Low (<1%) for each Fraser MU.

Mark rates: Low to Moderate (25% - 43% Apr-Jul, avg. 55% Aug-Mar).

Current monitoring information: Recent annual catches in the proposed area are quite low, with estimated mortalities for Apr-Sep averaging 350 Chinook.

Anticipated 2023 Effort: Potential to draw effort to area(s) where retention is permitted including from Greater Vancouver area.



DFO Review / Suggested Mitigations

Stocks of concern: Overall low risk based on low catch and effort, and low encounters noted in CWT data from 1975-2020 and DNA data from 2014-2020.

Ecosystem issues: There are a number of proposed and existing Glass Sponge reefs within this proposed area. There are regulations on the use of down riggers in GSP to mitigate any potential conservation issues.

Monitoring issues: Improve number of CWT head submissions and biological GSI sampling to confirm mark rates and stock composition in area. Expansion of the creel program may be required to improve understanding of catch and effort.

Compliance issues: Concerted effort will be required by Conservation and Protection to enforce this remote area. Different retention measures in adjacent PFMA's can pose compliance challenges

Other issues (e.g. allocation, gear conflict): None noted. FSC retention permitted.

Suggested mitigations: It is strongly recommended to increase monitoring and sampling to better understand fishery impacts. Suggest focusing on sampling releases where practical. Several of the recoveries identified as Fraser stocks of concern were caught in fishing areas slightly north of Horseshoe Bay in creel sub-area 28J; moving the boundary line of the proposed area northward may result in avoiding these stocks of concern.



Area 19 - Victoria

Subareas 19-1, 19-3 to 19-5

Previous regulations: Chinook non-retention April 1 to July 31

2023 Proposed Pilot: Month of April, and possible portion/all of May: One (1) Chinook per day, marked only >45 cm (except >62 cm in Subarea 19-5). Unmarked retention prohibited.

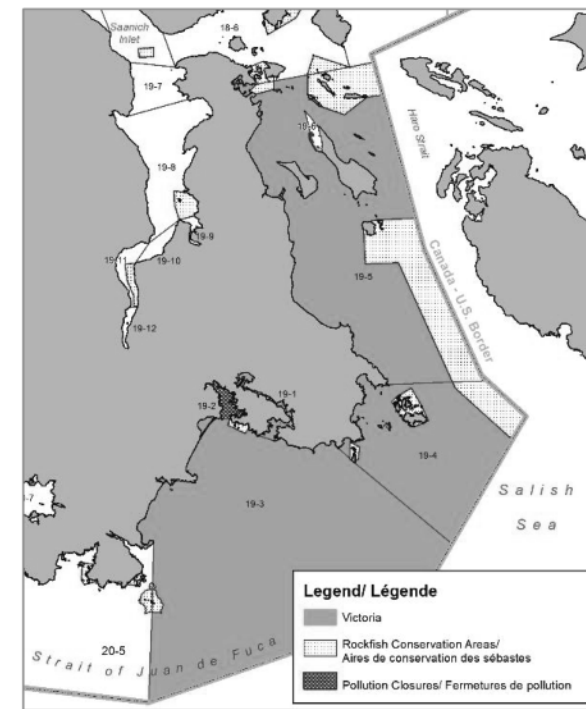
Main stocks contributing to fishery: Mixed stock comprised primarily of US stocks (Puget Sound) and low occurrences of LWFR, ECVI and WCVI stocks.

Potential impacts on stocks of concern: Estimate low incremental impact to stocks of concern based on DNA and CWT information for creel subareas 19B through 19E (2014-2018). Impact primarily due to releases from increased effort relative to non-retention.

Mark rates: moderate (61.6% January to December; lowest in September at 19.1% and highest in December at 84.1%).

Current monitoring information: Recent catches in the proposed area (creel subareas 19B and 19E) are available for 2009-2022 from April through July. Area 19 fisheries are well monitored and catch and effort data is consistent from April to July. A moderate amount of DNA and CWT information is available for creel subareas from April to July. Recent effort from April 1- May 31 was 3,170 boat trips in 2021 and 2,070 in 2022.

Anticipated 2023 Effort: Potential to draw effort to area(s) where retention is permitted. Effort will depend if and when this proposal may be approved. Base period effort for April 1- May 31 averages 3,000-6,000 boat trips.



DFO Review / Suggested Mitigations

Stocks of concern: Encounter rate with stocks of concern has been reduced with pre-existing regulations in the past (slot limit/MSF). Moderate to large contribution of US stocks (>90%).

Ecosystem issues: Potential interactions with SRKW.

Monitoring issues: Biological GSI sampling to confirm stock composition in area; baseline data affected by recent mark/size selective fishery.

Compliance issues: Different retention measures in adjacent PFMA's can pose compliance challenges.

Other issues (e.g. allocation, gear conflict): Proposal assumes FSC permitted.

Suggested mitigations: It is strongly recommended to increase monitoring and sampling to better understand fishery impacts. Suggest focusing on sampling releases where practical.

Canada



Area 20 – Juan de Fuca

Subareas 20-1, 20-3 to 20-5

Previous regulations: Chinook non-retention April 1 to July 31.

2023 Pilot Proposal: from April 1 – 30 and possible portion/all of May: One (1) Chinook per day, marked only >45 cm. Unmarked retention prohibited.

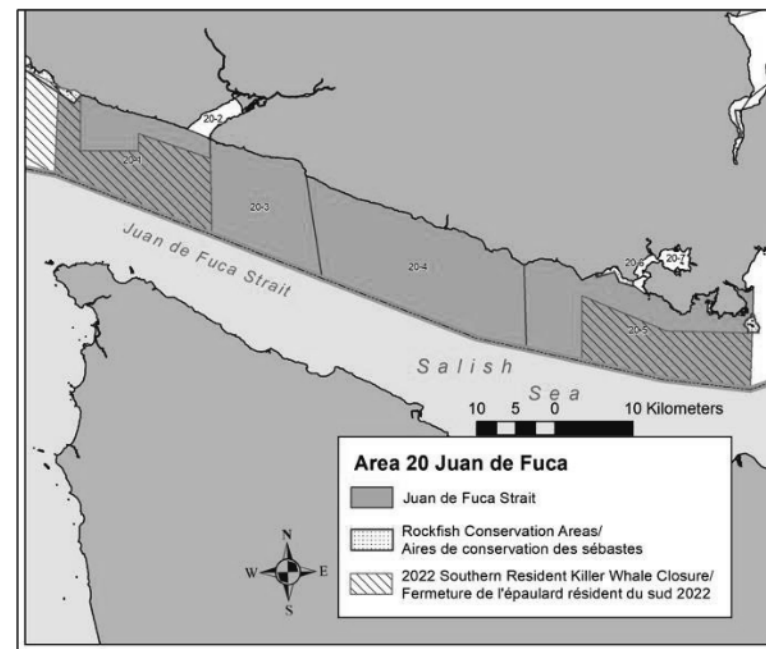
Main stocks contributing to fishery: Mixed stock composition comprised primarily of US stocks and a small proportion of local stocks.

Potential impacts on stocks of concern: Incremental impact relative to non-retention anticipated due to increased effort. Prevalence of stocks of concern estimated at 2.9% for the April 1- May 31 period (negligible in April with increases seen in the latter part of May).

Mark rates: moderate (averages 53.7% from January to December; lowest in August at 19.7% and highest in March 83.9%).

Current monitoring information: Recent catches in the proposed area (creel subareas 20A to 20D) are available for 2009-2022 from April through July. Area 20 fisheries are well monitored. DNA and CWT primarily recovered in creel subareas 20A and 20D with a high collection and recovery rate. Recent effort in 20-4 and 20-5 was 1,100 boat trips in 2021 and 1,600 trips in 2022.

Anticipated 2023 Effort: Potential to draw effort to an area where retention is permitted. Effort will depend on if and when this proposal may be approved. Base period effort ranges between 1,750 and 3,175 boat trips for 20-4 and 20-5. Chinook encounters range from 700-3,100 fish.



DFO Review / Suggested Mitigations

Stocks of concern: High encounter rate with stocks of concern in June and July based on effort, catch, DNA and CWT recoveries.

Ecosystem issues: Potential interaction and SRKW measures. Previous SRKW measures of no fishing for salmon in portions of Subareas 20-1 and 20-5 began July 15 / August 1 (after CN non-retention period) and would need to match start date (e.g. April 1) for SRKW measures if retention permitted.

Monitoring issues: Biological GSI sampling to confirm stock composition in area. Creel survey typically not active in 20-1 and 20-3 for the April 1- May 31 timeframe.

Compliance issues: Differential retention measures in adjacent PFMA's can pose compliance challenges.

Other issues (e.g. allocation, gear conflict): Proposal assumes FSC retention permitted.

Suggested mitigations: It is strongly recommended to increase monitoring and sampling to better understand fishery impacts. Suggest focusing on sampling releases where practical.



What monitoring and assessment plans are under consideration?

- Any new openings will have enhanced fishery monitoring with additional dockside observers, creel surveys starting earlier and adjusting the level of monitoring to the level of effort response
- Sector cooperation will be required for catch reporting and sampling, such as commitment from Avid Anglers and guides to keep catch and sample logs; to assess mark rate, and to sample legal sized releases in key areas. DFO stock assessment staff plan to discuss opportunities for First Nations involvement in catch monitoring activities in these areas.
- Ongoing research on release mortality rates, including University of British Columbia (UBC), Pacific Salmon Foundation (PSF), DFO studies re longer term mortality.
- Improved education for head recovery in recreational fishery.
- This information will be used to support post-season analysis and review of fishery mortalities of Chinook indicator populations and wild Chinook.





What are the next steps?

- Input from consultation will inform decision making on proposed fisheries.
- Consultation and engagement on proposed MSF pilots with First Nations and stakeholders
- Final Decisions will be communicated via Fishery Notice(s) and DFO web-site.
- Other adjustments to Chinook fishery plans may be considered in the process to develop the 2023/24 Salmon IFMPs for Northern and Southern BC and included in final IFMPs released in June/July 2023.

Activity	Target Date
Fishery proposals / evaluations shared with First Nations and stakeholders	Feb. 3, 2023
Consultations on completed Evaluations <ul style="list-style-type: none">• Webinar(s) to review evaluation document• Review at IHPC (Feb. 8)	February 2023
Deadline to submit feedback	March 3, 2023
DFO Approvals	March/April 2023
Fishery Notice(s) with approved management actions	April 2023 following decisions





Longer term Considerations

- Complete clearly defined frameworks and implementation plans for MM and MSF that guide assessment requirements, evaluation of impacts on wild Chinook and clear objectives/priorities for the MM of hatchery Chinook production lines.
- Apply frameworks and implementation plans to inform decisions about the expansion of hatchery Chinook MM and MSF broadly in Southern BC
- Potential MSF changes:
 - Consideration of retention of hatchery-marked Chinook in southern BC waters based on evaluation framework
- Potential MM changes:
 - Identification of priorities for MM of existing southern BC Chinook production where feasible





Longer-term: next steps

- Complete technical review
 - Winter 2022/Spring 2023
- Develop proposed MM strategy to support DFO objectives including hatchery genetic management strategy.
 - Spring 2023
- Develop and consult on Operational Framework to guide longer-term decision making on MM / MSF implementation.
 - Informed by technical review
 - Fall/Winter 2023
- Seek approvals and begin implementation of MM plans aligned with DFO objectives (2024).
 - Supported by operational framework
- Note: Opportunities to target new MM Chinook in Canada would occur approximately 2 years after marking begins
 - E.g. 2026 for new marking (2024 Conuma pilot mass marking project)



Questions to consider when providing feedback:

1. Are there other considerations that have not been identified?
2. Are there monitoring improvements or other suggestions that could mitigate any concerns?
3. What is your level of support for each of the proposed fisheries?
4. Do you have additional questions that should be addressed by technical experts?

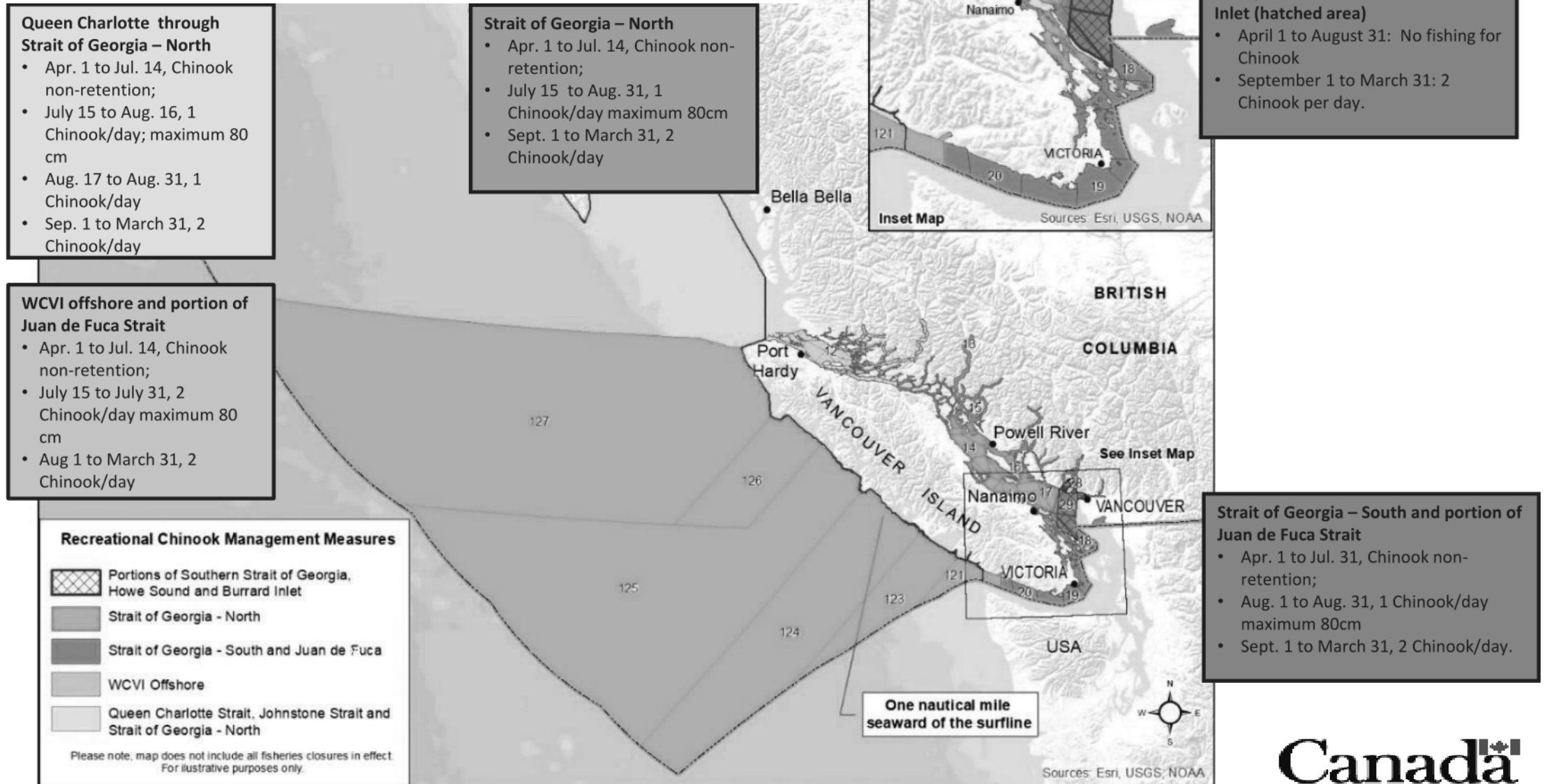


Background Information





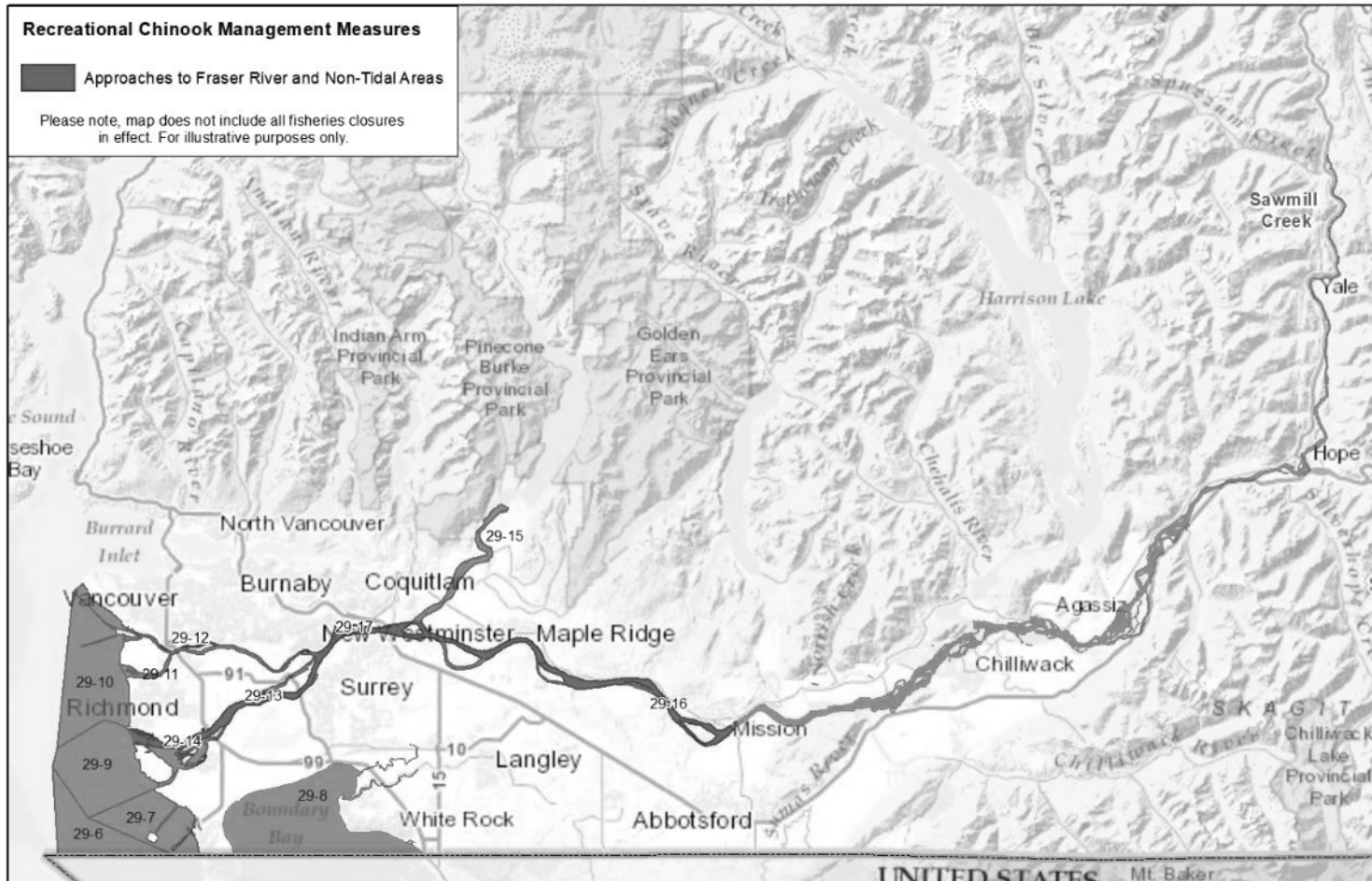
2022 Chinook Management





2022 Recreational Management Measures

– Fraser River



Approaches to Fraser River - Subareas 29-6, 29-7, 29-9 to 29-17 and the non-tidal waters of the Fraser River from Mission Bridge to the confluence with Sawmill Creek:

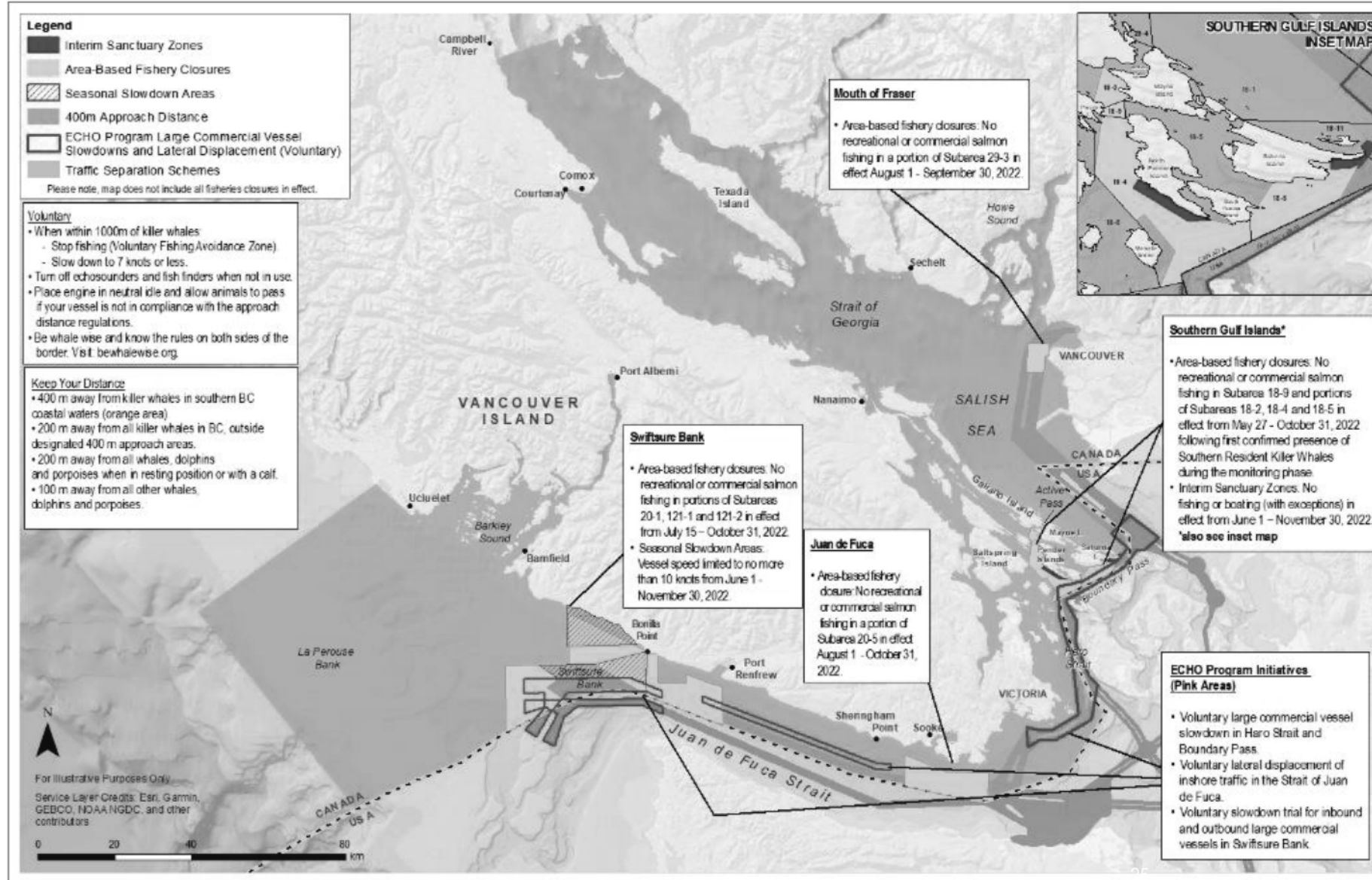
- January 1 to November 1: No fishing for salmon
- (Fishing opportunities for specific salmon stocks were considered)

Freshwater Regions 3,5,7 & 8: Year round:

- Closed to fishing for salmon
- (Fishing opportunities for specific salmon stocks may be considered)



2022 SRKW Management Measures





Recent
mark rates
by PFMA

Mark rates were determined as the proportion of marked fish out of all marked/ unmarked retained or released where mark status was reported.

Average Mark Rate Estimated by Month and PFMA using data from 2015 to 2018.														
PFMA	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ave	Data Source, comments
PFMA 11						5.4%	5.4%	4.8%					5.2%	Creel
PFMA 12					11.4%	13.1%	9.5%	7.7%	5.0%				9.3%	Creel
PFMA 13	17.9%	35.4%	5.6%	11.7%	8.8%	12.0%	9.0%	6.0%	10.3%	16.7%	18.8%	30.0%	15.2%	Logbook Jan to April, Oct to Dec
PFMA 14	33.7%	21.4%	38.9%	20.3%	13.4%	12.2%	20.3%	14.0%	13.2%				20.8%	Logbook Jan to April, Sept, iRec Nov
PFMA 15		85.7%	11.8%	2.6%	4.7%	9.3%	8.4%	8.5%	38.9%				21.2%	iRec Feb, Logbook Mar April
PFMA 16			69.8%	18.4%	15.6%	22.0%	21.0%	29.7%	23.1%				28.5%	iRec Mar, April
PFMA 17		50.0%	38.9%	38.2%	35.8%	35.3%	38.0%	25.8%	20.2%	50.0%		40.0%	37.2%	Logbooks Feb-June, Oct-Dec
PFMA 18	46.7%	58.9%	62.5%	48.3%	35.3%	65.1%	58.7%	44.1%	48.9%			88.9%	55.7%	Lobooks Jan to April and Dec
PFMA 28	42.5%	54.4%	54.0%	18.8%	19.4%	25.7%	29.2%	4.9%	19.0%	35.4%	28.6%	45.6%	31.5%	Logbooks Jan to April, and Sept to Dec
PFMA 29	68.9%	42.2%	65.6%	24.1%	23.9%	19.0%	37.2%	7.9%	15.5%				33.8%	iRec Jan to April,
PFMA 19	66.0%	75.9%	68.5%	81.2%	62.1%	60.0%	52.2%	20.7%	19.1%	79.0%	70.6%	84.1%	61.6%	Creel excpet iRec Jan, Nov and Dec
PFMA 20	47.4%	77.4%	83.9%	66.4%	70.5%	40.1%	37.0%	19.7%	31.8%	62.0%	59.7%	48.3%	53.7%	Creel excpet iRec Jan, Nov and Dec
PFMA 21			66.4%	57.8%	64.7%	58.3%	41.2%	21.0%	3.1%				44.6%	irec Mar, April
PFMA 23			50.7%	45.6%	62.0%	37.8%	31.0%	10.7%	5.5%				34.7%	iRec Mar, April
PFMA 24				87.5%	49.2%	44.5%	42.1%	19.7%	22.8%				44.3%	iRec April
PFMA 25					29.8%	36.1%	6.3%	3.0%	41.3%				23.3%	Creel
PFMA 26					26.3%	11.2%	7.8%	8.2%	20.0%				14.7%	iRec Sept
PFMA 27					32.6%	15.2%	11.0%	8.9%	3.0%				14.1%	Creel
PFMA 121			61.6%	55.1%	77.8%	56.5%	56.4%	54.1%	16.7%				54.0%	troll except July-Aug creel
PFMA 123			61.6%	51.2%	73.7%	56.5%	45.0%	32.8%	11.9%				47.5%	troll except July-Aug creel
PFMA 124			61.6%	55.1%	73.7%	56.5%	45.0%	43.0%	43.1%				54.0%	troll except July-Aug creel
PFMA 125				59.9%	45.7%	46.1%	26.7%	25.0%					40.7%	troll
PFMA 126				59.9%	45.7%	46.1%	26.7%	25.0%					40.7%	troll
PFMA 127				59.9%	45.7%	46.1%	26.7%	25.0%					40.7%	troll



Hon. Joyce Murray
Minister, Fisheries and Oceans Canada

February 14, 2023

Re: 'Opening of BC Mark Selective Fisheries in April of 2023.'

To the Hon. Minister Joyce Murray:

It has recently come to the attention of the Pacific Marine Conservation Caucus (MCC) that Fisheries and Oceans Canada (DFO) is planning to implement "Mark Selective Fisheries" (MSF) in many areas of the BC South Coast as of April of this year, essentially six weeks from now.

The MCC is in disbelief that such a decision could be made given the risk that some of these fisheries pose to the recovery of endangered (COSEWIC-listed) Fraser River Chinook, the recovery of endangered Southern Resident killer whales, the lack of any independent oversight in these fisheries, the high uncertainty—or outright absence—of information used to justify such fisheries, the 2021 conclusion by DFO that outstanding issues must be resolved before considering such fisheries, the failure to honour the promised consultation process for these fisheries, and the opposition to such fisheries from sectors and rights-holders beyond commercial sport fishing interests.

Furthermore, these fisheries were announced without transparent, verifiable monitoring and assessment plans that are critical to the assessment of impacts. The implementation of these fisheries in such a short time frame is in direct contradiction to messaging from regional DFO staff in the last few months which indicated a phased-in, small scale, terminal approach to MSF implementation. This decision is clearly the result of political lobbying by stakeholders that are in support of large scale marine mixed-stock fisheries, not supported by available information, and premature given the lack of critical information such as release mortality rates.

We are requesting a meeting with the minister to discuss the above. We are deeply concerned that the department lacks the information that would inform the sustainable implementation of new fisheries targeting the most endangered Chinook salmon populations in Canada and allow them within Southern Resident killer whale critical habitat on such an expedited timeline. These fisheries should not proceed in 2023.

Critical issues include:

1) Historically, endangered stream-type Fraser Chinook migrated to the Fraser River from March to August. DFO does not have spawner escapements that indicate rebuilding of these 10 endangered (and 2 threatened) Conservation Units (CUs) above biologically based escapement goals across this run timing period.

2) DFO does not have escapement data that supports the improved abundance/recovery (above biologically based escapement goals) of the endangered Nanaimo River spring Chinook CU and summer run of the endangered Eastern Vancouver Island CU.

3) DFO does not have genetic information collected on sublegal and adult Chinook released in the Juan de Fuca, Gulf Islands, Strait of Georgia and Howe Sound sport fisheries that show the absence of Endangered Fraser Chinook in April and May. Nor is there the range of certainty or confidence for this information.

4) DFO does not have peer reviewed, updated Fisheries Related Incidental Mortality estimates (i.e. since Patterson et al. 2017) for sublegal and legal Chinook released in the Juan de Fuca, Gulf Islands, Howe Sound and Strait of Georgia recreational fisheries that account for handling, damage to scales and fins, air exposure, hook location and gear types, air and water temperature, predators, distance to spawning grounds, freshwater migration conditions, and the interaction between these factors.

5) DFO does not have evidence that indicates that these fisheries will “improve the conservation of wild salmon by reducing the genetic risk of hatchery production” in the face of the Fisheries-Related Incidental Mortality in the endangered wild stocks outlined above. In fact, DFO assumes that fishing pressure, and therefore Chinook encounters and releases, in these times and areas, will increase.

6) DFO does not have evidence showing that recreational angling effort and the number of released Chinook has declined since recovery measures for endangered Fraser Chinook and endangered Southern Resident killer whales were put in place beginning in 2018. In fact, available information indicates that both effort and releases have increased since 2018.

7) DFO has not done studies that show the persistent absence of Southern Resident killer whales in the Juan de Fuca and Gulf Islands in April and May. In fact, the existing evidence suggests these areas are important feeding grounds for Southern Residents.

8) DFO does not have monitoring and assessment plans for these fisheries indicating the collection of verifiable fisher-independent information that will allow for transparent evaluation of these fisheries.

9) DFO does not have recovery plans for at-risk Conservation Units of Fraser River Chinook listed by COSEWIC, nor does it have rebuilding plans for stock management units below their limit reference points, both of which are required by the Species at Risk Act, the amended Fisheries Act, and the Wild Salmon Policy Implementation Plan.

We look forward to your timely response to our meeting request and the need to halt this fishery from proceeding in April 2023.

Sincerely,

Jeffery Young

David Suzuki Foundation

On behalf of the salmon committee of the Pacific Marine Conservation Caucus

CC

Annette Gibbons, Deputy Minister, Fisheries and Oceans Canada

Rebecca Reid, Pacific Regional Director General

Nathan Cullen, B.C. Minister of Water, Land and Resource Stewardship

Kelly Greene, B.C. Parliamentary Secretary for Fisheries and Aquaculture



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Mike Hawkshaw
Regional Salmon Coordinator
Fisheries and Oceans Canada (DFO), Pacific Region
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February 14, 2023

**RE: Mark Selective Fisheries (MSF) – Proposed New or Modified Pilots for Spring 2023
February 2023 by Fisheries and Oceans Canada**

Dear Mike;

This is the Island Marine Aquatic Working Group's (IMAWG) response to the "proposed new pilot mark-selective fisheries (MSF) for implementation beginning in Spring 2023 as part of the Pacific Salmon Strategy Initiative (PSSI)."

1. TECHNICAL CONCERNS AND FEEDBACK (*See Table in Letter for Details*)

1. Original concerns identified with the current "pilot" proposals have not been addressed.
2. The objectives for stocks of concern are not being met, even with these proposed areas closed to recreational chinook retention as we've seen in recent years. Opening these areas to MSF chinook retention will make meeting objectives for stocks of concern even less likely.
3. Mark (removed adipose fin) rates are not sufficient to reduce impacts to unmarked chinook.
4. DFO states (Slide 8) that these MSFs have been evaluated and are: "In times/areas where encounters with stocks of concern are low and/or ecosystem impacts can be avoided or mitigated", yet preliminary review of stock composition data for these areas indicates stocks of concern are present in all of these areas. There has been no statistically robust analysis to prove that encounters with stocks of concern are "low" relative to other stocks.
5. DFO has not been able to complete an adequate evaluation of the specific impacts from these fisheries, current and proposed, MSF's on stocks of concern.
6. DFO had previously evaluated these fisheries using the Draft Chinook Evaluation Framework, February 2021. These proposals were not accepted during that review due to various technical concerns.
7. Expected impacts and mark rates in these areas will likely be different than originally planned because of lack of CWT tagging due to Covid. This may impact ability to assess impacts on both wild and hatchery fish over the next few years.
8. Mark rates are not sufficient.

9. Recent Creel estimates show that recreational Chinook impacts are not decreasing and in fact, recent recreational estimates of released chinook almost tripled (316,845) from the recent five-year average of (184,589).
10. These MSF's will likely only increase the number of Chinook released and increase associated fishery related incidental mortality. Emerging research by UBC indicates FRIM rates are likely higher than what DFO is currently using.
11. Sampling and monitoring is not adequate.
12. Assumptions based on very small sample sizes/limited data.
13. Highly complex and different management measures in areas that are adjacent to each other out on the water makes compliance and enforcement very difficult.
14. There will be impacts to at risk wild chinook salmon in these MSFs.
15. Proposed MSF's undermine Southern Resident Killer Whale protection measures.
16. Pacific Salmon Commission Selective Fishery Evaluation Committee (SFEC) expressed numerous concerns specific to these proposals and listed several recommendations to address concerns; however DFO has not implemented any of these recommendations and are still moving forward with the proposals.

2. HIGH LEVEL CONCERNS AND FEEDBACK (*See Table in Letter for Details*)

1. Pilot fisheries were developed under a Conflict of Interest between retired South Coast Stock Assessment Chief and Sport Fishery Advisory Board (SFAB).
2. Undermines Reconciliation and UNDRIP.
3. Undermines Priority Right (Sparrow Decision): Conservation, First Nations Section 35.1 then Recreational.
4. Undermines Fraser Salmon Management Collaborative Agreement.
5. Undermines the Pacific Salmon Treaty and the work of the various Chinook Technical Committees of the PSC.
6. Sport Fishing Institute (SFI) and SFAB continues to undermine the conservation of chinook by exaggerating the economic benefit/loss.
7. Undermines existing DFO led consultation approaches and feedback received to date.
8. MSF aren't consistent with DFO National Policies
9. DFO has changed their language from protecting **ALL** Chinook stocks of concern to only protecting **WILD** Chinook stocks of concern.
10. Department has implemented MSF's at the same time they have undertaken other significant management measures, such as closing commercial salmon fisheries, Chinook non-retention, etc. so how is it possible to be able to evaluate the specific impacts of these MSF's when substantial reductions have occurred in other fisheries?

DETAILS REGARDING THE CONCERNS

TECHNICAL RATIONALE TO CONCERNS	
	Explanation/Rationale
<p>Original concerns identified with these “Pilot” proposals that remain to be addressed.</p>	<ul style="list-style-type: none"> • Data deficient stocks encountered. These stocks lack escapement/assessment programs so it is unclear if they can support targeted fisheries, or the impacts associated with these fisheries. • Lack of adequate DNA baseline to determine accurate stock composition. • Lack of post-season data to adequately evaluate the impacts of these fisheries. • Clear and substantial increases in recreational effort in these areas. • Significant increases in the number of released fish (and associated incidental mortality). • Significant number of sub-legal releases (impacts on rearing fish) and lack of data on sub-legals, makes it impossible to adequately assess risks. • significant impacts on wild stocks, even though these are labelled as "Mark Selective Fisheries". • Where stock composition data is available it indicates Stocks of Concern, such as Upper Pitt, Blue Creek, (Spring & Summer 5/2s) Harrison 4/1s and Puntledge and Nanaimo Summers are present and encountered in these fisheries. • Significant proportion of local stocks encountered in these fisheries (i.e., Cowichan, Squamish, Qualicum and Puntledge Chinook).
<p>Stocks of Concern are present in these areas</p>	<ul style="list-style-type: none"> • Existing stock composition data from these areas indicates the presence of various stocks of concern, including Fraser Spring 5/2, Fraser Spring 4/2, Nanaimo Summers and Puntledge Summers.
<p>Mark rates are not sufficient to reduce impacts to unmarked chinook.</p> <p><i>Dr. John Holmes Presentation at SFI Annual Policy Conference November 2020: DFO MSF Update</i></p> <p><i>Available at:</i></p>	<ul style="list-style-type: none"> • As indicated by John Holmes presentation to SFI on November 13, 2020, mark rates should be greater than or equal to 50% to implement MSF. • Washington uses mark rates of 40-60% where MSF's are allowed to occur. • Mark rates in the majority of these areas are well below 50% during the proposed MSFs. • In addition, existing catch data indicates that in most of these areas, anglers are catching equal amount of marked and unmarked fish.

TECHNICAL RATIONALE TO CONCERNS	
	Explanation/Rationale
https://sportfishing.bc.ca/wp-content/uploads/2020/10/DFO-MSF-Update_SFI_Webinar_Series_13Nov2020.pdf	
<p>To date, DFO has not been able to complete an adequate evaluation of the specific impacts from these MSF's on stocks of concern.</p>	<ul style="list-style-type: none"> • DFO hasn't provided any information to what was used to evaluate the specific impacts of these fisheries and deem them acceptable to go forward in 2022 and 2023. • Currently, most Chinook stocks do not have biologically based escapement goals, or limit reference points, and only approximately 10% of the 377 Pacific Salmon CUs have been assessed. Without knowing the current status or having biologically based limit reference points, it is difficult to understand with any certainty what level of impact these stocks can sustain.
<p>DFO had previously evaluated these Fisheries using the Draft Chinook Evaluation Framework, February 2021. These proposals were not accepted during that review due to various technical concerns.</p>	<ul style="list-style-type: none"> • It is unclear what has changed in these proposals to address the original technical concerns that resulted in DFO rejecting these proposals back in 2019/2020. • This Draft Chinook Evaluation was made publicly available via a Dropbox link from DFO. That link is no longer valid and the documents are no longer publicly accessible.
<p>Expected impacts and mark rates in these areas will likely be different than originally planned because of lack of CWT tagging due to Covid. This may impact ability to assess impacts on both wild and hatchery fish over the next few years.</p>	<ul style="list-style-type: none"> • DFO hasn't considered that the current understanding of mark rates may not be accurate since CWT marking was severely impacted during Covid 19. These will be the fish returning over the next few years (2023-2025 depending on specific life history characteristics); that is going to make it very difficult to estimate wild vs. hatchery impacts and may result in having unexpected impacts on either fish. • Mark rates in a number of these proposed areas, are already grossly below what other jurisdictions use. • Reduced mark rates in MSF areas means anglers will have to sort through more fish in order to get one that is marked, potentially increasing mortality on wild/unmarked fish.

TECHNICAL RATIONALE TO CONCERNS	
	Explanation/Rationale
<p>Recent Creel estimates show that recreational Chinook impacts are not decreasing and in fact, recent recreational estimates of released chinook almost tripled (316,845) from the recent 5 year average of (184,589).</p> <p>These MSF's will likely only increase the number of Chinook released and increase associated fishery related incidental mortality.</p>	<ul style="list-style-type: none"> • The amount of chinook released in recreational fisheries is likely to continue to keep increasing under these types of MSF, especially when mark rates are less than 50%. • Recreational anglers will have to sort through more wild/unmarked fish to get their one hatchery fish they are allowed to keep. • Overall, the total number of estimated Chinook kept increased relative to the recent five-year average. This is important to note, given the decrease in effort, as well as the fact that this is the first time since 2018 that the number of Chinook kept has increased relative to the five-year average. The catch by area varies; however, there are some areas where the kept catch increased significantly (including within the Strait of Georgia areas). • Overall, the total number of estimated Chinook released relative to the recent five-year average also increased (from the recent five-year average of 184,589 to 316,845). The number of Chinook released increased in all PFMAs; however, in some areas the increases were substantial. • If we apply a 20% mortality rate to these released fish (which has been argued to be an underestimate of post-release mortality) this would result in an additional 63,369 Chinook dying/being kept. • This would bring the overall total of estimated "kept" chinook to approximately 183,545.
<p>Sampling and monitoring are not adequate.</p>	<ul style="list-style-type: none"> • As indicated by John Holmes, if MSF were to occur in these areas, sampling and monitoring would need to be expanded to include: <ul style="list-style-type: none"> ○ Creel survey interviews; ○ dockside monitoring to recover CWTs, otolith for aging, etc; and ○ test fishing to establish stock composition, size, mark rate. • Avid Angler (fishery dependent data) is not sufficient to account for the wild release component.

TECHNICAL RATIONALE TO CONCERNS	
	Explanation/Rationale
	<ul style="list-style-type: none"> DFO must implement these other sampling and monitoring programs prior to opening these MSFs.
Assumptions based on very small sample sizes/limited data.	<ul style="list-style-type: none"> Biological data from Area 17 used to inform these proposals is extremely limited. There are only nine samples from this area (17 K), during the proposed MSF period (April to July) in the bio database from 2017-2021. These are all Avid Angler (fishery dependent) samples, and the stock composition includes Harrison 4₁ Chinook.
Highly complex and different management measures in areas that are adjacent to each other out on the water makes compliance and enforcement very difficult.	<ul style="list-style-type: none"> In Areas 20-1, 20-3 to 20-5, the management measures in these areas will be highly complex, because of these MSFs combined with Southern Resident Killer Whale closures/measures. Fishers are expected to understand and be compliant with the complexity of these management measures and know where the specific boundaries are when out on the water. In addition, has DFO consulted C&P regarding the inability and inefficacy of being able to enforce compliance in these areas given the high complexity and different management measures in adjacent areas.
There will be impacts to at risk wild chinook salmon in these MSFs. <i>"DFO will consider opportunities for fisheries in times and areas where harvest opportunities can be provided without jeopardizing conservation of Fraser River Chinook or other stocks of concern."</i>	<ul style="list-style-type: none"> There are only two SBC Chinook DU's that are considered Not at Risk, DU 23: East Vancouver Island Ocean Fall and DU12: South Thompson, Ocean Summer. These MSF are located on the migration pathway and occur during the migration timing of Fraser stocks of concern. Harrison 4₁ Chinook are present in this area year-round and make up a large proportion of the stock composition,
Proposed MSF's undermine Southern Resident Killer Whale (SRKW) protection measures.	<ul style="list-style-type: none"> Several the new MSF's are proposed to occur near or adjacent to identified SRKW critical habitat. Chinook salmon (wild and hatchery) have been identified as a critical food source for SRKW.
Pacific Salmon Commission Selective Fishery Evaluation Committee (SFEC) expressed numerous concerns specific to these proposals and listed a number of	<ul style="list-style-type: none"> Voluntary recovery program will not provide recoveries of unmarked and tagged fish in any fishery.

TECHNICAL RATIONALE TO CONCERNS	
	Explanation/Rationale
<p>recommendations to address concerns. Yet DFO has not implemented any of these recommendations and are still moving forward with the proposals.</p> <p><i>References:</i></p> <ul style="list-style-type: none"> • <i>Report SFEC (19)-1</i> • <i>Report SFEC (22)-1</i> • <i>Report SFEC (22)-02</i> 	<ul style="list-style-type: none"> • Complex (mark-mixed or mark- and size-mixed bag) regulations. • Visual sampling of heads leading to no unmarked tag recoveries. • Misalignment of catch sampling and CWT recovery programs with regulation boundaries. • Lack of estimates of released catch and for catch in certain periods. • No projected mark rates. • Low CWT submission. • SFEC noted: “Fishery details as described in proposal are vague” and because of this, their current evaluation was based on some assumptions. SFEC Recommended a second review when details are refined and an updated version is submitted. • This review still has not happened, yet DFO has/is going forward with implementing these MSFs. • Regulations to implement MSFs for recreational fisheries have become more complex, making analyses to estimate impacts challenging in several ways. We continue to be concerned about monitoring, sampling, and estimation methods keeping pace with increases in regulation complexity. Different types of mixed-bag regulations continue to be proposed by Canada”

HIGH LEVEL RATIONALE TO CONCERNS	
	Explanation/Rationale
<p>Original “pilot” fisheries developed during the conservation closure were created under an apparent conflict of Interest between retired DFO South Coast Stock Assessment Chief and the SFAB and Sport Fishing Institute.</p>	<ul style="list-style-type: none"> • These proposals were previously submitted to DFO by SFAB in a document titled “SFAB 2020/2021 Chinook Retention Proposals During Fraser River Stream-Type Chinook Conservation Closures. • It was identified via an ATIP request that these proposals had been developed under an apparent Conflict of Interest with the existing DFO South Coast Stock Assessment Chief.

HIGH LEVEL RATIONALE TO CONCERNS	
	Explanation/Rationale
Undermines Reconciliation and UNDRIP	<ul style="list-style-type: none"> First Nations have expressed broad opposition to MSFs since first introduced by the Department in 2019. First Nations have requested to be involved in the co-development of the criteria to support decision making. First Nations have requested DFO receive consent prior to implementing MSFs.
Undermines Priority Right (Sparrow Decision): Conservation, First Nations Section 35.1 then Recreational	<ul style="list-style-type: none"> There is no supporting evidence to indicate that First Nations priority rights holders will be benefiting from these fisheries. The recreational, non-priority rights holders will be benefitting from these MSFs. These MSF's are on the main migration and rearing path of many wild Chinook stocks of concern. These fisheries will have impacts on those stocks. First Nations on the Fraser River has not been able to access their allocation on chinook due to low returns; these MSF fisheries will be inducing harm and mortality to their potential access. DFO is simply re-allocating a portion of the total mortality to recreational Non-Right's Based anglers.
Undermines Fraser Salmon Management Collaborative Agreement	<ul style="list-style-type: none"> These proposals were never presented or discussed with at/the FSMB/FSMC prior to this public consultation period. Currently the FSMB JTC is working on Chinook Management scenarios to reduce impacts to Fraser Summer 5/2 stocks. Implementation of these MSF's have potential implications to the results and outcomes of that work.
Undermines the Pacific Salmon Treaty and the work of the various Chinook Technical Committees of the PSC.	<ul style="list-style-type: none"> Canada has obligations under the PST to reduce impacts on Harrison Fall 4₁ Chinook. DNA and CWT data have shown that Harrison Chinook rear in this area year- round. These fisheries will contribute to direct and indirect impacts on exploitation rates and mortality via targeted catch, but also through incidental mortality of undersized or unmarked fish in this MSF.

HIGH LEVEL RATIONALE TO CONCERNS	
	Explanation/Rationale
SFI and SFAB continues to undermine the conservation of chinook by exaggerating the economic benefit/loss.	<ul style="list-style-type: none"> Under the ATIP, there is evidence that DFO Stock Assessment Lead created the standing committee proposal for SFAB, quoting language to use to gain buy in from high level DFO staff and members of parliament. SFAB has had several engagements with the previous Deputy Minister (2019 to 2022) of DFO quoting that “he understands the value and benefit the sport fishery brings economical to small communities on the coast”. SFAB/SFI are consistent lobbyist within the political arena.
<p>Undermines existing DFO led consultation approaches and feedback received to date.</p> <ol style="list-style-type: none"> 1. DFO 2022 Mass Marking and Mark-Selective Fisheries Discussion Paper: A Summary Report on What We Heard 2. PSSI Mark Selective Fisheries Technical Workshop – December 14, 2022 	<ol style="list-style-type: none"> 1. DFO 2022 Mass Marking and Mark Selective Fisheries Summary Report <ul style="list-style-type: none"> The majority of these comments (e.g. over half) do not support the implementation of MSFs and were provided by First Nations and the Marine Conservation Caucus. The few that were in support of MSFs were provided by SFAB, the Province and <u>a few</u> First Nations. There is broad opposition for implementation of MSFs by First Nations; and where there is support it appears to be in areas where proposed MSF are truly terminal, the local FN will be benefitting, and the fishery will not be encountering mixed stocks and will contain a high proportion of hatchery fish (i.e., impacts to wild stocks of concern will be very low). Those that were provided by First Nations and were in support of MSF were in situations where the MSFs were in terminal areas, directly supported First Nations and had little to no impacts on wild stock of concern. 2. PSSI Mark Selective Fisheries Technical Workshop <ul style="list-style-type: none"> There was broad opposition to further implementation of MSFs by First Nations. SFAB reps were the only participants who were in support of further MSFs at this time.

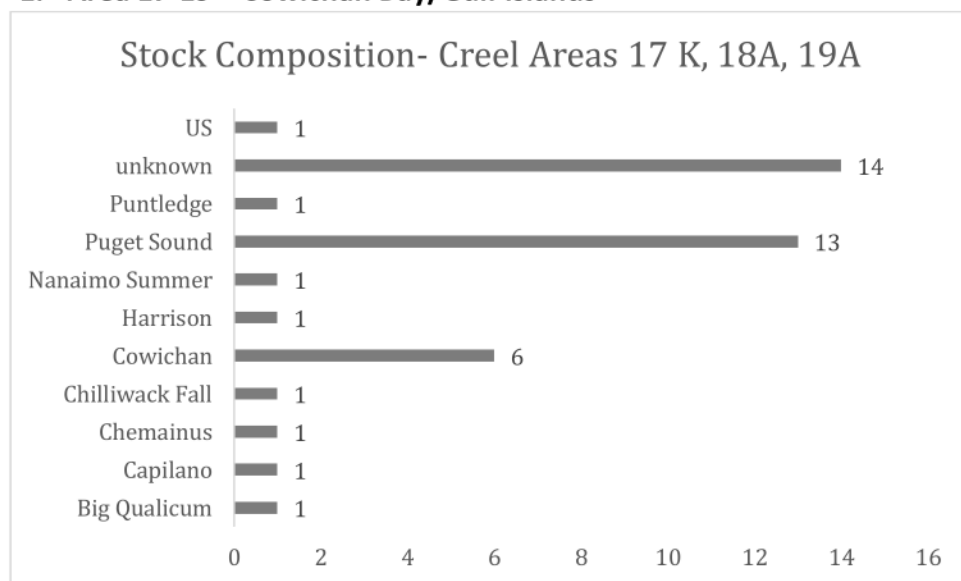
HIGH LEVEL RATIONALE TO CONCERNS	
	Explanation/Rationale
	<ul style="list-style-type: none"> Multiple First Nations representatives raised concerns regarding: <ol style="list-style-type: none"> The lack of an MSF framework and lack of monitoring / evaluation plans prior to implementation of new MSFs. Existing pilots have not been evaluated and new MSFs are proposed. Specific concerns/feedback to the 2022 DFO MSF Discussion paper (lack of consultation, impacts to CWT program, FRIM estimates, impacts to First Nations rights and priority access, lack of performance metrics) have not been addressed but DFO is moving forward with MSF implementation. Attendees questioned how DFO plans to manage risk and uncertainty without specific fishery and stock objectives. Request by FN to be involved in the co-management and co-design. Suggested developing a Steering Committee via FSMB where Indigenous Groups are involved in some of the Co-design and Co-Development. <p>DFO has not addressed any of these concerns.</p>
<p>MSF aren't consistent with DFO National Policies:</p> <ul style="list-style-type: none"> <i>Managing Bycatch</i> <i>Precautionary Approach</i> <i>Fisheries Act</i> 	<ul style="list-style-type: none"> Most Chinook stocks do not have biologically based escapement goals, or limit reference points, and only approximately 10% of the 377 Pacific Salmon CUs have been assessed. MSF isn't compliant with the Precautionary Approach: <ol style="list-style-type: none"> Minimal requirements for harvesting strategies in fishery management frameworks to be compliant with the Precautionary Approach: Need to determine stock status (critical, cautious, healthy) Determine the removal reference (the maximum acceptable removal rate – which is the ratio of all human induced removals and the total exploitable stock size)

HIGH LEVEL RATIONALE TO CONCERNS	
	Explanation/Rationale
	d. Stock status is needed to help determine the acceptable removal rate.
DFO has changed their language from protecting all chinook stocks of concern to allow as many Fraser stock to reach the spawning grounds as possible.	<ul style="list-style-type: none"> DFO has changed their language to focus on protection of WILD chinook. For example: <ol style="list-style-type: none"> <i>“These widespread conservation concerns require a continued precautionary fisheries management to limit fishery mortalities on wild chinook.”</i>
Department has implemented MSF's at the same time they have undertaken other significant management measures, such as closing commercial salmon fisheries, Chinook non-retention, etc.	<ul style="list-style-type: none"> This has made it impossible to evaluate if any changes in mortality rates are occurring because of MSFs. DFO has closed or severely restricted commercial fisheries, which would have a significant impact on reducing the ER, while simultaneously opening these MSF's. Impossible to use the describe table (in proposal) to be used to determine the magnitude of expected fishery impacts when the range of total mortalities will be highly influenced by other management measures. DFO is trying to determine the range in total mortalities when there is a moving target.

SUMMARY OF EXISTING STOCK COMPOSITIONS AND MARK RATE INFORMATION FOR THE PROPOSED NEW FOR 2023 MSFS

Based on catch data: anglers are catching equal amounts of marked and unmarked fish in all the proposed MSF areas, regardless of mark rate.

1. Area 17-19 – Cowichan Bay/Gulf Islands



*unknown = unassigned or assumed results (DNA results unreliable or blank)

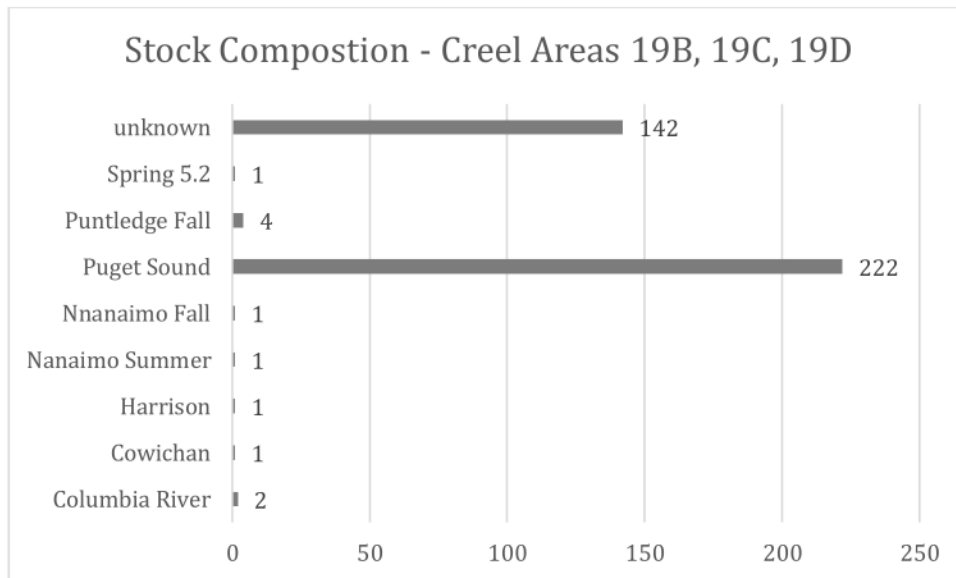
Mark Rates:

- According to DFO mark rates in PFMA 17 = 35.3%-38.2% between April to July.
- Mark rates in PFMA 18 = 35.3% -65.1% between April to July.
- Mark rates in PFMA 19 = 81.2% (April)-52.2% (July).

Request: Mark rates by Creel sub-area to match the proposal areas not by aggregate PFMA Area.

2. Area 19 MSF

- April 1- 30; possibly into portion or all of May (31) – marked retention.
- Note: for analytical purposes: used period of April 1-May 31.



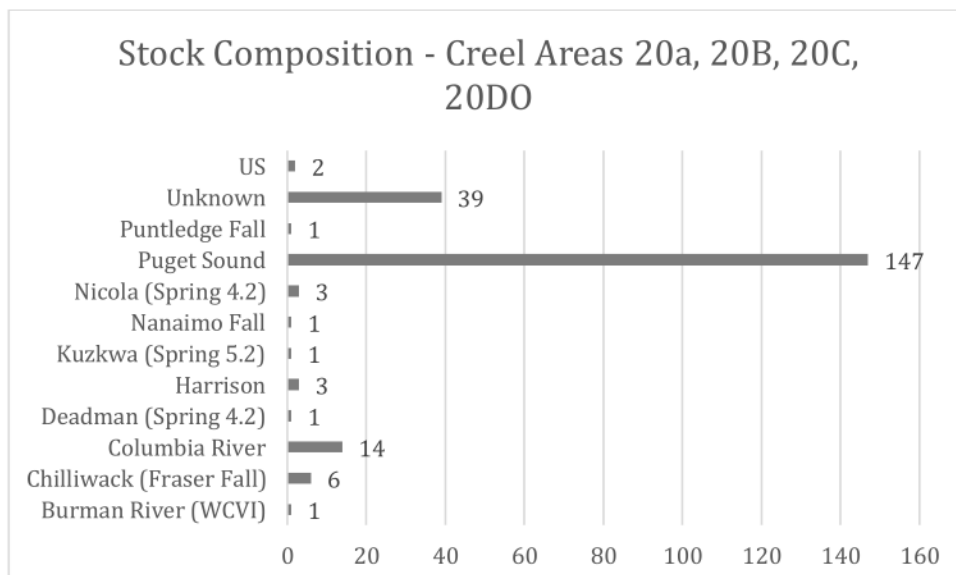
Mark rates:

- According to DFO mark rates in PFMA 19 = 81.2% (April)-62.1% (May)

Request: Mark rates by Creel sub-area to match the proposal areas not by aggregate PFMA Area.

3. Area 20- Juan de Fuca

- April 1- 30; “possibly into portion or all of May (31) – marked retention
- Note: for analytical purposes: used period of April 1-May 31

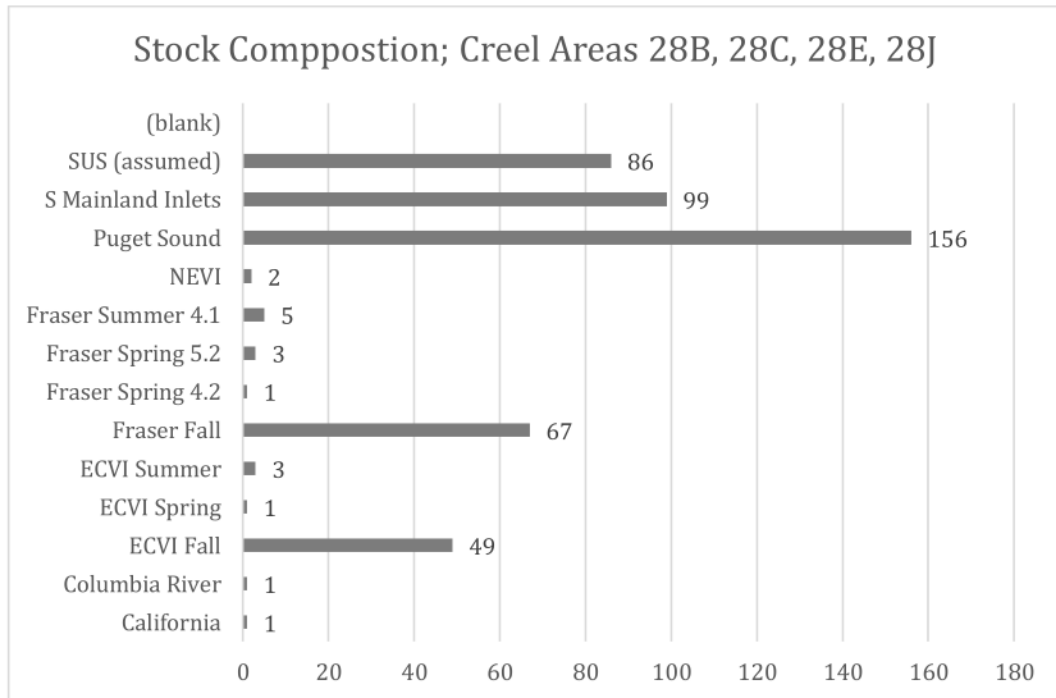


Mark Rates:

- According to DFO mark rates in PFMA 20 = 66.4%-70.5% between April to May

Request: Mark rates by Creel sub-area to match the proposal areas not by aggregate PFMA Area

4. Area 28-1 to 28-5 – Howe Sound



Mark Rates:

- According to DFO mark rates in PFMA 28 = 18.8%-29.2% between April to July.

IN CLOSING

Overall, there are significant technical, policy and allocation challenges that need to be addressed prior to any further implementation of MSFs. Failure to address these prior to implementation would be an absolute failure for both Chinook conservation and Indigenous Rights.

We thank you for your continued communication and feedback.

Sincerely,



Nick Chowdhury, IMAWG President

Cc. Jeff Grout, Regional Resource Manager, Salmon Fisheries and Oceans Canada
Honourable Joyce Murray, Minister of Fisheries and Oceans Canada
Annette Gibbons, Deputy Minister, DFO
Kevin Brosseau, Associate Deputy Minister, DFO
Linda Higgins, Area Director, DFO South Coast
Jorn Meier, Aboriginal Affairs Advisor, DFO South Coast
Kent Spencer, Aboriginal Affairs Advisor, DFO South Coast
Kevin Conley, Aboriginal Affairs Advisor, DFO South Coast
Matt Mortimer, East Coast Vancouver Island Manager, DFO South Coast
Eamon Miyagi, West Coast Vancouver Island Manager, DFO South Coast
Christine Butka, East Coast Vancouver Island Manager, DFO South Coast
Erin Rechisky, Stock Assessment Science, DFO South Coast
Indigenous Governments, Vancouver Island and Mainland Inlets



Reference: 29676

DATE

Dear DFO Regional Salmon Team,

Thank you for the opportunity to provide feedback on the proposed modified Chinook mark-selective fishery (MSF) pilots in Spring, 2023. As noted in the past, the Provincial government is supportive of expanded mass marking of hatchery-reared Chinook salmon and exploration of MSF where harvest opportunities do not increase the risk to already at-risk wild stocks or Southern Resident Killer Whales (SRKW). We view MSF as a way to provide for more selective and consistent fishing opportunities for recreational, commercial, and First Nations harvesters.

Given the short timeline for reviewing this proposal, we have not provided detailed comments. We are supportive of DFO's related work through the Salmonid Enhancement Program (SEP) to develop a structured framework for mass-marking and supporting MSF opportunities and look forward to collaborating on updated hatchery policies under the Pacific Salmon Strategy Initiative.

We note that these proposed pilot projects are being considered in advance of the completion of that policy framework and have provided high-level comments to address some of the issues that may be considered in a more integrated management approach that uses MSF.

Based on a review of the materials available, we note that the proposed fisheries for areas 19 and 20 indicate a potential interaction with current SRKW measures. Without more detail, it is not possible to provide feedback on this, however, we encourage Fisheries and Oceans Canada (DFO) to better define the potential impacts and associated risks to SRKW prior to the proposals being implemented.

The perspectives of Indigenous Nations vary widely on the issue of MSF and we encourage DFO to ensure that the consultation process is supportive of robust decisions for new MSF opportunities.

Finally, the proposal outlines possible modifications to the monitoring and data collection through enhanced fishery monitoring with additional dockside observers and creel surveys. We consider additional monitoring to be a key aspect of the success of the proposed pilot projects, and critical for evaluation of future MSF. The details provided in the proposal are

<Full Name>, <Position Title>

limited, and we encourage DFO to provide additional details to interested parties well in advance of any MSF decisions.

Thank you for the opportunity to provide feedback on this proposal, and I look forward look forward to continuing to collaborate on that initiative under the Pacific Salmon Strategy Initiative.

Sincerely,

James Mack
Assistant Deputy Minister



Fisheries and
Oceans
Canada

Pêches et
Océans
Canada

Pacific Region

February 3, 2023

Via E-mail to:

First Nations
Sport Fishing Advisory Board
Commercial Salmon Advisory Board
Marine Conservation Caucus

Subject: Request for Feedback on New or Modified Chinook Mark-Selective Fishery Pilots Starting in Spring (April/May) 2023

This letter provides an opportunity for your feedback on several proposed mark-selective fisheries (MSF) opportunities for consideration beginning in April 2023. These proposed fishery opportunities have not been approved and with this letter the Department is providing information on the preliminary evaluation of these pilot MSF to identify potential concerns and the level of support among groups to inform decision making.

The Department plans to maintain a precautionary management approach to support the conservation and rebuilding of wild southern BC Chinook salmon stocks of concern. This approach includes substantial new management measures implemented beginning in 2019 in First Nations, recreational and commercial fisheries to avoid impacts on at risk wild Chinook salmon in times and areas where these stocks may be encountered. Since 2020, these management measures were implemented beginning April 1. As part of these measures, the Department indicated that it would consider opportunities for fisheries in times and areas where harvest opportunities can be provided without jeopardizing conservation of Fraser River Chinook or other stocks of concern.

The Government of Canada's announcement of the Pacific Salmon Strategy Initiative (PSSI) in 2021 included additional resources and capacity to support the expanded use of mass marking (MM) of hatchery-origin Chinook, explore MSF opportunities as part of an integrated management approach, and address supporting stock assessment changes that may also be required (e.g., catch monitoring, stock identification). As part of this initiative, the Department is considering opportunities to pilot MSF fishery opportunities in 2023 as work continues to develop longer term implementation plans.

A presentation with further information on areas where fishery opportunities are proposed and a summary of the results from preliminary evaluations conducted by Departmental staff is provided in **Attachment 1**.

The Department is planning to provide updates on the proposed fisheries and opportunities for discussion at upcoming planned salmon IFMP development meetings with First Nations and stakeholders. In addition, the Department plans to host an on-line technical briefing on this information for First Nations and stakeholders and an invitation will be sent separately. If your First Nation or organization would like to arrange a further discussion, please contact the Resource Manager in your Area.

If your organization wishes to provide feedback on the proposed fisheries in writing, you are requested to provide feedback by **March 3, 2023** to the DFO Pacific Salmon Management Team at:
DFO.PacificSalmonRMT-EGRSaumondupacifique.MPO@dfo-mpo.gc.ca.

Feedback from consultations along with information from the evaluations will be used to inform decision making and final decisions will be communicated by Fishery Notice(s). Other fishery proposals or adjustments to Chinook fishery plans for the period covered by the next IFMP (June 1, 2023 - May 31, 2024) will be discussed and considered as part of the regular IFMP process with decisions on the IFMPs planned as part of regular approvals in June 2023.

Yours sincerely,

DFO Regional Salmon Team
DFO.PacificSalmonRMT-EGRSaumondupacifique.MPO@dfo-mpo.gc.ca