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## IPHC Fishery-Independent Setline Survey (FISS) design and implementation in 2020

PREPARED BY: IPHC SECRETARIAT (2 MARCH 2020)

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### PURPOSE

To provide Commissioners with the final 2020 FISS design.

### BACKGROUND/INTRODUCTION

The IPHC Secretariat finalised the 2020 FISS design addressing the three objectives identified at the 96<sup>th</sup> Session of the IPHC Annual Meeting (AM096). The 2020 design met the objectives of sampling Pacific halibut for stock assessment and stock distribution estimation, long-term revenue neutrality and minimizing removals and assisting others where feasible on a cost recovery basis.

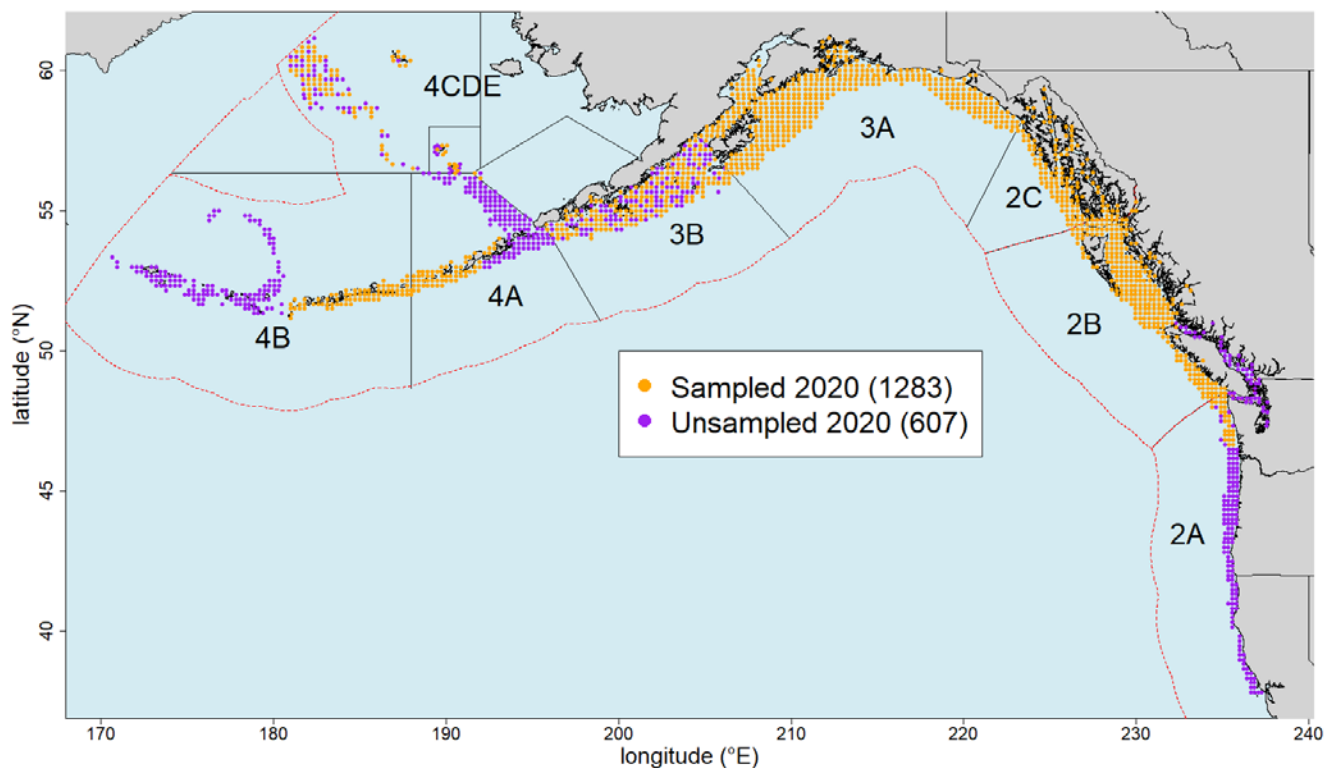
### The 2020 FISS design

- IPHC Regulatory Area 2A: Washington stations to be fished with four skates.
- IPHC Regulatory Areas 2B, 2C and 3A: 100% of stations on full FISS design to be fished with eight skates, with the exception of the stations in IPHC Regulatory Area 2B in the inside waters of Vancouver Island (Salish Sea).
- IPHC Regulatory Area 3B: A randomly chosen 64% of the stations from the full FISS design to be fished with four skates.
- IPHC Regulatory Areas 4A and 4B: Stations proposed at IM095 and AM096 to be fished with four skates.
- IPHC Regulatory Area 4CDE: A randomly chosen 60% of the stations from the full FISS design to be fished with four skates.

The 2020 design is expected to meet our science objectives. The stations in the modified design for IPHC Regulatory Area 4CDE comprise a random subsample of all stations in the full FISS grid, and are distributed throughout the region covered by the full design. This maintains spatial coverage, and therefore we remain confident that the goal of monitoring changes in spatial distribution in IPHC Regulatory Area 4CDE will be achieved.

In Region 2, coastwide and Regional modelled trends used in the assessment will still meet precision targets and the stock-distribution estimates will not be used to calculate allocation to Regulatory Area 2A in 2021, despite the reduced stations in Regulatory Area 2A.

Four skates will be fished in the IPHC Regulatory Areas where the FISS operates at a loss of revenue (2A, 3B and 4) to reduce the amount of this loss and reduce this risk while also meeting the primary objective of sampling. Eight skates will be fished in IPHC Regulatory Areas 2B, 2C and 3A where the FISS operates at a profit in order to meet the secondary objective of long term revenue neutrality. The 2020 FISS was also designed to meet the tertiary objective of minimizing removals and assisting others where feasible on a cost recovery basis.



**Figure 1.** Map of the 2020 FISS design. Each orange circle represents a FISS station targeted for sampling, while purple circles are stations that will be unsampled in 2020.

### 2021 FISS design considerations

Depending on prices and catch rates, subsampling of the core IPHC Regulatory Areas (2B-3A) may be possible during 2021-2022. Random subsamples in IPHC Regulatory Areas 3B and 4CDE, if maintained at similar rates, will include stations not sampled in 2020. Subareas that are unsampled in 2020 may require sampling during 2021-2023). These subareas are projected to result in increased costs due to low catch rates and high operating costs.

### RECOMMENDATION

That the Commission **NOTE** paper IPHC-2020-SS06-INF02, which provided the final 2020 FISS design.