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## Revised IPHC Regulatory Area 2A fishery-independent setline survey plan for 2017

PREPARED BY: IPHC SECRETARIAT (16 FEBRUARY 2017)

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### PURPOSE

To provide the Commission with a proposal for a revised IPHC Regulatory Area 2A 2017 fishery-independent setline survey plan following the Commissioners' recommendation at the IPHC's 93<sup>rd</sup> Annual Meeting for an ad-hoc expansion (densification) survey grid off the north Washington coast.

### BACKGROUND

At the 93<sup>rd</sup> Annual Meeting of the IPHC (AM093), the Commission made the following recommendation for action to the IPHC Secretariat (draft text awaiting adoption via correspondence by the Commission):

(AM093, para. 19) "*The Commission **RECOMMENDED** that the IPHC Secretariat develop a proposal detailing an ad-hoc expansion of the IPHC fishery-independent setline survey for 2017, which would involve a denser survey grid off the north coast of Washington, USA. The proposal shall be provided to the Commission as soon as possible following the close of the 93rd Annual Meeting for its review, endorsement, and potential implementation. The intention of the ad-hoc expansion is to verify the current estimates of stock distribution within Area 2A.*"

The primary justification for the proposed ad-hoc expansion (densification) is stakeholder and U.S.A. Commissioner concern that the IPHC fishery-independent setline survey coverage in the north coastal region of IPHC Regulatory Area 2A has been insufficient for sampling localised patches of high density Pacific halibut in parts of this region.

### Design concept and data use

Proposal: To double the IPHC fishery-independent setline survey station density within the region bounded to the south by 46°53.30' N and the Canadian border to the north, excluding the waters of the Salish Sea. The resultant augmented survey grid ([Fig. 1](#)), within the depth range of 20-275 fm, would add 26 stations to the setline survey design in IPHC Regulatory Area 2A. A design such as this, in which station placement is independent of underlying habitat or density, results in data that can be incorporated directly into the space-time modelling of weight and numbers-per-unit-effort, and used within the annual stock assessment modelling by the IPHC Secretariat. We project that this design will double the number of stations within the 100-150 fm zone off the north Washington coast.

### Logistical issues

The additional work required for this ad-hoc expansion (densification) would make it prohibitively challenging for the IPHC Secretariat to undertake the originally proposed fishery-independent setline survey expansion down to 36°30' N (Monterey Bay, California) ([Fig. 2](#)). Thus, the IPHC Secretariat is proposing a revision to the expansion endorsed by the Commission at the AM093 as detailed below:

- 1) The 2017 fishery-independent setline survey expansion stations, originally proposed to extend as far as south as 36°30' N, would be rolled back to stations only as far south as 37°45' N (near San Francisco). This is the current southern limit of the IPHC Regulatory Area 2A bottom area used in the stock assessment and biomass distribution calculations.
- 2) This would result in the removal of the 17 most southern expansion setline survey stations for 2017 ([Fig. 2](#)).
- 3) The additional 26 setline survey stations in Washington, added to densify the survey grid, as well as all other stations in IPHC Regulatory Area 2A, would be fished with 6 skates per

station (instead of the originally proposed 7), as it is likely that sufficient biological samples will be obtained for IPHC research and assessment needs.

### **Yelloweye rockfish (*Sebastes ruberrimus*)**

In 2017, there is currently 1.1 mt of yelloweye rockfish 'set-aside' for the IPHC's setline survey in Regulatory Area 2A by the National Marine Fisheries Service (NMFS) and the Pacific Fishery Management Council. The IPHC fishery-independent setline survey has consistently caught less than its yelloweye rockfish 'set-asides' in past years. However, the increased density of setline survey stations off the Washington coast with this ad-hoc expansion (densification) setline survey grid, covers habitat where yelloweye rockfish commonly occur and will likely increase IPHC's take of yelloweye rockfish in 2017.

Should the Commission formally approve the ad-hoc expansion (densification) stations, the IPHC Secretariat will commence discussions with the Washington Department of Fish and Wildlife, the Pacific Fishery Management Council, and NMFS to discuss the ad-hoc expansion and to request an increase in the yelloweye rockfish 'set-aside' by 0.3 mt, for a total of 1.4 mt for 2017. As has been done in previous years, IPHC will closely track yelloweye rockfish catch during the setline survey and report it to relevant agencies.

The IPHC Secretariat proposes to fish the Regulatory Area 2A survey stations shown in [Fig. 1](#) from South to North, including fishing the ad-hoc expansion (densified) survey stations alongside standard 10 nm grid survey stations. This will provide the best comparison of data with little to no gaps in temporal sampling of nearby stations. If the IPHC setline survey were to approach the yelloweye rockfish 'set-aside' ultimately approved by the NMFS in the Letter of Acknowledgment for the 2017 setline survey, the IPHC will work with the NMFS and may choose not to fish any remaining survey stations in Regulatory Area 2A for 2017 if there is a risk of exceeding the 'set-aside'.

The revised IPHC Regulatory Area 2A setline survey plan (Washington ad-hoc expansion (densification) and reduction in the California expansion) will require an additional 9 stations over the original proposal by the IPHC Secretariat for 2017, which was endorsed by the Commission at the AM093.

A summary of the changes in key metrics (skates, bait, stations, charter days) and income/expenses between the approved IPHC Regulatory Area 2A 2017 setline survey ([Fig. 2](#)) and the revision as described in this proposal ([Fig. 1](#)), is detailed in [Table 1](#).

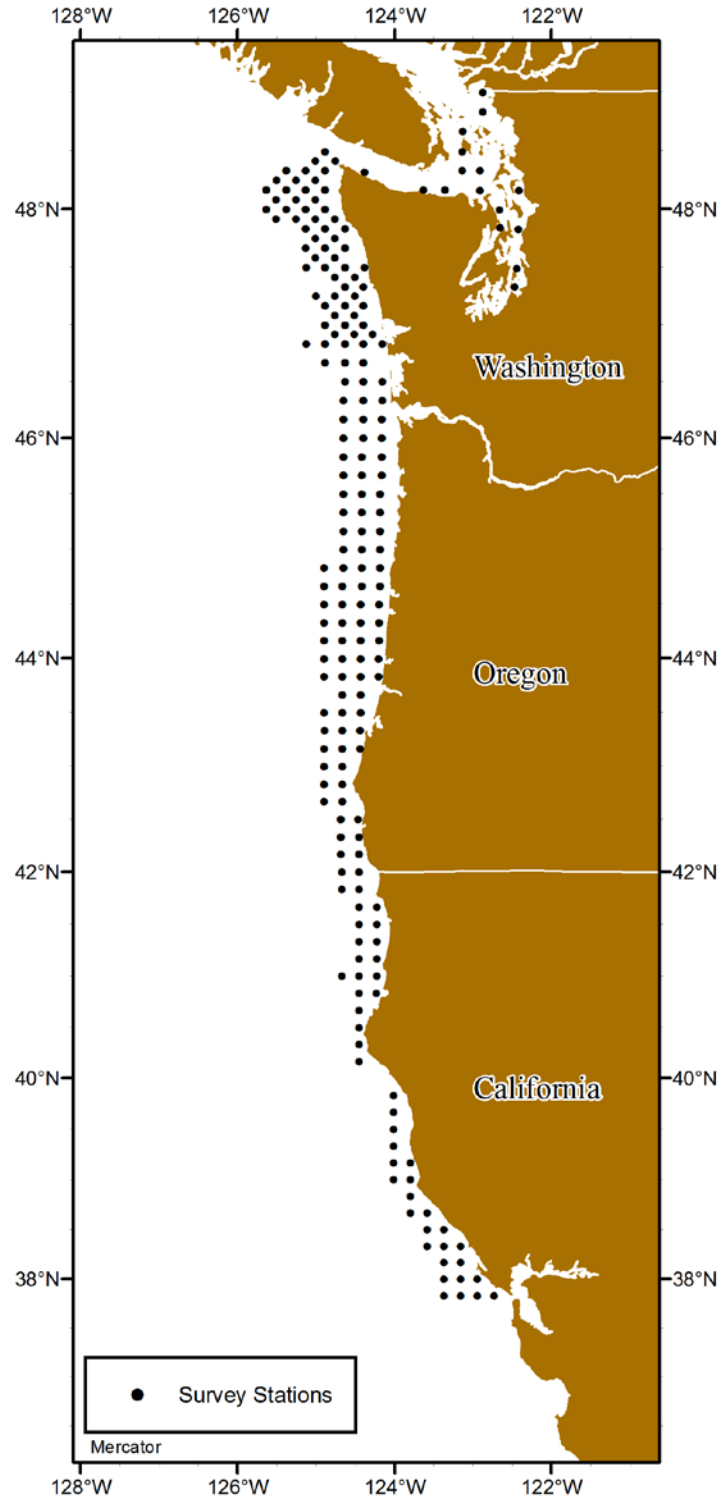
### **RECOMMENDATION/S**

That the Commission:

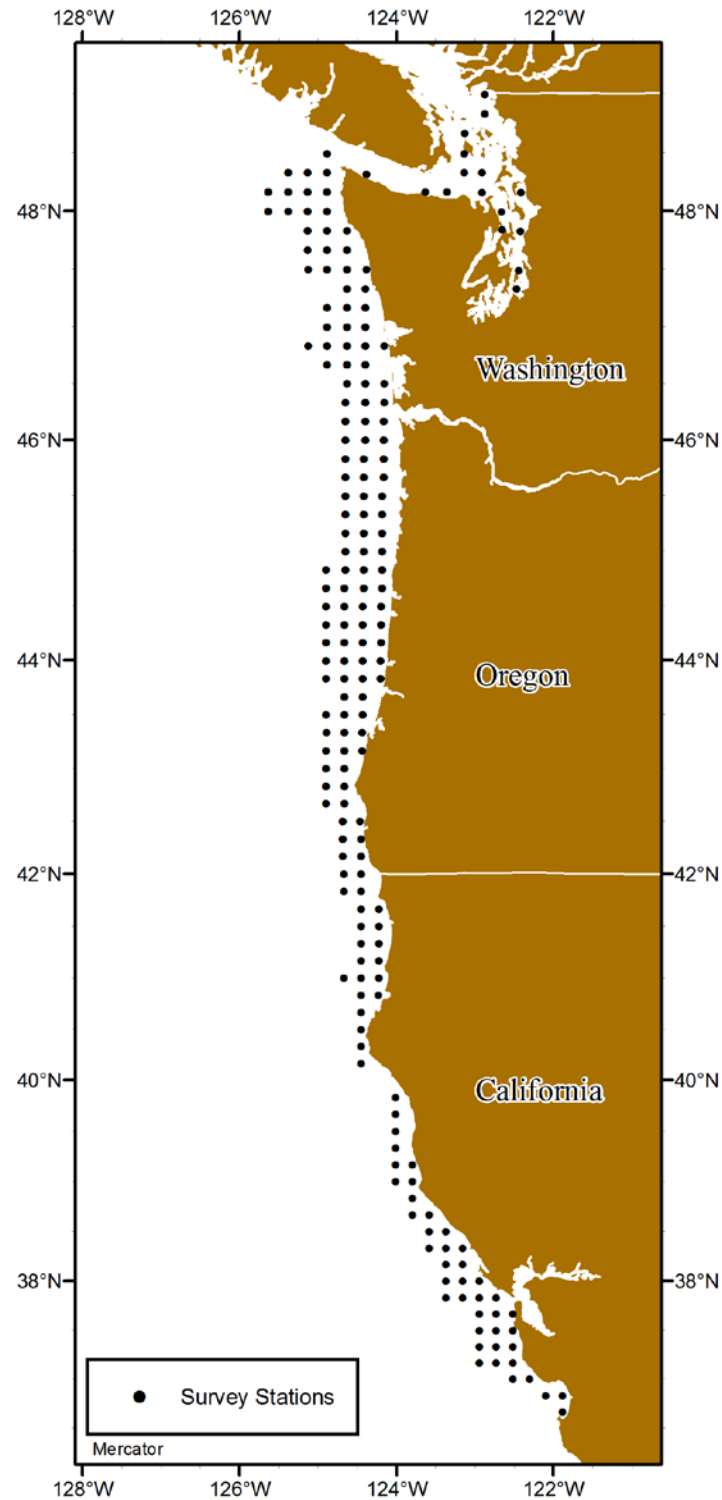
- 1) **CONSIDER** and **ENDORSE** the revised IPHC fishery-independent setline survey for Regulatory Area 2A in 2017, as described in this paper (IPHC-2017-AM093-06 ADD\_1).

**Table 1.** Key metrics and income/expenses for the IPHC Regulatory Area 2A fishery-independent setline survey proposed changes for 2017.

<i>Key Metrics</i>	<i>AM093 endorsed</i>	<i>Proposal</i>	<i>Net Change</i>
Skates to be fished	7	6	-1
Bait Used	52,565	46,154	-6,411
Stations	201	210	9
Charter Days	110	117	7
<i>Income/Expense</i>			
Pacific halibut proceeds	\$ 224,615	\$ 210,447	\$ (14,169)
Estimated bycatch proceeds	\$ 1,180	\$ 1,274	\$ 94
Total vessel expenses	\$ (637,374)	\$ (632,647)	\$ 4,727
<b>Net Revenue/Expenses</b>	<b>\$ (411,578)</b>	<b>\$ (420,926)</b>	<b>\$ (9,348)</b>



**Fig. 1.** Proposed IPHC Regulatory Area 2A ad-hoc expansion (densification) and reduced stations in southern California for 2017 .



**Fig. 2.** IPHC Regulatory Area 2A survey off the north Washington coast in 2017 (AM093 endorsed).