



INTERNATIONAL PACIFIC



HALIBUT COMMISSION

Fishery-Independent Setline Survey (FISS) design and implementation in 2019

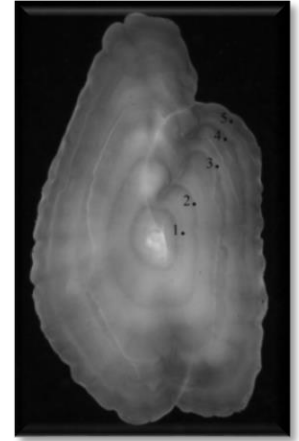
Agenda item 6.1

IPHC-2019-IM095-06

Primary objective

Standardised, fishery-independent data collection for the Pacific halibut annual stock assessment

- Pacific halibut distribution and abundance trends – CPUE
- Collection of biological structures (determining sex and maturity and age)
- Data from U32 Pacific halibut



Coastwide weights at-sea



- Weights taken at-sea along with lengths on all vessels



Standardisation

Gear

- Fixed gear

Each skate

- 548.64 metres (1800 feet) with 100 hooks spaced 5.49 metres (18 feet) apart
- No.3 (16/0) circle hooks threaded through the front on 61 to 122 centimetre (24 to 48 inch) gangions
- 3 to 5 kilogram (7-10 pound) weights on each non-anchored skate end

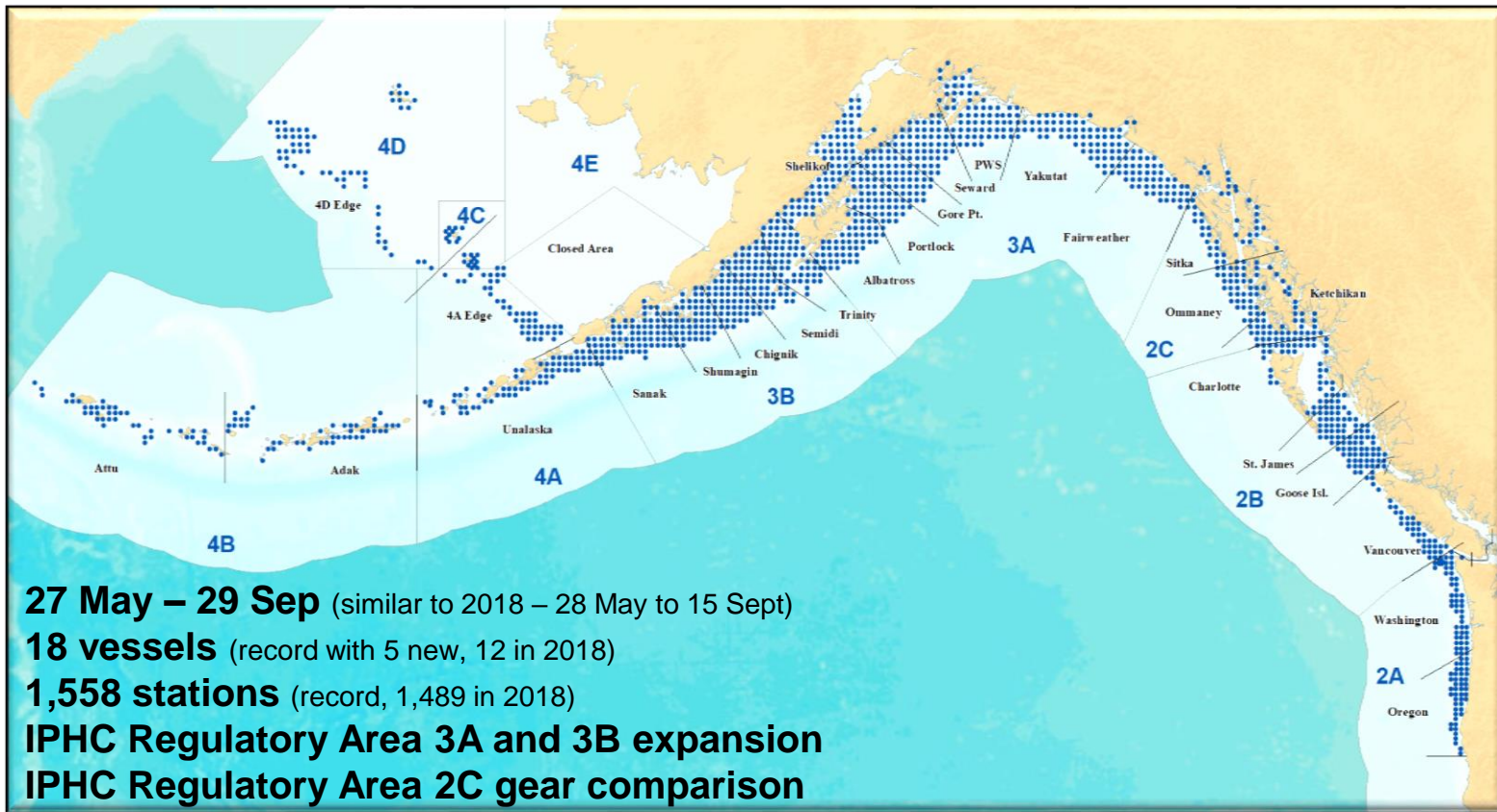


Bait

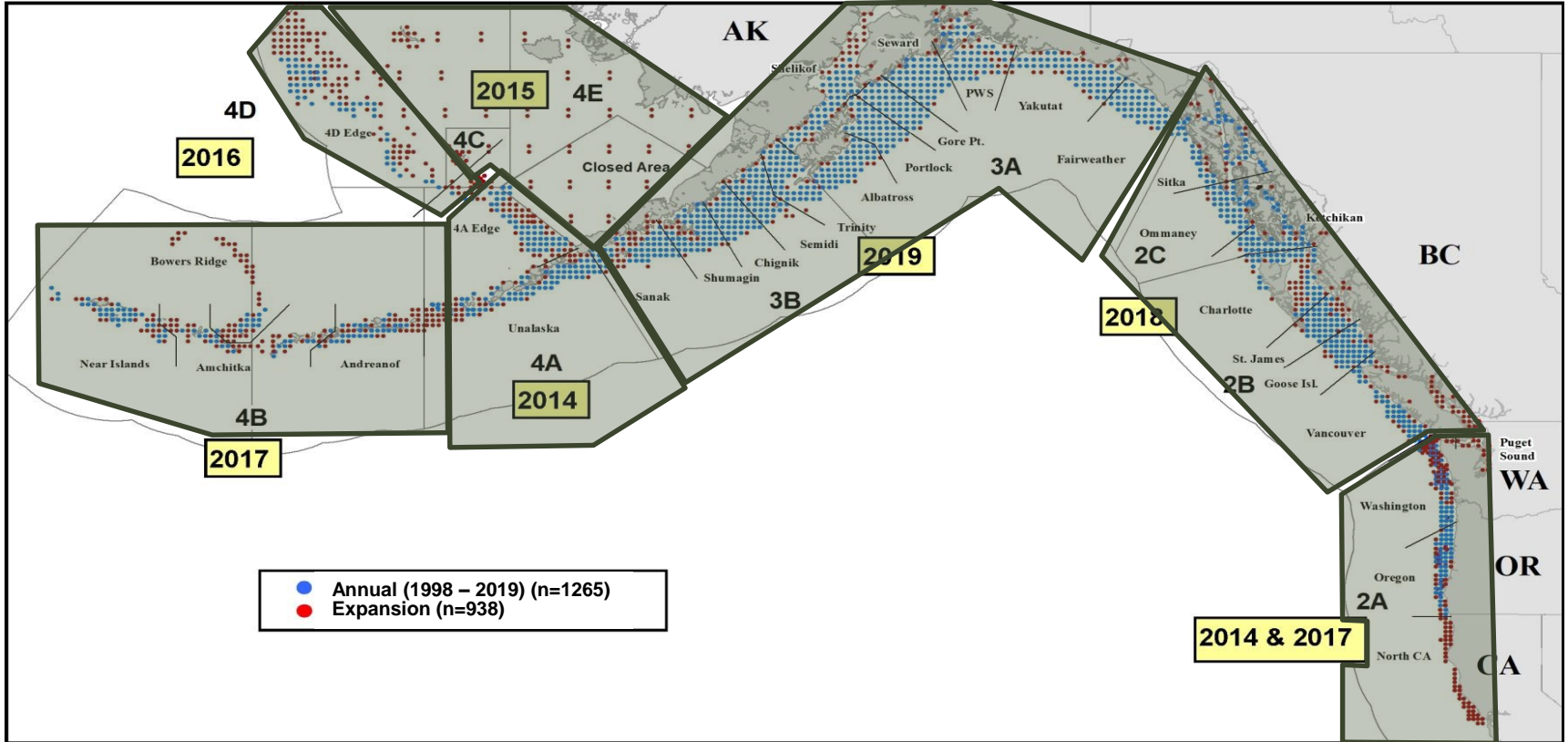
- Frozen chum salmon
- Number 2 semi-bright or better
- Cut 1/10 to 1/6 kilogram (1/4 to 1/3 pound)
- Captains sign off on bait quality



2019 Fishery-Independent Setline Survey (FISS)



IPHC FISS stations 2014-19



FISS expansions in 2019

- **IPHC Regulatory Area 3A**

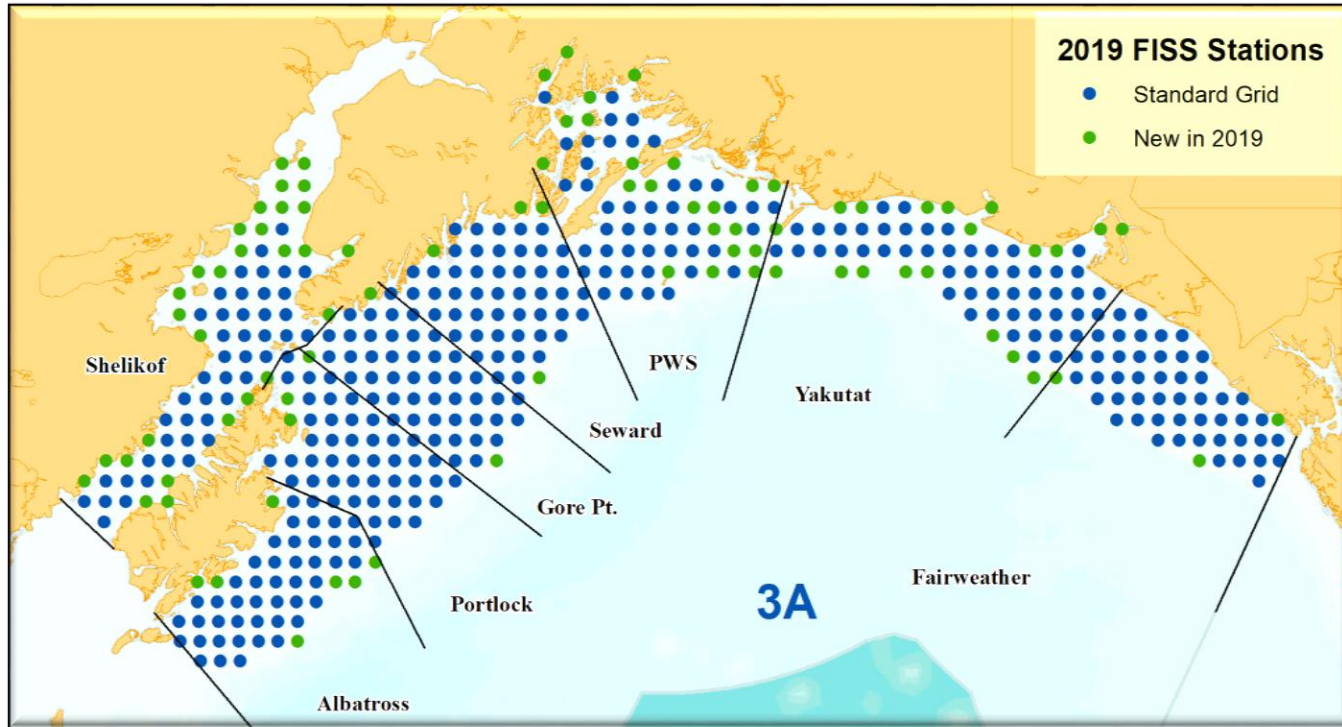
- Addition of deep (>275 fm) and shallow (10-20 fm) stations
- Other coverage gaps, including:
 - Cook inlet
 - Inside and outside Prince William Sound

- **IPHC Regulatory Area 3B**

- Addition of deep (>275 fm) and shallow (10-20 fm) stations
- Other coverage gaps, including:
 - Waters around the Shumagin and Sanak Islands



2019 FISS expansions



89 Expansion stations

463 Total

Fairweather – 51 (2 expansion)

Yakutat – 70 (19 expansion)

PWS – 68 (23 expansion)

Seward – 52 (4 expansion)

Gore Pt. – 48 (3 expansion)

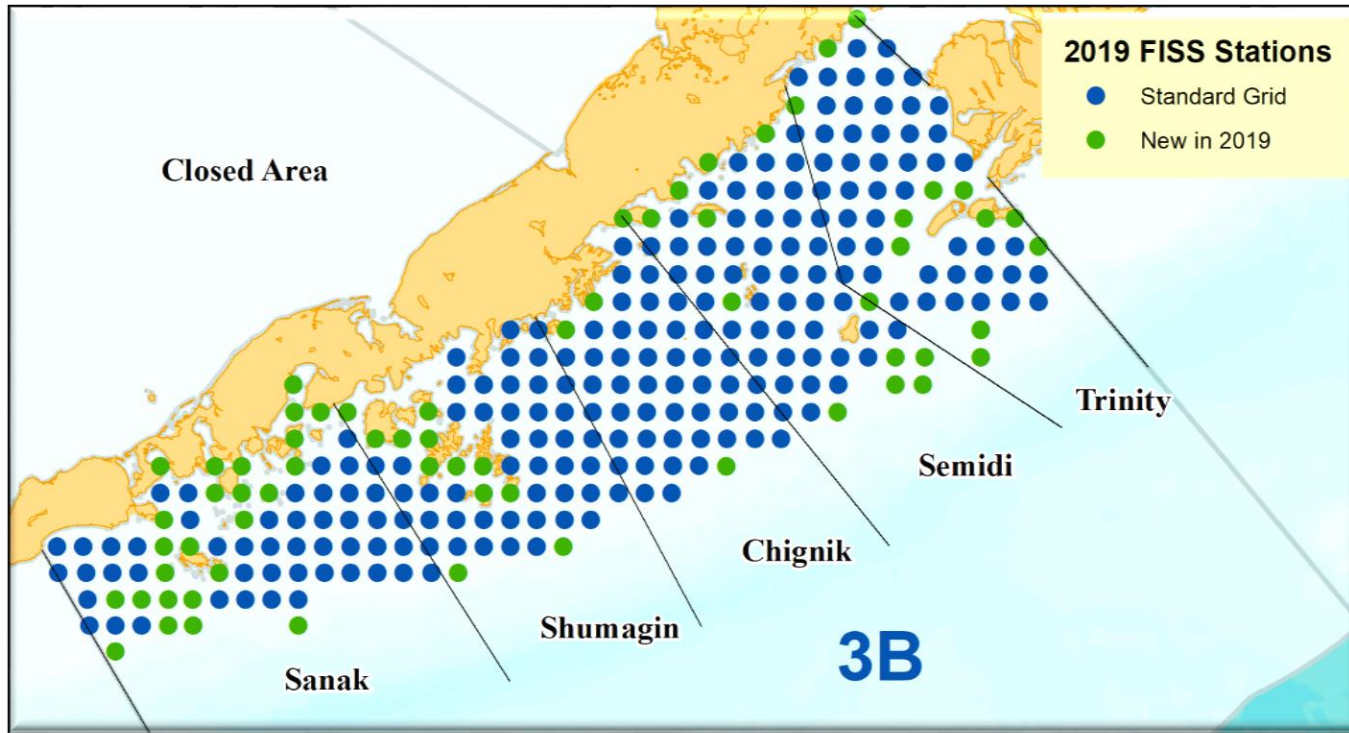
Portlock – 50 (4 expansion)

Albatross – 52 (7 expansion)

Shelikof – 72 (27 expansion)



2019 FISS expansions



66 Expansion stations

297 total

Trinity – 58 (11 expansion)

Semidi – 60 (13 expansion)

Chignik – 49 (4 expansion)

Shumagin – 55 (11 expansion)

Sanak – 75 (27 expansion)

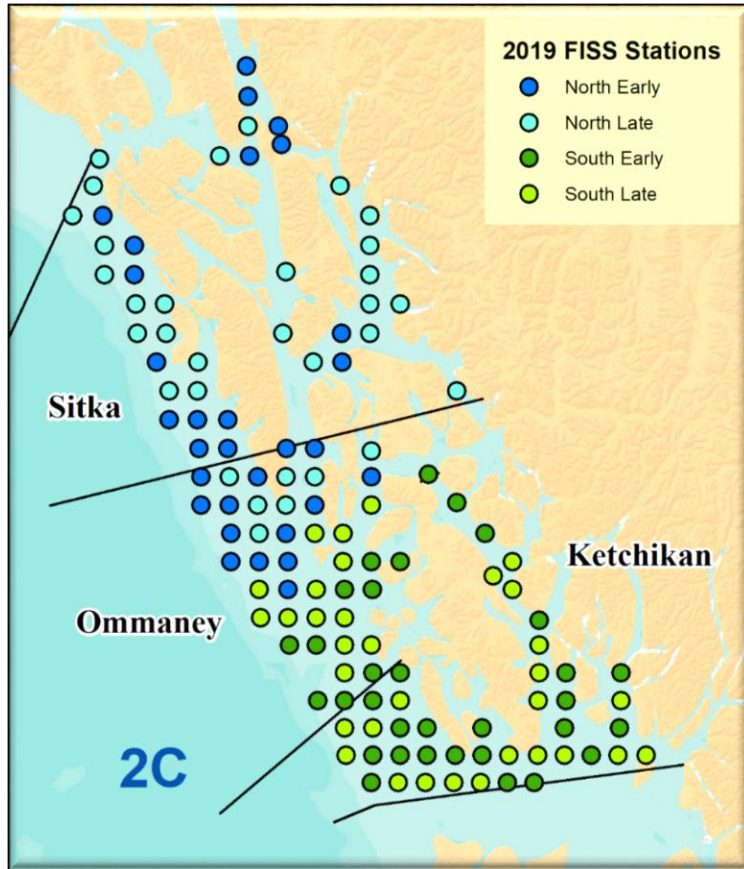


2019 gear comparison - fixed and snap

- IPHC Regulatory Area 2C
- Each station fished twice in random order
 - once with fixed-gear
 - once with snap-gear.



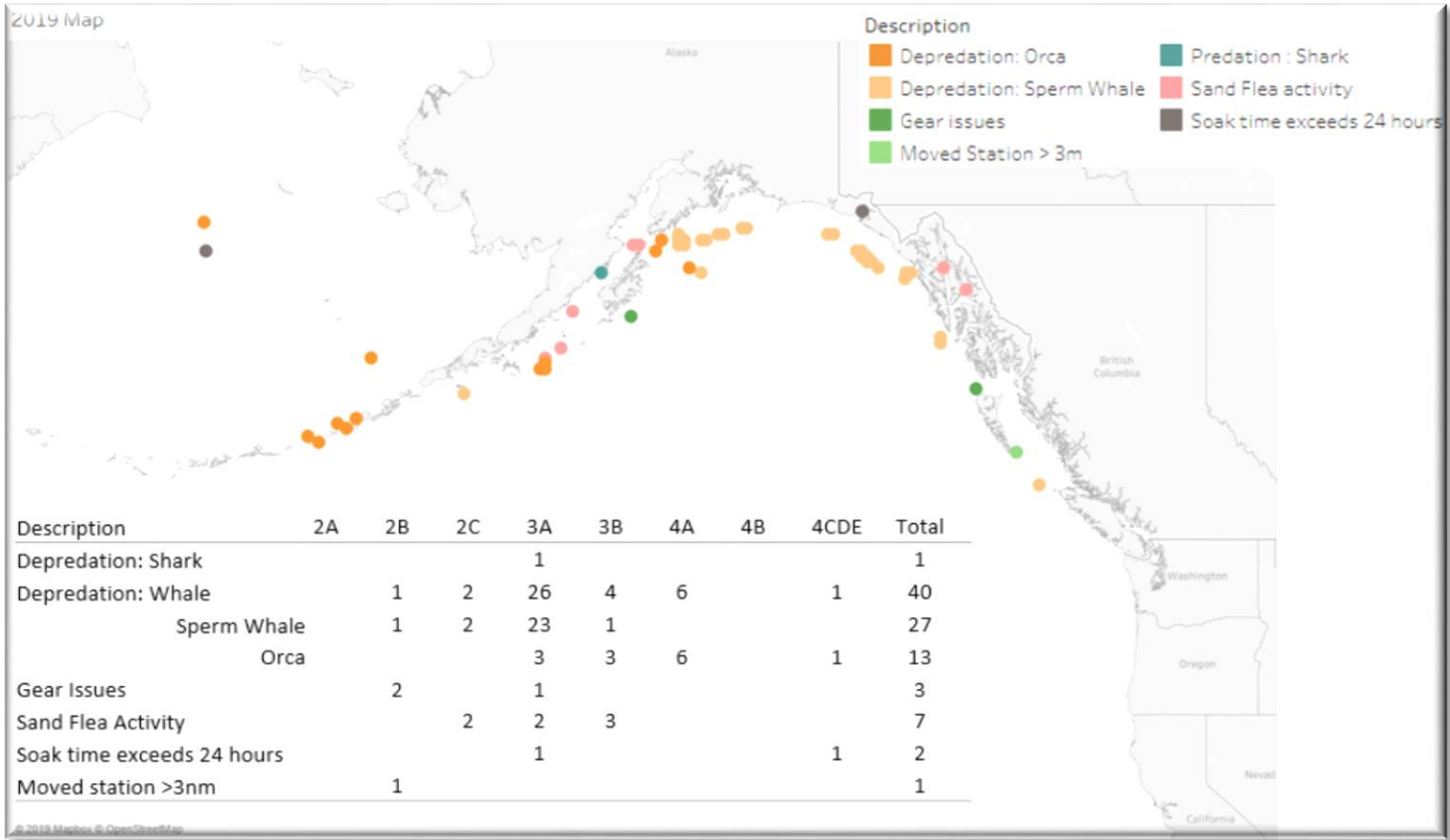
2019 FISS gear comparison



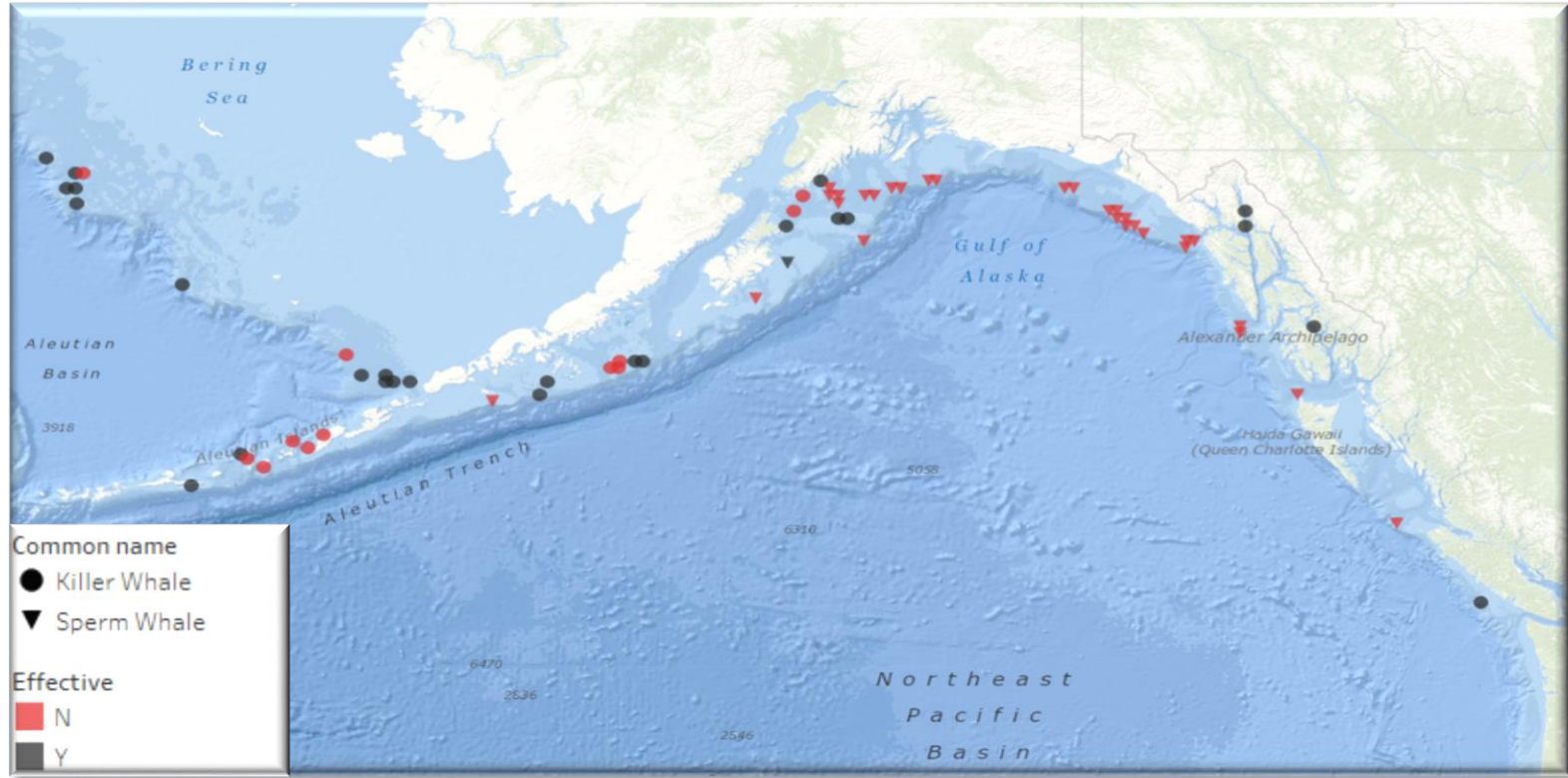
Fixed and snap gear stations
Timing is for fixed gear



Ineffective stations in 2019

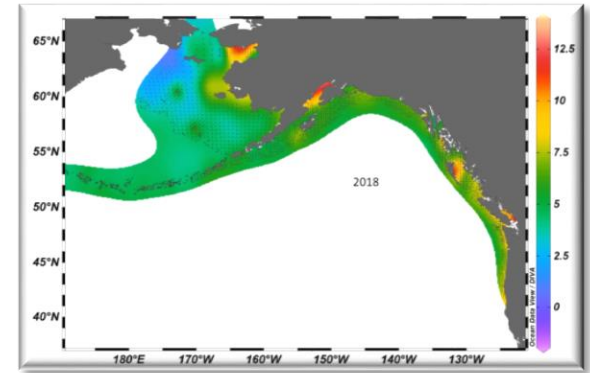


FISS stations with killer or sperm whale sightings



Secondary objectives

- Platform for data collection projects
 - Genetics, reproduction and condition factors
 - Oceanographic data
 - Prior hooking injuries
 - Marine mammal and seabird interactions
 - Environmental Contamination (ADEC)



Tertiary objectives

Collaboration

– Canada

- Fisheries and Oceans

- Rockfish biological samples
- 100% hook occupancy
- Shark sampling

– United States of America

- NOAA Fisheries

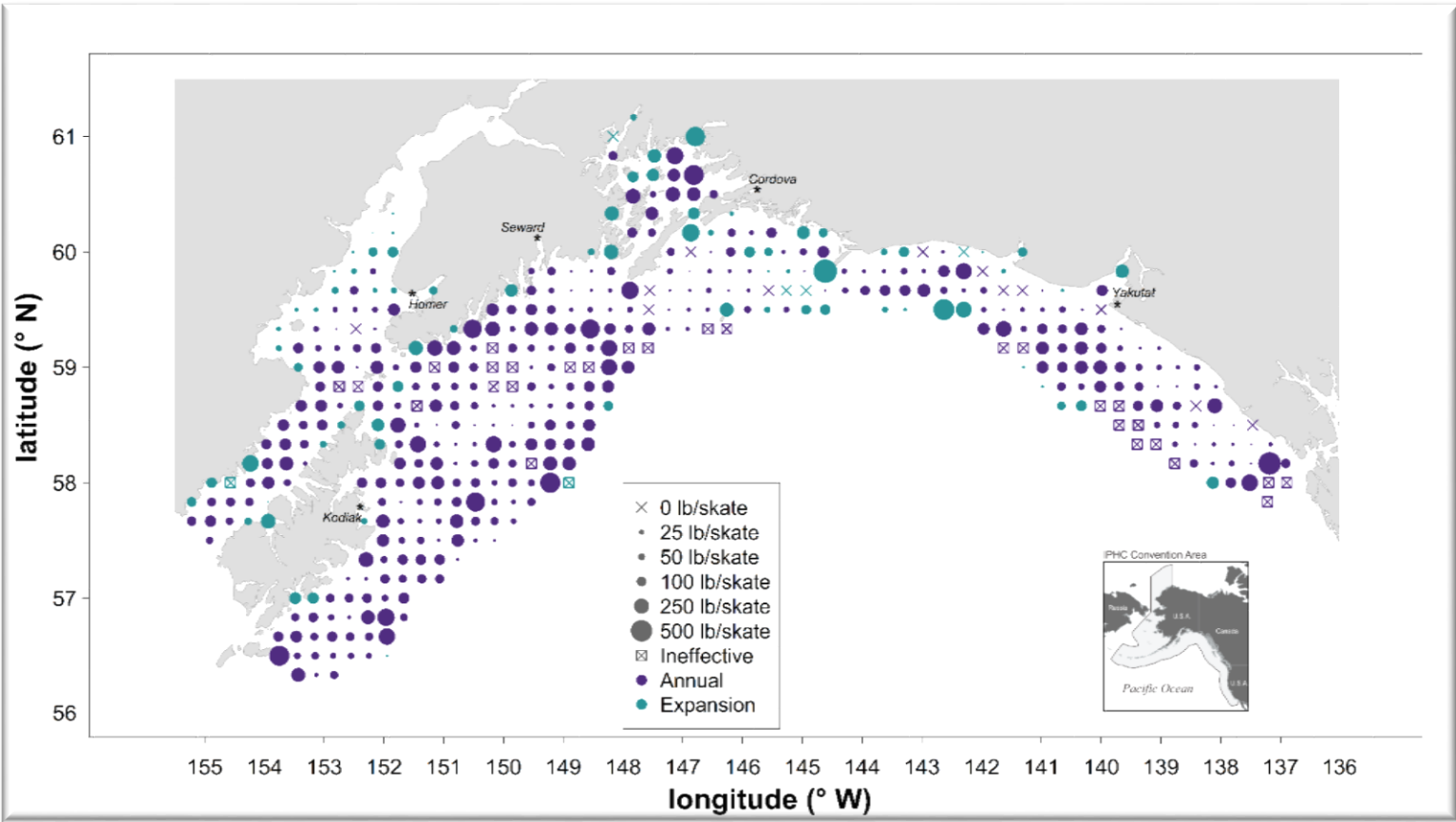
- Pacific cod sampling
- Electronic monitoring system tests
- Shark sampling (spiny dogfish and six gill)
- NOAA Fisheries trawl sampling

- WDFW and ODFW

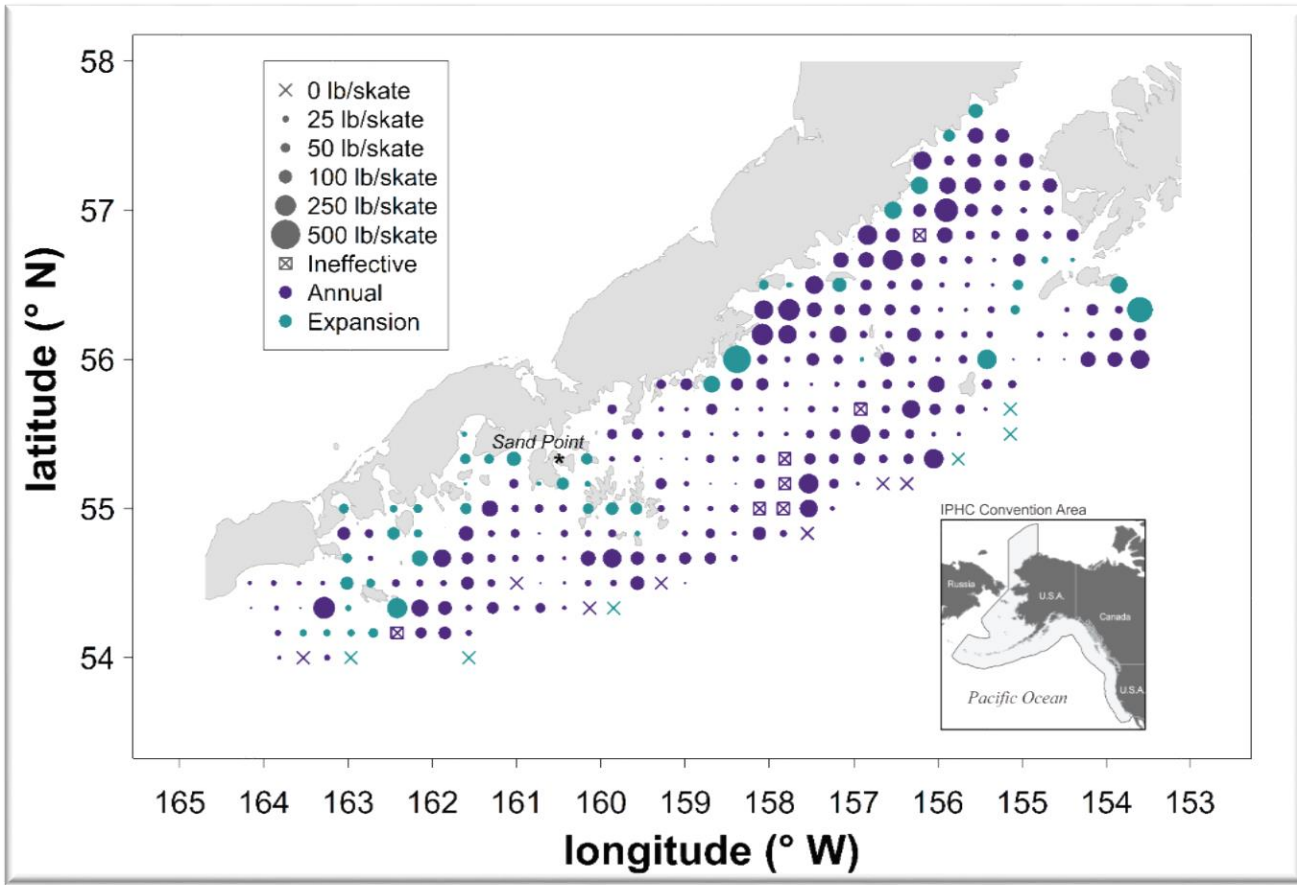
- Rockfish sampling cooperation



IPHC Regulatory Area 3A



IPHC Regulatory Area 3B



2019 – FISS results

- Explore the website for;
 - [FISS Catch-Per-Unit-Effort \(CPUE\) data maps and plots](#)
 - [FISS Biologicals](#)
 - [FISS Performance](#)
 - [Data set downloads](#)

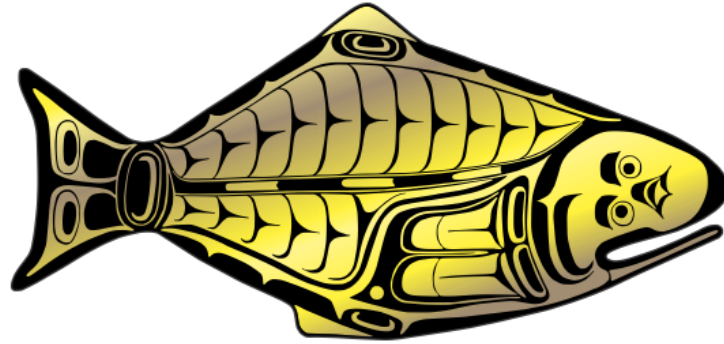


2020 – request for tender process

- Bid specs will be online in December.
- Submission of the tender online.
- Due by 15 February 2020.



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New Vessels in 2019



Borealis I (BOR)

New for 2019

Early Snap South 2C (33 stations)



New Vessels in 2019



Heather Rae (HRA)

New for 2019

Early Snap North 2C (30 stations)



New Vessels in 2019



Hanna Lio (HAN)

New for 2019

Late Snap North 2C (30 stations)



New Vessels in 2019



Southern Seas (SNS)

New for 2019

Shelikof (73 stations)



New Vessels in 2019



Cindria Gene (CDG)

New for 2019

Trinity and Yakutat (54 stations)

