



Bycatch Management in North Pacific Groundfish Fisheries

David Witherell (Executive Director), North Pacific Fishery Management Council

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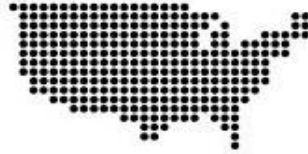
The Guiding Law for U.S. Marine Fisheries

The Magnuson-Stevens Fishery Conservation and Management Act – Adopted 1976



200-mile limit

Established the 3-200 nautical mile exclusive economic zone



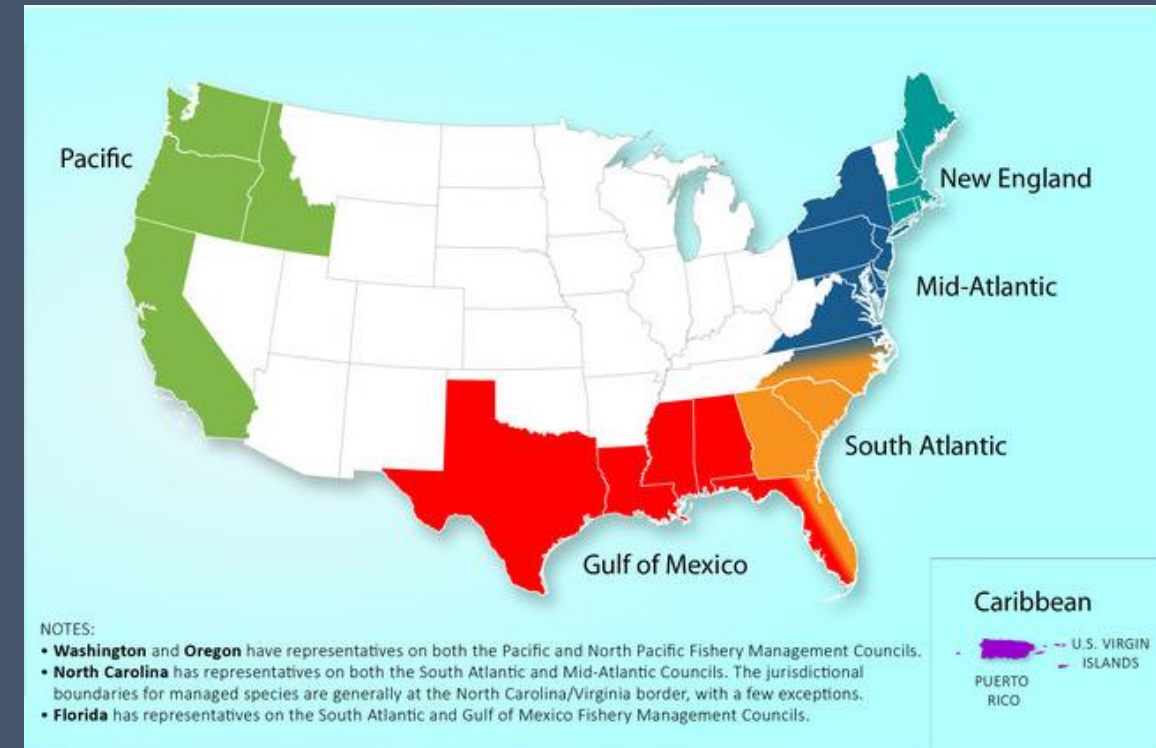
National Standards

Established National Standards and other requirements for conservation and management of resources.



8 Councils

Established a system of 8 Regional Councils, composed of fishermen and gov't representatives, to develop fishery regulations for their specific area.



Magnuson-Stevens Act - National Standards

1. Prevent overfishing and achieve optimum yield
2. Use best scientific information
3. Manage stocks as a unit throughout its range when practicable
4. No discrimination between residents of different states
5. Promote efficiency in fishery resource utilization
6. Take into account variations in fisheries, fish stocks & catches
7. Minimize costs and avoid duplication
8. Take into account importance to fishing communities
9. **Minimize bycatch and bycatch mortality**
10. Promote safety at sea

National Standard 9

“(9) Conservation and management measures shall, to the extent practicable, (A) minimize bycatch and (B) to the extent bycatch cannot be avoided, minimize the mortality of such bycatch.”

What is bycatch?

Magnuson-Stevens Act definition:

The term "bycatch" means fish which are harvested in a fishery, but which are not sold or kept for personal use, and includes **economic discards** and **regulatory discards**. Such term does not include fish released alive under a recreational catch and release fishery management program.

In other words:

Bycatch = Discarded fish

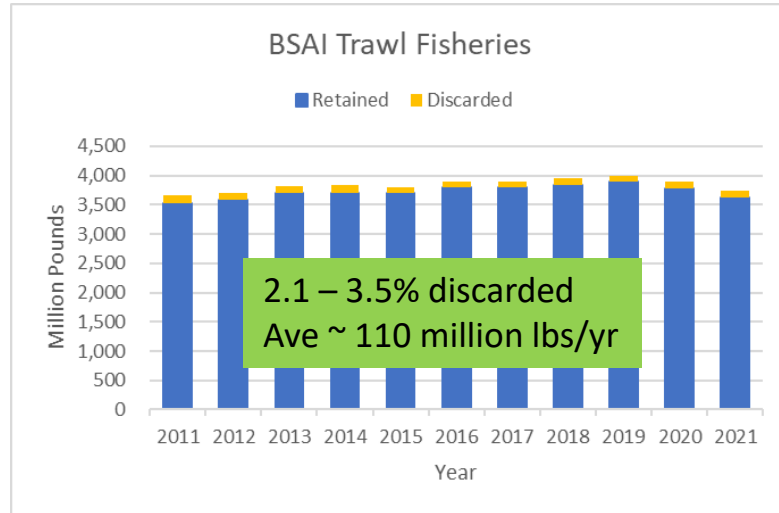
Economic discards: fish harvested which could be legally retained, but are of insufficient value to retain (e.g., sculpins, grenadiers, brittle stars)

Regulatory discards: fish harvested which are required by regulation to be discarded whenever caught, or are required by regulation to be retained but not sold

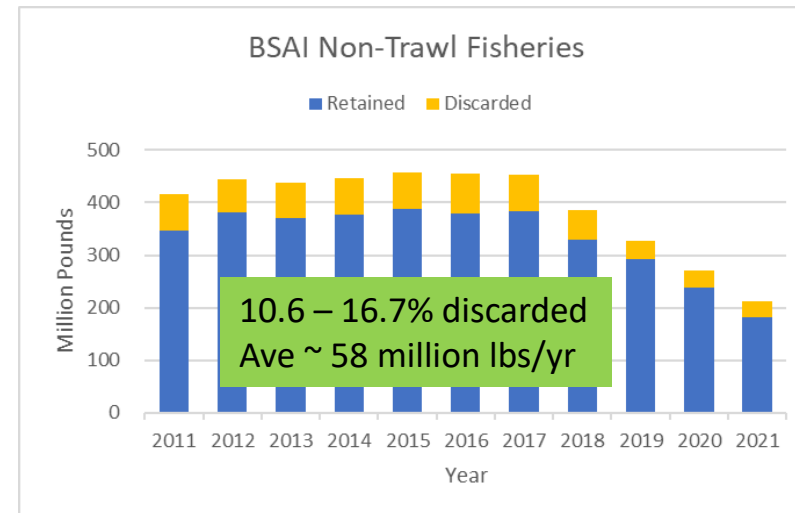
- **Prohibited Species Catch (PSC)** : A special type of regulatory discard. Fish caught that must be returned to sea with a minimum of injury = **Pacific halibut, Pacific herring, Pacific salmon, steelhead, king crab, bairdi, opilio crab.**

Total Bycatch by Gear Type in the Groundfish Fisheries

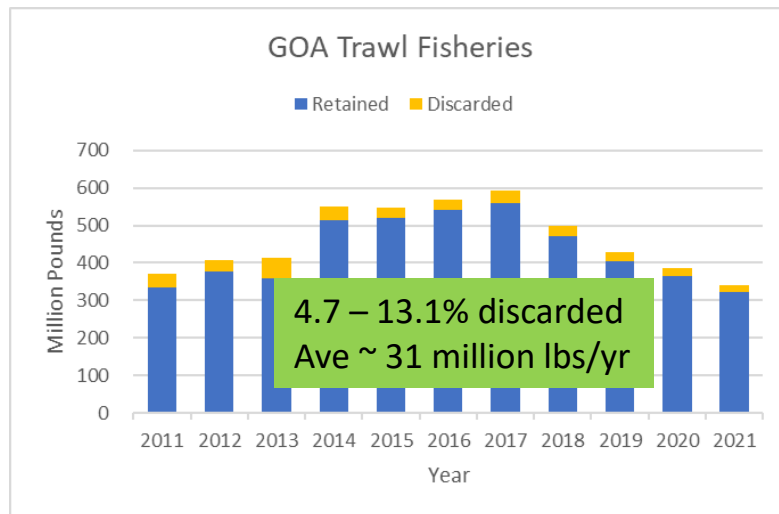
Trawl Gear



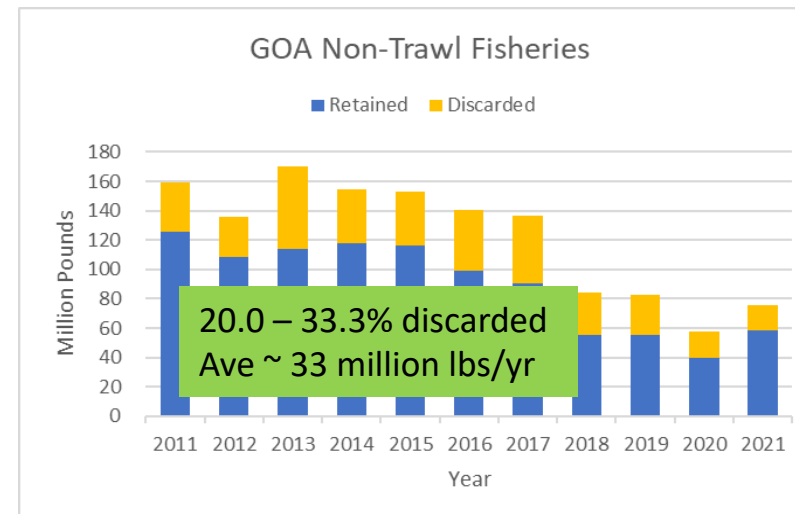
Longline and Pot Gear



GOA Trawl Fisheries



GOA Non-Trawl Fisheries



PSC Limits and Catch

	Gear Type	Overall Limit	2021 Catch Thru 10/23/21	Apportionment
Halibut				
BSAI	trawl	2,805 mt	1,233	Am 80, TLAS,CDQ
	hook and line	710 mt	80	CV/CP, seasonal
GOA	trawl	1,706 mt	306	seasonal & species depth
	hook and line	257 mt	56	seasonal and DSR
Chinook Salmon				
BSAI	pollock trawl	47,591 fish	13,488	cooperatives
GOA	pollock trawl	25,000 fish	9,257	Western & Central GOA
	non-pollock trawl	9,690 fish	5,488	CVs, CPs, rockfish CVs
Herring				
BSAI	trawl	2,723 mt	1,877	
Crab				
King	bottom trawl	97,000 crab	15,224	Zone 1
Tanner	bottom trawl	3,071,678 crab	506,803	Zones 1 and 2
Opilio	bottom trawl	5,990,225 crab	224,549	COBLZ

Measures to Minimize Salmon PSC in the BSAI

Note: Only Chinook and Chum salmon are caught in any numbers in BSAI and GOA groundfish fisheries.

Regulatory measures

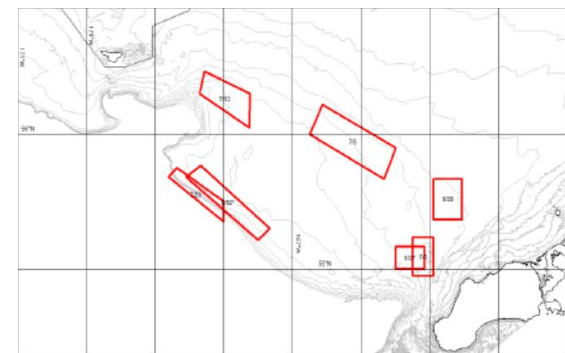
- Chinook Salmon PSC Limits

<u>Amendment 91</u>	<u>Amendment 110</u>
<p>Performance Standard 47,591 Each pollock sector (shoreside, at-sea, mothership, CDQ) gets relative share of total for year.</p> <p>Incentive – If a sector exceeds its share in 2 or 7 years, it is limited to the performance share thereafter.</p> <p>Overall PSC Limit 60,000 The entire pollock fishery is shut down if this limit is hit.</p>	<p>If Western AK 3-river system index > 250,00 then Performance standard = 47,591 and Overall PSC Limit = 60,000</p> <p>If Western AK 3-river system index < 250,00 then Performance standard = 33,318 and Overall PSC Limit = 45,000</p> <p>Western AK 3-river system index: Each year, ADF&G provides a Chinook salmon abundance using the 3-System Index for western Alaska based on the post-season in-river Chinook salmon run size for the Kuskokwim, Unalakleet, and Upper Yukon aggregate stock grouping</p>

- Incentive Plan Agreements (IPA) Requirements

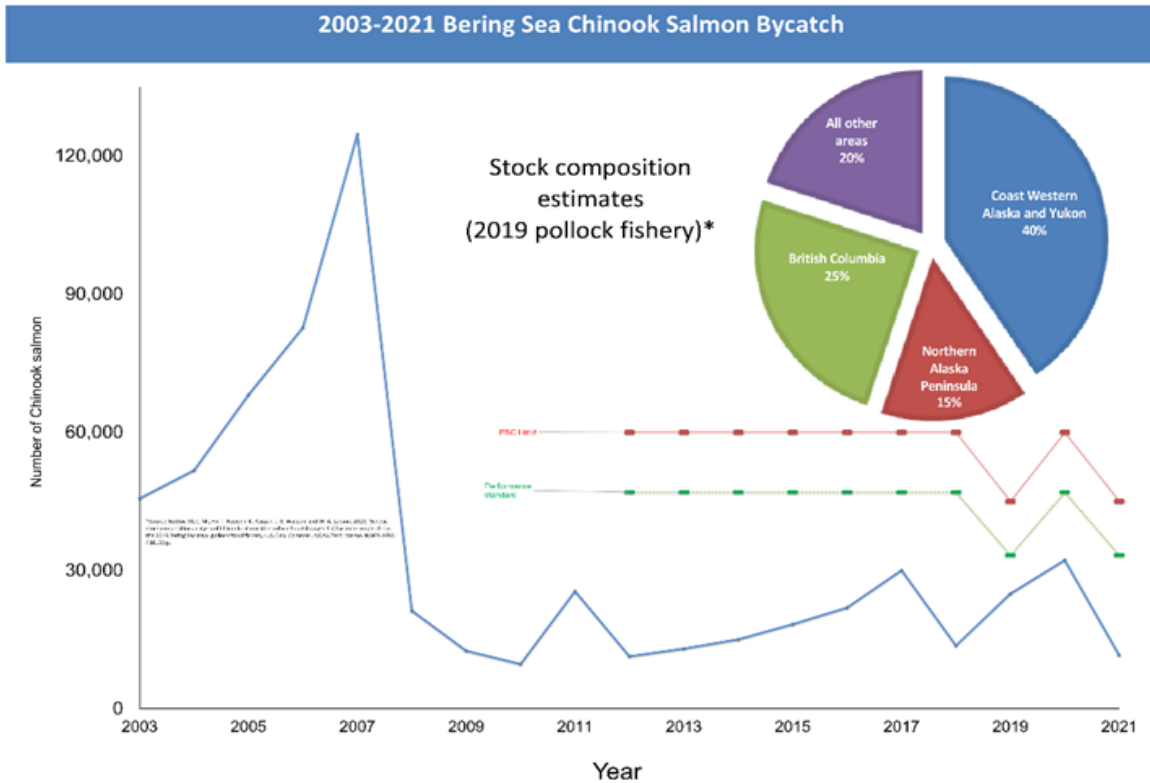
Voluntary measures

- Pollock fishery cooperative IPAs: incentives for captains to avoid Chinook salmon and chum salmon bycatch under any condition of pollock and Chinook salmon abundance in all years; rewards for avoiding Chinook salmon, and penalties for failure to avoid Chinook salmon at the vessel level.
- Hotspot reporting and closures
- Salmon escape panels
- Donation to foodbanks



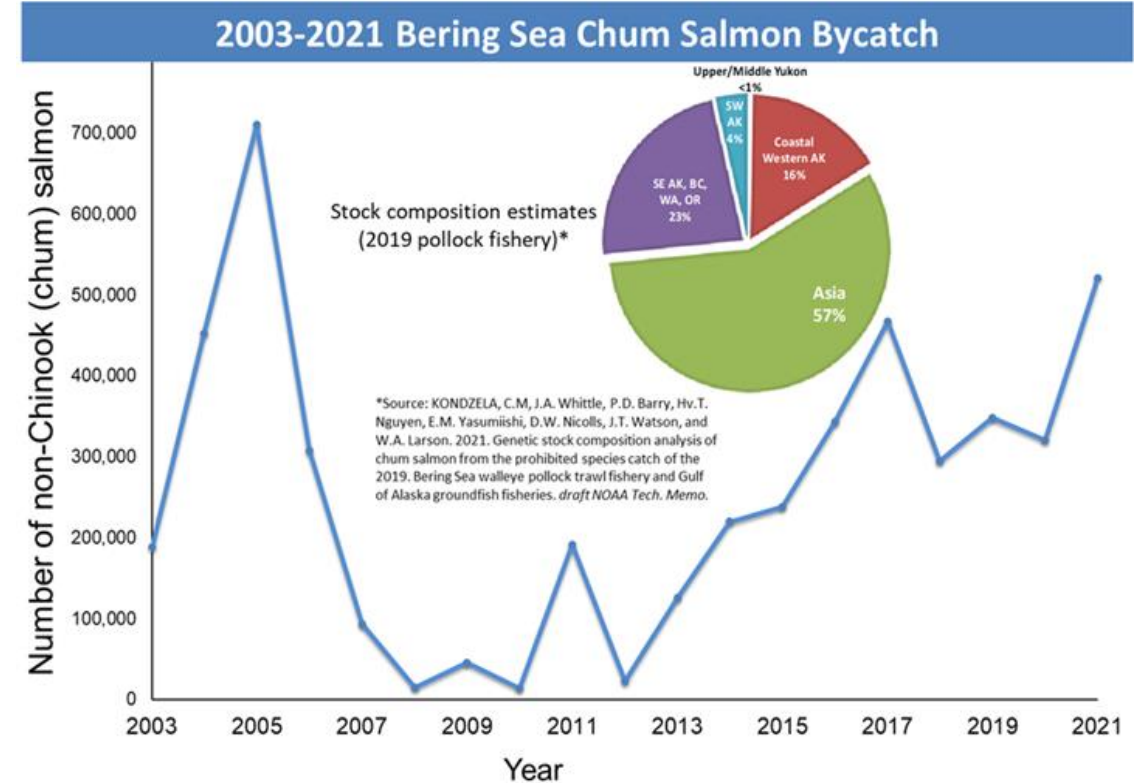
Bering Sea Salmon PSC trends and genetic breakouts

Chinook Salmon



2019 Chinook salmon bycatch: 39% from western coastal Alaska and <1% from Upper/Middle Yukon

Chum Salmon



2019 chum salmon bycatch: 16% from coastal western Alaska and 0.3% from Upper/Middle Yukon

Last impact assessment (2017) showed <2.5% impact on aggregate WAK and <1% on Yukon Chinook salmon runs.

Measures to minimize halibut PSC

Regulatory measures

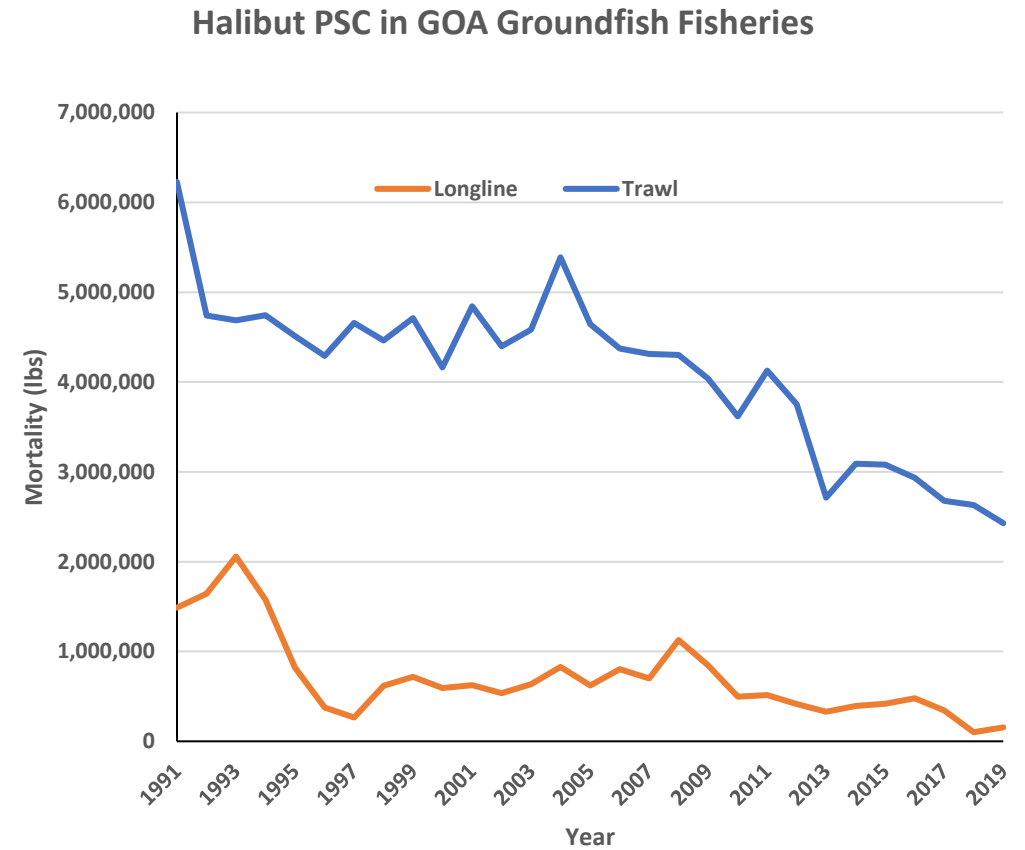
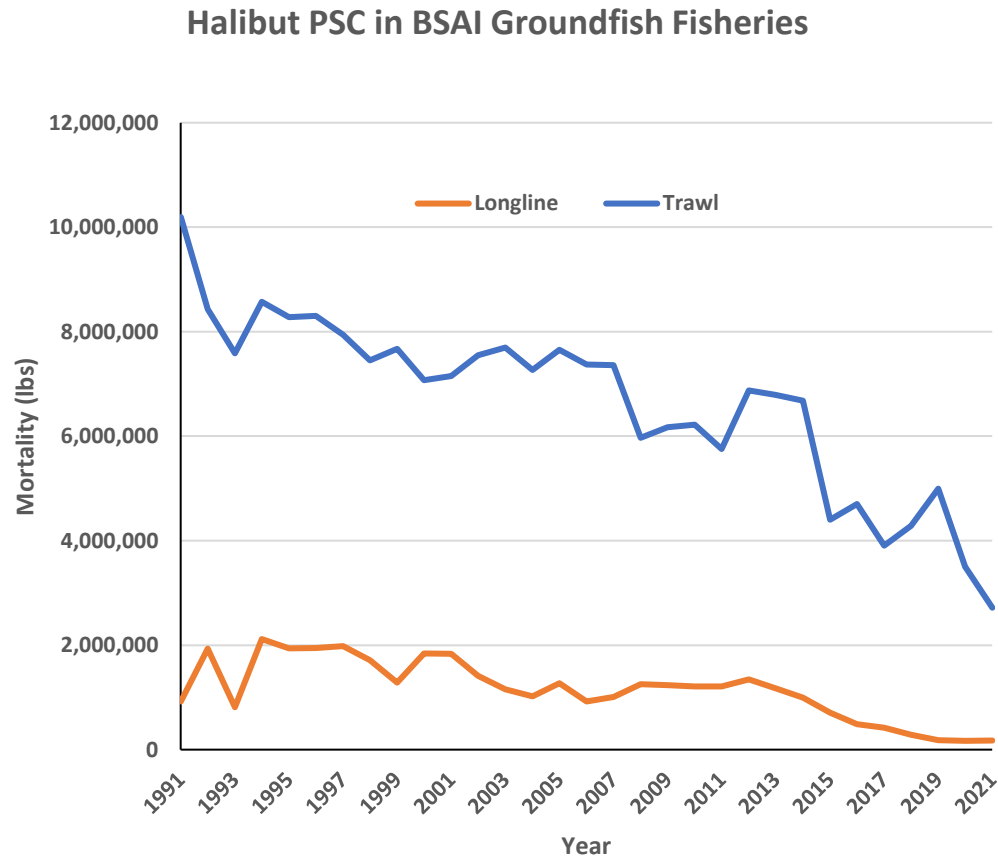
- Strict PSC Limits: Fishery stops if reached
- Deck sorting regulations
- Careful release requirements for longliners



Voluntary measures

- Deck sorting of halibut to get fish released alive
- Halibut Avoidance Incentive Program: data shared across BSAI fleet, testing and use of halibut excluder panels, limitations on trawling at night, etc.
- Annual report to the Council from the Amendment 80 fleet on bycatch performance and avoidance program
- Donation to foodbanks

Halibut PSC Trends by Area and Gear Type



Catch data through 10/23/2021

BSAI Abundance based halibut PSC limits for Amendment 80 fleet

At current halibut abundance index levels, a 1,309 mt PSC limit would be established for the A80 sector as specified in the Low/Low states of the setline and EBS trawl survey indices. This is a 25% reduction from the 1,745 mt limit currently in place.

		EBS shelf trawl survey index (t)	
		Low < 150,000	High ≥ 150,000
IPHC setline survey index in Area 4ABCDE (WPUE)	High ≥ 11,000	1,745 mt (current limit)	1,745 mt (current limit)
	Medium • 8,000 – 10,999	1,396 mt (20% below current)	1,571 mt (10% below current)
	Low 6,000-7,999	1,309 mt (25% below current)	1,396 mt (20% below current)
	Very Low < 6,000	1,134 mt (35% below current)	1,134 mt (35% below current)

Additional Resources:

North Pacific Fishery Management Council:

<https://www.npfmc.org/>

National Oceanic and Atmospheric Administration, National Marine Fisheries Service:

<https://www.fisheries.noaa.gov/region/alaska>

National Oceanic and Atmospheric Administration, Alaska Fisheries Science Center:

<https://www.fisheries.noaa.gov/region/alaska>

Alaska Department of Fish and Game:

<https://www.adfg.alaska.gov/index.cfm?adfg=fishing.main>

U.S. Regional Fishery Management Councils:

www.fisherycouncils.org

International Pacific Halibut Commission:

<https://www.iphc.int/>

Questions?

David.Witherell@noaa.gov

North Pacific Fishery Management Council

1007 West Third, Suite 400

Anchorage, Alaska 99501

Phone: (907) 271-2809

