

Kodiak Pacific Cod Fisheries Overview

Report to the Alaska Board of Fisheries

January 11–14, 2020

Oral Report: RC 3; Tab 7

Staff Comments: RC 2



List of Fishery Terms

- **NPFMC** = North Pacific Fishery Management Council
- **NMFS** = National Marine Fisheries Service
- **ABC** = Acceptable Biological Catch
- **TAC** = Total Allowable Catch (Federal/parallel catch limit)
- **GHL** = Guideline Harvest Level (State-waters catch limit)
- **Sectors** = Different gear types or processing capabilities used to allocate federal/parallel TAC
- **LLP** = License Limitation Program (equivalent to state's limited entry program)
- **FFP** = Federal Fisheries Permit
- **SSL** = Steller Sea Lion
- **VMS** = Vessel Monitoring System

List of Fishery Terms - Jurisdiction

- **Federal Waters** = Waters from 3–200 nmi offshore under federal management jurisdiction

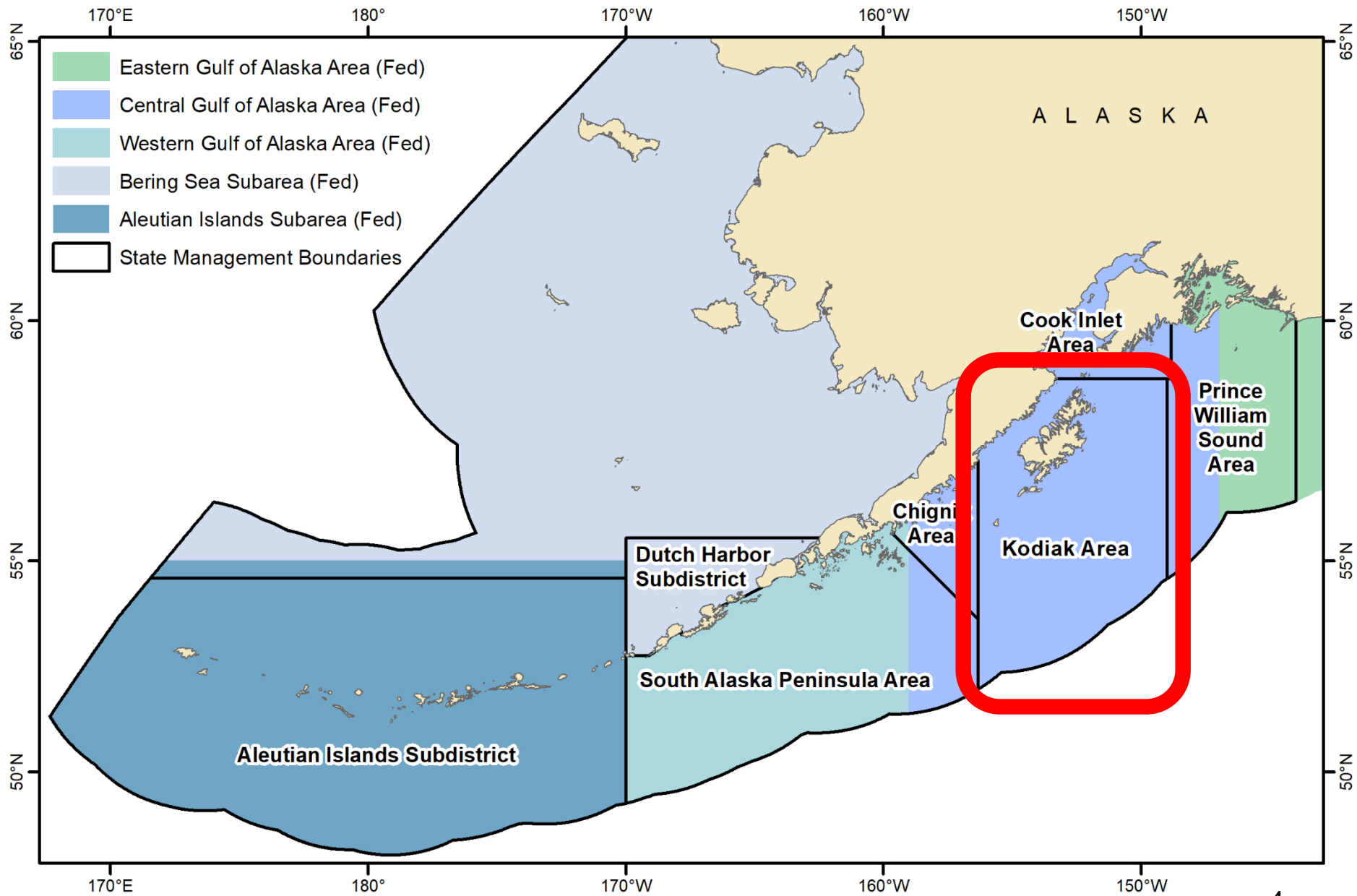
Federal Pacific Cod Groundfish Management Areas (5)

- **EGOA** = Eastern Gulf of Alaska
- **CGOA** = Central Gulf of Alaska
- **WGOA** = Western Gulf of Alaska
- **BS** = Bering Sea
- **AI** = Aleutian Islands

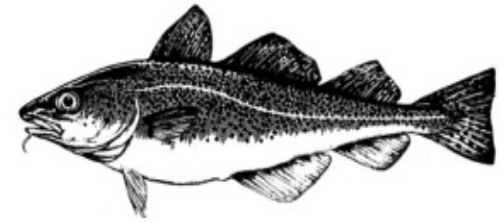
- **State Waters** = Waters from 0–3 nmi offshore under state management jurisdiction

State Pacific Cod Groundfish Management Areas (8)

- Eastern Gulf of Alaska (Southeast Alaska)
- Prince William Sound
- Cook Inlet
- Kodiak
- Chignik
- South Alaska Peninsula
- Dutch Harbor Subdistrict
- Aleutian Islands Subdistrict

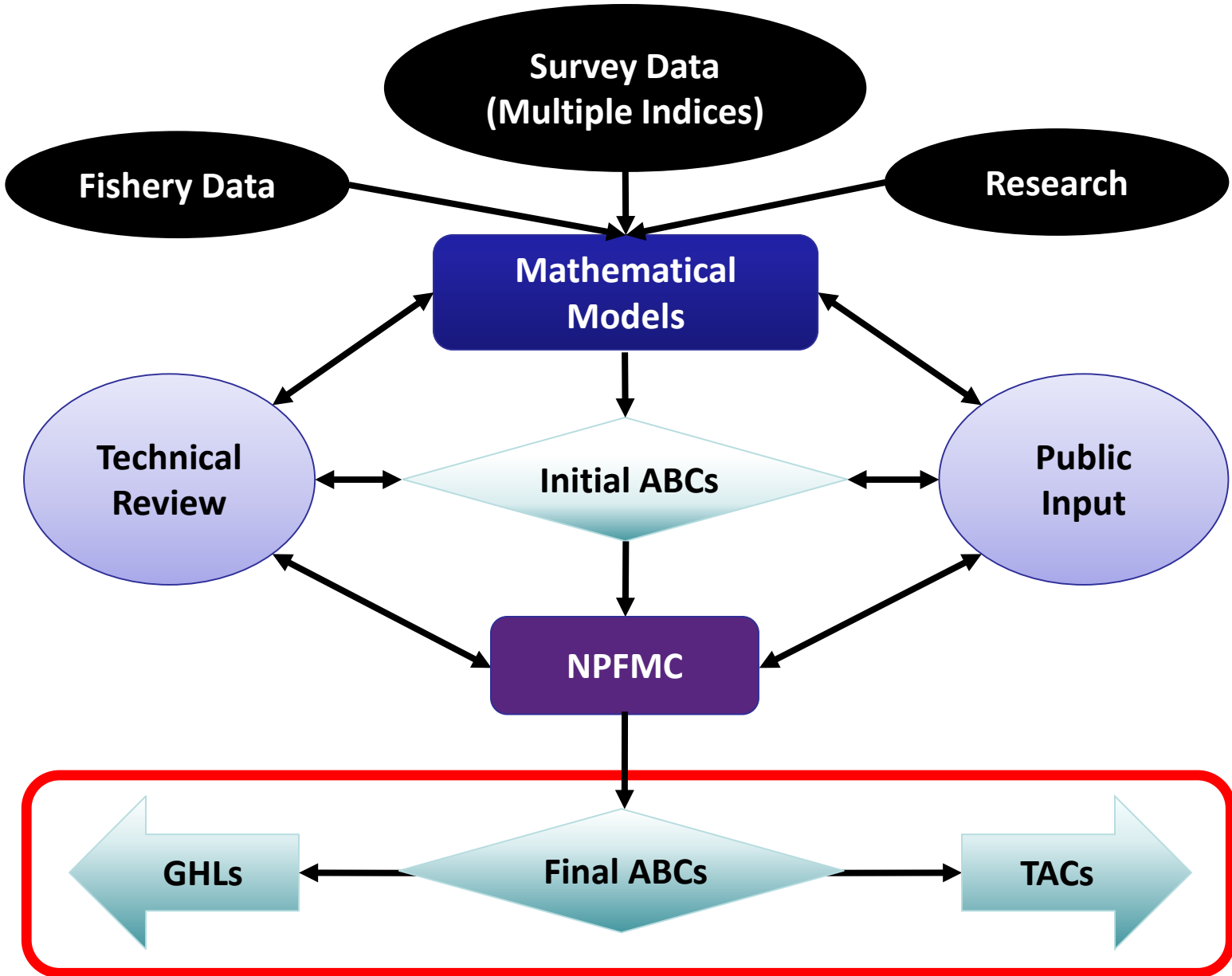


Alaska Pacific Cod Fisheries:



- **Federal:** Federal waters (3–200 nmi) guided by NPFMC process. Harvest deducted from federal TAC.
- **Parallel:** State waters (0–3 nmi) concurrent with adjacent federal fishery and generally adopt federal regulations and management measures as guided by the board process. Harvest deducted from federal TAC.
- **State-Waters (GHL):** State waters (0–3 nmi) guided by the board process. Harvest deducted from state GHL.

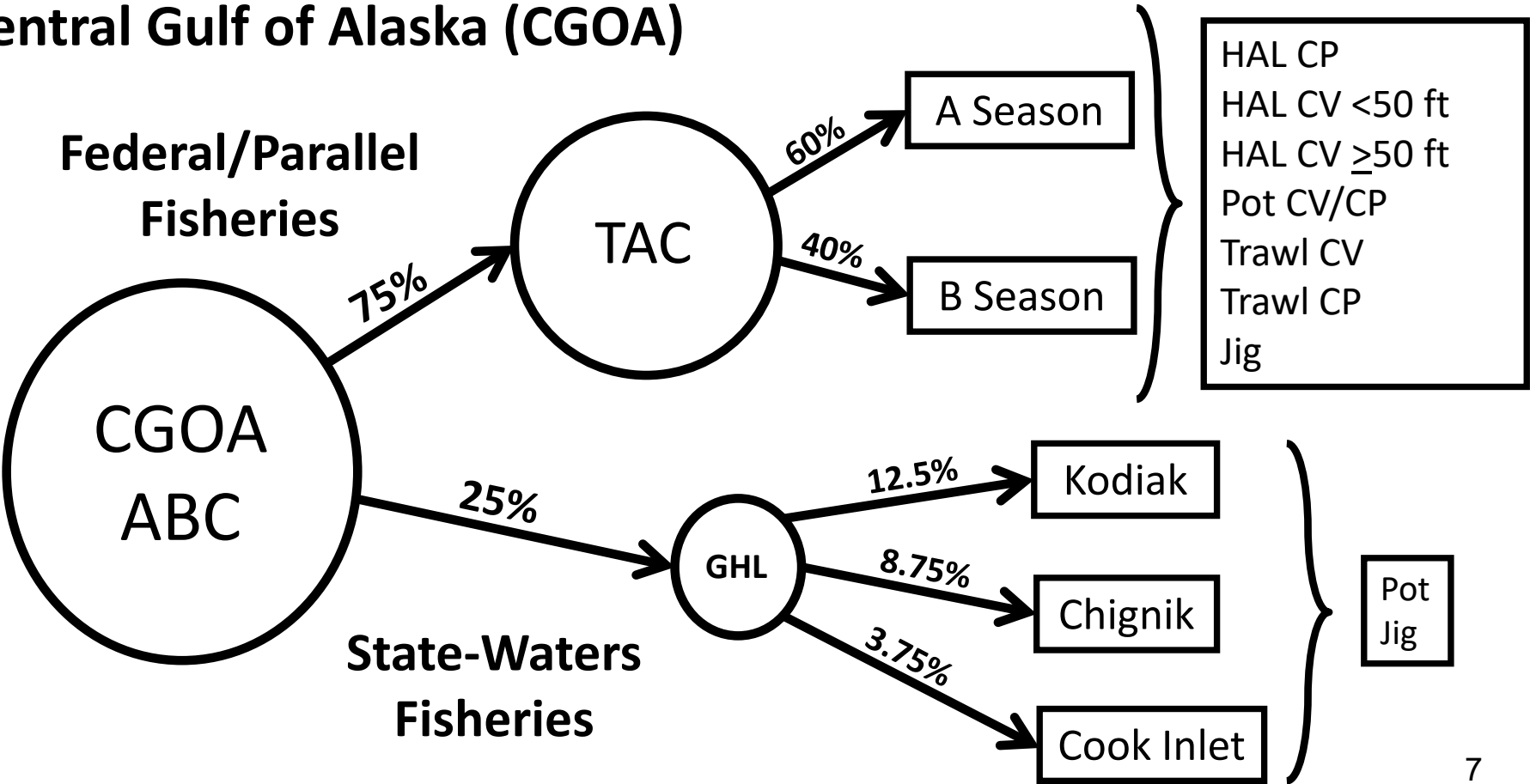
Pacific Cod Stock Assessment Process



Harvest Limits

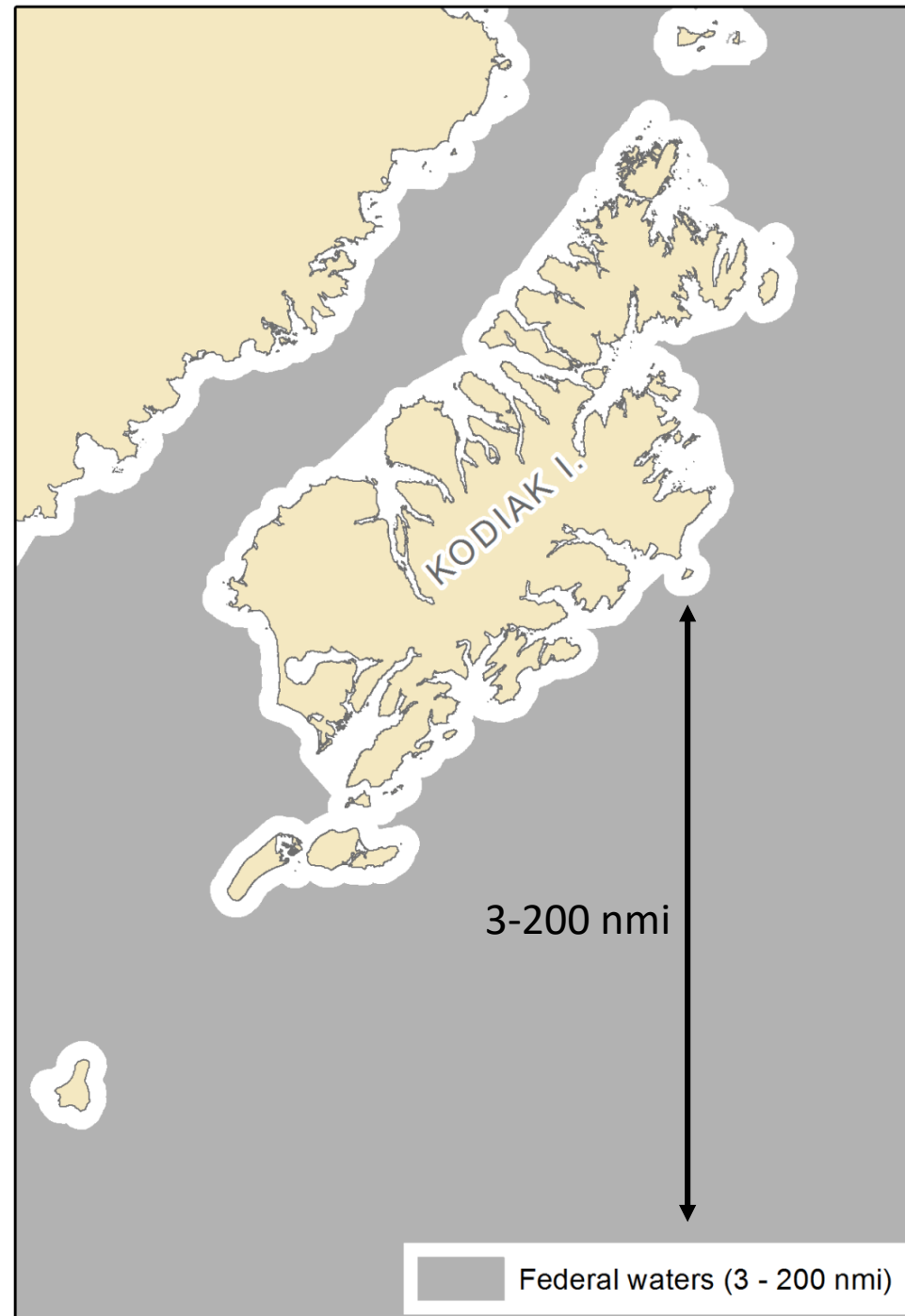
- **ABC** - Acceptable Biological Catch (Federal: EGOA, CGOA, WGOA, BS, AI)
- **TAC** - Total Allowable Catch (Federal/Parallel Fisheries)
- **GHL** - Guideline Harvest Level (State-Waters Fisheries)

Central Gulf of Alaska (CGOA)



CGOA Federal Pacific Cod Fishery

- Federal waters 3–200 nmi
- Harvest limit (TAC) based on 75% of federal Pacific cod ABC
- Gear sectors: trawl, longline, pot, and jig gear (CV and CP)
- A and B seasons (Jan 1 and Sep 1)
- No gear limits, vessel length limited to 125 ft
- Limited access (FFP and LLP required)
- Steller sea lion (SSL) protection measures (no fishing zones and VMS)
- Observer requirements



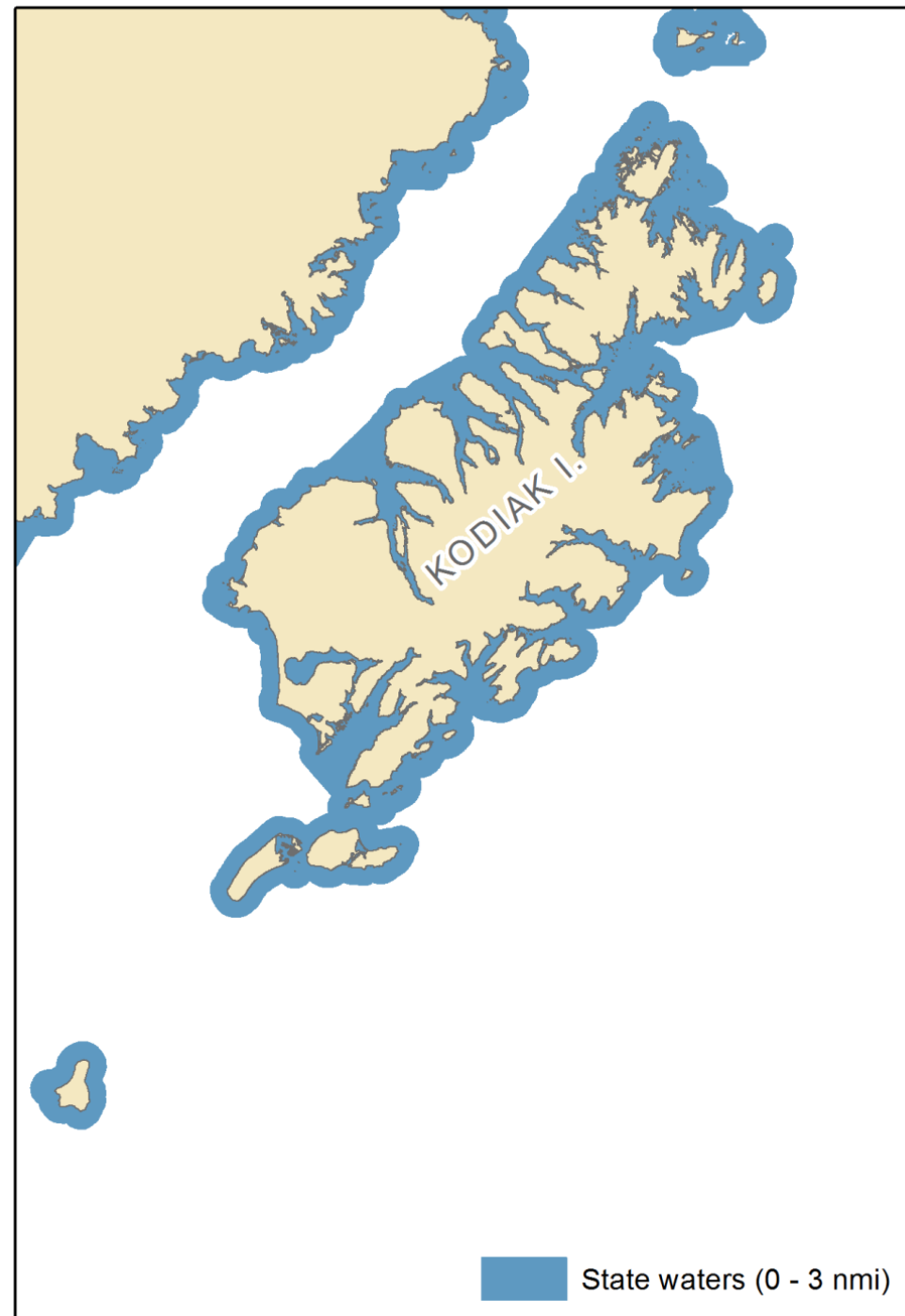
Kodiak Area Parallel Pacific Cod Fishery

- State waters 0–3 nmi
- Opened concurrent to federal fishery by state EO
- Shared TAC with federal fishery
- Gear sectors: trawl, longline, pot and jig gear (bottom trawl restrictions)
- A and B seasons (Jan 1 and Sep 1)
- No gear limits, vessel length limited to 125 ft
- Open access (FFP/LLP not required)
- Most SSL protection measures adopted
- Observer requirements only for federally permitted vessels



Kodiak Area State-Waters Pacific Cod Fishery

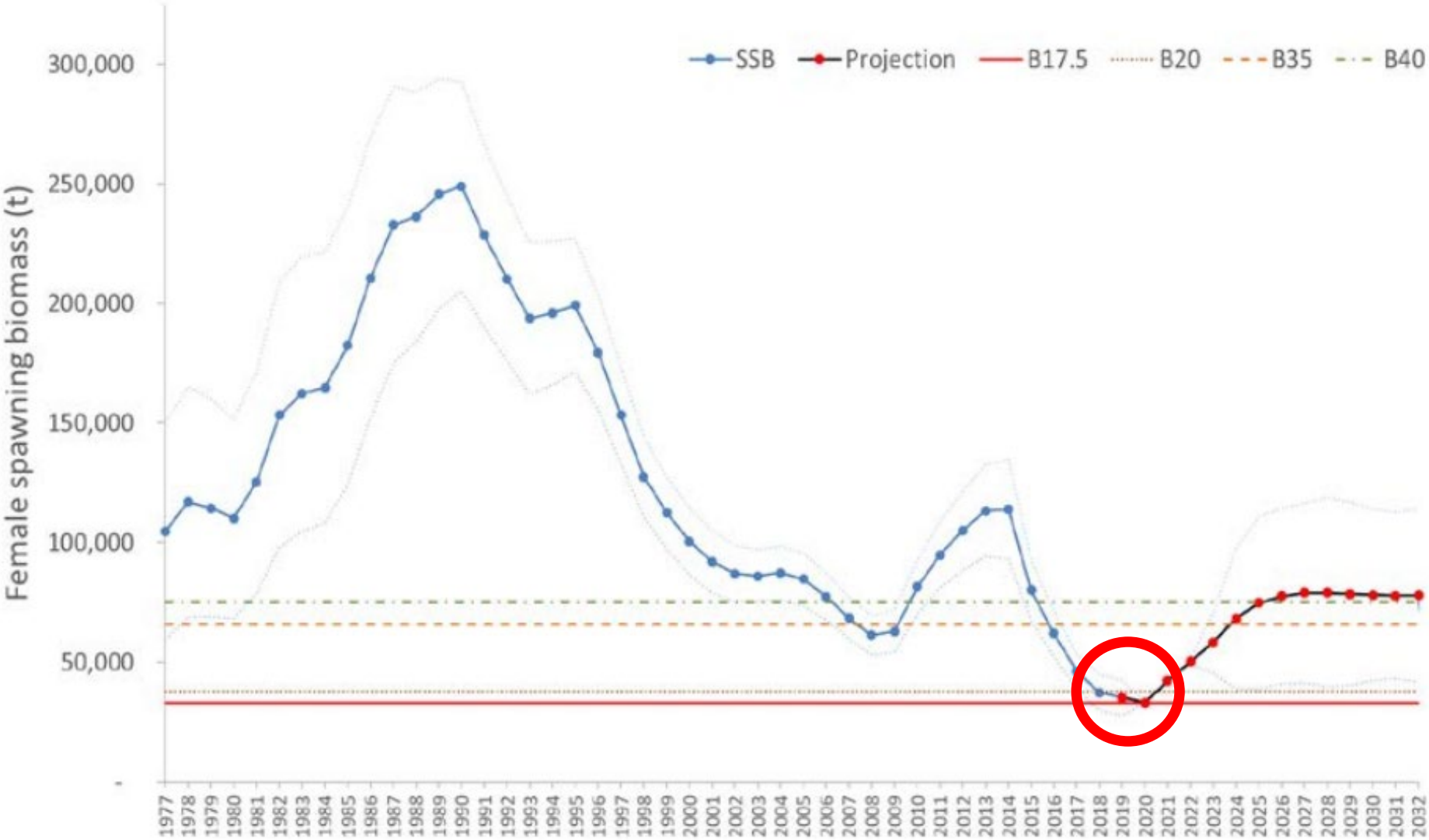
- State waters 0–3 nmi
- Harvest limits (GHL) based on 12.5% of federal Pacific cod ABCs
- Seasons open after federal/parallel fisheries close
- Pot and jig gear only
- Gear limited to 60 pots or 5 jig machines
- No vessel length limit
- Open access – exclusive registration
- SSL rookery protection only
- No observer requirements



OVERVIEW OF CURRENT CGOA STATE-WATERS FISHERIES

	Kodiak Area	Chignik Area	Cook Inlet Area
% CGOA ABC	12.5%	8.75%	3.75%
2019 GHL	2.11 million pounds	1.48 million pounds	634,000 pounds
Gear Types	Pot and jig	Pot and jig	Pot and jig
GHL Allocations	Pot: 50% (1.06 mil) Jig: 50% (1.06 mil)	Pot: 90% (1.33 mil) Jig: 10% (148k)	Pot: 85% (539k) Jig: 15% (95k)
Opening date	Pot: 7 days after CGOA A season pot close Jig: 48 hours after CGOA jig A season close or March 15	Pot: 7 days after CGOA pot A season close or March 1 Jig: March 15	Pot: 24 hours after CGOA pot A season close Jig: 48 hours after CGOA jig A season close
GHL rollover date	After CGOA pot gear B season close	August 14	September 1
Registration	Exclusive	Superexclusive	Exclusive
Maximum vessel length	None	58 ft	None
Vessel Count (2015–2019)	Pot: 23 Jig: 54	Pot: 9 Jig: <1	Pot: 11 Jig: 4

Gulf of Alaska Pacific Cod Biomass



Source: Barbeaux et al.

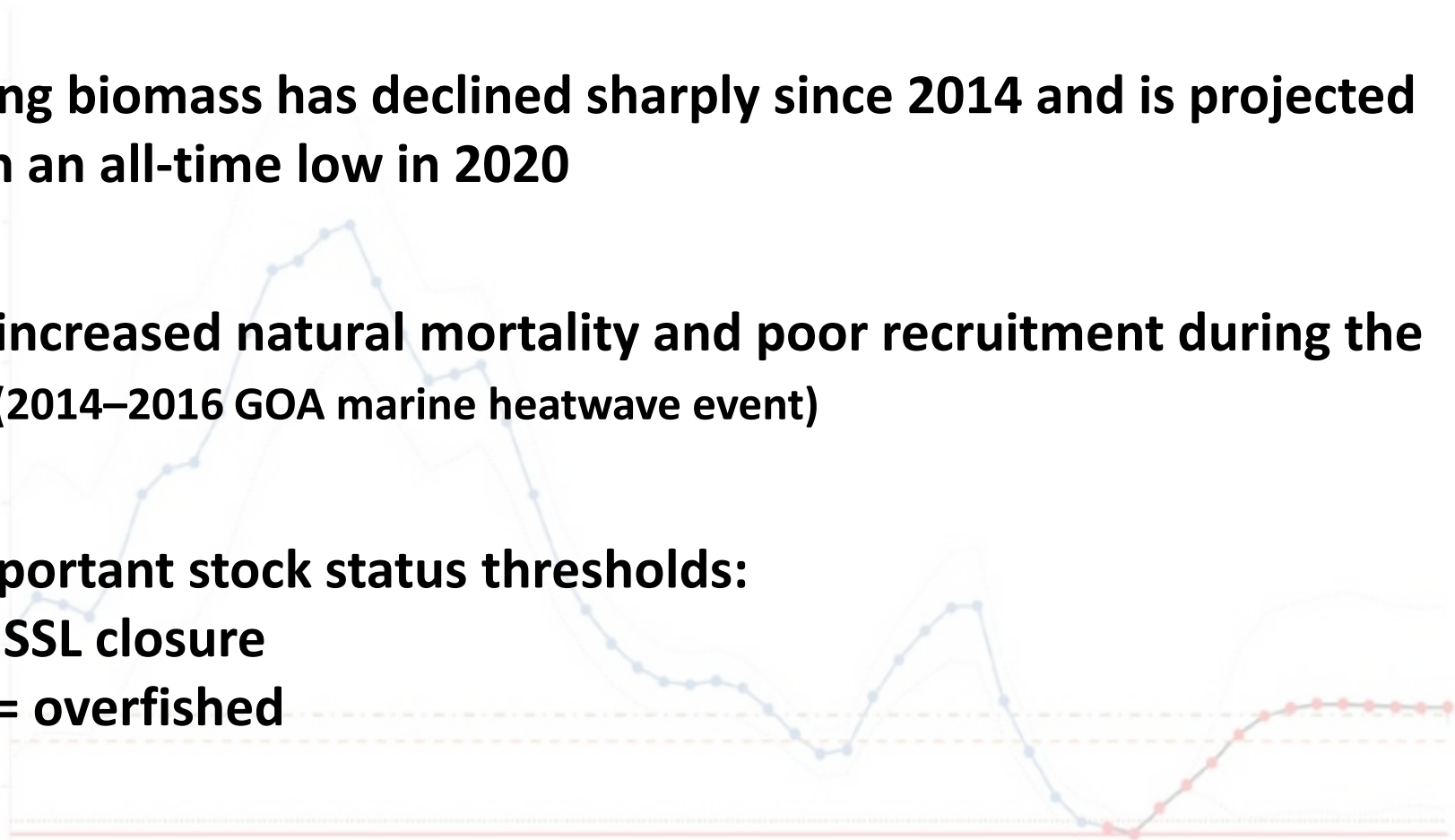
- Spawning biomass has declined sharply since 2014 and is projected to reach an all-time low in 2020

- Due to increased natural mortality and poor recruitment during the “Blob” (2014–2016 GOA marine heatwave event)

- Two important stock status thresholds:

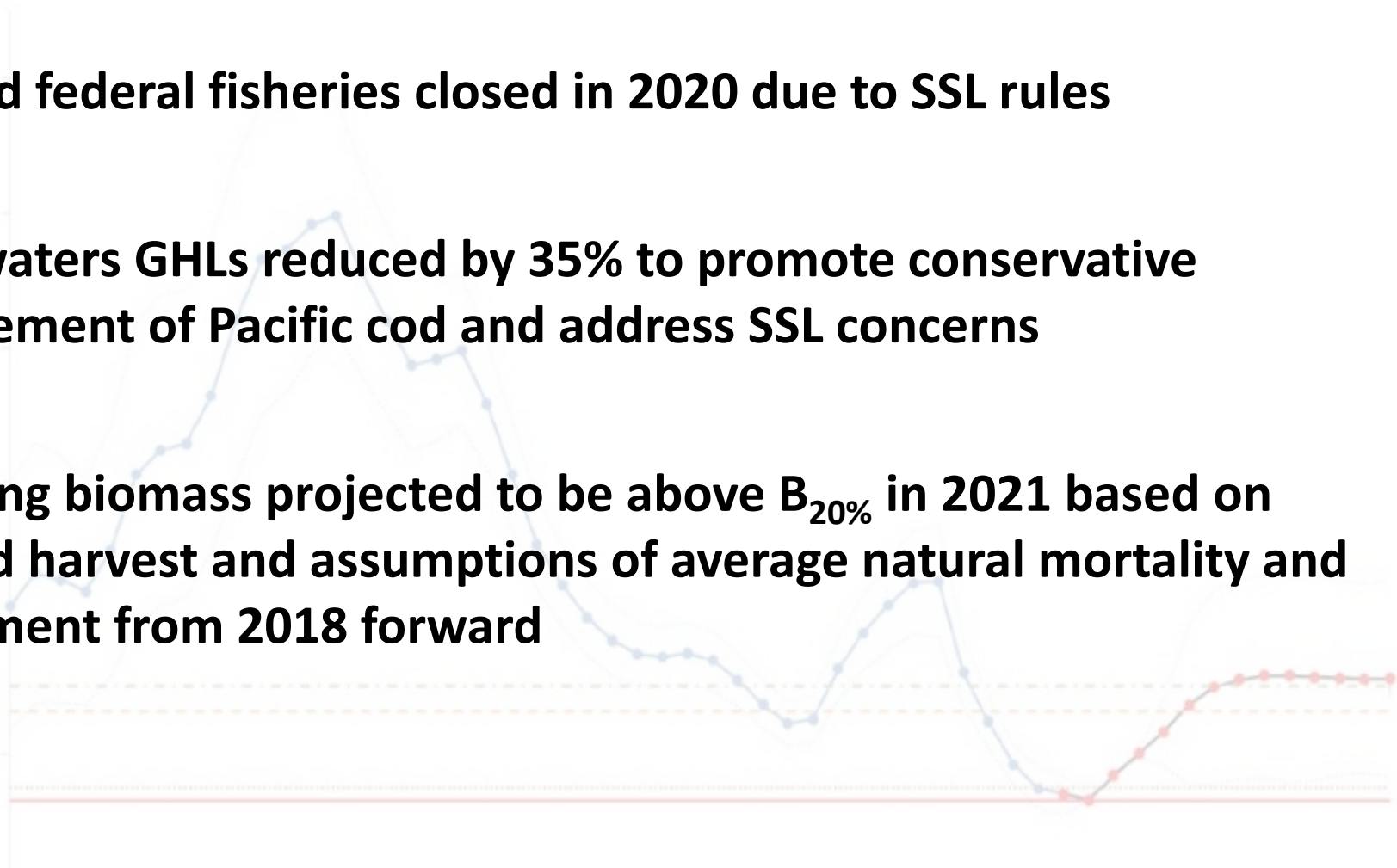
$B_{20\%}$ = SSL closure
 $B_{17.5\%}$ = overfished

- In 2020, spawning biomass is projected to be $B_{17.6\%}$
(Below the SSL threshold but above the overfished threshold)



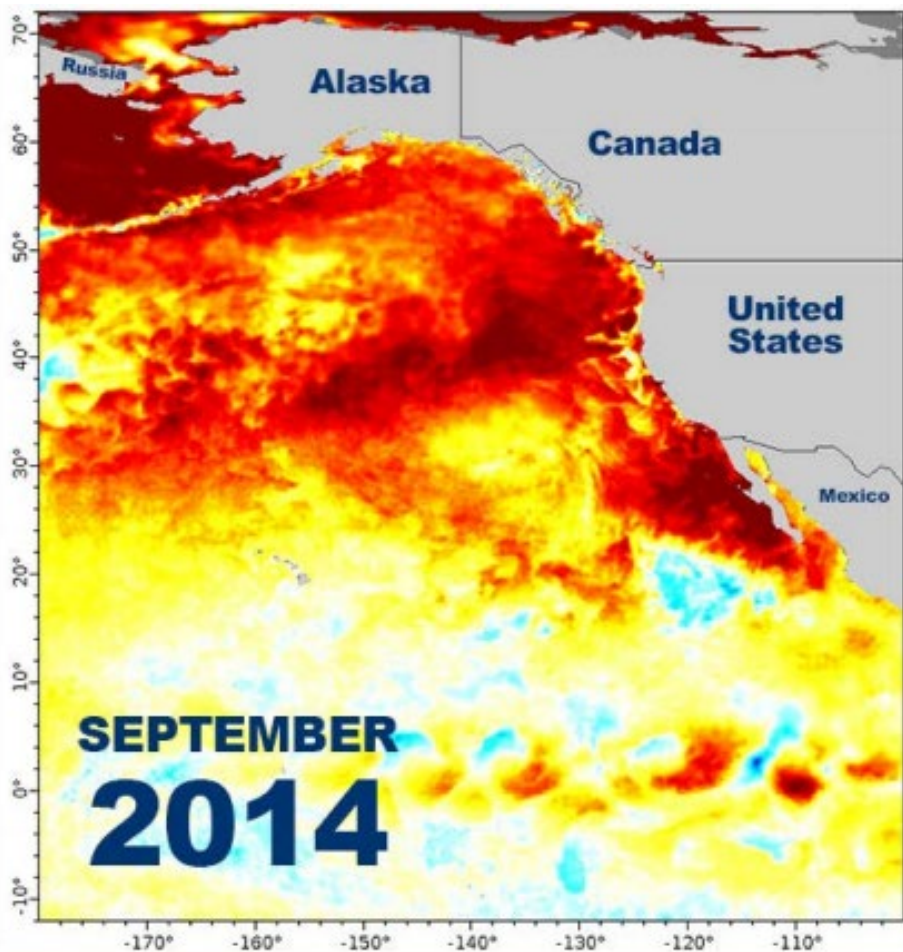
Therefore...

- **Directed federal fisheries closed in 2020 due to SSL rules**
- **State-waters GHIs reduced by 35% to promote conservative management of Pacific cod and address SSL concerns**
- **Spawning biomass projected to be above $B_{20\%}$ in 2021 based on reduced harvest and assumptions of average natural mortality and recruitment from 2018 forward**

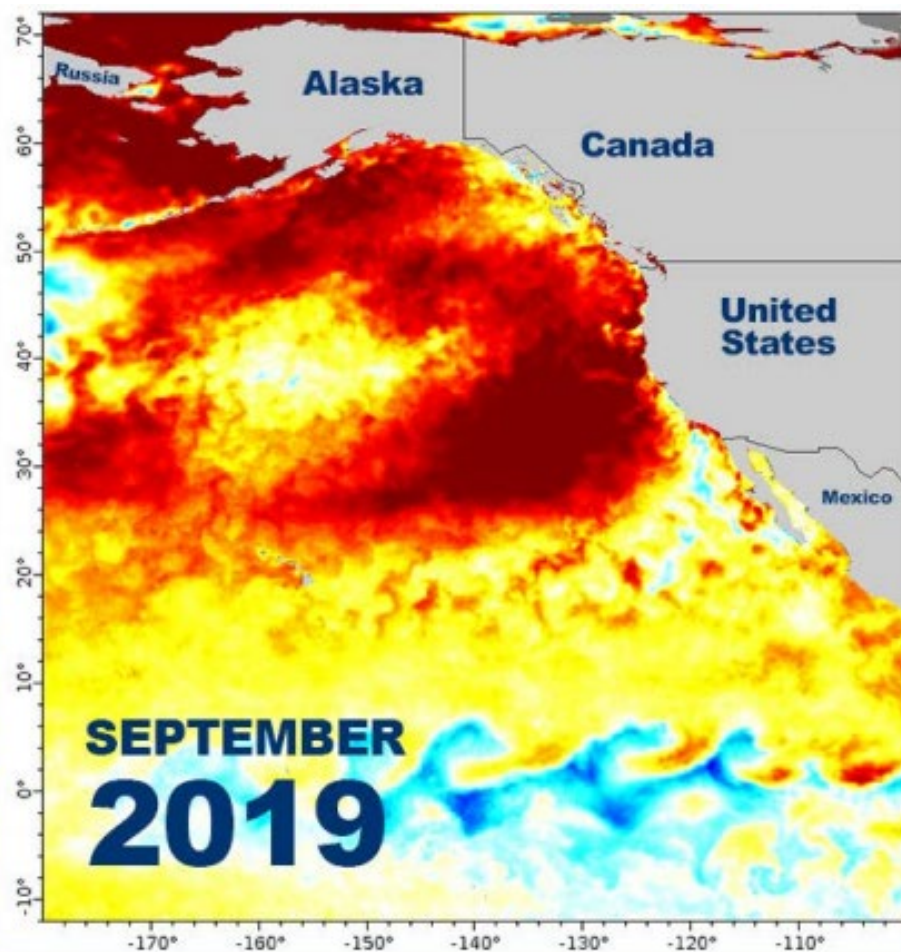


But...

- New marine heatwave event began September 2018
- 2019 summer sea surface temps were warmer than during the “Blob” years (2014–2016)



sea surface temperature anomaly (Celsius)
NOAA Global Coral Bleaching Monitoring Products: Daily 5-km
(2014-09-01T12:00:00Z)
Data courtesy of NOAA Coral Reef Watch



sea surface temperature anomaly (Celsius)
NOAA Global Coral Bleaching Monitoring Products: Daily 5-km
(2019-09-02T12:00:00Z)
Data courtesy of NOAA Coral Reef Watch

2020 Kodiak Finfish Meeting

Pacific Cod Proposals (7)

Jig gear fishery – 2 Proposals

Proposals 39 - Exclusivity

Proposal 50 - Gear limits

State-waters gear allocations – 2 Proposals

Proposals 51 - GHL gear allocation

Proposal 54 - GHL rollover

State-waters with federal/parallel overlap – 2 Proposals

Proposals 52 - ABC allocation and GHL gear allocation

Proposals 53 - Interannual GHL rollover

State-waters season dates – 1 Proposal

Proposal 283 - AIS season dates and vessel length limits

Proposal 39

Designate all registration areas as nonexclusive for state-waters Pacific cod jig gear fisheries

- Allow jig gear vessels to fish in multiple areas during the same calendar year

Proposal 50

Increase gear limits in Kodiak Area jig gear fisheries from 5 jig machines to 6 jig machines

- Applies to all vessels in state-waters Pacific cod and state-managed black rockfish fisheries and to non-FFP vessels in the parallel Pacific cod fishery
- Vessels in the parallel Pacific cod fishery with FFPs would be subject to federal gear limits

Proposal 51

Change GHL gear allocation between pot and jig gear from 50/50 to 60/40 and annually increase or decrease jig gear allocation by 5% based on previous year's fishery performance

- Pot gear allocation would not exceed 80% or be reduced below 50%
- Jig gear allocation would not exceed 50% or be reduced below 20%

Proposal 54

Reopen pot gear fishery on May 8 and make 50% of unharvested jig gear GHL allocation available for harvest by pot gear vessels

- Provides pot gear vessels access to a portion of the jig gear GHL allocation but does not reallocate GHL

Proposal 52

Increase Kodiak Area state-waters fishery's portion of CGOA ABC by 5% (from 12.5% to 17.5%) and make the additional 5% available only to pot gear vessels by changing the GHL gear allocation between pot and jig gear from 50/50 to 65/35

- 82% increase in state-waters pot gear GHL
- 2% decrease in state-waters jig gear GHL
- 5% decrease in federal TAC

Proposal 53

Roll unharvested jig gear GHL allocation to the pot gear vessel's allocation during following year's state-waters fishery

- Annually variable CGOA ABC apportionment
- Increase GHLs and decrease TACs

Proposal 283

Amend season dates for the Aleutian Islands Subdistrict (AIS) state-waters Pacific cod fishery to exclude vessels greater than 60 ft in length prior to March 15

- Board generated proposal

