

Pacific halibut bycatch in the groundfish fishery (2002-2009)

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Pacific halibut bycatch

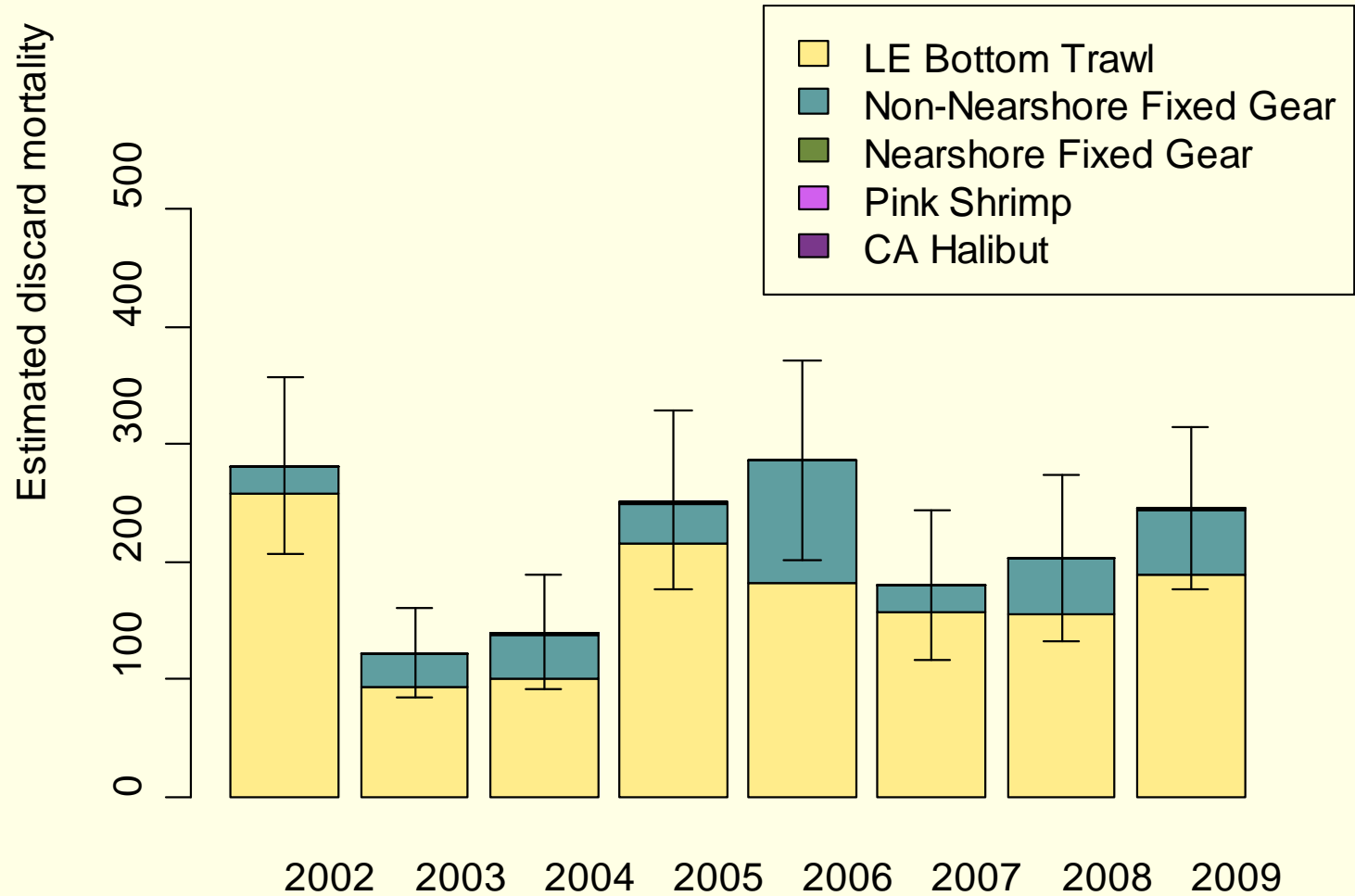
- Estimated for:
 - 2002-2009
 - **All sectors** observed by the West Coast Groundfish Observer Program (WCGOP)



Sectors included

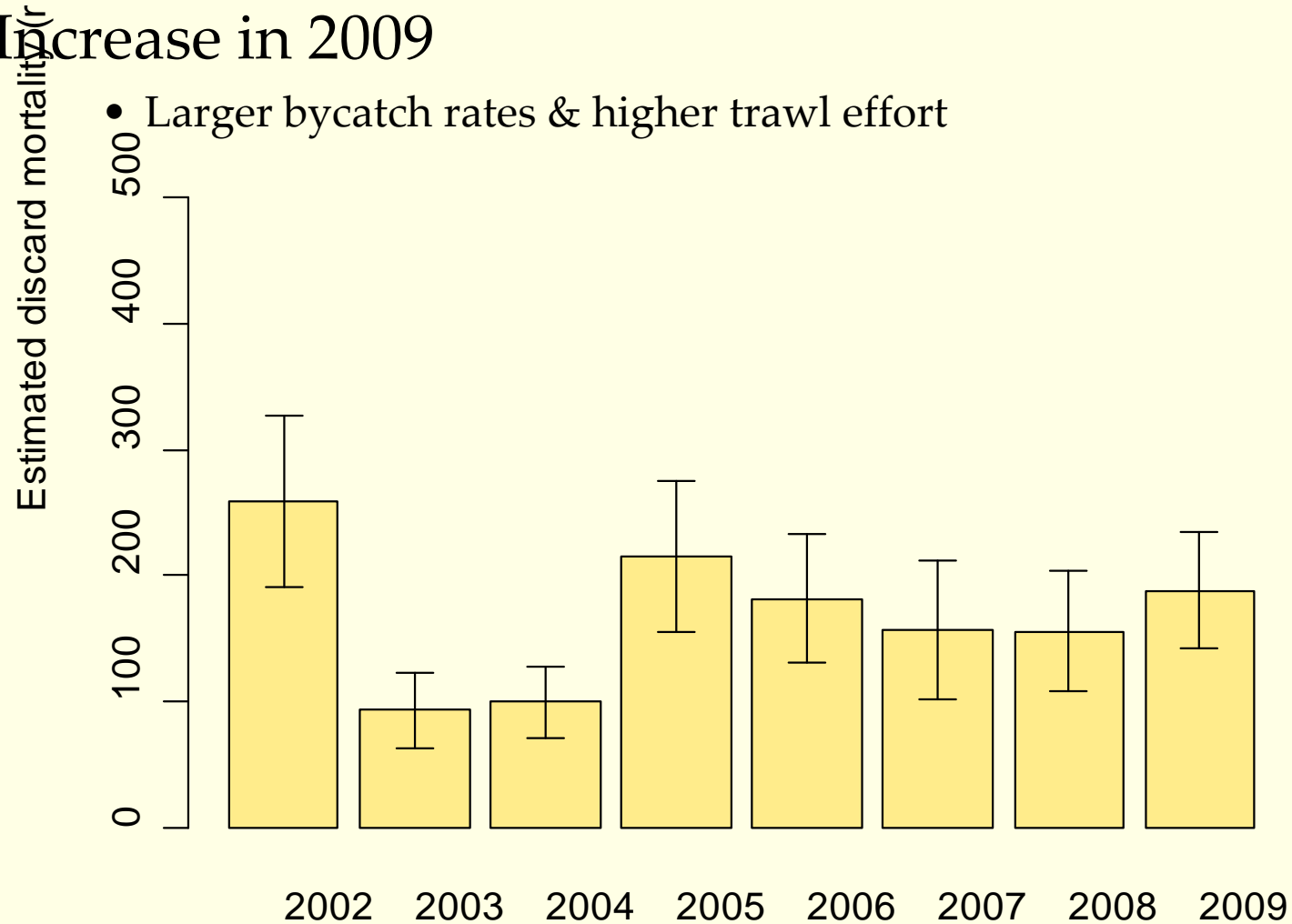
LE bottom trawl
Non-nearshore fixed gear
Nearshore fixed gear
Pink shrimp
CA halibut

Pacific halibut bycatch



LE Bottom Trawl

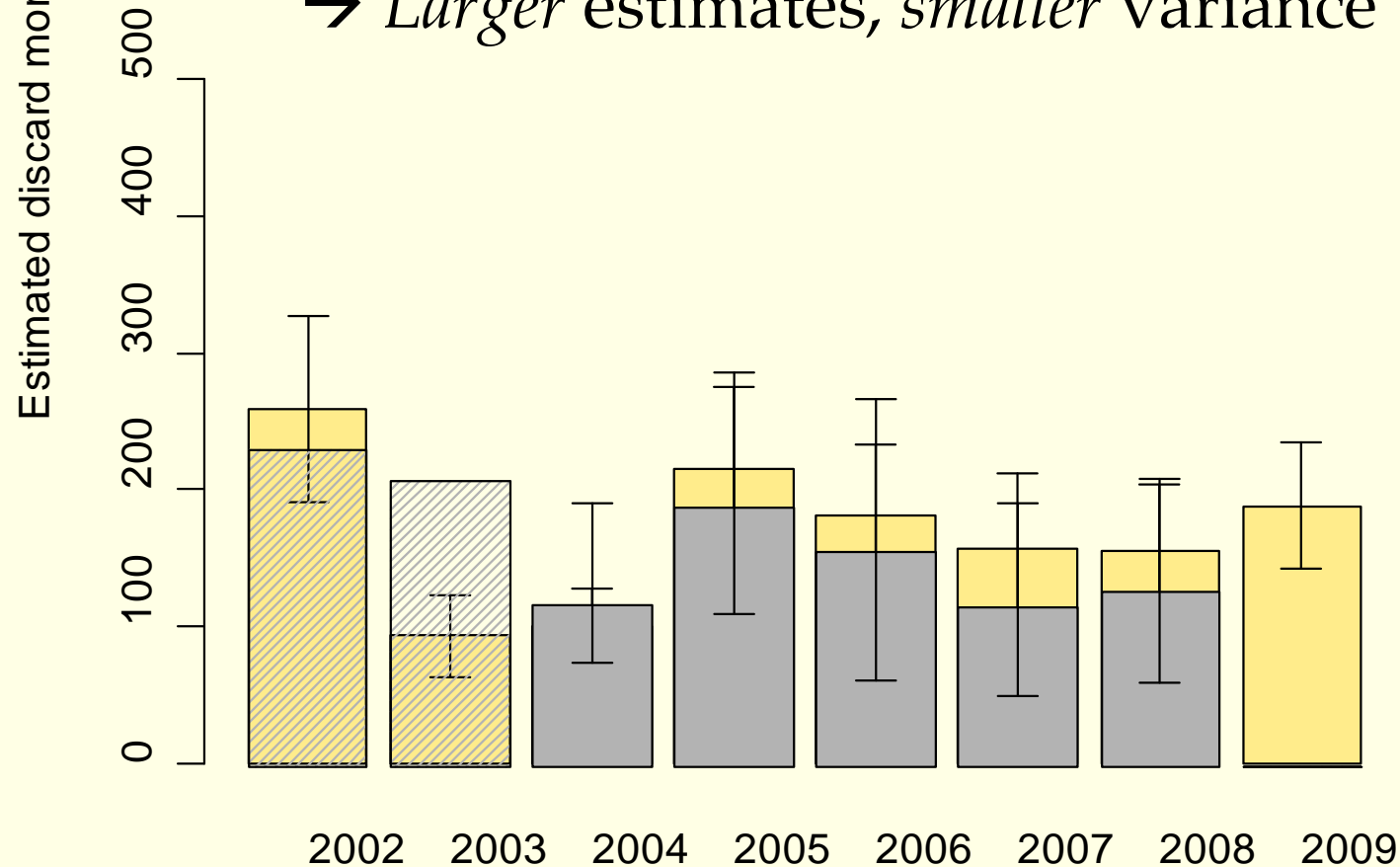
- Increase in 2009



LE Bottom Trawl

- Changes in methodology

→ *Larger estimates, smaller variance*



LE Bottom Trawl

- *Why are they different?*
 - Inclusion of CA data
 - Logbook tow time adjustment
 - Required b/c $< 100\%$ of logbooks are submitted
 - Changed to be consistent with other total mortality reports
 - Stratification
 - Broader
 - Identified through model selection process

LE Bottom Trawl

Stratification selected

Latitude: North / south of Point Chehalis, WA

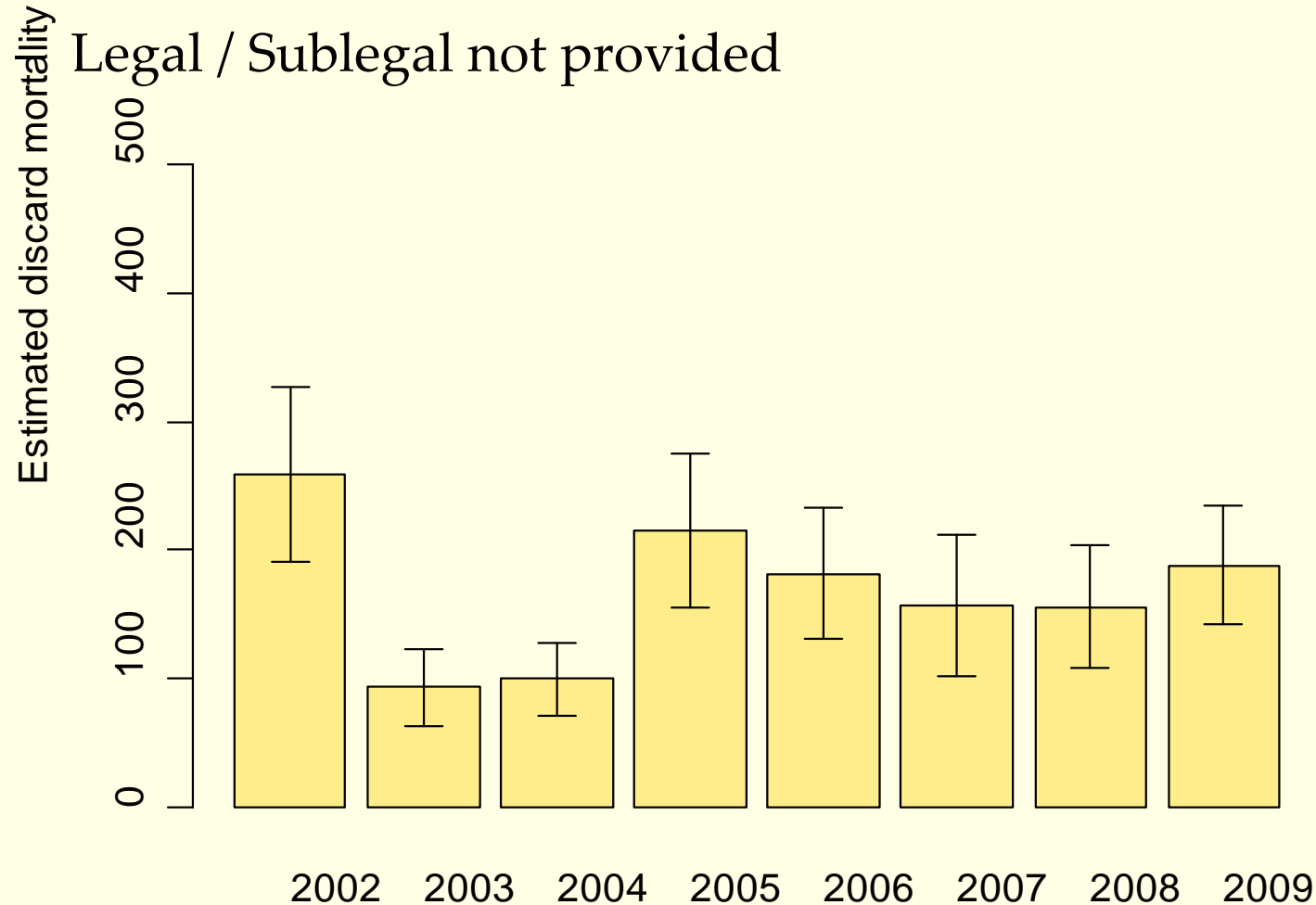
Depth: Shallower / deeper than 60 fm

CPUE of other species: Less than / greater than 125 lbs/hr of species with a positive relationship to Pacific halibut CPUE

- arrowtooth flounder
- petrale sole
- lingcod
- Pacific cod
- skates
- yellowtail rockfish
- Pacific ocean perch

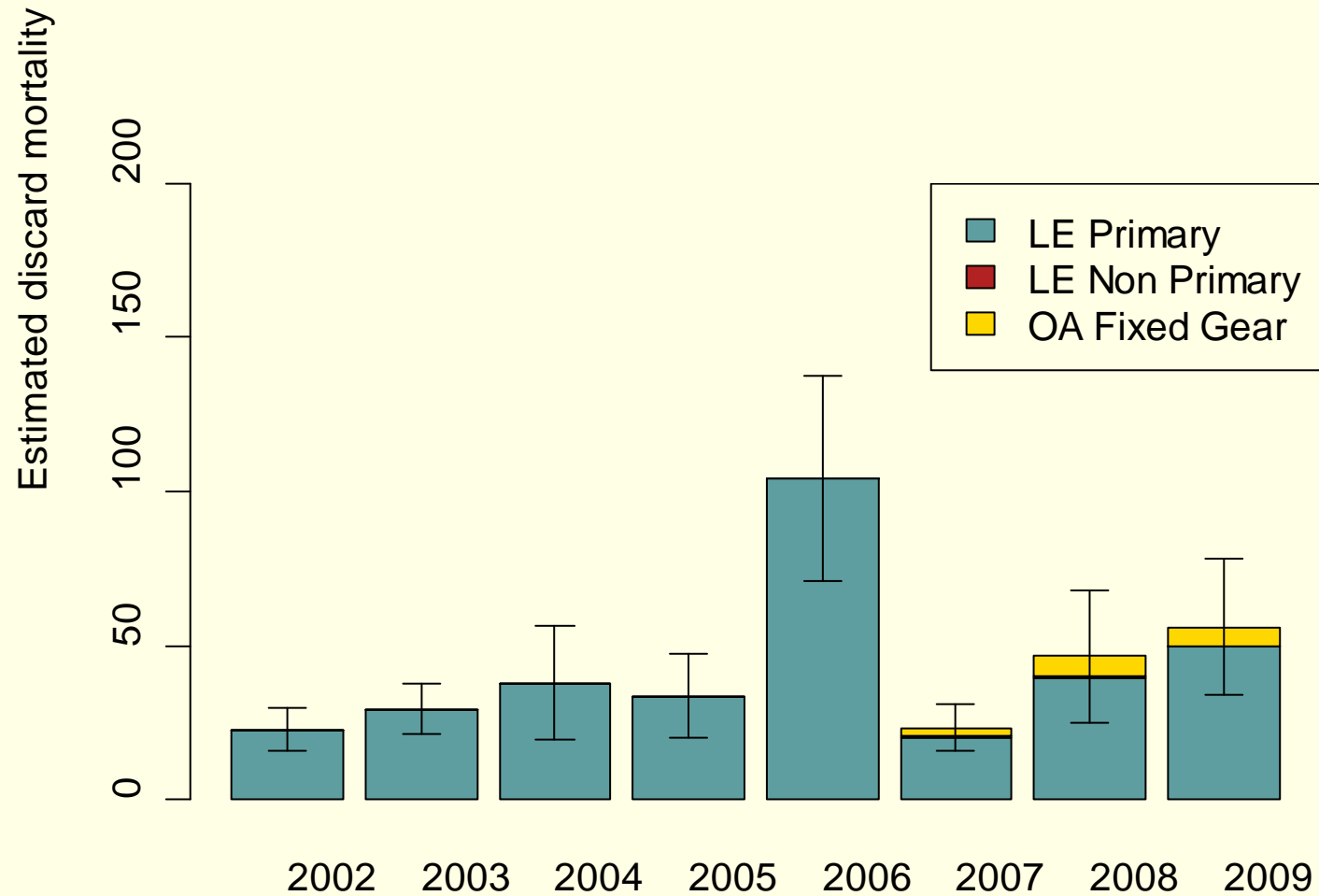
LE Bottom Trawl

- Based on consultation with the IPHC

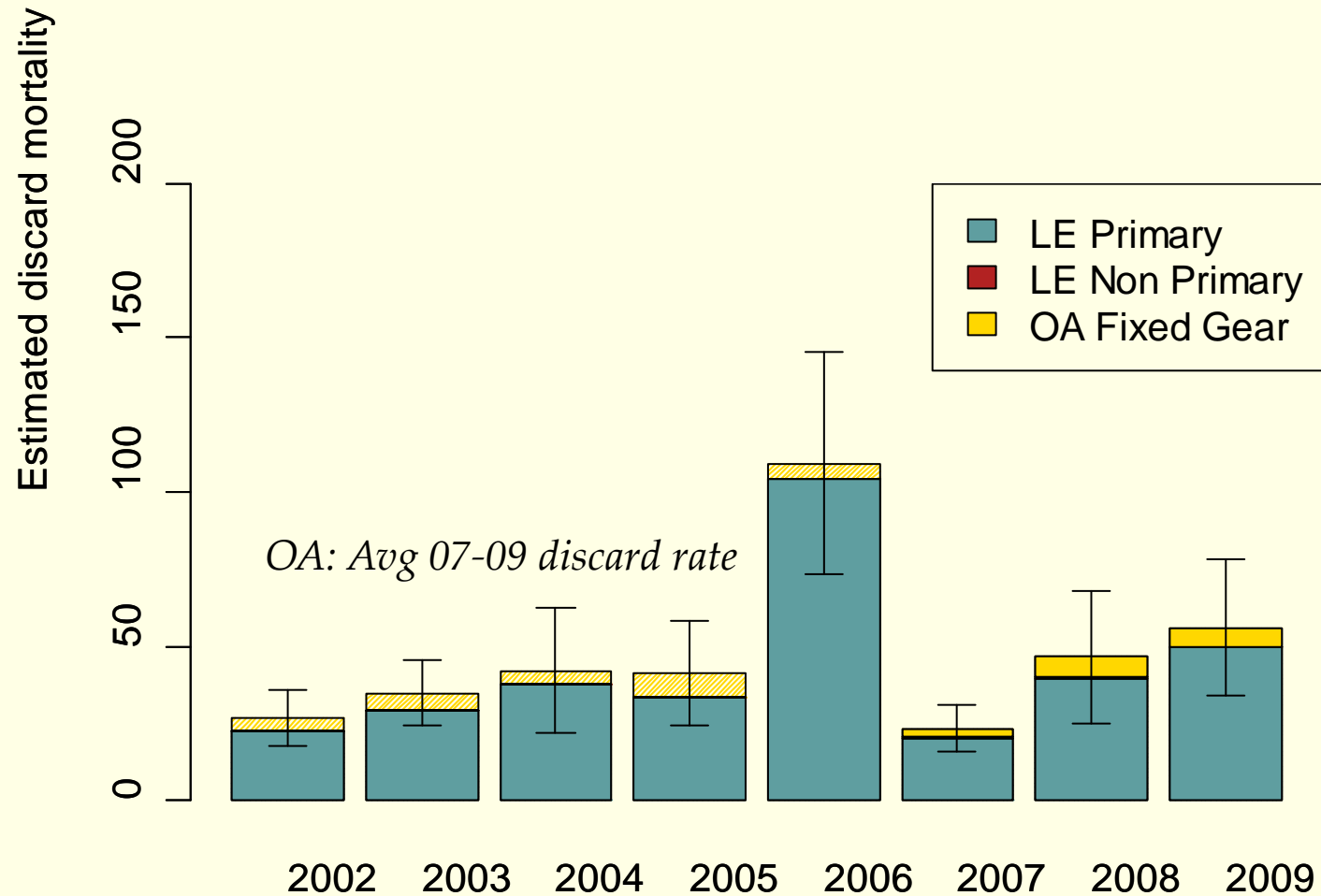


Non-Nearshore Fixed Gear

Non-Nearshore Fixed Gear



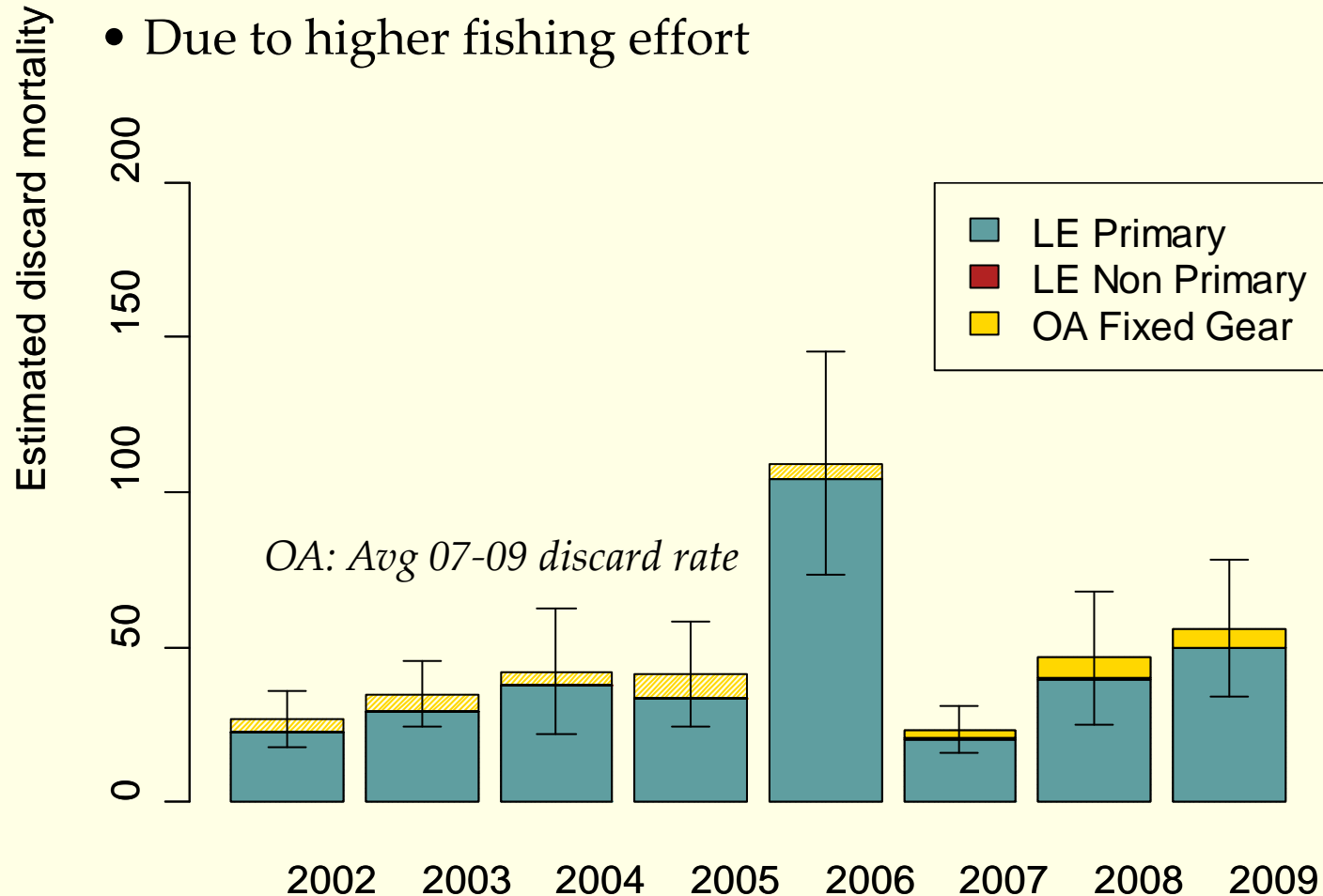
Non-Nearshore Fixed Gear



Non-Nearshore Fixed Gear

- Increase in 2009

- Due to higher fishing effort



Non-Nearshore Fixed Gear

- Methodology also reviewed
 - Evaluation supported previous approach

Stratification

LE Sablefish Primary (longline)

- *Latitude*: North / south of Point Chehalis, WA

All other sectors / gears

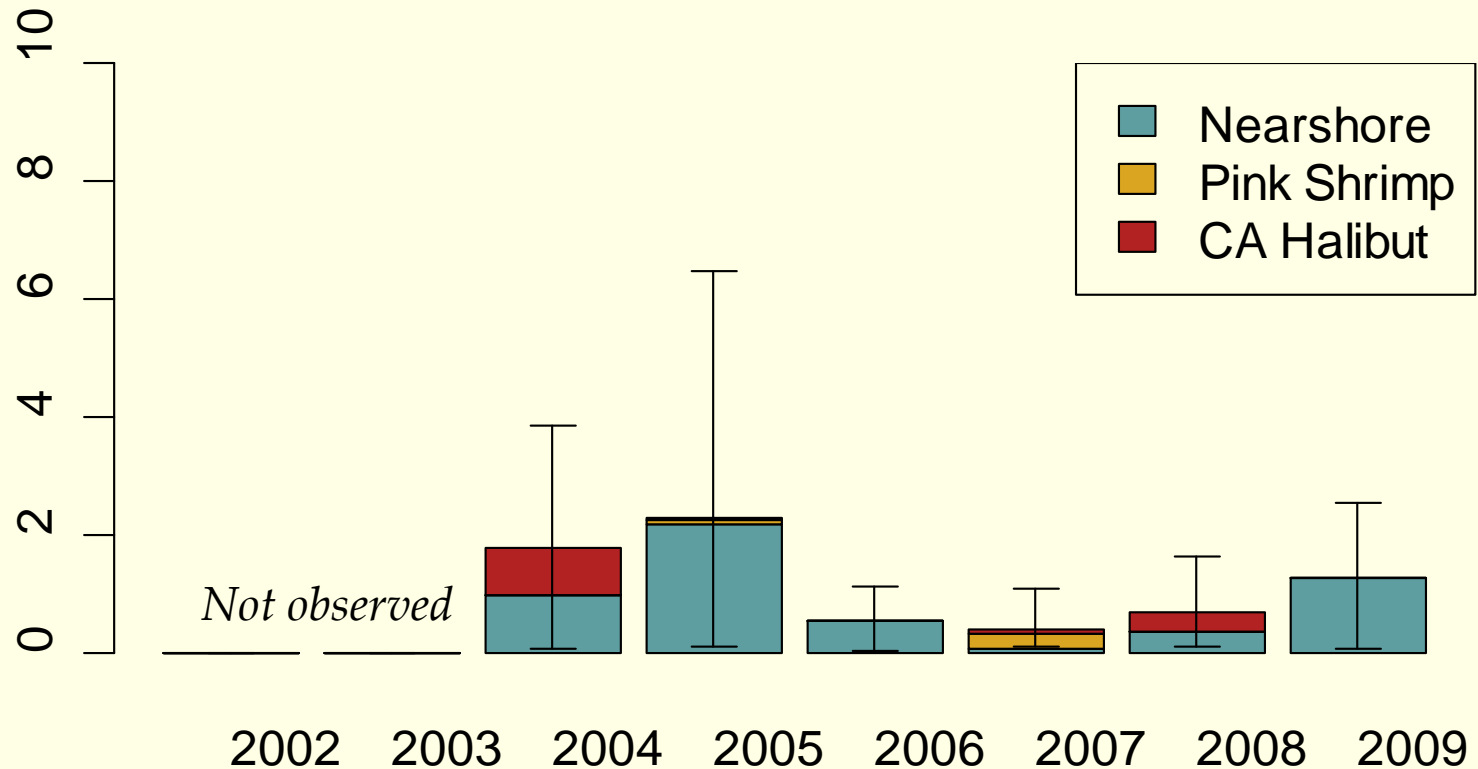
- Insufficient data for additional strata

Other sectors

- Minor source of bycatch
 - Pink shrimp – well below 25,000 lbs

Estimated gross discard

No mortality applied



Summary

- Mortality increased in 2009
- Revised trawl methodology
 - *Higher estimates, smaller variance*

Sectors included	Sectors not included
LE bottom trawl	At-sea hake
Non-nearshore fixed gear	Shoreside hake
Nearshore fixed gear	WA tribal
Pink shrimp	Research
CA halibut	Incidental

Questions

