



NOAA
FISHERIES

SEFSC

Gulf of Mexico Gray Snapper Benchmark Assessment: data inputs

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SEFSC Miami

GMFMC SSC Meeting

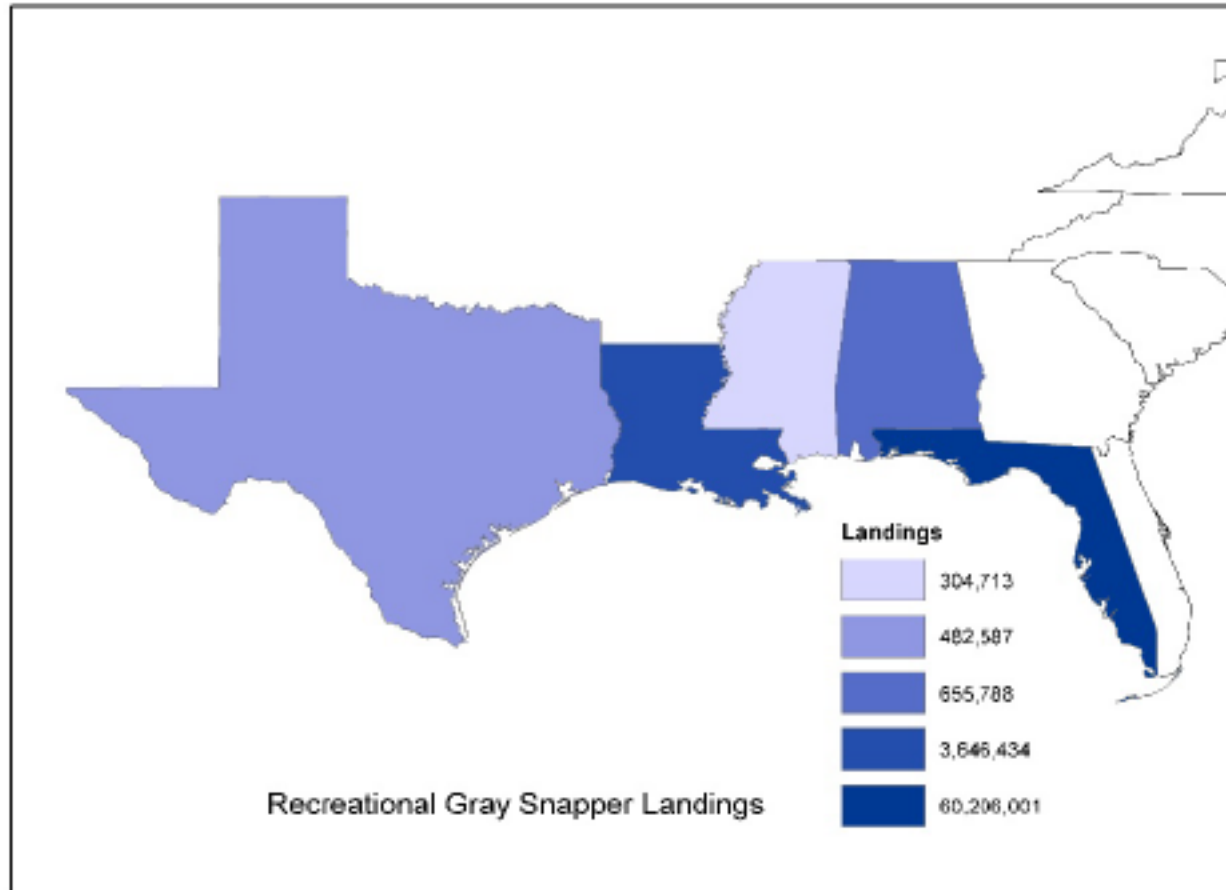
Tampa, FL

May 30-June 1, 2018

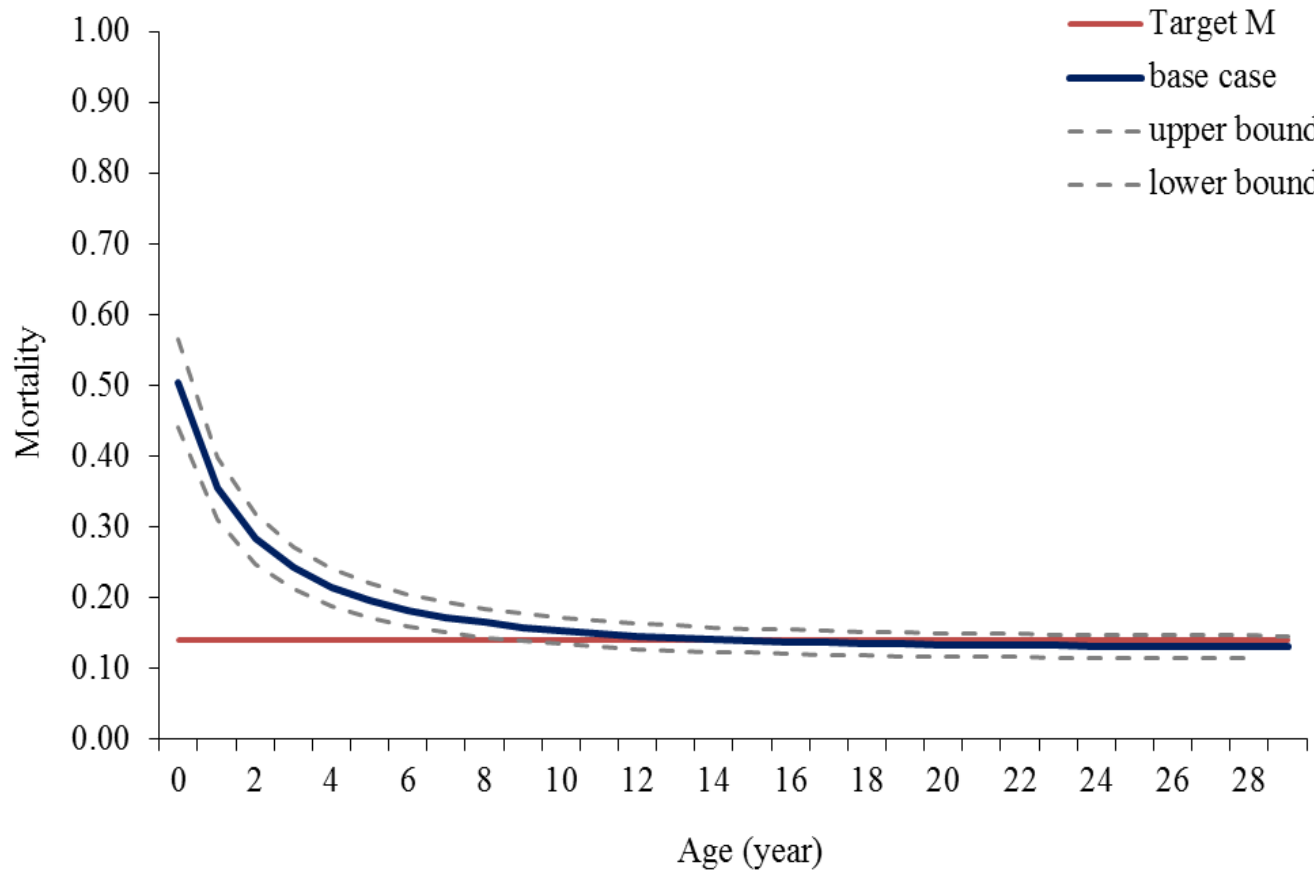


DATA REVIEW: spatial frame Monroe Co, FL-Texas

Figure 4.10.1. Estimated number of Gulf of Mexico gray snapper landings from MRIP (1981-2015), SRHS (1981-2015), TPWD (1981-2015) and LA Creel (2014) by state (a),

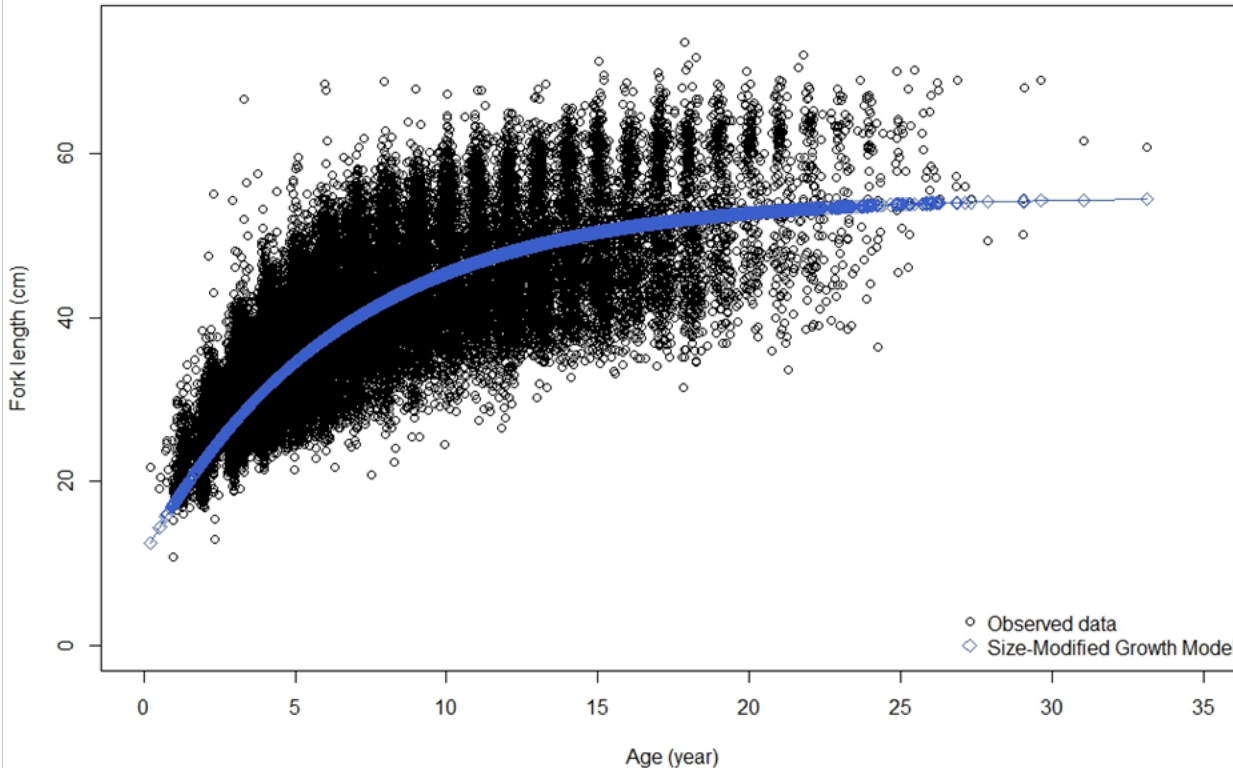


DATA REVIEW: Natural Mortality



- Age-based (Lorenzen)
- Target $M = 0.1487$ (Hoenig)
- Max age = 28

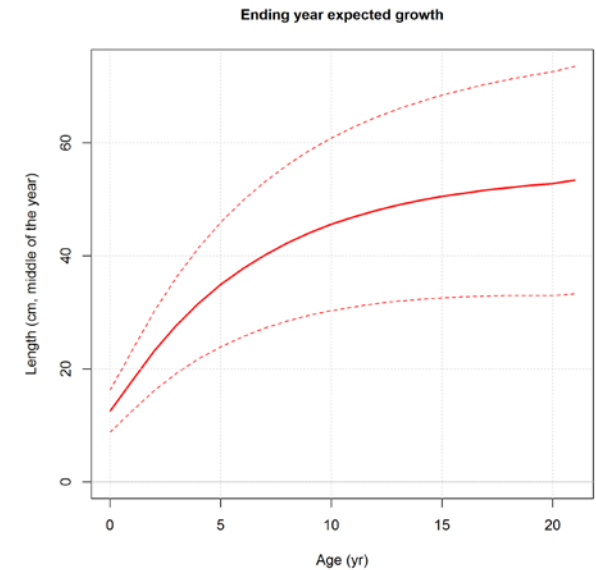
DATA Review: Growth – All Samples



$L_{\infty} = 54.69$ cm FL,

$k = 0.1546$,

$t_0 = -1.4554$.



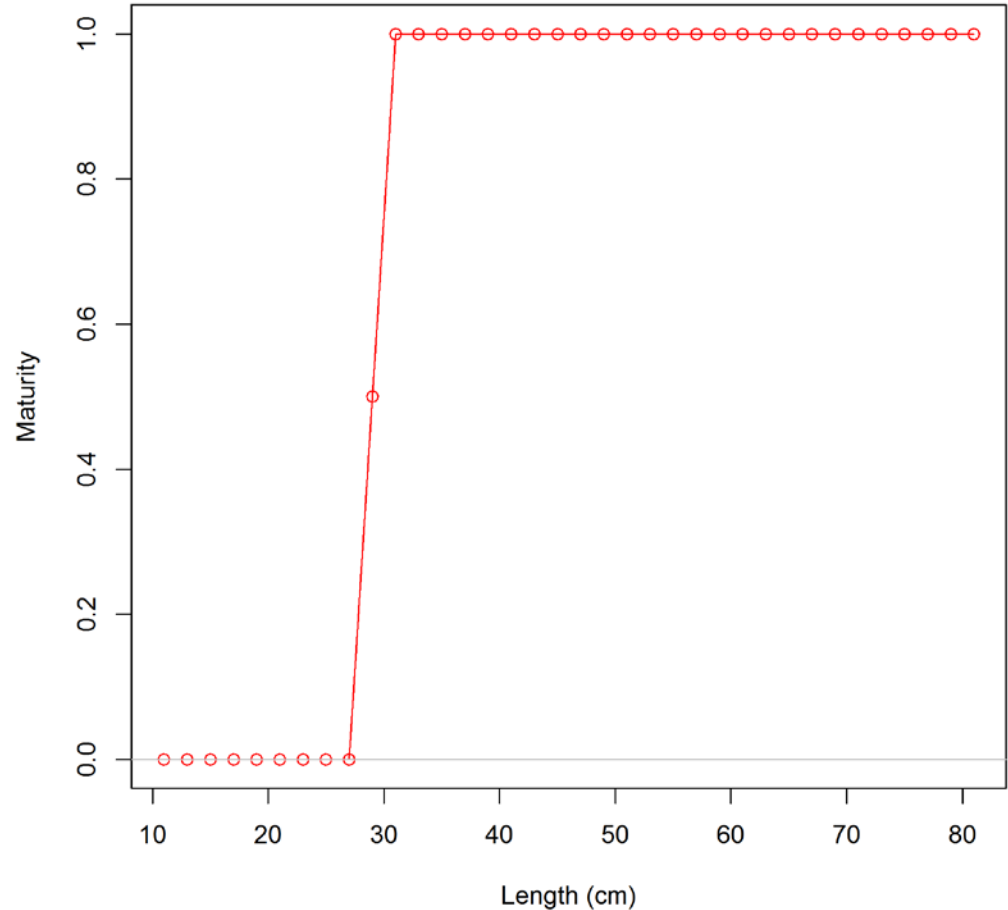
CV modeled as a function of age

Age 1: CV = 0.1514

Age Plus Group = 0.1922

DATA REVIEW: Reproduction

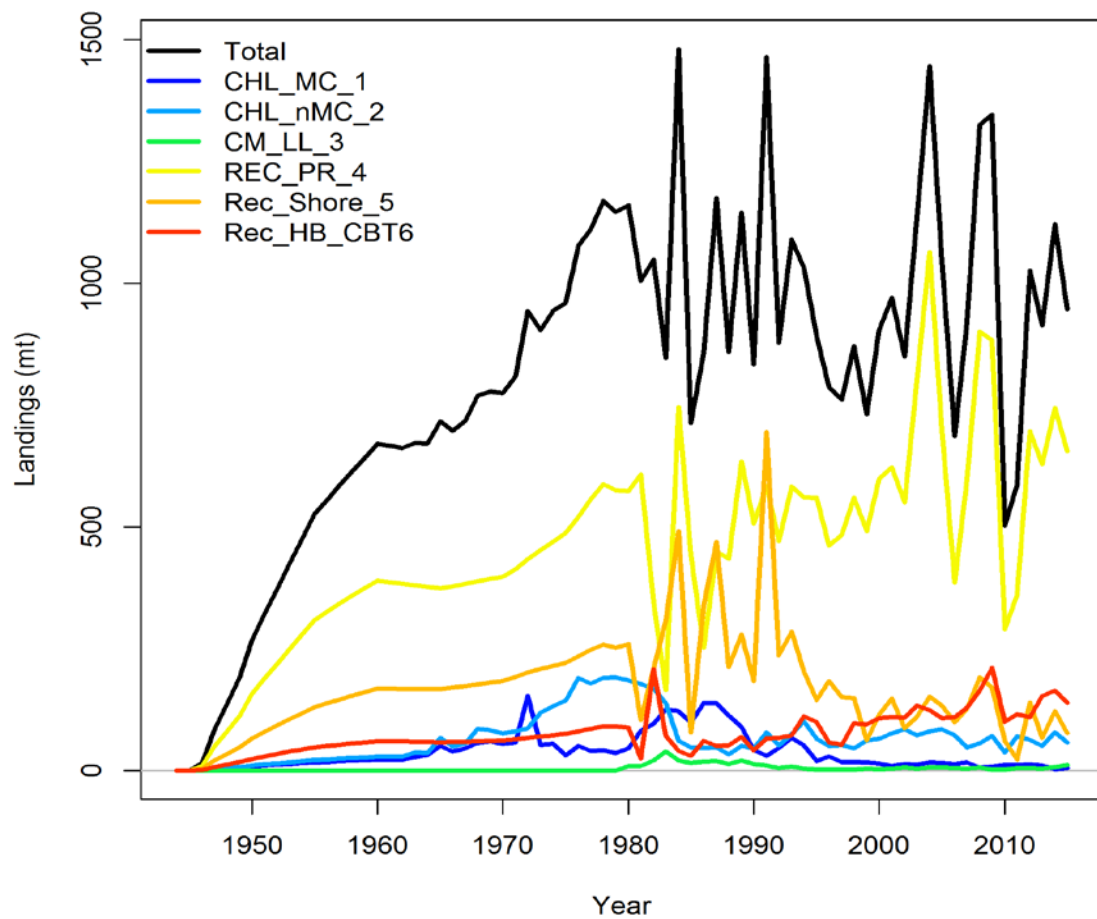
- Maturity assumed knife-edged at 30 cm
- Fecundity assumed proportional to body weight (SSB)



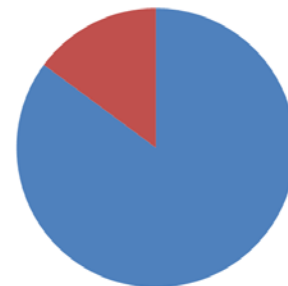
DATA REVIEW: Landings

- Recreational data 1981-2015
- Commercial data 1962-2015
- Historic data (1945-1961 commercial, 1945-1980 recreational)
 - Use effort series from US Fish and Wildlife Service Survey of Hunters and Fishers
 - Every 5 years
 - Adjust effort to 1981 or 1962 value.
 - Use proportion of landings based on effort.
 - Assumes constant CPUE

DATA REVIEW: Landings



Total Landings 1981-2015
(Pounds Whole Weight)



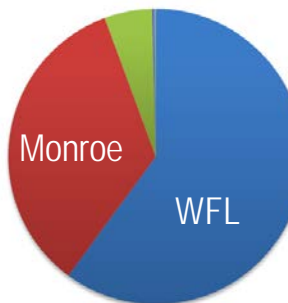
■ Recreational ■ Commercial

Total Commercial Landings 1962-2015
(Pounds Whole Weight)



■ HANDLINE+ ■ NETS_TRAPS ■ LONGLINE+

Total Commercial Landings 1962-2015
(Pounds Whole Weight)



■ WFL ■ MONROE ■ LA ■ AL ■ MS ■ TX

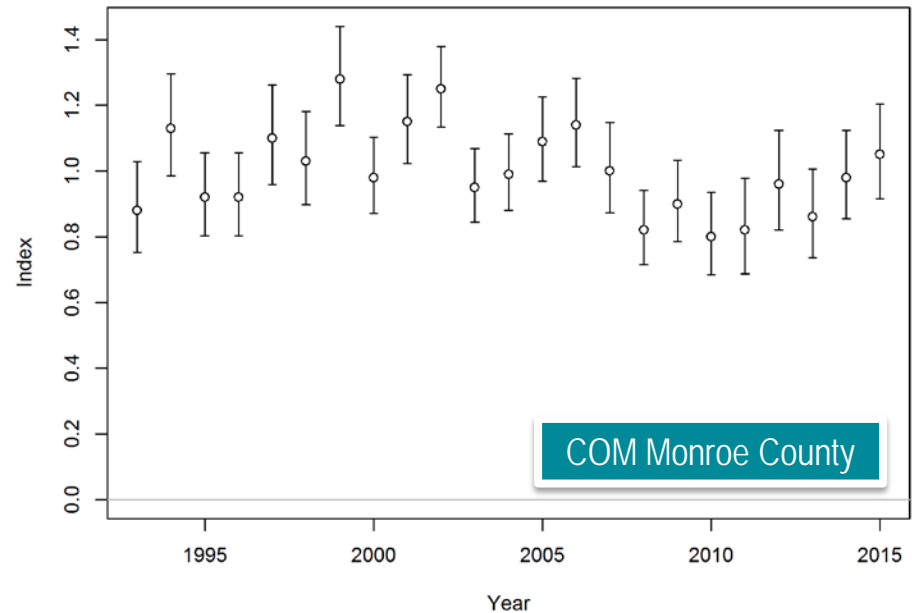
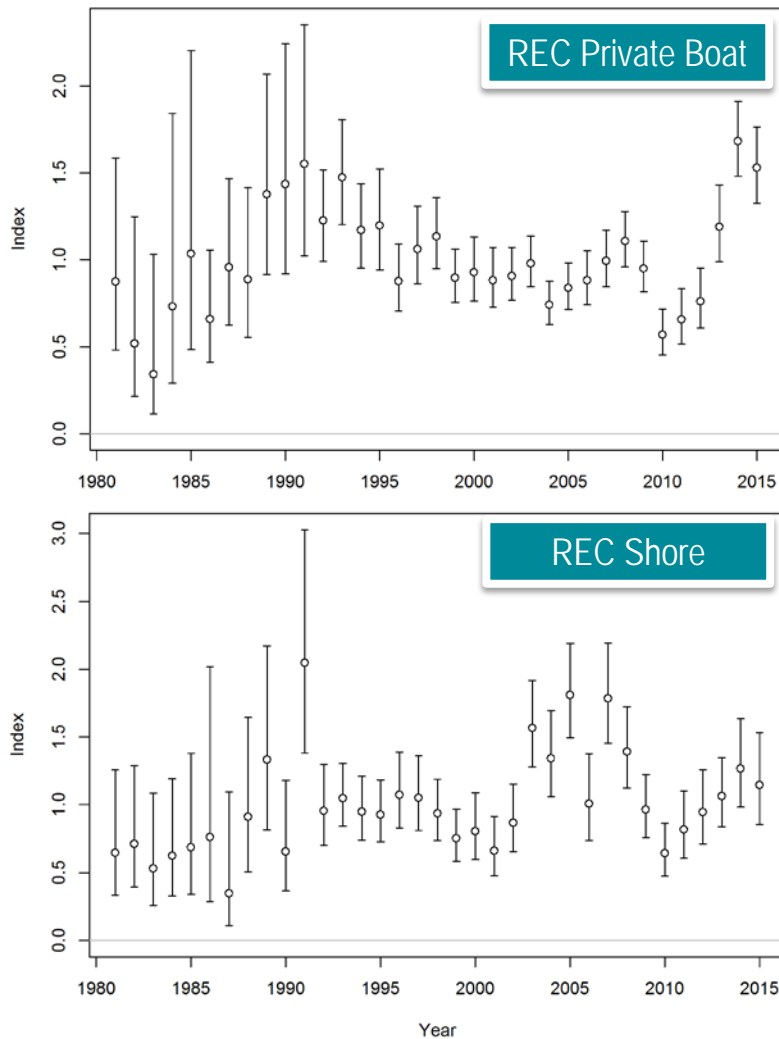


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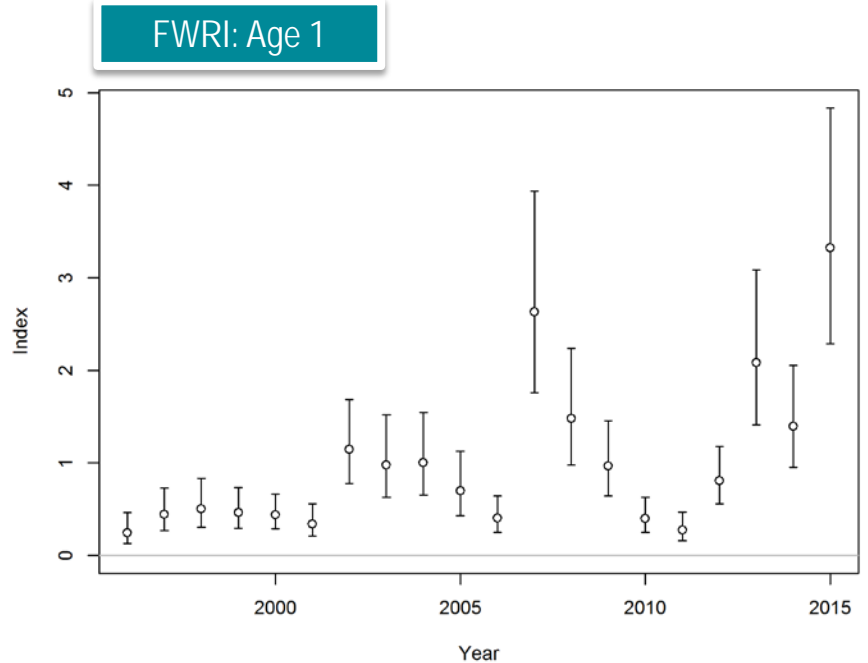
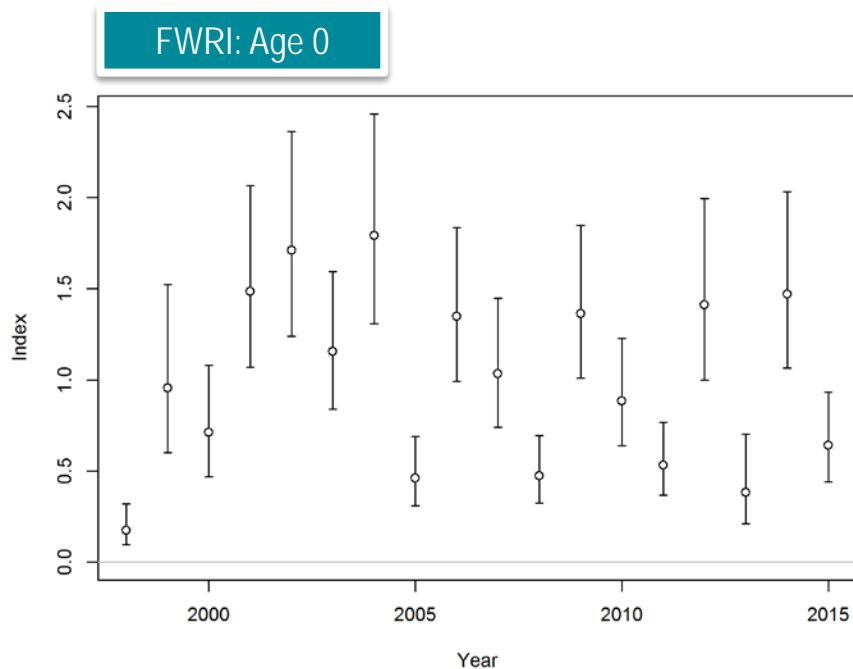
DATA REVIEW: Indices of Abundance

- 8 Indices
 - 3 Fishery dependent
 - 5 Fishery independent
 - 3 trawl
 - 2 Visual
- Adjusted CV = $(CV/\text{meanCV}) * 0.20$
 - Puts all errors on same scale.
 - Reduced weighting of fishery dependent indices

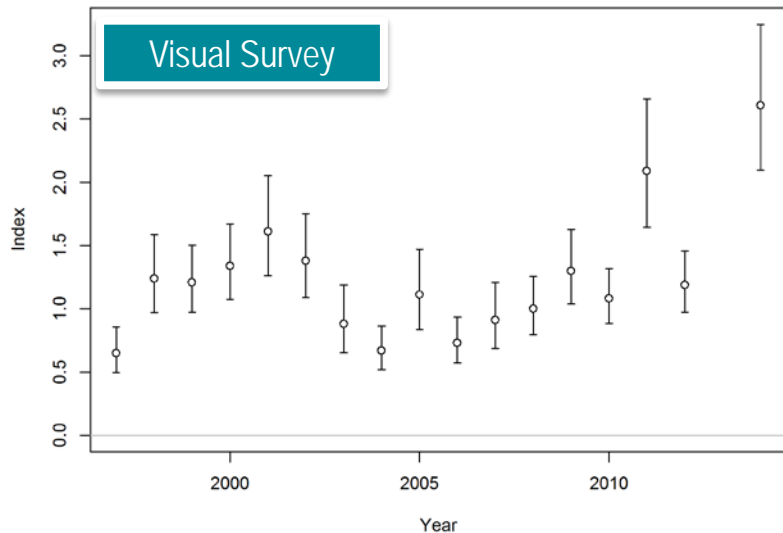
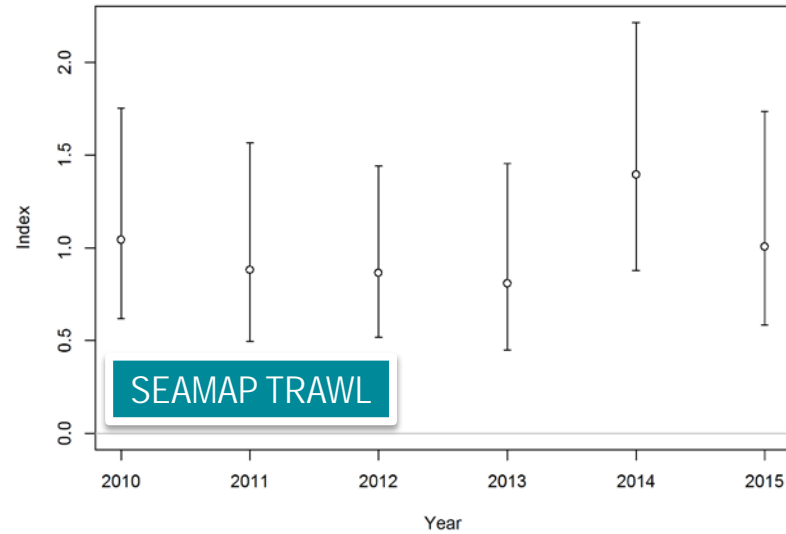
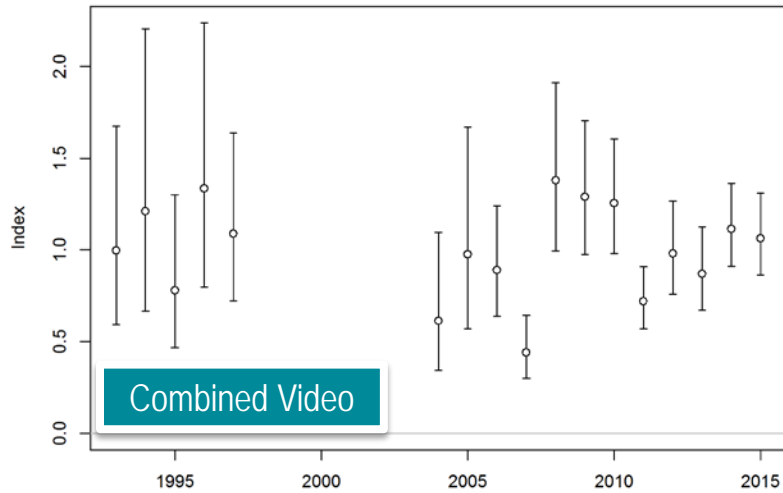
DATA REVIEW: Fishery Dependent Indices



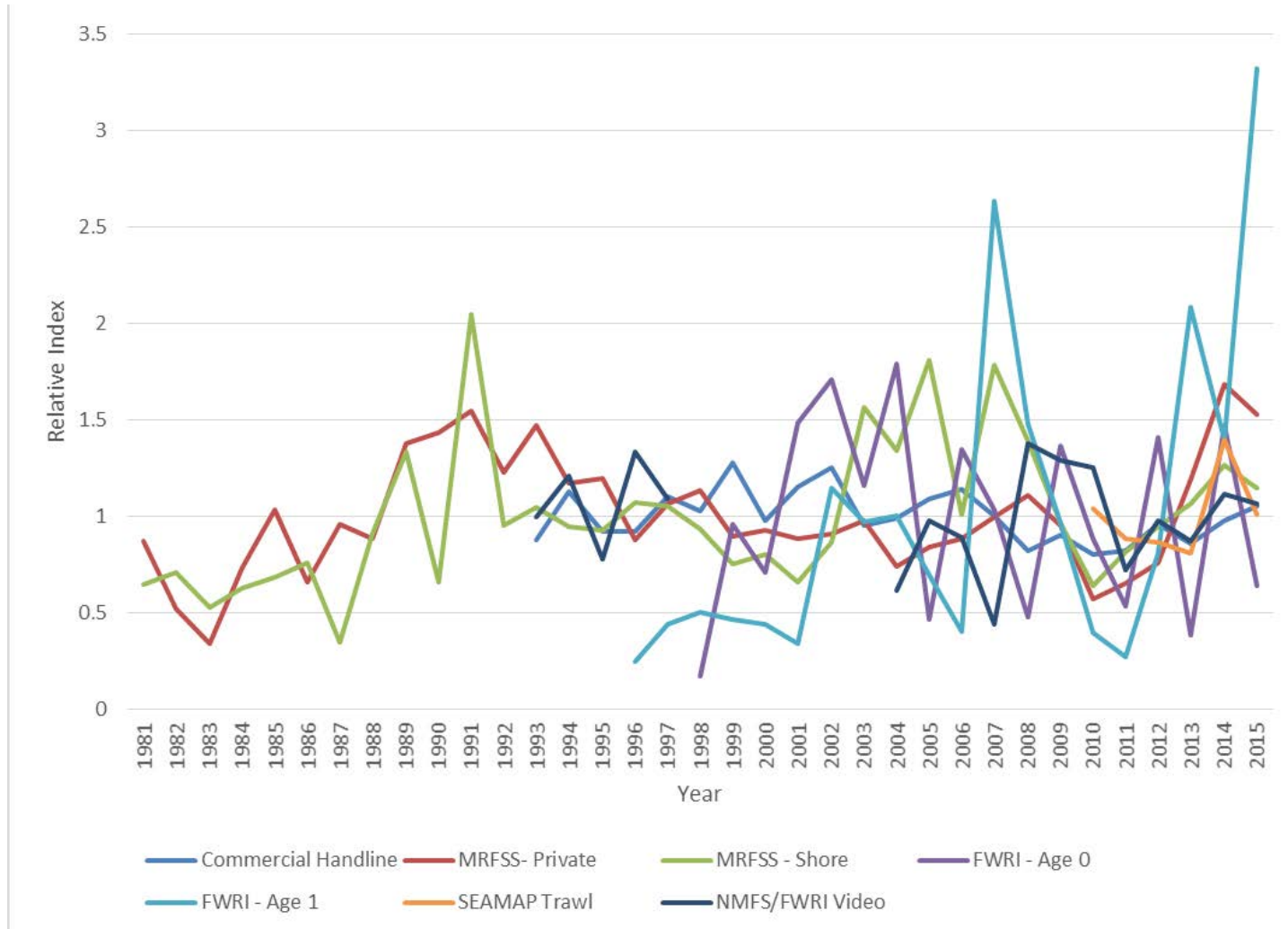
DATA REVIEW: Fishery Independent Indices



DATA REVIEW: Fishery Independent Indices



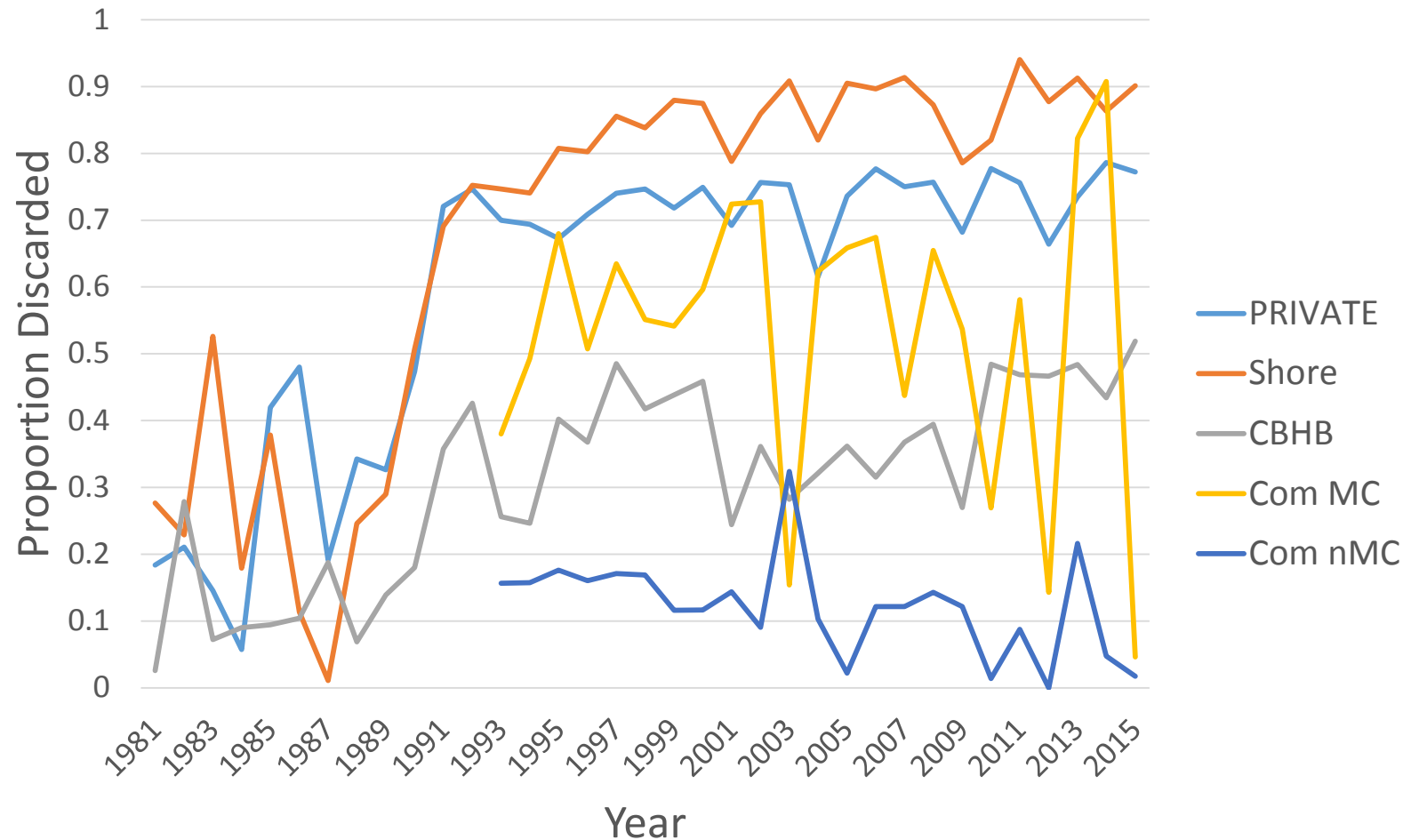
DATA REVIEW: Indices of Abundance



DATA REVIEW: Annual Proportion Discarded

- Annual proportion discarded was used rather than the absolute magnitude. *No length data available during SEDAR 51 process.*
- Recreational
 - Annual rec discards were derived from MRIP (1981-2015) and were based on dockside interviews of anglers. Self-reported number of fish discarded alive.
- Commercial Discards
 - Commercial LL: Discards negligible, added to landings
 - Commercial HL+Other: Observer program data could not be stratified according to the preferred model structure. Therefore, discard fractions were estimated in/out of Monroe County using area-specific landings, self-reported discards and gulf wide observer program reports as follows:
 - *Correction Factor = Gulfwide Discards from Obs Program/ Gulfwide Self-Reported Discards*
 - *Corrected Discards = Correction Factor * Self-Reported Discards*
 - *Discard Fraction = Corrected Discards/(Corrected Discards + Landings)*
 - *Discard fraction are quite uncertain due to low observer coverage (<5%).*

DATA REVIEW: Annual Proportion Discarded

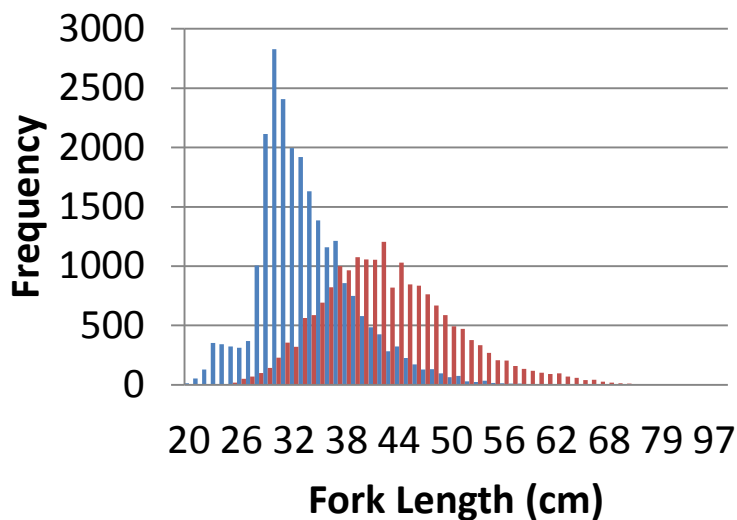


DATA REVIEW: Length Composition

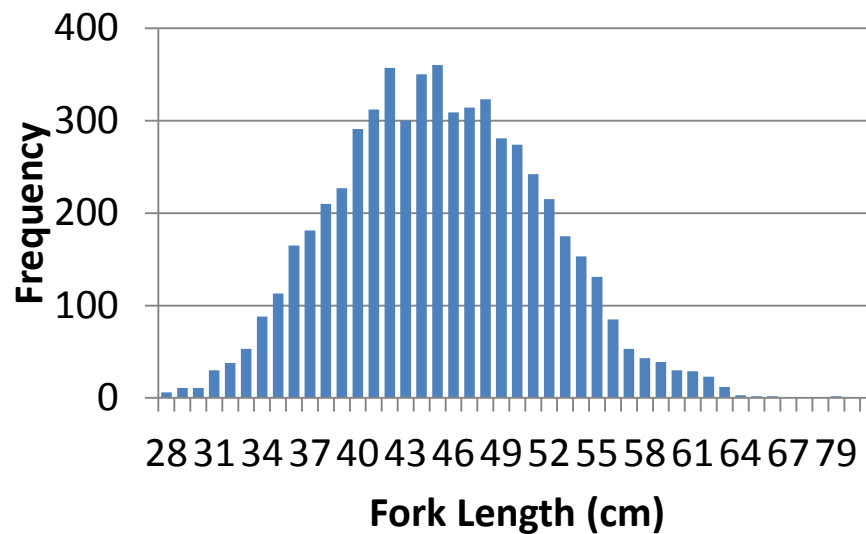
- Length Bins: 10 – 80 cm by 2 cm
- Regulations in TL(in) converted to FL(mm)
 - 10 in (TL) State waters = 24.2 mm (FL)
 - Recreational fleets
 - 12 in (TL) Federal waters = 28.8 mm (FL)
 - Commercial fleets

DATA REVIEW: Commercial Length Composition

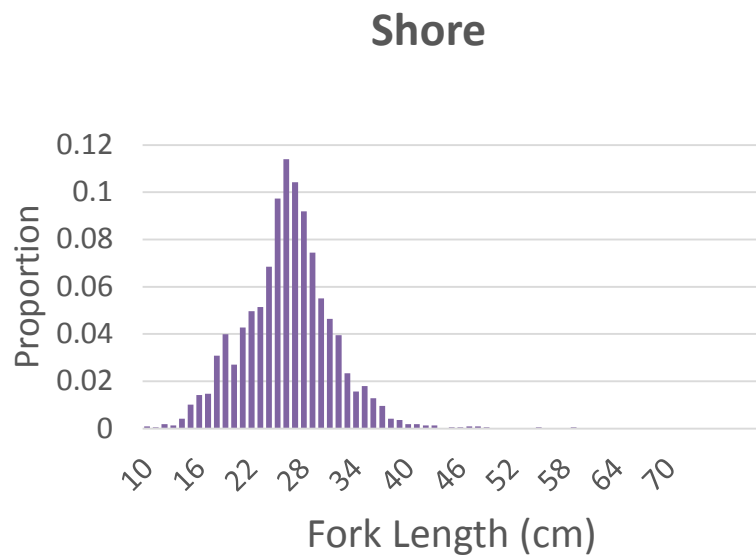
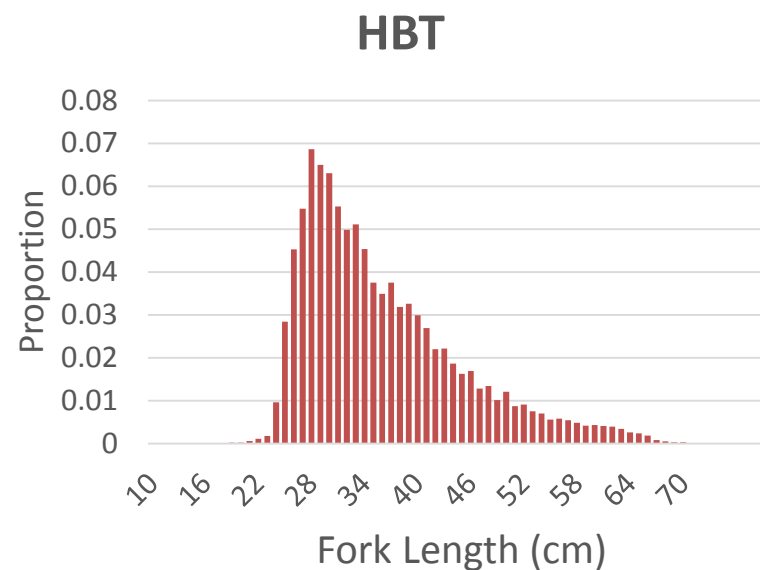
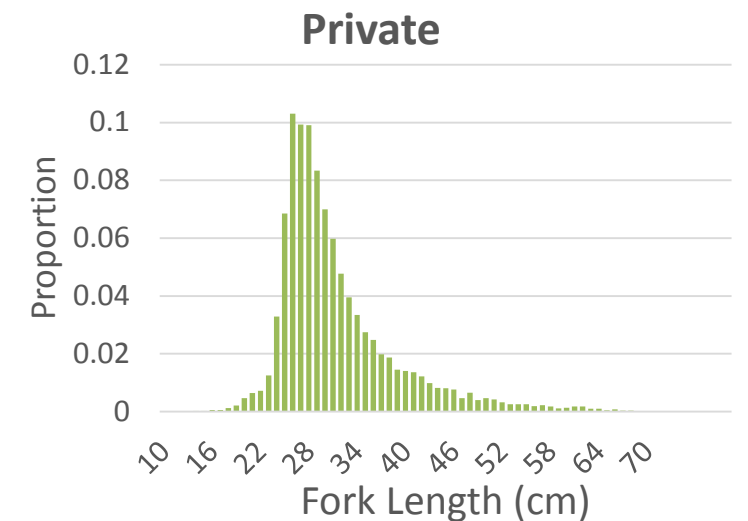
Commerical HL+Other



Commercial LL

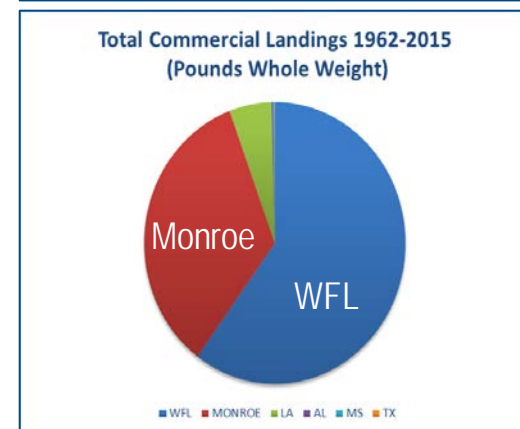
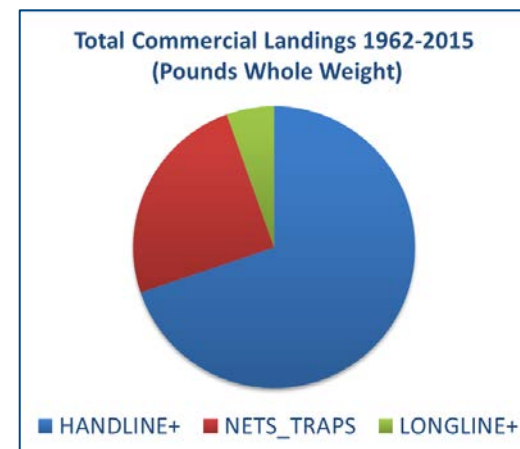
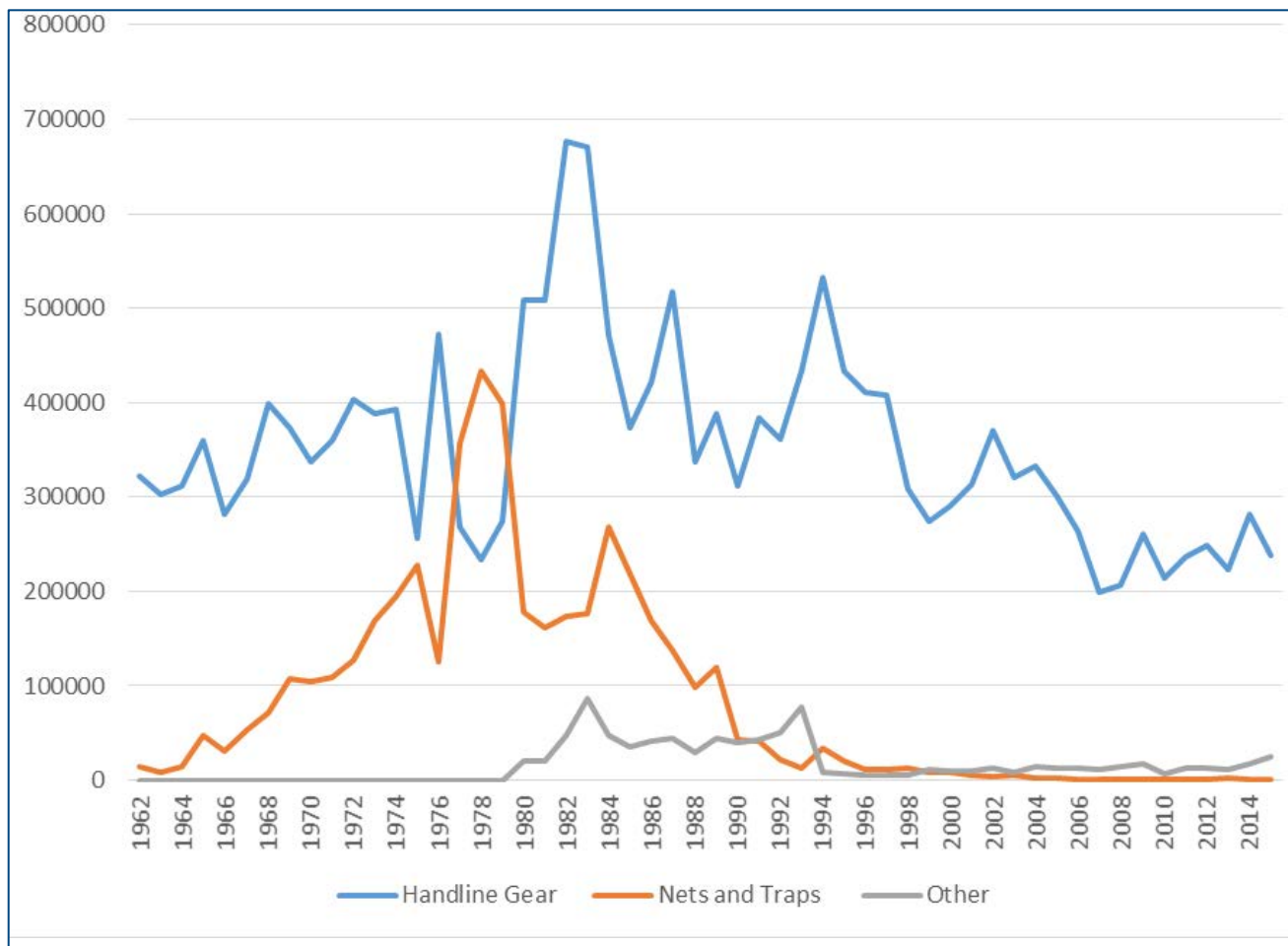


DATA REVIEW: Recreational Length Composition



EXTRA SLIDES

Commercial Landings by Gear Group



Recreational Landings by Mode

