

Spiny Dogfish



SSC

September 2018

Outline

1. Stock Status and Biological Reference Points
2. Regulatory Review
3. Recent Fishery Performance
4. Advisory Panel Fishery Performance Reports
5. ABC Projections and Staff Recommendations

Stock Status

- Last benchmark: SARC 43 (2006)
 - stochastic estimator of spawning stock biomass and fishing mortality
- 2018 assessment update
 - Not overfished in 2018 (67% of target), overfishing not occurring in 2017 (83% of threshold).

Biological Reference Points

- Update:

- Overfishing not occurring

- F_{2014} : 0.202 (F_{MSY} : 0.2439)

- Not overfished

- B_{2018} : 106,753 mt (B_{MSY} : 159,288 mt)

- 67% of target

- 2018 predicted to be 87% in 2015

Fishing Mortality

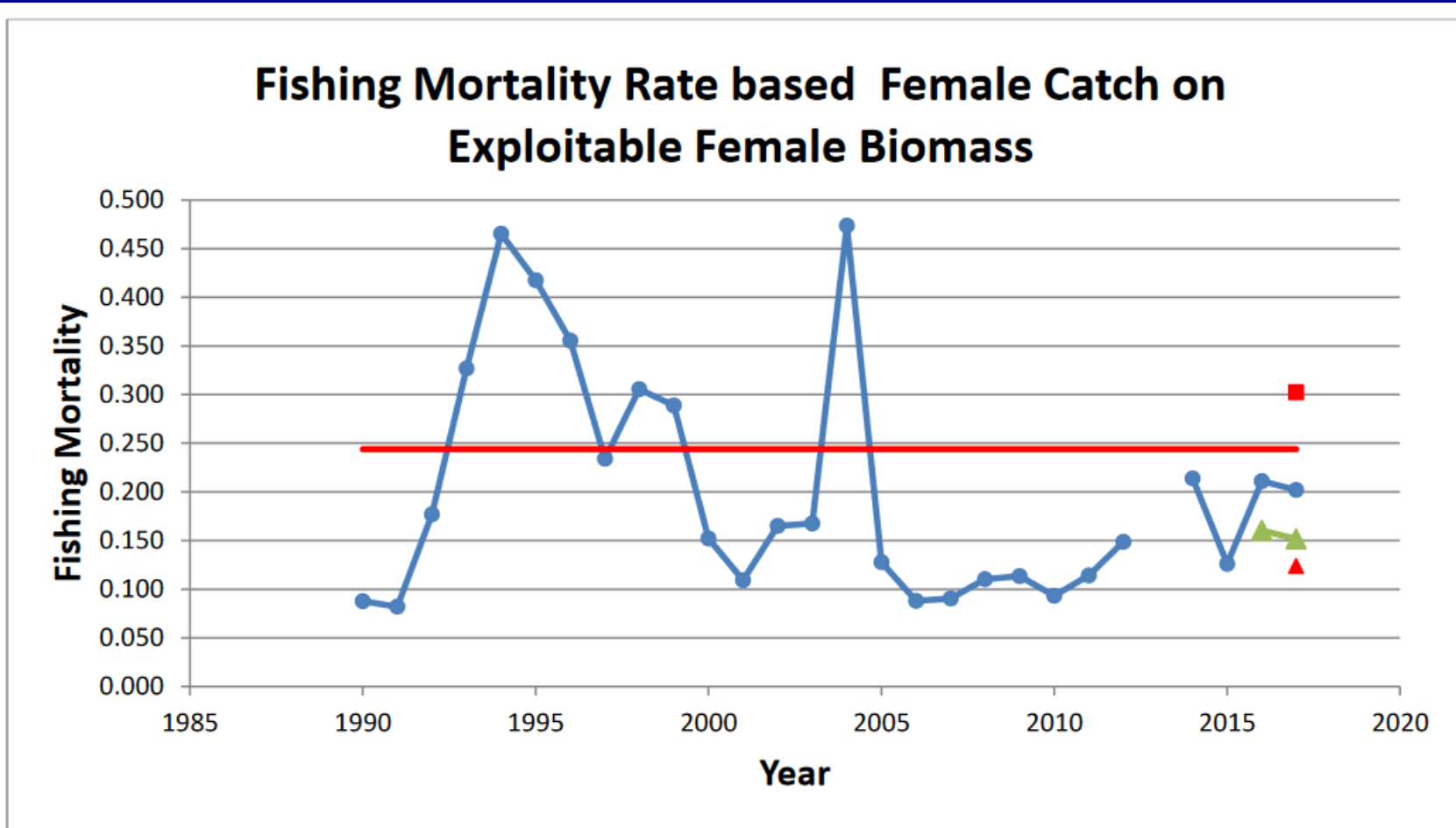


Figure 14. Estimated stochastic fishing mortality rates for female catch from the exploitable female stock biomass, 1990-2017. Estimate for 2013 not available. The blue circles are the non-Kalman adjusted values including 2017, the green triangles are the non-Kalman adjusted values not including 2017 and the red square (with 2017) and triangle (no 2017) are the Kalman adjusted values. F threshold is defined as 0.2439.

SSB

Female spawning stock biomass Estimates 1982-2018

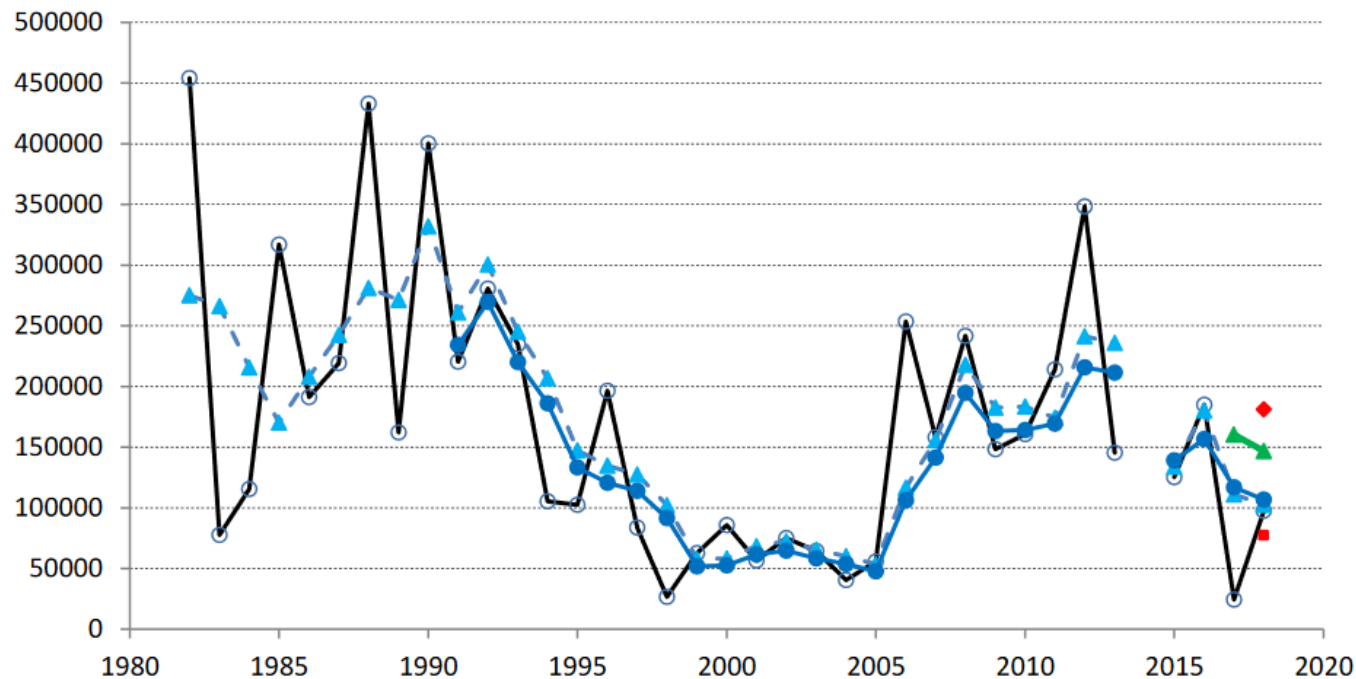


Figure 12. Comparison of alternative swept area estimates of female spawning stock biomass, 1982-2015. Stochastic SSB estimates are available for 1991 to 2018, except 2014. The open circles are the swept area SSB estimates, the blue triangles are the 3-year moving average of the swept area estimates, the closed blue circles are the stochastic SSB estimates including 2017 but not adjusting for the Kalman, the green triangles are the stochastic estimates not including 2017 and not adjusting for the Kalman, and the red triangle (no 2017) and square (with 2017) are the stochastic estimates adjusting for the Kalman. Year refers to the terminal year in the three point moving average.

Pup Production

Pup Index, 1968-2018

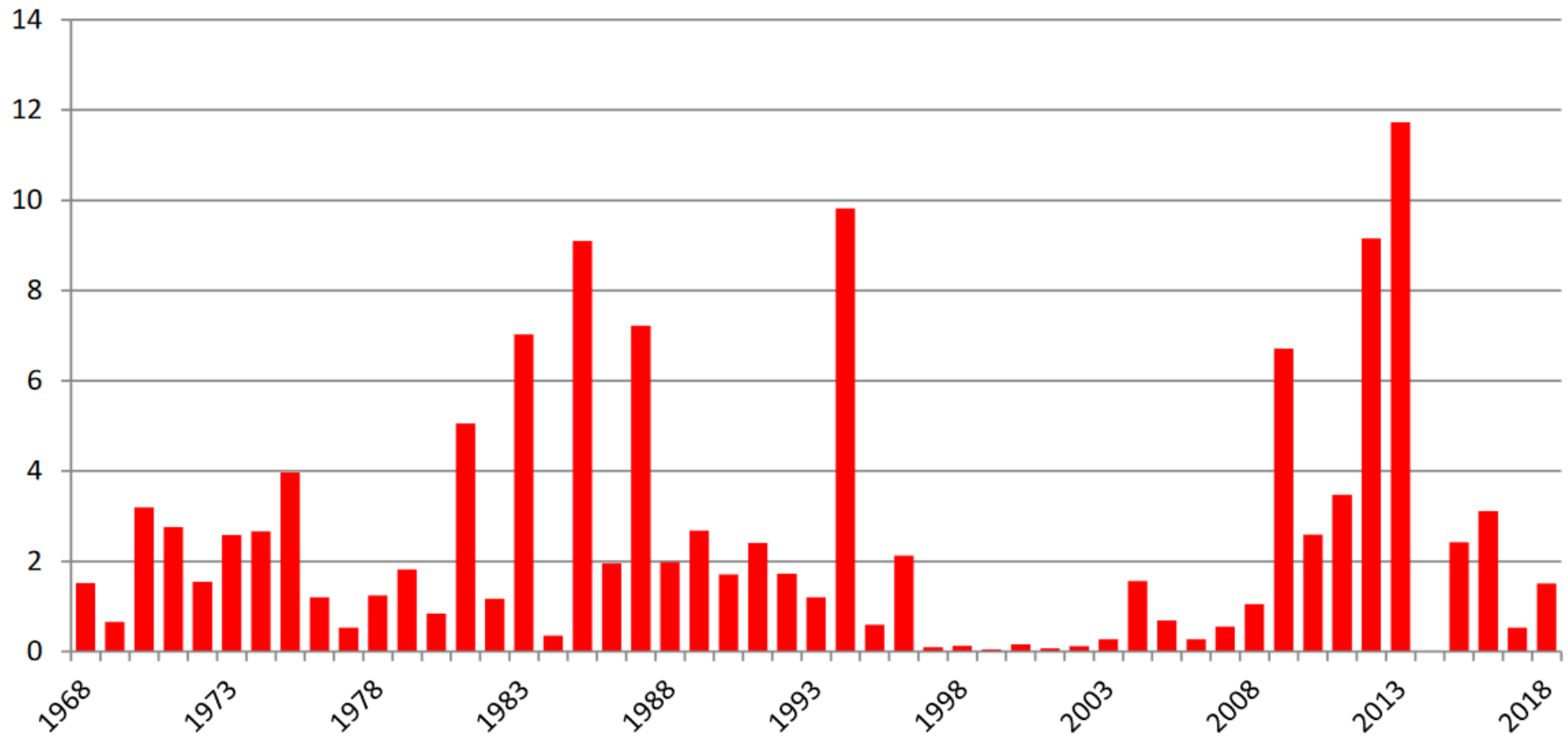


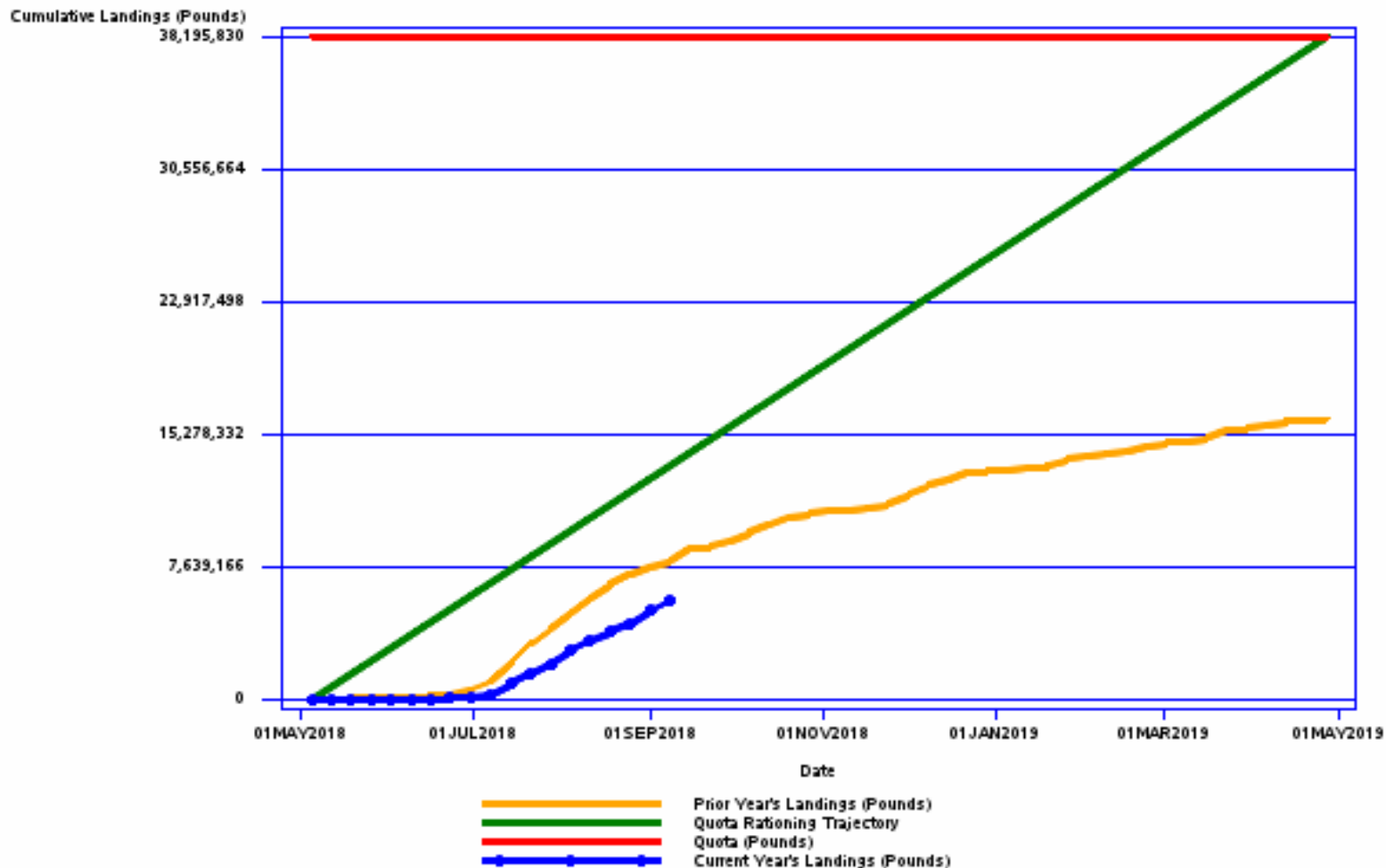
Figure 6. Estimated swept area biomass (mt) of total pups (spiny dogfish ≤ 35 cm) captured in the NEFSC spring bottom trawl survey, 1968-2018. Survey was incomplete in 2014; no estimate available.

Regulatory Review

- Current ABC = 22,635 MT
- Current Quota = 17,325 MT
- Open access
- Federal Trip Limit = 6,000 pounds
- 2017 fishing year landed 8,173 MT

Regulatory Review

Spiny Dogfish Quota Monitoring Report



Data through September 12, 2018

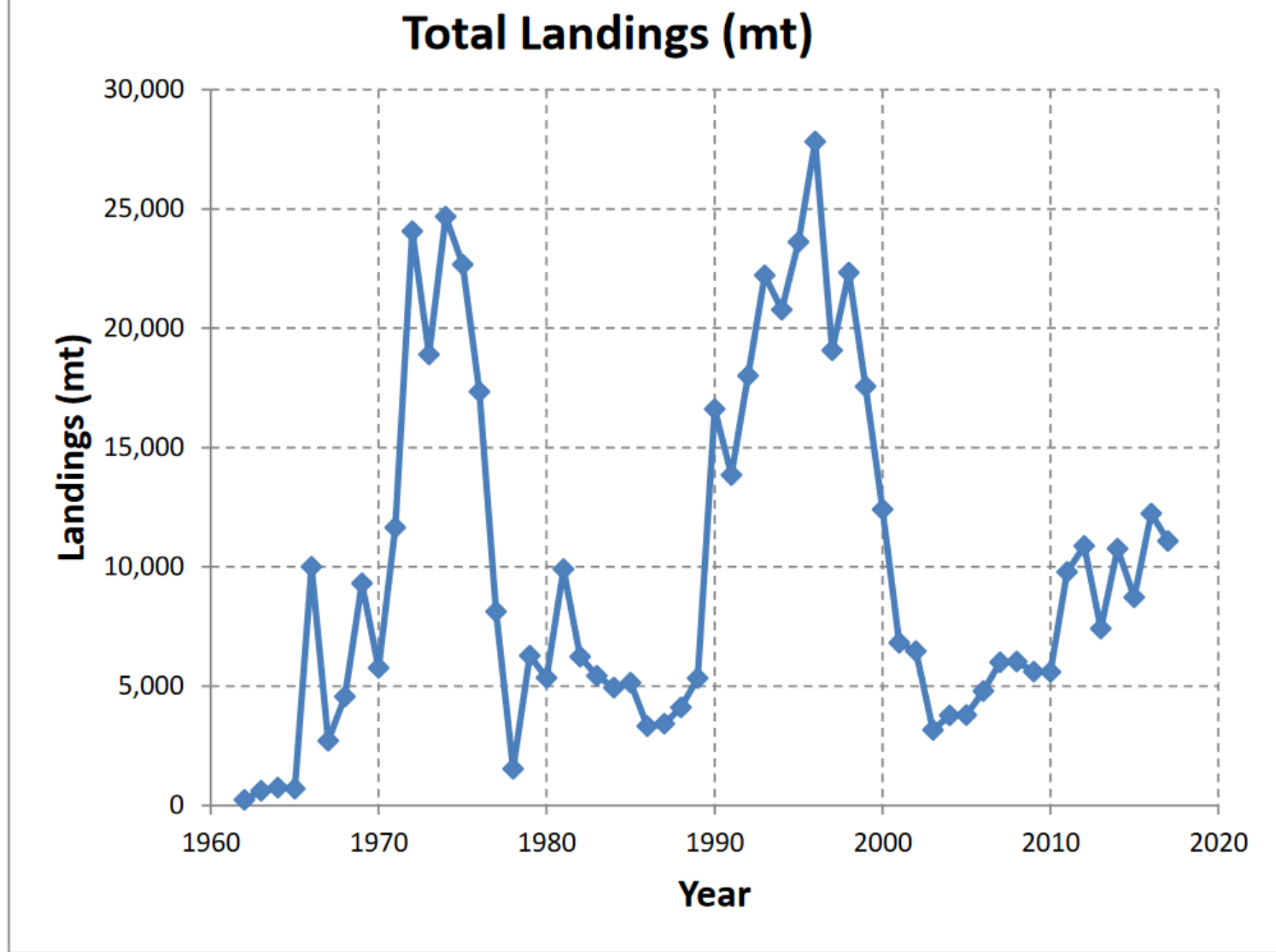


Figure 1. Estimated total landings (mt, live) of spiny dogfish in NAFO Areas 2 to 6, 1962-2017.

Fishery Performance

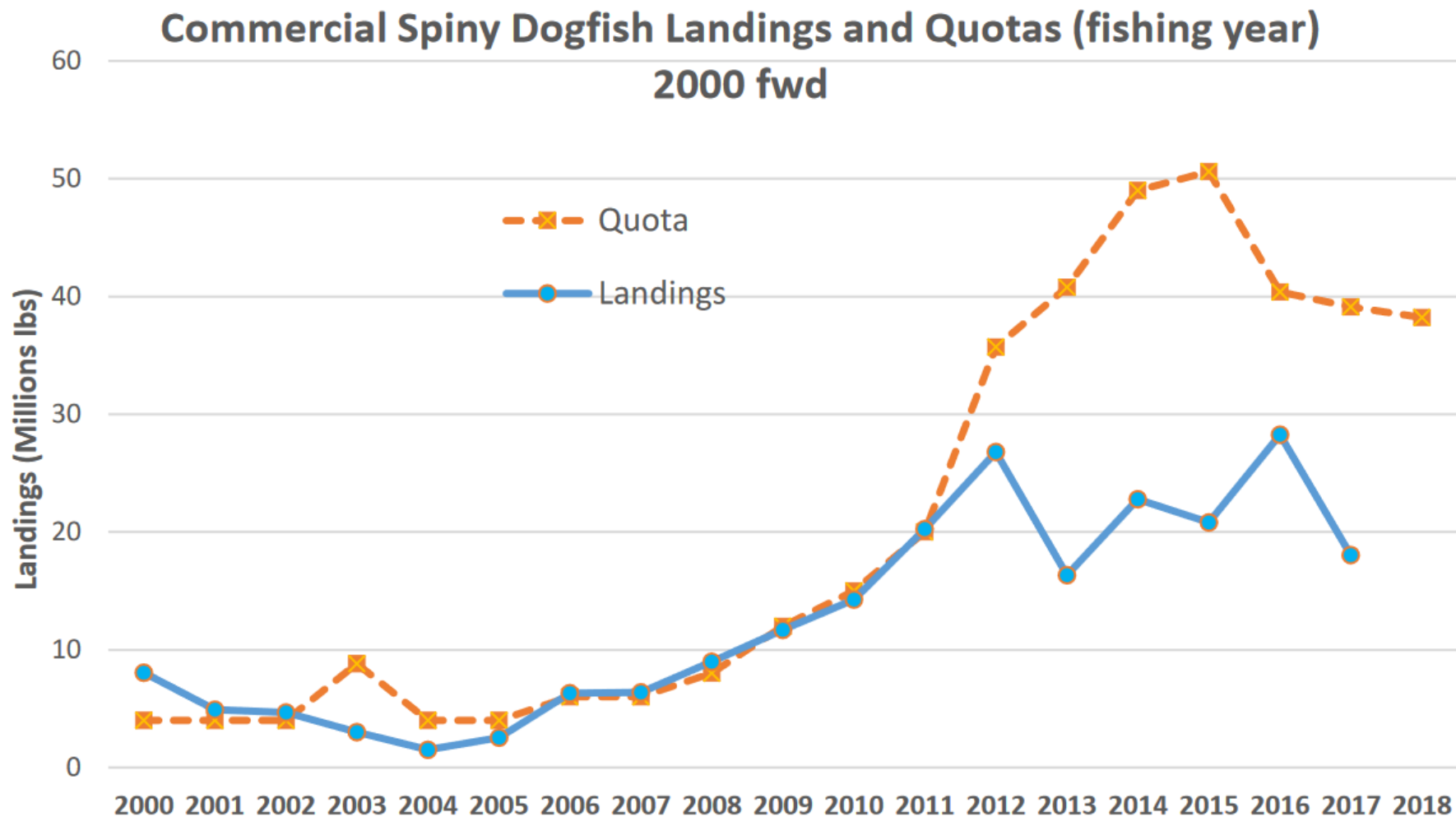


Figure 1. Spiny Dogfish Landings and Quotas 2000-2017. 2017 = May 1, 2017 to April 30, 2018.

Source: Unpublished NMFS dealer reports

Fishery Performance Report

- Markets, Markets, Markets
 - Price
- Boats have no problem catching trip limit
- No observations of drastic abundance changes in recent years
- Different perspectives on trip limits

Staff ABC Recommendation

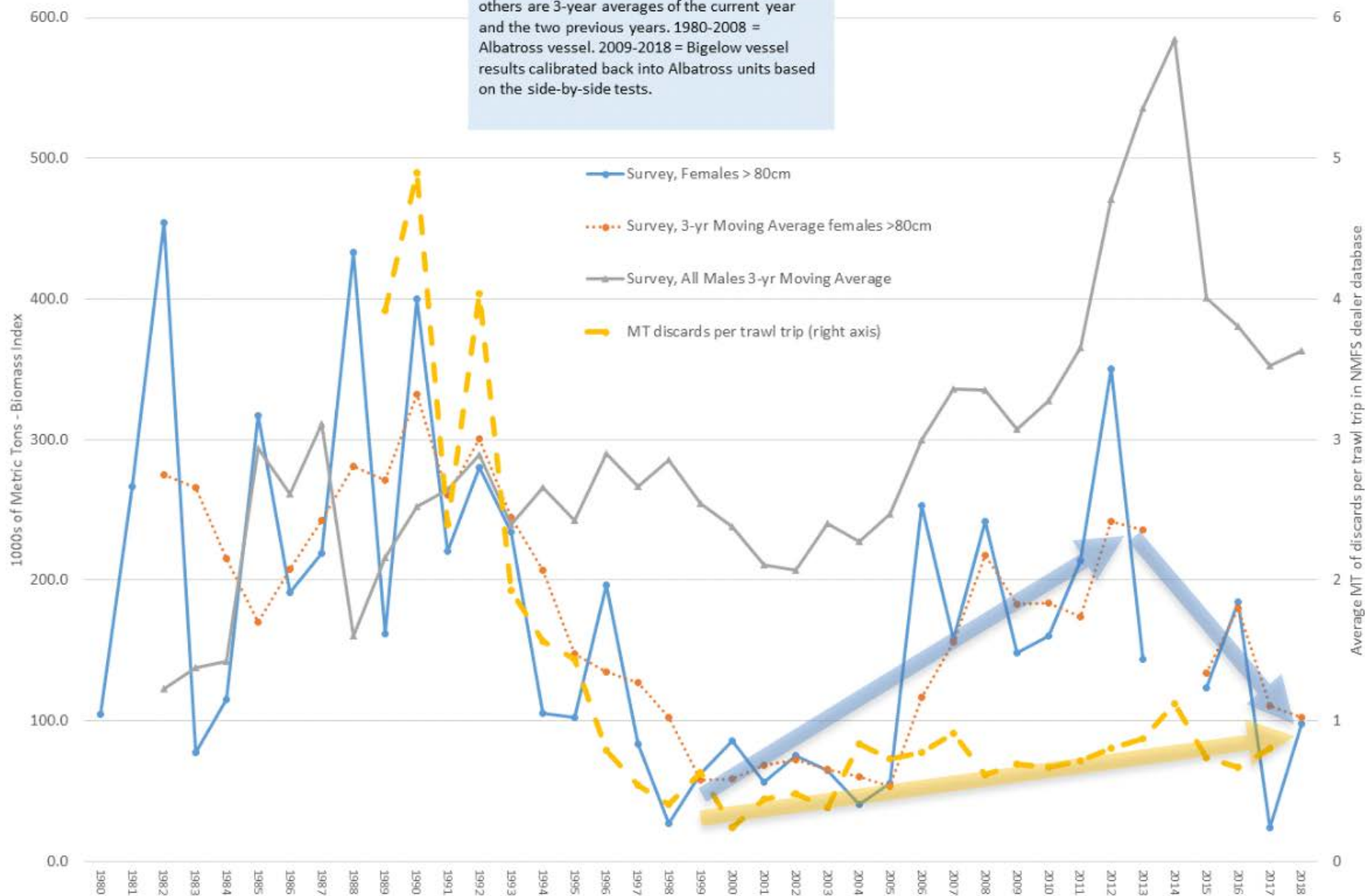
- Consistent with ABC projections in assessment update, which are based on Council Risk Policy
- Standard smoothing (2016 2017 2018)
 - No Kalman
- 100% CV for OFL distribution
 - P^* 0.269, .274, .296 (below target)

Staff ABC Recommendation

- 12,914 MT for 2019; 14,126 MT for 2020; 16,043 MT for 2021
- Lower in part due to lower biomass, lower in part due to lower tolerated risk of overfishing with lower biomass
- SSC-recommended this

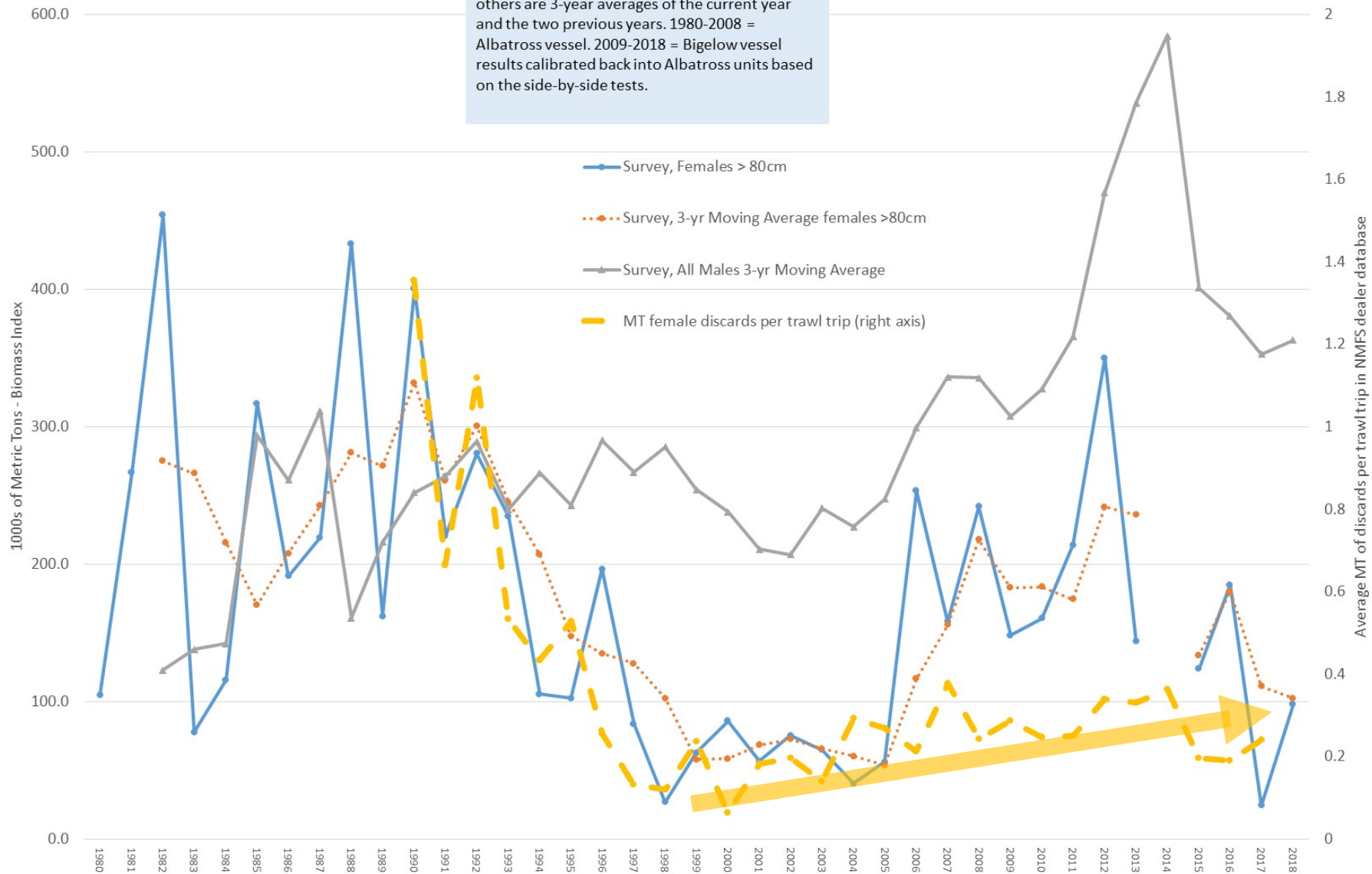
Spiny Dogfish Indices 1980-2018 and 1989-2017 Discard Index

Notes: 2015 and 2016 moving averages for the survey are 2-pt averages due to the data gap - others are 3-year averages of the current year and the two previous years. 1980-2008 = Albatross vessel. 2009-2018 = Bigelow vessel results calibrated back into Albatross units based on the side-by-side tests.



Spiny Dogfish Indices 1980-2018 and 1989-2017 Discard Index

Notes: 2015 and 2016 moving averages for the survey are 2-pt averages due to the data gap - others are 3-year averages of the current year and the two previous years. 1980-2008 = Albatross vessel. 2009-2018 = Bigelow vessel results calibrated back into Albatross units based on the side-by-side tests.



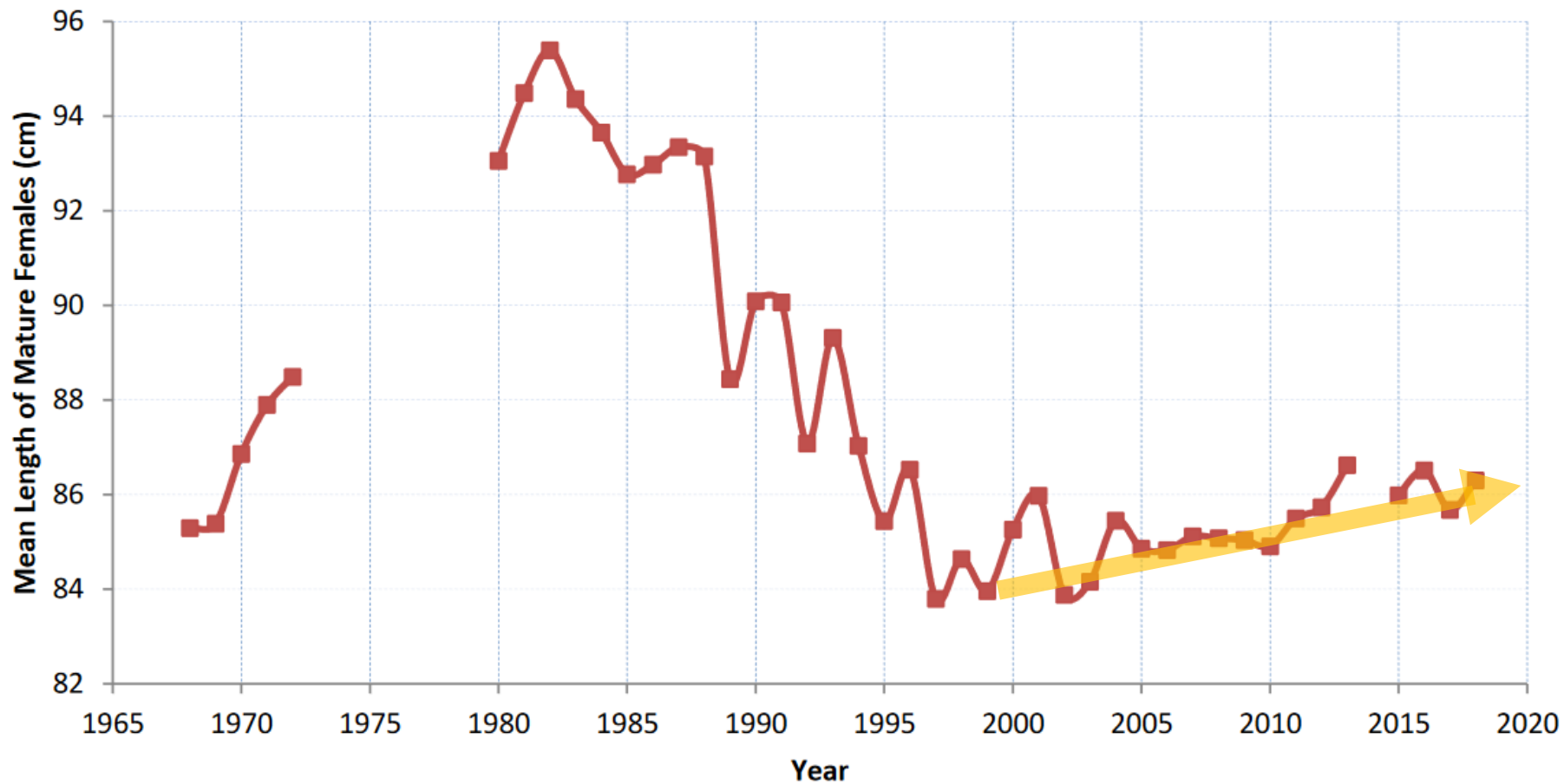
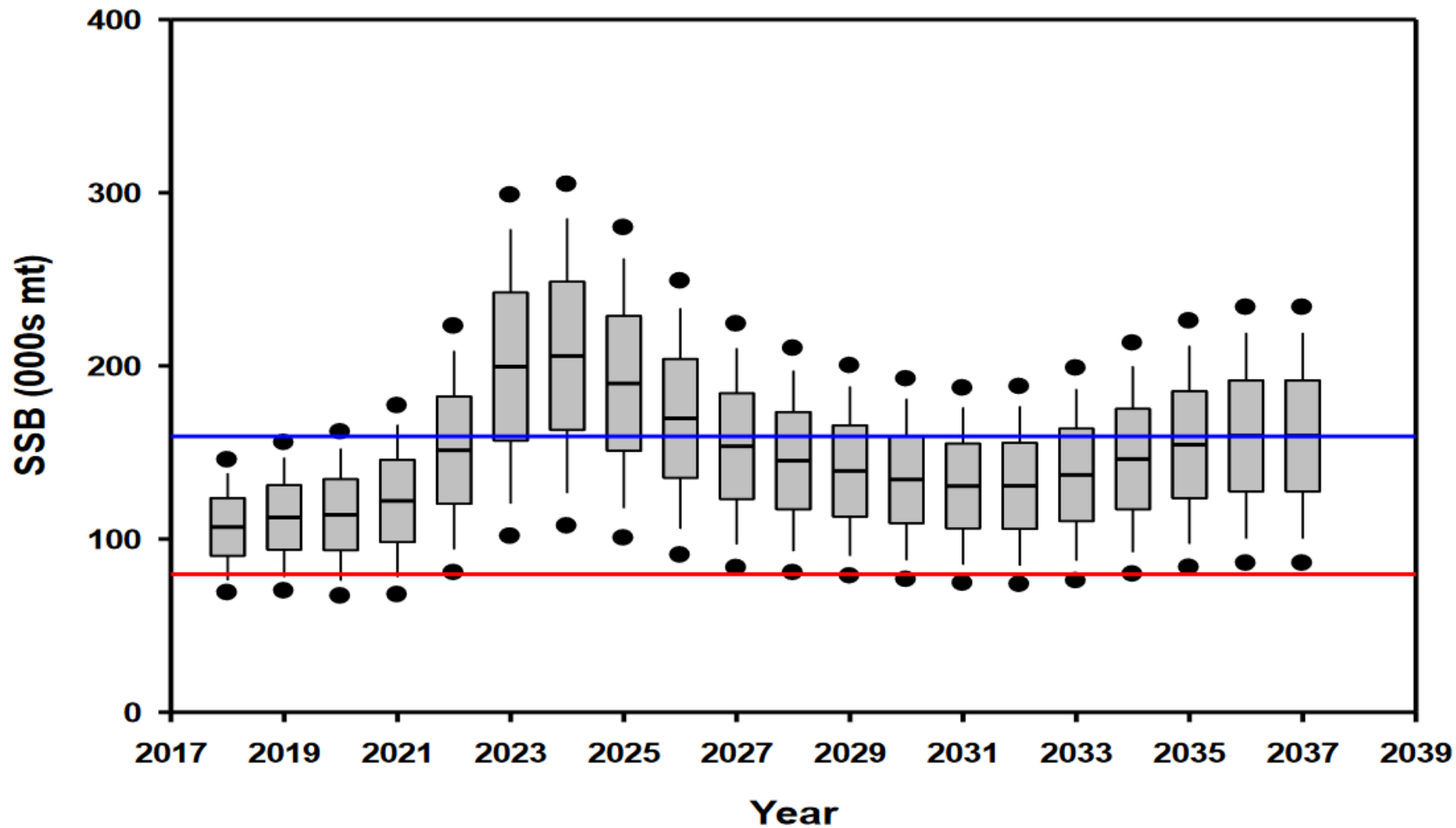


Figure 8. Mean Length of mature female spiny dogfish in NEFSC Spring bottom trawl survey, 1968-1972 and 1980-2018. Survey in 2014 was incomplete. Spiny dogfish sex was not recorded in the NEFSC database for 1973 to 1979.

P*, 3-YEAR, NO KALMAN



QUESTIONS?