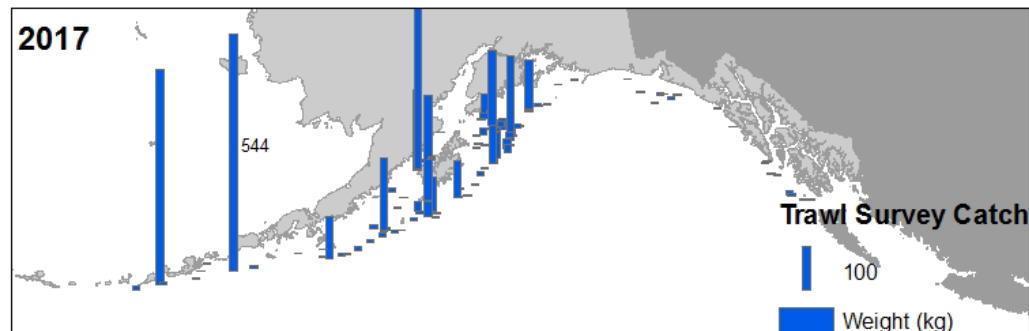
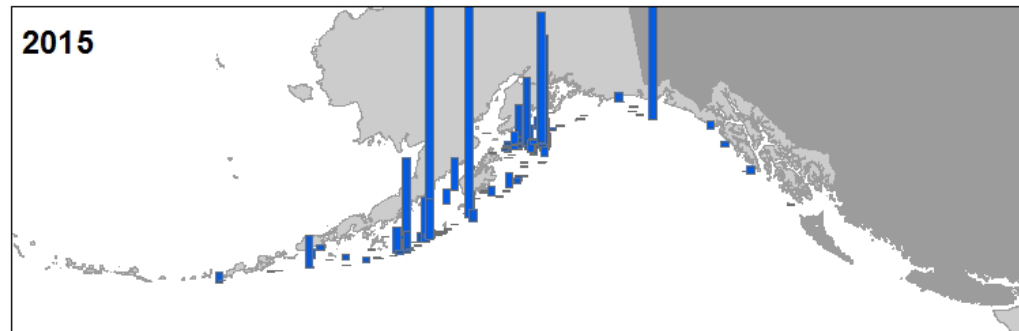
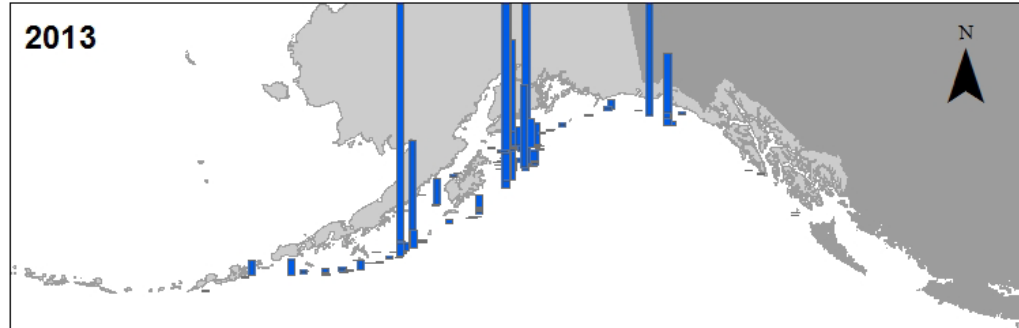


Dusky Rockfish

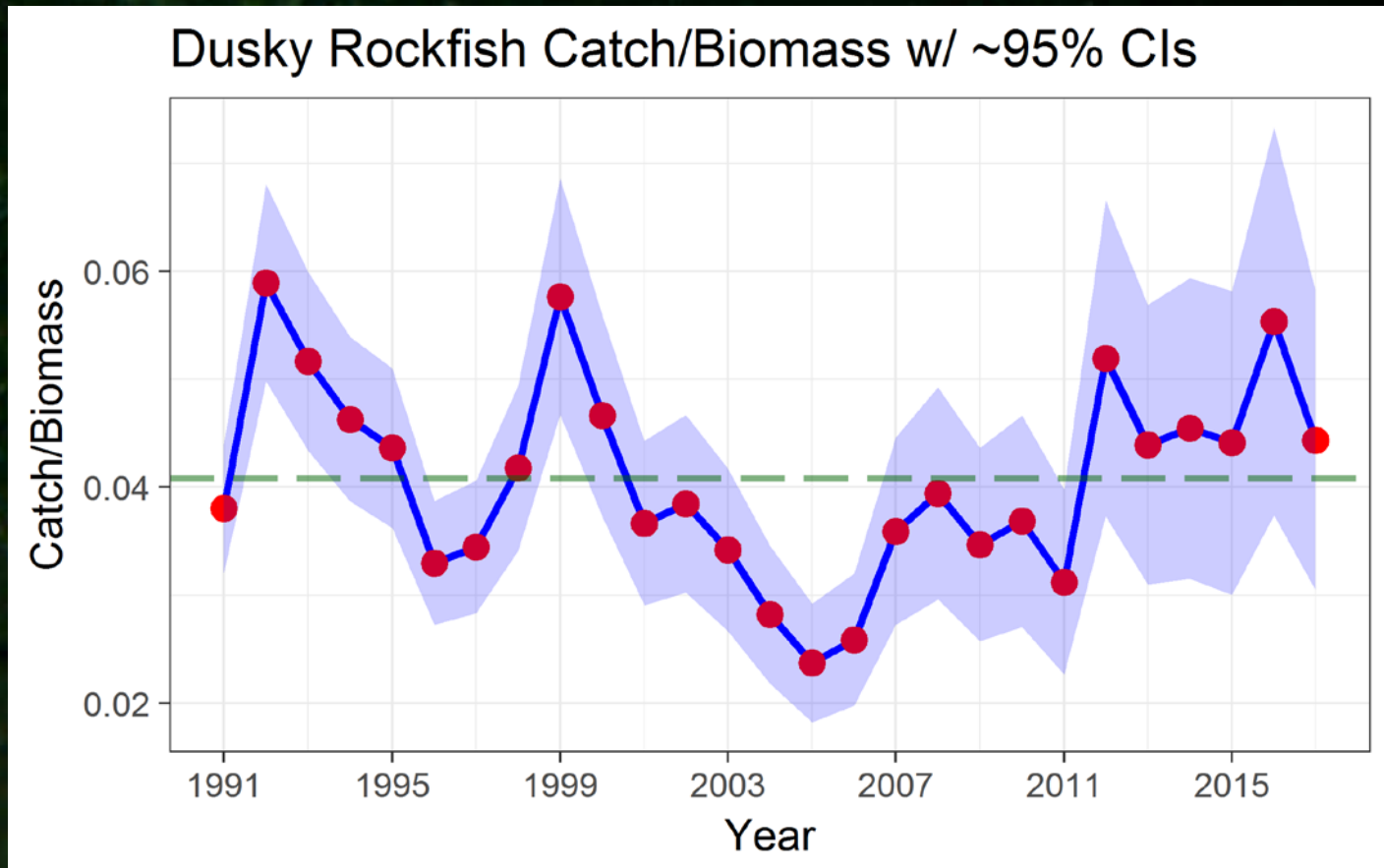


- Tier 3a species
 - Only update catches in projection model (Partial assessment year!)
 - Updated 2016 and estimated 2017-2019 catches
- Catch update:
 - Updated 2016 catch (3,328 t)
 - Geostatistical model for computing survey biomass
- Recommended 2018 ABC: **3,957 t**
 - 3% higher than 2017 ABC (4,278 t)
 - Very similar to year's projected 2018 ABC (3,954 t)

2017 Trawl Survey - Dusky



Dusky rockfish



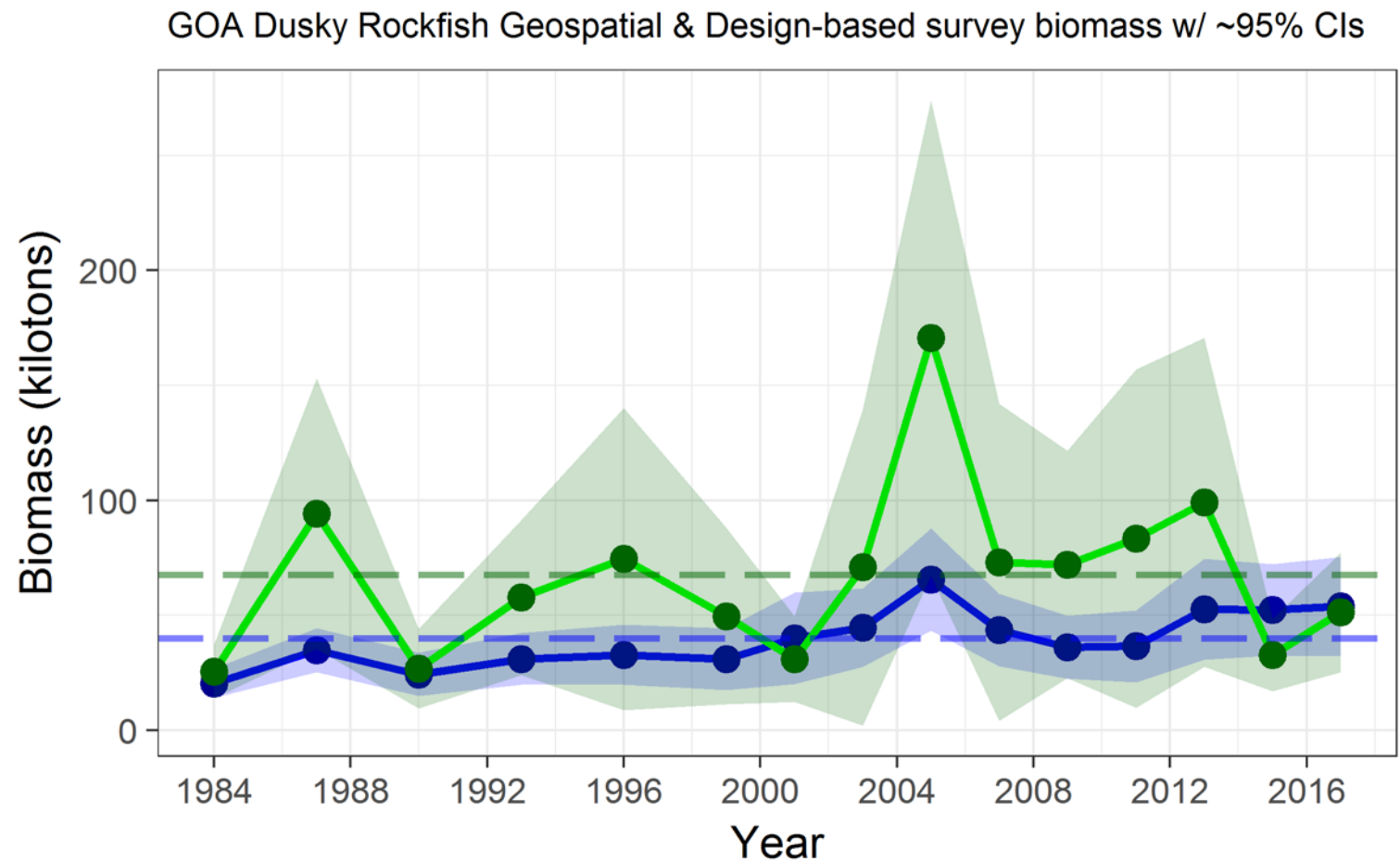
Dusky rockfish - Apportionment

| | Western | Central | Eastern | Total |
|----------|---------|---------|---------|-------|
| 2017 ABC | 158 | 3,786 | 334 | 4,278 |
| 2018 ABC | 146 | 3,502 | 309 | 3,957 |
| 2017 OFL | | | | 5,233 |
| 2018 OFL | | | | 4,841 |

Dusky rockfish - Summary

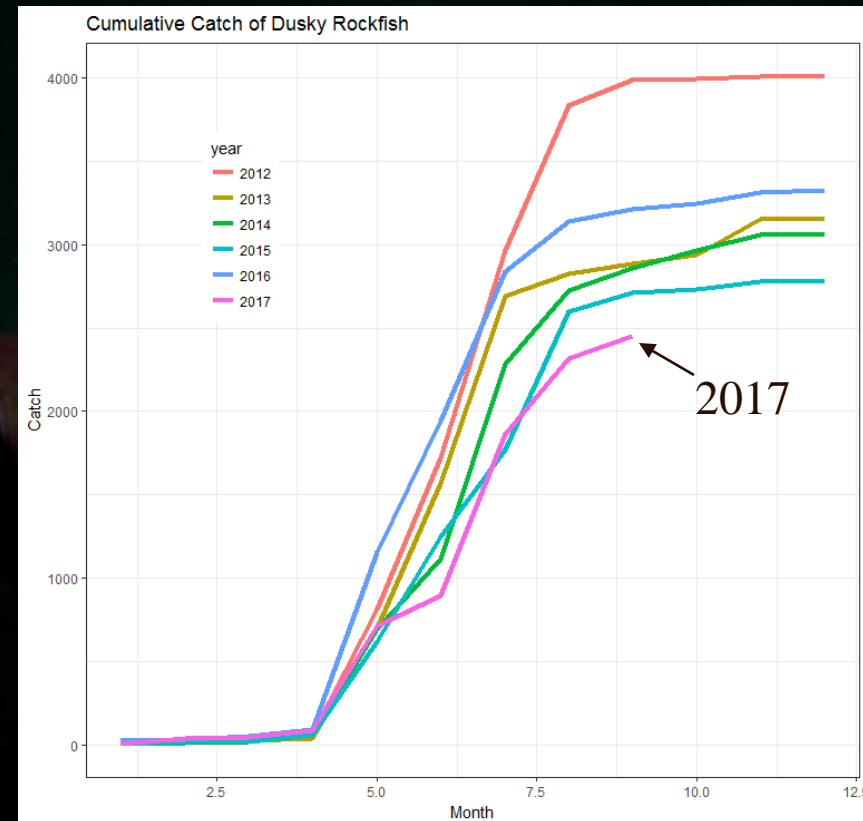
- Projecting a decrease in ABC through 2019
- Catches are below ABC for 2016, 2017;
Female spawning biomass is above B40
- Expect a full assessment using the new 2017 trawl data for 2018
- Expect to continue using and investigating the geospatial alternative survey biomass estimator (Plan Team Working Group) for 2018

Dusky rockfish – Bonus slides



Dusky rockfish – Bonus slides

- Age and length comps examined – no indication of incoming recruitment.
- Catches accumulating more slowly in 2017 compared to past 5 years



| | ABC (t) | Catch (t) | Projected female SB (t) | B40 (t) |
|------|---------|-----------|-------------------------|---------|
| 2016 | 4686 | 3328 | 25238 | 17244 |
| 2017 | 4278 | 2450 | 23178 | |
| 2018 | 3957 | | 21559 | |
| 2019 | 3668 | | 20151 | |