

GOA Flathead Sole Partial Assessment

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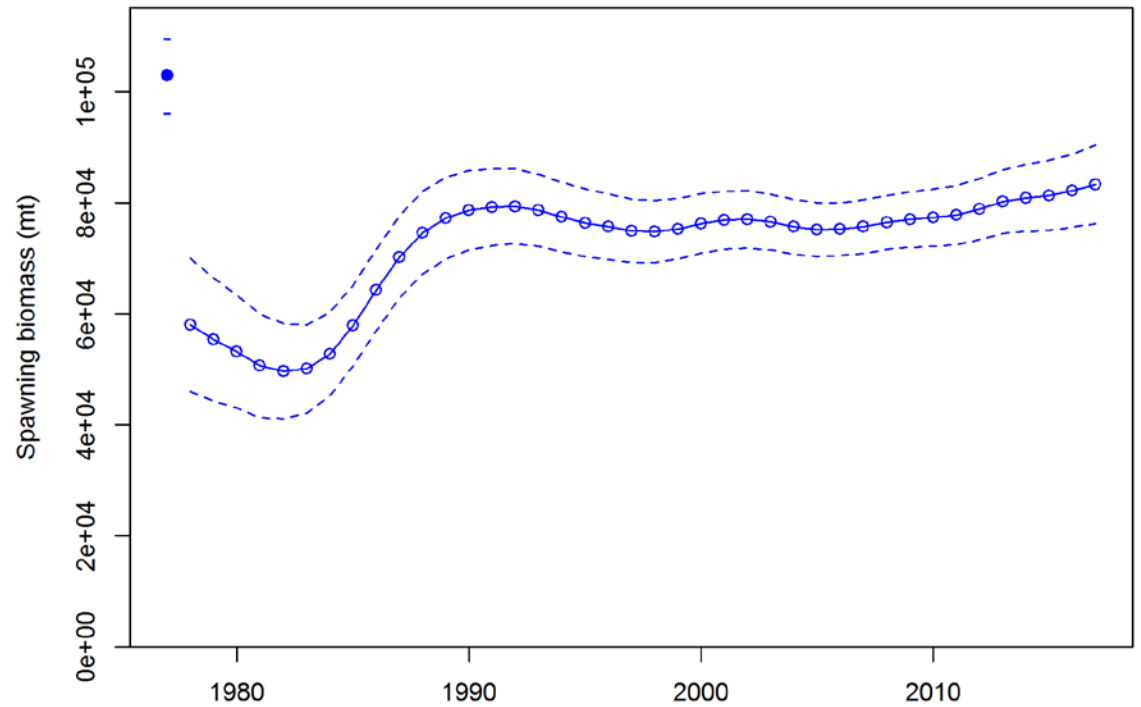
Executive summary

Catches used for projections:
 1,965 t for 2020
 2,269 t for 2021
 2,269 t for 2022

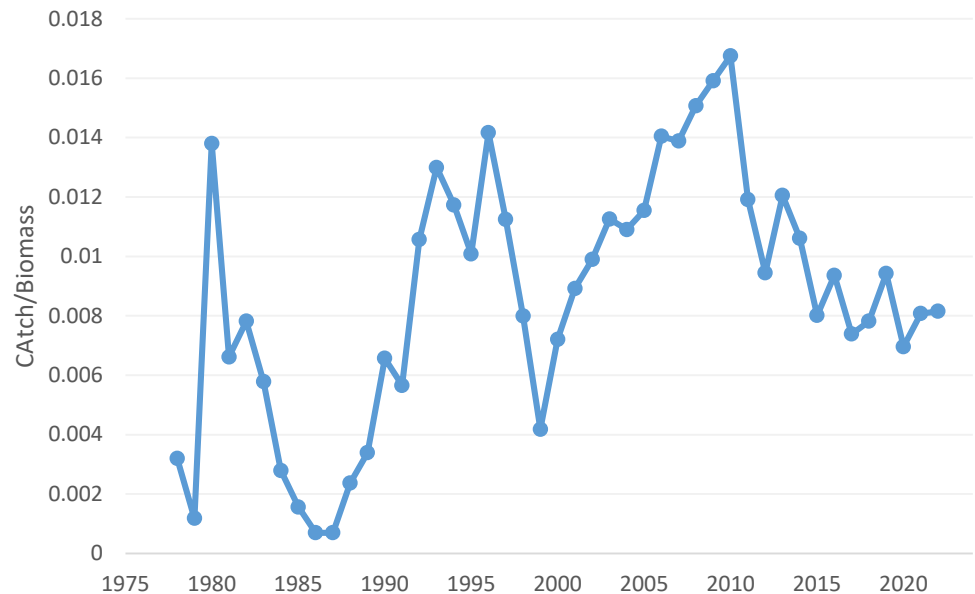
2021 recommended ABC is 3.1% decrease from 2020 ABC

| Quantity | As estimated or specified last year for: | | As estimated or recommended this year | |
|---------------------------------------|--|---------|---------------------------------------|---------|
| | 2020 | 2021 | 2021* | 2022* |
| M (natural mortality rate) | 0.2 | 0.2 | 0.2 | 0.2 |
| Tier | 3a | 3a | 3a | 3a |
| Projected total (3+) biomass (t) | 282,371 | 280,730 | 280,980 | 278,418 |
| Projected Female spawning biomass (t) | 92,467 | 95,216 | 95,338 | 96,833 |
| $B_{100\%}$ | 91,551 | 91,551 | 91,551 | 91,551 |
| $B_{40\%}$ | 36,620 | 36,620 | 36,620 | 36,620 |
| $B_{35\%}$ | 32,043 | 32,043 | 32,043 | 32,043 |
| F_{OFL} | 0.36 | 0.36 | 0.36 | 0.36 |
| $maxF_{ABC}$ | 0.28 | 0.28 | 0.28 | 0.28 |
| F_{ABC} | 0.28 | 0.28 | 0.28 | 0.28 |
| OFL (t) | 46,572 | 47,919 | 47,982 | 48,534 |
| maxABC (t) | 38,196 | 39,326 | 39,377 | 39,851 |
| ABC (t) | 38,196 | 39,326 | 39,377 | 39,851 |
| Status | As determined last year | | As determined this year | |
| | 2017 | 2018 | 2018 | 2019 |
| Overfishing | no | n/a | no | n/a |
| Overfished | n/a | no | n/a | no |
| Approaching overfished | n/a | no | n/a | no |

Spawning biomass
(from 2017
assessment) is
increasing



Exploitation is
consistently low



Apportionment

- Area apportionment calculated from random effects model estimates by area
- No survey in 2020 so no change in apportionment percentages

| Quantity | Western | Central | West Yakutat | Southeast | Total |
|--------------------|----------------|----------------|---------------------|------------------|--------------|
| Area Apportionment | 36.08% | 52.89% | 6.16% | 4.86% | 100.00% |
| 2021 ABC (t) | 14,209 | 20,826 | 2,427 | 1,915 | 39,377 |
| 2022 ABC (t) | 14,380 | 21,076 | 2,456 | 1,938 | 39,851 |