Summer Flounder
2023 Specifications Review

SSC
July 26, 2022
Overview

- Stock status and data update
- Recent catch and landings
- Advisory Panel Fishery Performance Report
- Review 2023 ABC and consider if revisions needed
  - Staff recommend no changes
Stock Status: 2021 Management Track Assessment

SSB
- Not overfished in 2019
- 2019 SSB = 47,397 mt, 86% of SSB_{MSY} = 55,217 mt

F
- Overfishing not occurring in 2019
- 2019 F = 0.340, 81% of F_{MSY} proxy = 0.422
Fishing Mortality
2021 MTA

Total Catch and Fishing Mortality (F)

Year

Total Catch (mt)
0 5,000 10,000 15,000 20,000 25,000 30,000 35,000

F (age 4)
0.0 0.2 0.4 0.6 0.8 1.0 1.2 1.4 1.6 1.8

FMSY = F35% = 0.422
SSB and Recruitment
2021 MTA

Spawning Stock Biomass (SSB) and Recruitment (R)

- **SSBMSY = SSB35% = 55,217 mt**
- **1/2 SSBMSY = 1/2 SSB35% = 27,609 mt**
2022 Data Update

NEFSC Summer Flounder Biomass Indices: BIG 2009-2022

BIG Kg per tow

BIG Spring  BIG Fall

2022 Data Update

NEFSC fall survey length frequency distributions suggest above average year class in 2018 with average to below average recruitment since
Fishery Landings & Discards 1989-2021*

*No dead disc. available for 2020 or 2021

Summer Flounder

- Commercial Landings
- Commercial Dead Discards
- Recreational Harvest
- Recreational Dead Discards

[Graph showing trends in commercial landings, dead discards, and harvest over the years 1989 to 2021.]
## Recreational Fishery Performance

<table>
<thead>
<tr>
<th>Year</th>
<th>Rec. land. old MRIP</th>
<th>Rec. land. new MRIP</th>
<th>RHL</th>
<th>RHL overage/underage</th>
<th>Rec. dead catch old MRIP</th>
<th>Rec. dead catch new MRIP</th>
<th>ACL</th>
<th>ACL overage/underage</th>
</tr>
</thead>
<tbody>
<tr>
<td>2016</td>
<td>6.18</td>
<td>13.24</td>
<td>5.42</td>
<td>14%</td>
<td>7.66</td>
<td>16.51</td>
<td>6.84</td>
<td>12%</td>
</tr>
<tr>
<td>2017</td>
<td>3.19</td>
<td>10.09</td>
<td>3.77</td>
<td>-15%</td>
<td>4.13</td>
<td>13.39</td>
<td>4.72</td>
<td>-13%</td>
</tr>
<tr>
<td>2018</td>
<td>3.35</td>
<td>7.60</td>
<td>4.42</td>
<td>-24%</td>
<td>4.32</td>
<td>9.81</td>
<td>5.53</td>
<td>-22%</td>
</tr>
<tr>
<td>2019</td>
<td>NA</td>
<td>7.80</td>
<td>7.69</td>
<td>1%</td>
<td>NA</td>
<td>10.84</td>
<td>11.51</td>
<td>-6%</td>
</tr>
<tr>
<td>2020</td>
<td>NA</td>
<td>10.06</td>
<td>7.69</td>
<td>31%</td>
<td>NA</td>
<td>TBD</td>
<td>11.51</td>
<td>TBD</td>
</tr>
<tr>
<td>2021</td>
<td>NA</td>
<td>6.82</td>
<td>8.32</td>
<td>-18%</td>
<td>NA</td>
<td>TBD</td>
<td>12.48</td>
<td>TBD</td>
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</table>
## Commercial Fishery Performance

<table>
<thead>
<tr>
<th>Year</th>
<th>Com. landings</th>
<th>Com. quota</th>
<th>Quota underage/overage</th>
<th>Com. dead catch</th>
<th>ACL</th>
<th>ACL underage/overage</th>
</tr>
</thead>
<tbody>
<tr>
<td>2016</td>
<td>7.80</td>
<td>8.12</td>
<td>-4%</td>
<td>9.50</td>
<td>9.43</td>
<td>1%</td>
</tr>
<tr>
<td>2017</td>
<td>5.83</td>
<td>5.66</td>
<td>3%</td>
<td>7.83</td>
<td>6.57</td>
<td>19%</td>
</tr>
<tr>
<td>2018</td>
<td>6.14</td>
<td>6.63</td>
<td>-7%</td>
<td>8.34</td>
<td>7.70</td>
<td>8%</td>
</tr>
<tr>
<td>2019</td>
<td>9.05</td>
<td>10.98</td>
<td>-18%</td>
<td>10.79</td>
<td>13.53</td>
<td>-20%</td>
</tr>
<tr>
<td>2020</td>
<td>9.11</td>
<td>11.53</td>
<td>-21%</td>
<td>TBD</td>
<td>13.53</td>
<td>TBD</td>
</tr>
<tr>
<td>2021</td>
<td>10.36</td>
<td>12.49</td>
<td>-17%</td>
<td>TBD</td>
<td>18.48</td>
<td>TBD</td>
</tr>
</tbody>
</table>
2022 Commercial Landings

Commercial landings through July 20, 2022

Quota: 15,512,127 lbs
Market and Economic Issues

- January through April 2022, commercial fishermen reported unusually low prices (since recovered)
  - Possibly driven by lack of hotel/restaurant demand in NY
  - NY prices have now increased for the first time in years ($5-6 range)

- Reiterated concerns about high fuel prices
  - Significantly eating into profits; not sustainable
  - Impacting willingness to steam to fish permits held in other states
  - May lead to lower landings in VA and NC and continued quota underages
Environmental and General Fishing Trends

- Current assessment shows increasing biomass 2017-2019 but recreational harvest did not show same increasing trend.
  - Interested in next update and if landings will track estimated biomass
- 3 advisors suggested summer flounder not inshore/in bays yet (as of June 21), fishing slow, possibly due to water temps
General Management Issues

- Decline in recruitment 2010-2019 due to regulations driving increased harvest of larger female fish
  - Need to recognize importance of BOFFFFFFFF
Recreational Management Issues

- 2022 recreational regulations in NJ include split slot limit (2 fish at 17-17.99 and 1 above 18’’)
  - One advisor supportive: hopes for positive impacts to female biomass and wider slot next year
  - Another hesitant: believes many more fish have been harvested this year already. People still want large fish; could negatively impact rec. fishery in long run
Research Recommendations

- Low recruitment caused not by number of eggs produced, but predation on larvae in first year of life. Determine what is eating them and associated impacts to stock.

- Extensive wind farms possible: need to know impact to summer flounder migrations and optimal habitat (cables and magnetic fields).
Research Recommendations

- Need to know more about migration patterns of summer flounder beyond general East-West
  - Interplay with stock distribution shift; may be more complicated than oceanic factors
- Recruitment sampling locations should be adjusted to better account for distribution changes
- Find better, less destructive survey methods vs. bottom trawls
Email Comments (Summer Flounder)

- Flounder fishing is decent in Delaware; got off to a late start due to cold water sticking around into late spring
  - Size limit change in DE from 16.5 to 16 inches didn’t make big difference; lack of shorts may indicate problems for future
- Concerned about impacts of climate change on habitat and migrations
- Recommend more research on breeding habits/location and potential harvest restrictions during spawning season
Email Comments (Summer Flounder)

- Commercial net size incorrect; should be 5” for all 3 species
- Consider recreational total length limit with no discarding and cell phone reporting; would benefit low income shore fishermen
Prior SSC Recommendations
July 2021

- Recommended 2022-2023 constant & varying ABCs based on 2021 MTA projections
  - SSC-modified OFL probability distribution; OFL CV = 60%
  - Recruitment sampled from 9-yr below avg. recruitment (2011-2019)
Prior SSC Recommendations & Staff Recommendation for 2023

- Council/Board adopted constant ABCs for 2022-2023
- Staff recommend no changes; no new information to suggest substantial change in status

<table>
<thead>
<tr>
<th>Variable ABCs</th>
<th>Year</th>
<th>OFL</th>
<th>ABC</th>
<th>P*</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>2022</td>
<td>36.28 mil lb 16,458 mt</td>
<td>33.96 mil lb 15,403 mt</td>
<td>0.452</td>
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<tr>
<td></td>
<td>2023</td>
<td>34.74 mil lb 15,759 mt</td>
<td>32.27 mil lb 14,639 mt</td>
<td>0.447</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Constant ABCs*</th>
<th>Year</th>
<th>OFL</th>
<th>ABC</th>
<th>P*</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>2022</td>
<td>36.28 mil lb 16,458 mt</td>
<td><strong>33.12 mil lb 15,021 mt</strong></td>
<td>0.435</td>
</tr>
<tr>
<td></td>
<td>2023</td>
<td>34.98 mil lb 15,865 mt</td>
<td>15,021 mt</td>
<td>0.461</td>
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