Summer Flounder

SSC Review of 2018 Specifications

July 19, 2017
Stock Status

- Last benchmark assessment: SAW/SARC 57 (2013)
  - Age-structured assessment program (ASAP)
  - Not overfished, overfishing not occurring in 2012

- 2014: data update
- 2015 and 2016: assessment updates
- 2017: data update
**Stock Status: 2016 Update**

### SSB
- **2015 SSB = 36,240 mt**
- **58% of SSB\(_{35\%}\) = SSB\(_{MSY}\) = 62,394 mt**
- **16% above MSST = \(\frac{1}{2} \text{ SSB}_{35\%}\) = 31,197 mt**
- Not overfished in 2015

### F
- **2015 F = 0.390**
- **26% above F\(_{35\%}\) = F\(_{MSY}\) proxy = 0.309**
- Overfishing occurring in 2015
SSB and Recruitment

**2016 Update**

**Spawning Stock Biomass (SSB) and Recruitment (R)**

- **SSBMSY** = SSB35% = 62,394 mt
- 1/2 SSBMSY = 1/2 SSB35% = 31,197 mt
Regulatory Review

- July 2016: SSC recommended two-year ABCs (2017-2018) based on 2016 assessment update
- Revised previous multi-year recommendations (derived in 2015 using phased-in reduction approach)
Regulatory Review

SSC recommended abandoning phased-in approach due to:

- Update showed continued reductions in SSB; increases in F
- Retrospective concerns; adjustment would indicate even worse condition
- Consistent overfishing
- Over-optimistic projection trends
- Downward trend in indices since 2011
Regulatory Review

- Reverted to standard application of risk policy

- Typical life history; Proj. $B/B_{MSY} = 58\%$; Lognormal distribution of OFL with CV = 60\% $\Rightarrow P^* = 0.239$
  
  - Yielded 2017 ABC = 11.30 million lb = 5,125 mt
  
  - 2018 ABC = 13.23 million lb = 5,999 mt ($P^* = 0.267$)
Currently Implemented ABCs

<table>
<thead>
<tr>
<th></th>
<th>2017</th>
<th>2018</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Mil lb.</td>
<td>mt</td>
</tr>
<tr>
<td>OFL</td>
<td>16.76</td>
<td>7,600</td>
</tr>
<tr>
<td>ABC</td>
<td>11.30</td>
<td>5,125</td>
</tr>
</tbody>
</table>
## Fishery Performance

<table>
<thead>
<tr>
<th>Year</th>
<th>Comm. Landings (mil lb)</th>
<th>Comm. Quota (mil lb)</th>
<th>Comm. % Overage (+)/Underage(-)</th>
<th>Rec. Landings (mil lb)</th>
<th>Rec. Harvest Limit (mil lb)</th>
<th>Rec. % Overage (+)/Underage(-)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2012</td>
<td>13.04</td>
<td>12.73</td>
<td>+2%</td>
<td>6.49</td>
<td>8.49</td>
<td>-24%</td>
</tr>
<tr>
<td>2013</td>
<td>12.44</td>
<td>11.44</td>
<td>+9%</td>
<td>7.36</td>
<td>7.63</td>
<td>-4%</td>
</tr>
<tr>
<td>2014</td>
<td>11.00</td>
<td>10.51</td>
<td>+5%</td>
<td>7.39</td>
<td>7.01</td>
<td>+5%</td>
</tr>
<tr>
<td>2015</td>
<td>10.68</td>
<td>11.07</td>
<td>-4%</td>
<td>4.72</td>
<td>7.38</td>
<td>-36%</td>
</tr>
<tr>
<td>2016</td>
<td>7.81</td>
<td>8.12</td>
<td>-4%</td>
<td>6.18</td>
<td>5.42</td>
<td>+14%</td>
</tr>
<tr>
<td>5-yr Avg.</td>
<td></td>
<td></td>
<td>+2%</td>
<td></td>
<td></td>
<td>-9%</td>
</tr>
</tbody>
</table>
Quota Monitoring

64% of commercial quota harvested as of week ending July 1, 2017.
General Management Issues

- MRI P data is highly imprecise in some states/waves/modes
  - Should be reviewed more closely before using for management measures

- Mandatory angler reporting via mobile app should be considered
Environmental and Ecological Issues

- Concern with retrospective pattern in assessment
- Density dependence & stock-recruit relationships must be properly considered
Environmental and Ecological Issues

- Cold water this past year led to fish still available offshore near Hudson Canyon into June (a month later than normal)

- One advisor: not as many large fluke off NY as in the past, but evidence of better recruitment
  - Another advisor: larger biomass than usual off NY in recent years
Environmental and Ecological Issues

- One advisor recommended management based on reproductive efficiency of fish rather than total poundage limit
Market and Economic Issues

- A cumulative economic impact study should be conducted to show impacts of recent quota cuts over time and by state.

- Request to evaluate boat registration and participation trends.
Commercial Management Issues

- Catch influenced primarily by regulations/quotas

- One advisor believes commercial high grading may be taking place due to few fish landed at 14”
  - Another responded that this is due to minimum mesh sizes, not high grading
Recreational Management Issues

- Frustration with restrictive management measures and the data used to manage the recreational fishery

- Number of directed trips has exceeded number of pounds in RHL in recent years
Recreational Management Issues

- Concern regarding increases in size limits in recent years and the impacts of directing on large females
- Landing larger fish also leads to reaching RHL faster
- Several believe current assumed recreational discard mortality rate (10%) to be an underestimate
Recreational Management Issues

- Request to consider alternative management measures to reduce discards and mortality on large females:
  - Total discard ban proposed by one advisor
  - Alternative strategies supported by others (e.g., single slot limit, multi-slot limit, total length limit)
One request to eliminate current regional management: bad for NJ given differing availability at size within the state
Research Recommendations

- Evaluate impacts of higher mortality on certain size/sex combinations
- Re-evaluate 10% discard mortality assumption
- Evaluate impacts of total length limit
- Evaluate cumulative economic impacts of quota cuts
- Cost/benefit analysis of changing specifications annually vs. stable measures
- Evaluate full retention requirement for recreational fishery
One advisor: concerned that east-west migrating species should be managed differently than north-south

- Suggests northward shift in biomass is due to localized depletion in south due to commercial fishing pressure

Time/area closures should be considered to ease pressure on spawning fluke

Stop trying to manage on an annual basis
CT advisor: summer flounder fishing has been very poor
- 2017 landings in Central Long Island Sound very low so far this year

Another advisor: requests age/sex model for management
Staff ABC Recommendation

- Maintain previously specified ABC for 2018

- Benchmark assessment tentatively scheduled for review in late 2018
  - Will need 2019 recommendations next year as placeholder
## Currently Implemented ABCs

<table>
<thead>
<tr>
<th></th>
<th>2017</th>
<th>2018</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Mil lb.</td>
<td>mt</td>
</tr>
<tr>
<td><strong>OFL</strong></td>
<td>16.76</td>
<td>7,600</td>
</tr>
<tr>
<td><strong>ABC</strong></td>
<td>11.30</td>
<td>5,125</td>
</tr>
</tbody>
</table>