Recommended Catch Limit Considerations

- Commission’s desire to achieve target harvest rates in all areas
- Declining indices of abundance
- Recent high exploitation rates in Area 2
- Declining size at age and effect on Ebio
- Addressing inconsistencies in treatment of U32/O26 removals among different categories of removals. Options for direct deductions of both U32/O26 and U26 removals examined
Raw and Adjusted Survey WPUE (O32)

Note the different vertical scales for each area.

Note the different timeline for Areas 2B, 2C, and 3A.
Commercial WPUE, 1974-2010

Graphs showing trends in WPUE (lbs/skate) from 1975 to 2005 for different years and categories:

- **2A**: +73% from 1975 to 2005
- **2B**: +23% from 1975 to 2005
- **2C**: +6% from 1975 to 2005
- **3A**: -6% from 1975 to 2005
- **3B**: -16% from 1975 to 2005
- **3C**: -19% from 1975 to 2005
- **4A**: -13% from 1975 to 2005
- **4B**: -13% from 1975 to 2005
- **4C**: -7% from 1975 to 2005
- **4D**: -6% from 1975 to 2005

Graphs labeled 2B, 3B, and 4B show OAIFQ trends.

Graphs labeled 2C, 3A, 3B, 4A, and 4D show OAIFQ trends.

Graph labeled 4C shows OAIFQ trends with a -24% decrease.

Graph labeled Total shows OAIFQ trends with a -6% decrease.

Graphs are marked with "IPHG 2011 Annual Meeting."
Reg area age and weight trends (survey)
Ebio projections - Coastwide

- Cautionary notes on projections
  - Based on current estimated population structure
  - Assumes no change in size-at-age
  - Assumes near average recruitment
  - Assumes removals will be at target HR of 0.20.
Projected CW EBio (no change in trends)

- Using Min, Avg and Max CW estimated recruitment
- Changing trends: 1) no further decreases in size-at-age
  2) no further decreases of recruitment estimates

2010 assessment estimate of CW EBio trajectory
Realized harvest rates

HR on Exploitable Biomass

HR on Total Biomass (Ages 8+)

HR on Total Biomass (Ages 6+)

2/2/2011

IPHC 2011 Annual Meeting
Projected CW EBio (alternative method)

1) Using Min, Avg and Max CW estimated recruitment
2) Avg Recruits, reduced rec. (R.R), reduced size-at-age (R.S) and both (R.R,S)

2010 assessment estimate of CW EBio trajectory
Apportionment Process

- Adjustment factors used same as those in 2010
  - Hook competition
  - Survey timing
- Data averaging
  - Statistical analysis used Kalman filter approach to develop 75:20:5 reverse weighting for the past three years of survey data, most recent year’s data weighted highest
- Final apportionment uses adjusted, reverse-weighted WPUE, and bottom areas (0-400 fm)
Change to Slow Up Fast Down (SUFD)

- SUFastD phases in changes asymmetrically
- EBio (x HR) -> TCEY (- OR) -> FCEY (SUFastD) -> CLR
- Fishery CEY adjustment termed "Slow Up Fast Down"
  - Option to modify to Slow Up Full Down (SUFullD)
- SUFastD has resulted in Coastwide quotas 9-14% over the Fishery CEY (FCEY) the last few years
  - Individual regulatory areas have been as much as 75% over FCEY
- Analysis shows that SUFastD does not work as well under conditions of:
  - Starting from catch levels well above FCEY
  - Continuing decline in size at age
Commission Requested Analysis

- Current treatment of U32/O26 removals is not consistent across all fishery types (commercial, sport, subsistence). Some is by direct deduction, some is by harvest rate adjustment.

- Commission requested that staff attempt to rationalize the treatment of such fish

- Staff developed method to directly deduct all such removals from Total CEY, in combination with a modified harvest rate

- Results indicate previous treatment was adequate but proposed method more apparent and consistent
### Scenarios Considered

<table>
<thead>
<tr>
<th>Reg Area</th>
<th>Standard Deductions, All U32 BAWM in HR</th>
<th>Direct U32/O26 Deductions, All U26 BAWM in HR</th>
<th>Direct U32 Deductions, No U32 BAWM in HR</th>
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<tr>
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<td>4CDE</td>
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<td>3.87</td>
<td>3.87</td>
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<tr>
<td><strong>Total</strong></td>
<td>43.22</td>
<td>46.67</td>
<td>42.11</td>
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</table>

Revised from initial staff recommendations
All cases use Hook/Timing Adjustment Factors and reverse weighted averaging of survey WPUEs
### Staff Recommendation

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<thead>
<tr>
<th>Reg Area</th>
<th>SUFullID</th>
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<tr>
<td>2A</td>
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<td>2.18</td>
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<td>4CDE</td>
<td>3.72</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>41.07</strong></td>
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</tbody>
</table>

Recommendations based on use of Hook/Timing adjustment factors and reverse weighting of survey WPUEs
## Coastwide Assessment: Hook Competition and Timing AFs, reverse averaging to Survey Apportionment, SUFullD, and Direct U32/O26 Deduction

<table>
<thead>
<tr>
<th>Reg Area</th>
<th>Exploitable biomass</th>
<th>Harvest Rate</th>
<th>Total CEY</th>
<th>2010 Other Removals</th>
<th>2010 Catch Limit</th>
<th>2011 Fishery CEY</th>
<th>Slow Up-Down Adjustment</th>
<th>2011 Catch Limit Recomm.</th>
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<tbody>
<tr>
<td>2A</td>
<td>6.63</td>
<td>21.5%</td>
<td>1.43</td>
<td>0.31</td>
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<td>1.11</td>
<td>-0.20</td>
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<tr>
<td>2B</td>
<td>40.89</td>
<td>21.5%</td>
<td>8.79</td>
<td>0.85</td>
<td>7.50</td>
<td>7.94</td>
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<tr>
<td>2C</td>
<td>25.05</td>
<td>21.5%</td>
<td>5.39</td>
<td>3.06</td>
<td>4.40</td>
<td>2.33</td>
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<tr>
<td>3A</td>
<td>109.39</td>
<td>21.5%</td>
<td>23.52</td>
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<tr>
<td>3B</td>
<td>57.32</td>
<td>16.1%</td>
<td>9.24</td>
<td>1.73</td>
<td>9.90</td>
<td>7.51</td>
<td>0.00</td>
<td>7.51</td>
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<tr>
<td>4A</td>
<td>21.25</td>
<td>16.1%</td>
<td>3.43</td>
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<td>-0.16</td>
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<td>4B</td>
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<td>4CDE</td>
<td>40.32</td>
<td>16.1%</td>
<td>6.50</td>
<td>2.52</td>
<td>3.58</td>
<td>3.99</td>
<td>-0.27</td>
<td>3.72</td>
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<tr>
<td><strong>Total</strong></td>
<td><strong>317.00</strong></td>
<td><strong>19.2%</strong></td>
<td><strong>60.90</strong></td>
<td><strong>18.88</strong></td>
<td><strong>50.67</strong></td>
<td><strong>42.02</strong></td>
<td><strong>-0.95</strong></td>
<td><strong>41.07</strong></td>
</tr>
</tbody>
</table>

Note: Exploitable biomass is coastwide assessment, survey partitioning; Hook & Timing Afs; Kalman wts

1 Catch limits and Fishery CEY for 2A includes commercial, sport, and treaty subsistence catches
2 Catch limits and Fishery CEY for 2B includes commercial and sport catch
3 Calculated as 2010 catch limit plus 1/3 of the difference between 2011 Fishery CEY and 2010 Catch Limit
4 Calculated as 2011 Fishery CEY

Assumes GHL of 0.788 Mlb in Area 2C, 3.65 Mlb in Area 3A under Other Removals
Other removals for 2C and 3A are adding projected unguided harvest to the applicable GHL

2/2/2011 IPHC 2011 Annual Meeting
## 2010 vs. 2011 Comparison

<table>
<thead>
<tr>
<th></th>
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<tbody>
<tr>
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<td>21.67</td>
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<td>3.43</td>
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<td>4CDE</td>
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<td>3.72</td>
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<tr>
<td><strong>Total</strong></td>
<td><strong>334.00</strong></td>
<td><strong>317.00</strong></td>
<td><strong>59.63</strong></td>
<td><strong>60.90</strong></td>
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<td><strong>49.02</strong></td>
<td><strong>50.67</strong></td>
<td><strong>41.07</strong></td>
</tr>
</tbody>
</table>

Note: Ebio and FCEY values are directly comparable; TCEY uses different harvest rates in 2010 and 2011.

2/2/2011 IPHC 2011 Annual Meeting
2010 vs. 2011 FCEY and CLs

- 2010 Fishery CEY
- 2011 Fishery CEY
- 2010 Catch Limit Recomm.
- 2010 Adopted Catch Limits
- 2011 Catch Limit Recomm.
### 2011 Adopted Catch Limits

<table>
<thead>
<tr>
<th>Regulatory Area</th>
<th>2010 Catch Limit</th>
<th>Staff (Millions of Pounds)</th>
<th>CB</th>
<th>PAG</th>
<th>IPHC Approved</th>
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<tbody>
<tr>
<td>2A 1</td>
<td>0.810</td>
<td>0.910</td>
<td>0.860</td>
<td>0.920</td>
<td>0.910</td>
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<td>2B 1,2</td>
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<tr>
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<tr>
<td>4C 4</td>
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<td>1.690</td>
<td>1.690</td>
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<td>4D 4</td>
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<td>1.690</td>
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<td>0.340</td>
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<tr>
<td><strong>Total</strong></td>
<td><strong>50.670</strong></td>
<td><strong>41.070</strong></td>
<td><strong>42.050</strong></td>
<td><strong>41.860</strong></td>
<td><strong>41.070</strong></td>
</tr>
</tbody>
</table>

1. Combined sport and commercial allocation (2A includes tribal)
2. Presumes adherence to sport management targets
3. Allocation for combined Areas 4C, 4D, 4E
4. NPFMC Plan: 4C, 4D: 46.43% of 80K less than 4CDE quota, 4E: 7.14% + 80K
Management Recommendations

Fishing periods and catch sharing

- Staff proposes March 15 - November 15 for quota share fisheries
- Area 2A commercial and treaty Indian fisheries should fall within adopted season
- In 2A, a series of 10-h periods starting June 29 for the directed fishery
- Endorse Management Councils’ catch sharing plans for Areas 2A and 4CDE
- Endorse DFO commercial:sport allocation plan for Area 2B
Regulatory Proposals

From Commission staff

- Changing logbook regulation to remove the option for use of LORAN coordinates for fishing locations, due to decommissioning of the LORAN-C network

Direction to Staff

- Analyze potential for using tags as a monitoring tool for non-commercial removals of halibut
- Analyze biological impacts of incrementally reducing or eliminating the commercial size limit
Alaskan Charter Fishery Control Measures
Requested by the Commission

❖ At 2010 Annual Meeting, Commission requested staff development of potential control measures for charter halibut fisheries, should the NPFMC Catch Sharing Plan not be implemented in a timely manner

❖ Measures considered by the Commission and Advisory bodies at Annual Meeting. Measures in IPHC Blue Book, Appendix I, pp. 156-164

❖ Staff worked with NMFS to develop a suite of potential control measures, based largely on existing analyses
Charter Control Options

Objectives

- Meet IPHC conservation goals
- Reduce harvest to GHL
- Minimize season disruption to the extent practicable
- Assure equity of access and applicability to all charter anglers
- Ensure measures result in enforceable accountability
- Simplify application by basing measures on previous analyses where possible
Charter Control Options

Potential Measures

• Existing Catch Sharing Plan measures
• Maximum size limit
• Season limitation

Longer term measure

• Restricted number of halibut tags, with licence and logbook recording

Commission Adopted

• One-fish bag limit, maximum size 37 in., carcass retention until offloading
Bycatch Mortality

- Commission notes Council’s letter of 12/27/2010 concerning PSCs and affirms participation in the Council process
- Building on activities of Halibut Bycatch Work Group re-formed in 2010, the Commission has formed a Halibut Bycatch Project Team, led by Commissioners
- Gain better understanding of amounts and impacts, as well as potential control and mitigation measures
- Report to the Commission at its 2012 Annual Meeting
Performance Review

- Using a team of external experts in fisheries science, management, and organizational governance, the Commission will conduct a review of its performance relative to the central objectives of the Halibut Convention.

- Will review trends and stock status with regard to relevant reference points, as well as governance and advisory processes relative to advancing the goals of the Commission.

- Team will attend the 2012 Annual Meeting to interact with the Commission’s Advisory Bodies and assess decision-making procedures.

- Report to the Commission prior to the 2012 Interim Meeting.