Executive Summary
Pacific Fisheries Management Council
June 2017
FIVE-YEAR REVIEW

• Section 303A(c)(1)(G) of the MSA requires the Councils and Secretary to “include provisions for [...] a formal and detailed review 5 years after the implementation of the program

• Pacific Fishery Management Council opted for a very detailed review

• Review document is organized around the goals and objectives of the program
QUESTIONS FROM THE SSC & COUNCIL

1. NET BENEFITS: How did net benefits to the nation derived from this fishery change?

2. FINANCIAL OUTCOMES: How did financial outcomes for participants in the fishery change?

3. DISTRIBUTIONAL OUTCOMES: Did the distribution of cost, revenues, effort, and net benefits among fishery participants (including communities and user groups) change?

4. UTILIZATION: Did utilization rates for specific species change?
Primary data sources:
Fish Tickets
Pacific Coast Groundfish Social Survey
Economic Data Collection
West Coast Groundfish Observer Program
Pacific Coast Groundfish Permit System and IFQ Accounting System
The Blob

Ongoing consolidation

Overfished (prior to 2000):
- Cowcod and canary rockfish (2000)
- Lingcod, POP, and bocaccio (1999)

Overfished:
- Pacific whiting and yelloweye rockfish (2002)
- Petrale sole (2010)

Rebuilt:
- Pacific whiting (2004)
- Lingcod (2005)
- Widow rockfish (2012)
- Canary rockfish and petrale sole (2015)

PCGFSS baseline
EDC baseline
Catch Share Program
RCAs Implemented
Buyback Program

Section 2.0
Page 2-3 to 2-6
NET BENEFITS

HOW DID NET BENEFITS TO THE NATION DERIVED FROM THIS FISHERY CHANGE AFTER IMPLEMENTATION OF THE CATCH SHARE PROGRAM?
Net economic benefits are calculated by subtracting monetary costs from gross revenue for fishing activities, summed over participants in each sector.

<table>
<thead>
<tr>
<th>Year</th>
<th>Catcher-processors</th>
<th>Shoreside catcher vessels</th>
<th>Shorebased processors</th>
<th>At-sea catcher vessels</th>
<th>Motherships</th>
</tr>
</thead>
<tbody>
<tr>
<td>2009</td>
<td>10</td>
<td>5</td>
<td>5</td>
<td>5</td>
<td>1</td>
</tr>
<tr>
<td>2010</td>
<td>15</td>
<td>10</td>
<td>10</td>
<td>10</td>
<td>2</td>
</tr>
<tr>
<td>2011</td>
<td>20</td>
<td>15</td>
<td>20</td>
<td>20</td>
<td>3</td>
</tr>
<tr>
<td>2012</td>
<td>25</td>
<td>20</td>
<td>25</td>
<td>25</td>
<td>4</td>
</tr>
<tr>
<td>2013</td>
<td>30</td>
<td>25</td>
<td>30</td>
<td>30</td>
<td>5</td>
</tr>
<tr>
<td>2014</td>
<td>35</td>
<td>30</td>
<td>35</td>
<td>35</td>
<td>6</td>
</tr>
<tr>
<td>2015</td>
<td>40</td>
<td>35</td>
<td>40</td>
<td>40</td>
<td>7</td>
</tr>
</tbody>
</table>

2009-2010 Average: $25 million
2011-2015 Average: $54 million
Efficiency (net revenue as a percentage of revenue)
NET BENEFITS
FLEXIBILITY

- Participation in non catch-share fisheries
- Participation in cooperatives and risk pools
- Days at sea
- Timing of landings
- Number and size of fishing trips
- Location of landings
- Carrying over, leasing, and selling quota
FLEXIBILITY
TIMING OF LANDINGS

Shoreside non-whiting

Shoreside whiting
FINANCIAL OUTCOMES

HOW DID FINANCIAL OUTCOMES FOR PARTICIPANTS IN THE FISHERY CHANGE FOLLOWING IMPLEMENTATION OF THE CATCH SHARE PROGRAM?
Financial outcomes

SSC: “Upper bound” individual-level measures of net revenue
Figure 3-1. Economic performance section classification of catch share catcher vessels. **Does not include vessels that only caught whiting as bycatch.
Shore-based processors and first receivers

Figure 3-2. Economic performance section classification of CS first receivers and shorebased processors. **Does not include processors that only receive whiting as bycatch.
https://dataexplorer.northwestscience.fisheries.noaa.gov/fisheye/PerformanceMetrics/
Table 3-25. Fleet-wide revenue, average revenue, and expenses as a percentage of revenue (2015 $) for shor**eside whiting operations** of catcher vessels, 2009-2015. Source: EDC data.

<table>
<thead>
<tr>
<th></th>
<th></th>
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<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Fleet-wide Fishing Revenue</td>
<td>5,969,108</td>
<td>10,884,420</td>
<td>8,426,764</td>
<td>24,291,580</td>
<td>21,918,060</td>
<td>27,610,230</td>
<td>24,575,220</td>
<td>9,983,392</td>
<td>21,675,696</td>
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<tr>
<td>Average revenue</td>
<td>175,562</td>
<td>310,983</td>
<td>243,273</td>
<td>934,292</td>
<td>913,253</td>
<td>1,150,426</td>
<td>983,009</td>
<td>453,791</td>
<td>886,954</td>
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<tr>
<td>Expenses (% of revenue)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Crew and captain</td>
<td>32%</td>
<td>31%</td>
<td>31%</td>
<td>31%</td>
<td>35%</td>
<td>34%</td>
<td>36%</td>
<td>34%</td>
<td>34%</td>
</tr>
<tr>
<td>Equipment and fishing gear</td>
<td>52%</td>
<td>47%</td>
<td>49%</td>
<td>28%</td>
<td>36%</td>
<td>22%</td>
<td>21%</td>
<td>51%</td>
<td>32%</td>
</tr>
<tr>
<td>Fuel and lubrication</td>
<td>18%</td>
<td>21%</td>
<td>20%</td>
<td>11%</td>
<td>15%</td>
<td>10%</td>
<td>13%</td>
<td>18%</td>
<td>14%</td>
</tr>
<tr>
<td>Buyback fees</td>
<td>5%</td>
<td>5%</td>
<td>5%</td>
<td>5%</td>
<td>5%</td>
<td>5%</td>
<td>5%</td>
<td>5%</td>
<td>5%</td>
</tr>
<tr>
<td>Observers</td>
<td>0%</td>
<td>1%</td>
<td>1%</td>
<td>0%</td>
<td>1%</td>
<td>1%</td>
<td>1%</td>
<td>2%</td>
<td>1%</td>
</tr>
<tr>
<td>Cost recovery fees</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
<td>3%</td>
<td>3%</td>
<td>3%</td>
<td>3%</td>
<td>1%</td>
</tr>
<tr>
<td>Ice, food, bait, supplies</td>
<td>4%</td>
<td>3%</td>
<td>3%</td>
<td>1%</td>
<td>1%</td>
<td>1%</td>
<td>1%</td>
<td>2%</td>
<td>1%</td>
</tr>
<tr>
<td>Other</td>
<td>10%</td>
<td>8%</td>
<td>9%</td>
<td>4%</td>
<td>5%</td>
<td>5%</td>
<td>6%</td>
<td>11%</td>
<td>6%</td>
</tr>
<tr>
<td>Total Expenses</td>
<td>121%</td>
<td>115%</td>
<td>118%</td>
<td>81%</td>
<td>96%</td>
<td>77%</td>
<td>86%</td>
<td>127%</td>
<td>93%</td>
</tr>
<tr>
<td>Number of vessels</td>
<td>34</td>
<td>35</td>
<td></td>
<td>26</td>
<td>24</td>
<td>24</td>
<td>25</td>
<td>22</td>
<td></td>
</tr>
</tbody>
</table>
Daily and Annual Wages for Crew

- **Whiting vessels**: Increased 83% and 118% (excl. 2015)
- **Non-whiting vessels**: Increased by 63% and 24%
- **Motherships**: Only annual wages increased for processing and non-processing crew
- **Catcher-Processors**: Processing crew decreased 23 and 20%
- **PCGFSS results on compensation satisfaction** corroborates these results; In 2010, 64% of crew interviewed rated compensation as “excellent” or “good”, in 2015 this increased to 76%

Shorebased processor employees

- **Non-production employees**: **hourly** wages have increased
- **Production employees**: **hourly** wages have stayed the same
- Mean number of processing employees per facility has increased in most months
DID THE DISTRIBUTION OF COST, REVENUES, EFFORT, AND NET BENEFITS AMONG FISHERY PARTICIPANTS (INCLUDING COMMUNITIES AND USER GROUPS) CHANGE?
DISTRIBUTIONAL OUTCOMES
COMMUNITIES- Port Areas

Number of Buyers- Shoreside whiting


Number of Buyers- Non-whiting Trawl


Table 3-103, Page 3-217
### DISTRIBUTIONAL OUTCOMES

COMMUNITIES- Port Areas

**Table 3-97-98, page 3-212**

<table>
<thead>
<tr>
<th>Location</th>
<th>Average annual ex-vessel value: Whiting</th>
</tr>
</thead>
<tbody>
<tr>
<td>Washington</td>
<td>4,000</td>
</tr>
<tr>
<td>Astoria/Tillamook</td>
<td>6,000</td>
</tr>
<tr>
<td>Newport</td>
<td>4,000</td>
</tr>
<tr>
<td>Coos Bay</td>
<td>2,000</td>
</tr>
<tr>
<td>Brookings</td>
<td>2,000</td>
</tr>
<tr>
<td>Crescent City</td>
<td>2,000</td>
</tr>
<tr>
<td>Eureka</td>
<td>2,000</td>
</tr>
<tr>
<td>Fort Bragg</td>
<td>2,000</td>
</tr>
<tr>
<td>San Francisco</td>
<td>2,000</td>
</tr>
<tr>
<td>Monterey</td>
<td>2,000</td>
</tr>
<tr>
<td>Morro Bay</td>
<td>2,000</td>
</tr>
</tbody>
</table>

**Average annual ex-vessel value: Non-whiting**

- **Washington**: 8,000
- **Astoria/Tillamook**: 12,000
- **Newport**: 4,000
- **Coos Bay**: 4,000
- **Brookings**: 4,000
- **Crescent City**: 4,000
- **Eureka**: 4,000
- **Fort Bragg**: 4,000
- **San Francisco**: 4,000
- **Monterey**: 4,000
- **Morro Bay**: 4,000

*Table 3-97-98, page 3-212*
Fishing Engagement:
• Decrease in Coos Bay and Crescent City
• Increase in Ilwaco

Fishing Infrastructure:
• 46% of interviews contained some discussion of infrastructure

• Percentage discussing infrastructure losses:
  Washington: 15%
  Oregon: 20%
  California: 27%

• 21% of Newport respondents spoke about increases or no change in infrastructure.
DISTRIBUTIONAL OUTCOMES
MANAGEMENT COSTS AND CONCERNS

Monitoring costs:


Cost recovery:

Varies by fleet and began being collected in 2014.
QUESTIONS?