

Public Review Draft of EA/RIR/IRFA to
Revise Bering Sea/Aleutian Islands Halibut Prohibited Species Catch Limits

ERRATA – May 21, 2015

This errata sheet has been prepared to correct four halibut fishery impact tables in the document: Table ES-6 (p.30), which is also in the main document as Table 4-191 (p.362); and Tables 4-192 and 4-193 (p.364). Also, Figure 4-91 and the text describing it (pp.362-363) have been corrected, and converted to net weight pounds. For clarity, all of Section 4.13.1.1 has been reproduced below, with changes marked in red underline/strikeout.

Table ES-6 Summary of harvest impacts for commercial halibut fishery from reductions across all sectors combined, in pounds net weight

Option	Commercial Halibut Fishery Impacts							
	Scenario A				Scenario B			
	4A	4B	4CDE	Area 4	4A	4B	4CDE	Area 4
	Average Annual Change from the Status Quo in Commercial Halibut (net weight 1,000s pounds)							
Status Quo	1,549 <u>1,576</u>	1,382	276	3,234 <u>3,234</u>	1,549 <u>1,577</u>	1,383	283	3,215 <u>3,242</u>
All Sectors: -10%	52 <u>25</u>	0.4	28	81 <u>54</u>	44 <u>17</u>	2	59	105 <u>78</u>
All Sectors: -20%	122 <u>94</u>	2	132	256 <u>228</u>	69 <u>41</u>	10	215	293 <u>266</u>
All Sectors: -30%	203 <u>176</u>	20	302	525 <u>498</u>	126 <u>99</u>	24	431	584 <u>553</u>
All Sectors: -35%	235 <u>208</u>	29	416	679 <u>652</u>	162 <u>136</u>	45	557	764 <u>736</u>
All Sectors: -40%	279 <u>252</u>	38	534	852 <u>824</u>	199 <u>172</u>	53	688	944 <u>913</u>
All Sectors: -45%	354 <u>323</u>	43	653	1,046 <u>1,019</u>	244 <u>216</u>	63	835	1,143 <u>1,116</u>
All Sectors: -50%	434 <u>403</u>	50	758	1,239 <u>1,211</u>	284 <u>257</u>	82	986	1,353 <u>1,325</u>

4.13.1.1 Harvest and revenue impacts for reductions across all sectors (pp. 361-364)

The commercial halibut fishery harvest under the implementation of combined reductions across all sectors is summarized in Table 4-191. For example, the rows showing outcomes under a -10% change include a 10 percent reduction in halibut PSC limits for the A80-CPs, the BSAI TLA fisheries, the LGL-CPs and the groundfish CDQ fisheries. If the 30 percent PSC reduction were chosen across all sectors, it is projected that the entire Area 4 halibut fishery could realize an increase in annual average harvest volumes by up to ~~18~~ 17 percent. Under a 50 percent PSC reduction for all sectors, the Area 4 halibut fishery could realize an increase in annual average harvest volumes of up to ~~42~~ 41 percent. Under PSC limit reductions of 50 percent, projected increases to harvest volumes in Area 4CDE would be expected to range between 275 and 349 percent of status quo levels, which, as modelled, were very low – lower, in fact, than current or historic levels of harvest. This is because the model uses our interpretation of the IPHC’s current blue line application of the harvest policy, without adjustments to the directed fishery harvest limit (as occurred in 2015 for Area 4B and Area 4CDE (Section 4.6)), so this represents an increase from the blue line catch limits for Area 4CDE, not the actual 4CDE harvest limit as adopted. As noted earlier, halibut PSC reductions in the BSAI are significantly larger than gains to the halibut fishery in Area 4, and the relationship between reductions in PSC from groundfish fisheries and increases in O26 halibut harvest can be approximated by a 2 to 1 ratio. In other words, for every 100 mt (net weight) increase in harvests in the commercial halibut fishery, a decrease in PSC by groundfish fleets of approximately 200 mt (round weight) is required. This results from a combination of the conversion from round weight to net weight, and the proportion of savings that accrue immediately from O26 halibut, and those that accrue over time from U26 halibut.

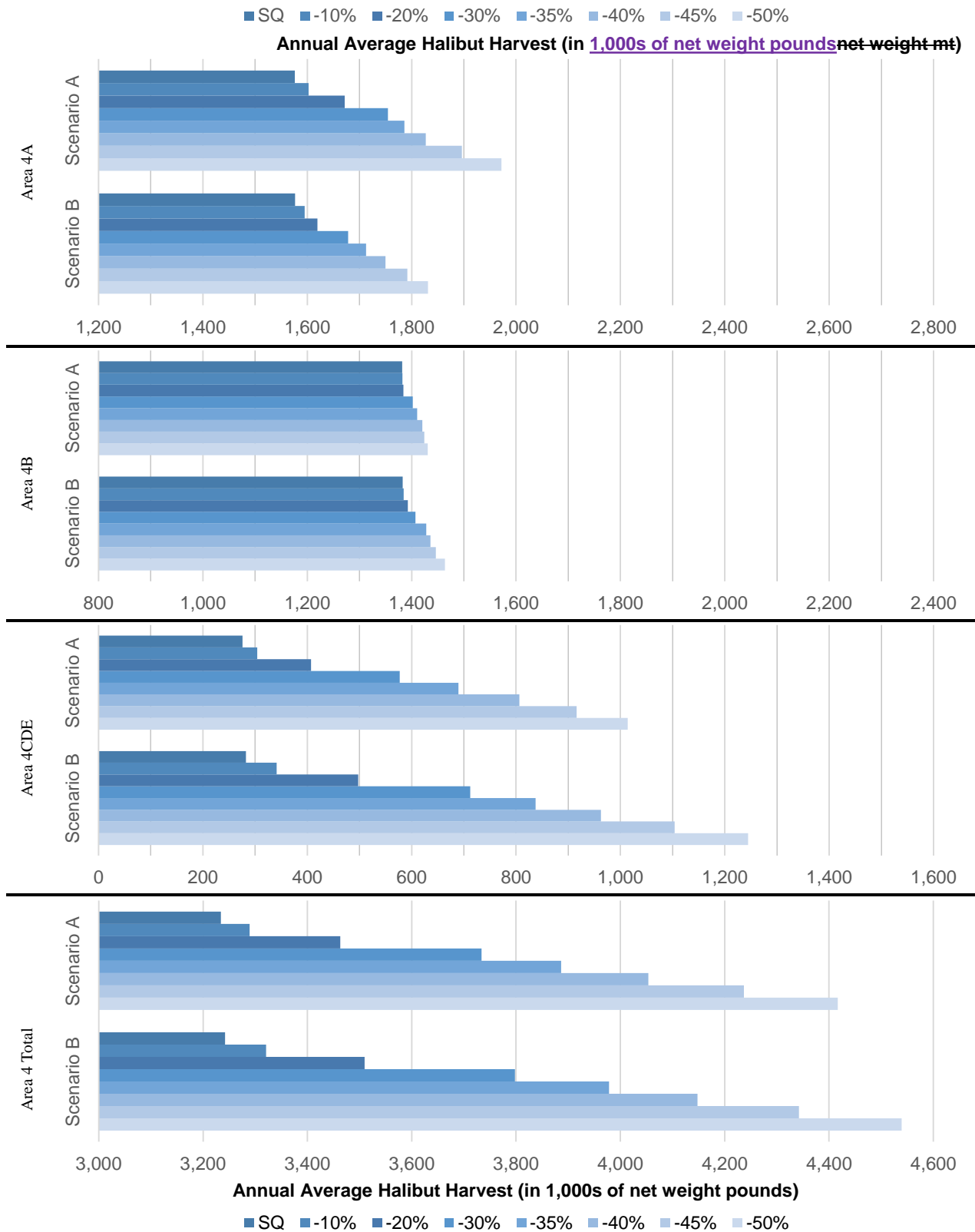
Table 4-191 Summary of harvest impacts for commercial halibut fishery from reductions across all sectors combined, in pounds net weight

Option	Commercial Halibut Fishery Impacts							
	Scenario A				Scenario B			
	4A	4B	4CDE	Area 4	4A	4B	4CDE	Area 4
	Average Annual Change from the Status Quo in Commercial Halibut (net weight 1,000s pounds)							
Status Quo	1,549 <u>1,576</u>	1,382	276	3,234 <u>3,234</u>	1,549 <u>1,577</u>	1,383	283	3,245 <u>3,242</u>
All Sectors: -10%	52 <u>25</u>	0.4	28	81 <u>54</u>	44 <u>17</u>	2	59	105 <u>78</u>
All Sectors: -20%	122 <u>94</u>	2	132	256 <u>228</u>	69 <u>41</u>	10	215	293 <u>266</u>
All Sectors: -30%	203 <u>176</u>	20	302	525 <u>498</u>	126 <u>99</u>	24	431	584 <u>553</u>
All Sectors: -35%	235 <u>208</u>	29	416	679 <u>652</u>	162 <u>136</u>	45	557	764 <u>736</u>
All Sectors: -40%	279 <u>252</u>	38	534	852 <u>824</u>	199 <u>172</u>	53	688	944 <u>913</u>
All Sectors: -45%	354 <u>323</u>	43	653	1,046 <u>1,019</u>	244 <u>216</u>	63	835	1,143 <u>1,116</u>
All Sectors: -50%	434 <u>403</u>	50	758	1,239 <u>1,211</u>	284 <u>257</u>	82	986	1,353 <u>1,325</u>

Figure 4-91 summarizes projected annual average halibut harvests by IPHC areas if PSC limit reduction options are imposed on all sectors at the same percentage of change from the Status Quo. ~~Note, this figure is in net weight mt, not pounds.~~ There are two sets of bars for each IPHC Area—over all Area 4 subarea Scenario A will generally show slightly lower annual average harvests than under Scenario B, however Area 4A is expected to see lower increases under Scenario B and higher increases under Scenario A. These differences are due primarily to the different sets of behavioral changes in groundfish fisheries in response to the new lower PSC limits. We also note that unlike most of the results that are reported in the analysis, the results show the projected outcomes under the “Change Case” rather than the difference from the status quo. Finally it is important to realize that the starting point for the bars is not always set at zero because the total harvest level varies among subareas, however, the scale of the figure over all of the areas is the same—all of the vertical lines represent an increment of one hundred thousand net weight pounds ~~50 net weight mt of halibut or roughly 110 thousand net weight pounds.~~

If we compare the figures across IPHC areas we see that Area 4CDE is projected to realize the largest increases of the three subareas, while increases in Area 4B are projected to be less than 50 net weight mt ~~100,000 net weight pounds~~ even if PSC limits are reduced by 50 percent across the board. In Area 4A increases are projected to range as high as 403,300 net weight pounds ~~195 net weight mt~~ with a 50 percent across the board cut, but under Scenario B the same cut is projected to add just 257,000 net weight pounds ~~129 net weight mt~~. In Area 4CDE, annual average halibut harvests are projected to range between 131,800 and 215,000 net weight pounds ~~131 and 225 net weight mt~~ with a 20 percent across the board cut in PSC limit. If a 35 percent cut in PSC limits is imposed across the board, projected annual average halibut harvests range between 415,600 and 556,600 net weight pounds ~~314 and 381 net weight mt~~. The projected range of annual average halibut harvests is 758,200 and 985,800 net weight pounds ~~469 to 575 net weight mt~~ in 4CDE with a 50 percent across the board cut in PSC limits.

(REVISED) Figure 4-91 Projected Annual Average Halibut Harvests (in net weight ~~pounds~~mt) under All Options Combined



Note: This chart includes outcomes for halibut under the same PSC limit reduction option implemented across all sectors simultaneously.

Table 4-192 and Table 4-193 provide wholesale revenues from the commercial halibut fishery under the implementation of combined reductions across all sectors. The numbers in Table 4-192 represent the ten-year sum of wholesale revenues over the modeled future period under the status quo (discounted to present values), and the 10-year sum of changes in wholesale value for each PSC limit reduction option, again discounted to present values. In general, the wholesale revenue impacts increase in approximately the same proportions as changes in halibut harvests. Table 4-193 breaks out average annual revenue increases that would accrue over the modeled years. The decline in revenue over the ten-year model period is the result of discounting to present values. The bottom line of Table 4-193 shows the average annual change over all of the years and over all of the iterations.

Table 4-192 Summary of revenue impacts for commercial halibut fishery from reductions across all sectors combined

Option	Commercial Halibut Fishery Impacts							
	Scenario A				Scenario B			
	4A	4B	4CDE	Area 4	4A	4B	4CDE	Area 4
	Discounted Present Value of the Change from the Status Quo in Wholesale Revenues (\$2013 Millions)							
Status Quo	\$167.48 <u>\$171.18</u>	\$149.76	\$28.87	\$346.12 <u>\$349.81</u>	\$167.50 <u>\$171.20</u>	\$149.77	\$29.52	\$346.79 <u>\$350.49</u>
All Sectors: -10%	\$6.40 <u>\$2.71</u>	\$0.04	\$3.02	\$9.46 <u>\$5.77</u>	\$5.50 <u>\$1.80</u>	\$0.21	\$6.28	\$11.99 <u>\$8.29</u>
All Sectors: -20%	\$13.82 <u>\$10.13</u>	\$0.21	\$14.09	\$28.12 <u>\$24.43</u>	\$8.12 <u>\$4.42</u>	\$1.02	\$23.00	\$32.14 <u>\$28.44</u>
All Sectors: -30%	\$22.48 <u>\$18.79</u>	\$2.10	\$32.26	\$56.84 <u>\$53.15</u>	\$14.20 <u>\$10.51</u>	\$2.57	\$46.04	\$62.81 <u>\$59.11</u>
All Sectors: -35%	\$25.88 <u>\$22.18</u>	\$3.01	\$44.41	\$73.30 <u>\$69.60</u>	\$18.04 <u>\$14.34</u>	\$4.77	\$59.46	\$82.27 <u>\$78.58</u>
All Sectors: -40%	\$30.59 <u>\$26.89</u>	\$4.03	\$57.14	\$91.75 <u>\$88.06</u>	\$22.03 <u>\$18.34</u>	\$5.61	\$73.62	\$101.26 <u>\$97.56</u>
All Sectors: -45%	\$38.22 <u>\$34.53</u>	\$4.46	\$69.80	\$112.48 <u>\$108.79</u>	\$26.73 <u>\$23.04</u>	\$6.73	\$89.33	\$122.79 <u>\$119.09</u>
All Sectors: -50%	\$46.78 <u>\$43.09</u>	\$5.18	\$81.04	\$133.00 <u>\$129.31</u>	\$31.12 <u>\$27.43</u>	\$8.71	\$105.57	\$145.40 <u>\$141.70</u>

Table 4-193 Discounted Average Annual Halibut Wholesale Revenues (\$ million) under Halibut PSC Reductions Options Combined for All Sectors

Year	Status Quo	All - a):-10%	All - b):-20%	All - c):-30%	All - d):-35%	All - e):-40%	All - f):-45%	All - g):-50%
	Scenario A - B	Scenario A - B	Scenario A - B	Scenario A - B	Scenario A - B	Scenario A - B	Scenario A - B	Scenario A - B
	Area 4 Total							
2014	\$42.1 to \$45.8 <u>\$42.0 to \$45.7</u>	\$3.7 to \$0.0 <u>\$3.7 to \$0.0</u>	\$3.7 to \$0.0 <u>\$3.7 to \$0.0</u>	\$3.7 to \$0.0 <u>\$3.7 to \$0.0</u>	\$3.7 to \$0.0 <u>\$3.7 to \$0.0</u>	\$3.7 to \$0.0 <u>\$3.7 to \$0.0</u>	\$3.7 to \$0.0 <u>\$3.7 to \$0.0</u>	\$3.7 to \$0.0 <u>\$3.7 to \$0.0</u>
2015	\$38.9 to \$39.0	\$1.5 to \$2.0	\$5.6 to \$6.5	\$12.0 to \$13.3	\$15.6 to \$17.6	\$19.7 to \$21.8	\$24.4 to \$26.6	\$28.9 to \$31.7
2016	\$39.8 to \$39.9	\$0.6 to \$0.9	\$2.7 to \$3.1	\$6.1 to \$6.8	\$8.0 to \$9.0	\$10.1 to \$11.3	\$12.5 to \$13.7	\$15.0 to \$16.3
2017	\$37.6 to \$37.7	\$0.6 to \$0.9	\$2.6 to \$3.0	\$5.6 to \$6.3	\$7.4 to \$8.3	\$9.3 to \$10.4	\$11.6 to \$12.6	\$13.7 to \$15.1
2018	\$35.6 to \$35.6	\$0.6 to \$0.8	\$2.5 to \$2.8	\$5.3 to \$5.9	\$7.0 to \$7.9	\$8.8 to \$9.6	\$10.9 to \$11.9	\$13.0 to \$14.3
2019	\$33.7 to \$33.7	\$0.5 to \$0.8	\$2.3 to \$2.8	\$5.1 to \$5.7	\$6.7 to \$7.5	\$8.6 to \$9.4	\$10.5 to \$11.5	\$12.4 to \$13.6
2020	\$31.8 to \$32.0	\$0.5 to \$0.8	\$2.3 to \$2.7	\$4.9 to \$5.4	\$6.5 to \$7.4	\$8.1 to \$9.1	\$10.0 to \$11.0	\$12.0 to \$13.1
2021	\$30.3 to \$30.4	\$0.5 to \$0.8	\$2.2 to \$2.6	\$4.8 to \$5.4	\$6.3 to \$7.1	\$8.1 to \$8.8	\$9.8 to \$10.8	\$11.6 to \$12.9
2022	\$28.9 to \$28.9	\$0.5 to \$0.7	\$2.2 to \$2.6	\$4.7 to \$5.3	\$6.2 to \$7.0	\$7.7 to \$8.7	\$9.6 to \$10.6	\$11.6 to \$12.5
2023	\$27.3 to \$27.4	\$0.5 to \$0.7	\$2.1 to \$2.4	\$4.6 to \$5.1	\$6.0 to \$6.8	\$7.6 to \$8.5	\$9.4 to \$10.3	\$11.1 to \$12.3
Average	\$34.6 to \$35.0 <u>\$34.7 to \$35.0</u>	\$0.8 to \$0.5 <u>\$0.8 to \$0.8</u>	\$2.5 to \$2.2 <u>\$3.2 to \$2.5</u>	\$5.0 to \$4.7 <u>\$6.3 to \$5.9</u>	\$6.3 to \$6.0 <u>\$8.2 to \$7.9</u>	\$7.6 to \$7.3 <u>\$10.1 to \$9.8</u>	\$9.0 to \$8.6 <u>\$12.3 to \$11.9</u>	\$10.2 to \$9.9 <u>\$14.5 to \$14.2</u>