

Amendment 80 Deck Sorting EFP 2015-02: Data Review Summary

January 8, 2016

I was contracted by Alaska Seafood Cooperative (AKSC) to review the Excel data spreadsheets generated from AKSC's deck sorting EFP 2015-02 for data entry errors. The goal was to summarize the detected errors and determine how or if they affected the total EFP halibut mortality and the net savings in mortality achieved by deck sorting. I have worked as project manager on numerous EFP's for the North Pacific Fisheries Research Foundation and on several previous AKSC cooperative research projects including the first deck sorting EFP in 2009 (EFP 09-02). I am currently employed by Alaska Groundfish Data Bank, Inc in Kodiak Alaska. Although I was consulted by AKSC prior to the start of the project in the development of the deck sheets and data spreadsheet templates, I was not contracted by AKSC or any of its member companies associated with this EFP outside of this task to review the 2015 EFP data.

The project data spreadsheets were reviewed for errors from Dec. 21, 2015 – January 5, 2016. The original deck sheets containing the raw data were compared to the data entered into the spreadsheets. Data checks included: viability, length of deck and factory halibut, time out of water (deck halibut), total number of deck sorted and factory halibut as well as number of sampled halibut. The files were also reviewed for any omissions and correct haul associations. The haul weights (OTC's) were not data checked because I did not have access to these data. A portion of the deck sheets had already been reviewed by the project managers so there were two classes of deck sheets to review: (1) those that had already been checked by the project managers; and (2) those that had not been thoroughly reviewed by project staff. The deck sheets in the former category, since they had already been checked, were subject to a 20% review: every 5th deck sheet was checked for errors (with a random start). The deck sheets that had not been through a data check by project staff were subject to 100% review.

Briefly, the errors were minor with no significant effect on the project totals. Table 1 summarizes the data entry errors by vessel and type of error for both the 20% (265 hauls) and 100% (633 hauls) review categories. A total of 248 data entry errors were found: 206 of the errors (83%) were time out of water rounding errors. A few of the samplers had difficulty rounding minutes/seconds to the nearest whole number minute. Very few errors were found for the 20% review (22 errors, mostly time out of water rounding errors though there were also 8 incorrect lengths and 2 incorrect viability codes). For the Arica (100% review), data from one deck sampled halibut had not been entered and no data from last 3 hauls had been entered (hauls 998-1000 on Nov. 17-18). The OTC's on the deck sheets for these hauls were used but these should be checked against the official numbers. For the Defender, data from one deck sampled halibut had not been entered and two factory lengths had been omitted.

Table 1. Summary of errors detected during data review (Top: 100% review; bottom: 20% review).

100% Review		Error Summary (no. of data entry errors)					
Vessel	No. Hauls Reviewed	Viability	length	Time out of water	No. deck sorted Hbt	No. Factory Hbt	Total
Arica	142	8	8	138	2	0	156
Constellation	48	0	1	5	0	0	6
Cape Horn	133	0	1	37	0	0	38
Defender	160	0	6	5	1	2	14
Unimak	150	1	0	11	0	0	12
Total	633	9	16	196	3	2	226

20% Review		Error Summary (no. of data entry errors)					
Vessel	No. Hauls Reviewed	Viability	length	Time out of water	No. deck sorted Hbt	No. Factory Hbt	Total
Arica	72	0	1	1	0	0	2
Constellation	90	2	6	6	0	0	14
Cape Horn	34	0	0	2	0	0	2
Defender	25	0	1	1	1	0	3
Enterprise	7	0	0	0	0	0	0
Legacy	13	0	0	0	0	0	0
Ocean Peace	13	0	0	0	0	1	1
Rebecca Irene	11	0	0	0	0	0	0
Total	265	2	8	10	1	1	22
Grand Total	898	11	24	206	4	3	248

Table 2 compares the EFP totals pre and post data review: there was an increase in halibut catch of 1.1 mt and an increase in EFP mortality of 0.5 mt, but the net savings increased by 0.3 mt. The overall EFP mortality did not change (49%). Note: the increase in groundfish catch on the Constellation was due to a summation formula error in the spreadsheet (not all hauls were summed).

Table 2. EFP Summary Tables. Top: pre-data review; bottom: post data review.

Pre-Data Review (received from J. Gauvin 1-6-16)

Vessel	EFP Groundfish MT	Halibut catch MT	EFP mortality MT	EFP mortality rate	IPHC mortality MT*	Net Savings MT	Dates in EFP
Constellation	7,671	116.9	58.5	50%	93.5	35.0	May 24-July 4; July 17-Oct 24
Legacy	794	22.2	9.1	41%	17.8	8.7	May 16 -June 4
Arica	11,071	139.7	67.8	49%	111.8	44.0	June 9- Nov 17
Cape Horn	5,589	74.2	34.4	46%	59.4	25.0	June 3- July 26; Sept 14-Nov 6
Rebecca Irene	921	14.9	6.4	43%	11.9	5.5	July 20-Sept 2
Defender	5,153	65.4	34.2	52%	52.3	18.1	June 22-Oct 16
Unimak	3,656	21.8	10.9	50%	17.4	6.5	Aug 29-Oct 11
Ocean Peace	1,293	25.3	11.8	47%	20.2	8.4	Aug 12-Sept 2
Enterprise	159	0.2	0.1	70%	0.2	0.0	Sept 17-Sept 19
Totals	36,307	480.6	233.2	49%	384.5	151.3	

Post Data Review

Vessel	EFP Groundfish MT	Halibut catch MT	EFP mortality MT	EFP mortality rate	IPHC mortality MT*	Net Savings MT	Dates in EFP
Constellation	9,818	117.0	58.5	50%	93.6	35.1	May 24-July 4; July 17-Oct 24
Legacy	794	21.6	9.0	42%	17.3	8.3	May 16 -June 4
Arica	11,130	140.4	68.2	49%	112.3	44.1	June 9- Nov 18
Cape Horn	5,589	74.2	34.4	46%	59.4	25.0	June 3- July 26; Sept 14-Nov 6
Rebecca Irene	944	15.0	6.5	43%	12.0	5.5	July 20-Sept 2
Defender	5,153	65.4	34.2	52%	52.3	18.1	June 22-Oct 16
Unimak	3,656	21.3	10.7	50%	17.1	6.4	Aug 29-Oct 11
Ocean Peace	1,318	26.6	12.2	46%	21.3	9.0	Aug 12-Sept 2
Enterprise	159	0.2	0.1	70%	0.2	0.0	Sept 17-Sept 19
Totals	38,561	481.7	233.8	49%	385.4	151.6	

Difference	2,254	1.1	0.5	0.00%	0.9	0.3	
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Please don't hesitate to contact me if you have any questions or concerns,

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