

Interim Report on Deck Sorting EFP (EFP 16-01) December, 2016



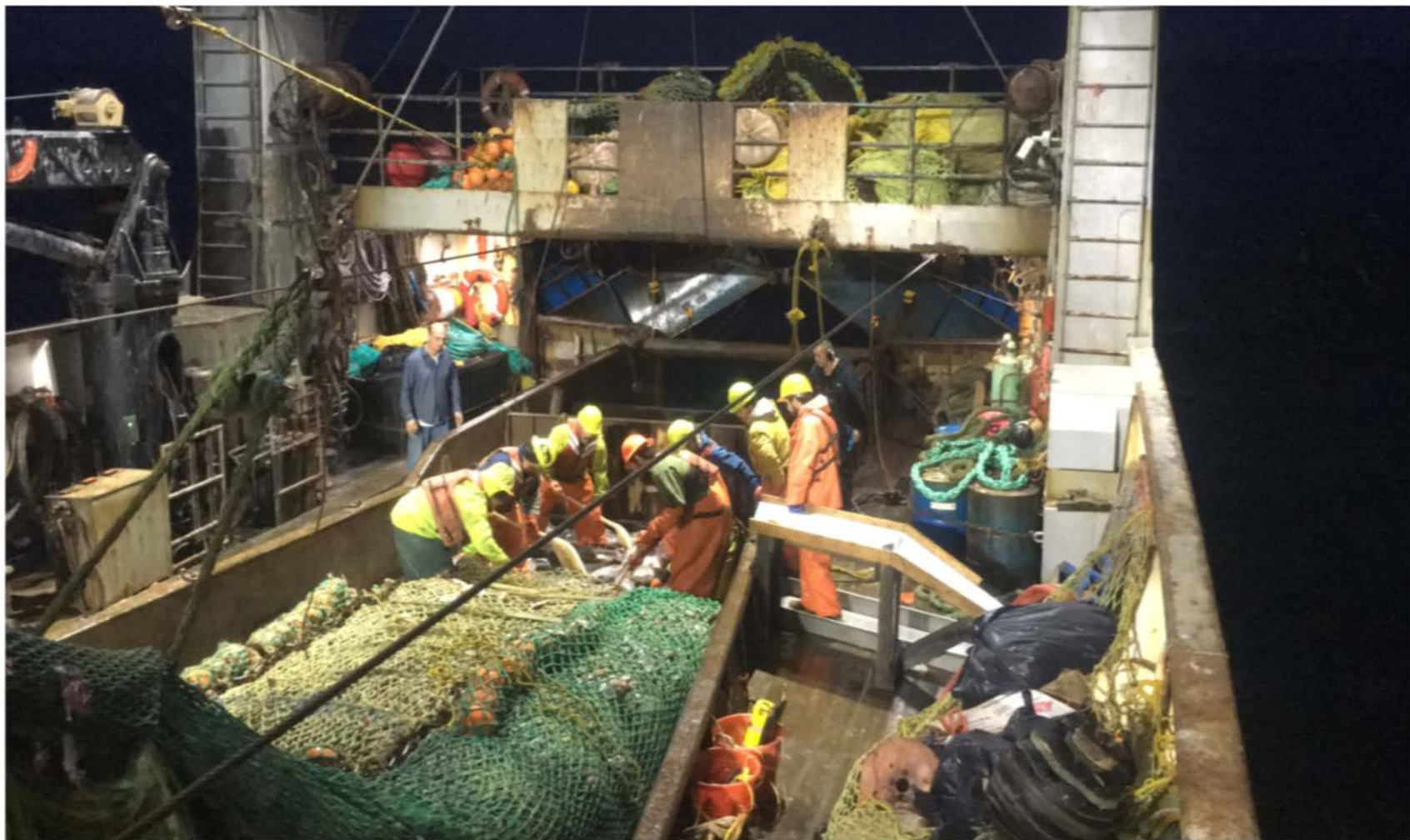
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Report Covers Data from May – November 15, 2016

Some EFP Boats Still Fishing after Nov 15th cut off..



Metrics of Interest

- Increase in EFP participation from 9 boats in 2015 to 12 boats in 2016
- Participants tended to do a far greater percentage of their flatfish/related fishing inside the EFP than occurred in 2015
- Deck sorting expanded greatly to fisheries beyond flathead sole and ATF. 2016 had a much higher frequency of EFP trips in Yellowfin sole, Pacific cod, Pacific Ocean Perch, Atka mackerel in 541.

2016 Deck Sorting Performance

Vessel	Dates in EFP	EFP Groundfish (MT)	Halibut Catch (MT)	EFP Halibut Mortality (MT)*	EFP Mortality Rate	IPHC Mortality (MT)**	Net Savings (MT)
Arica	May - Oct	10,728	73.27	33.48	46%	62.28	28.80
Cape Horn	Jun - Oct	6,608	49.96	26.85	54%	42.47	15.62
Constellation	May - Oct	9,901	62.75	31.61	50%	53.34	21.73
Defender	Jun - Oct	7,889	75.08	33.71	45%	63.81	30.10
Katie Ann	Sep - Nov	2,174	30.46	13.27	44%	25.89	12.62
Legacy	Jun - Nov	6,632	118.54	44.42	37%	100.76	56.34
Northern Glacier	Jul - Oct	7,872	66.69	25.61	38%	56.69	31.08
Rebecca Irene	Jun - Nov	10,703	79.11	32.48	41%	67.24	34.76
Seafisher	Aug - Sep	2,647	32.56	13.14	40%	27.67	14.53
Seafreeze America	Oct - Nov	1,766	23.89	13.86	58%	20.31	6.45
Unimak	May - Oct	9,601	97.62	46.62	48%	82.97	36.35
Seafreeze Alaska	Nov - Dec						
Total		76,522	709.92	315.05	44%	603.43	288.38

*EFP Halibut Mortality for Deck and Factory Halibut

**IPHC Mortality (MT) uses an 85% mortality rate for all target fisheries

Note: "EFP Halibut Mortality" includes the haul-specific mortality rate applied to deck sorted halibut and a fixed (90%) mortality rates factory halibut.

Performance from 2015 Deck Sorting EFP

(Table 1 from 2015 Final Report Revised)

Vessel	Groundfish	Halibut	EFP	EFP	IPHC	Net	Dates in EFP
	MT	catch MT	mortality MT	mortality rate	mortality MT*	Savings MT	
Constellation	9,818	117	58.5	50%	99.5	41.0	May 24-July 4; July 17-Oct 24
Legacy	794	21.6	9	41%	18.4	9.4	May 16-June 4
Arica	11,130	140.4	68.2	49%	119.3	51.1	June 9-Nov 17
Cape Horn	5,589	74.2	34.4	46%	63.1	28.7	June 3-July 26; Sept 14-Nov 6
Rebecca Irene	944	15	6.5	43%	12.8	6.3	July 20-Sept 2
Defender	5,153	65.4	34.2	52%	55.6	21.4	June 22-Oct 16
Unimak	3,656	21.3	10.7	50%	18.1	7.4	Aug 29-Oct 11
Ocean Peace	1,318	26.6	12.2	46%	22.6	10.4	Aug 12-Sept 2
Enterprise	159	0.2	0.1	70%	0.2	0.1	Sept 17-Sept 19
Totals	38,561	481.7	233.8	49%	409	175.6	

*Using 85% mortality rate as per Oct 2016 DMR analysis

Note: "EFP Mortality" includes the haul-specific mortality rate applied to deck sorted halibut and a fixed (90%) mortality rates factory halibut.

Comparing 2016 EFP to 2015 EFP

Comparison of key performance indicators 2015 to 2016

	Groundfish MT	Halibut catch MT	EFP mortality MT	EFP mortality rate	IPHC mortality MT*	Net Savings MT
2015 Totals	38,561	481.7	233.8	49%	409.4	175.6
2016 Totals	76,522	709.9	315.0	44%	603.4	288.4
Delta	37,961			-5%		113

Other Metrics of Interest

- Halibut bycatch “catch rate” in EFP fishing, not accounting for mortality rates, was lower in 2016 (1.3% in 2015 and 0.9% in 2016)
- Halibut excluders and deck sorting used together extensively (some hiccups, siltation with new device)
- Fraction of total halibut catch sorted on deck ~85%, same as 2015
- Crews did a better job keeping sorting times to under 20 minutes (some exceptions especially for boats new to deck sorting)

Other Metrics of Interest

continued

- Inclusion of CDQ into EFP was successful from operational and NMFS catch accounting perspective (huge effort by NMFS)
- Trawl limited Access fishing could not be incorporated in 2016 even if permit allowed it
- Data collections by NMFS Observers instead of sea samplers (workload of training/debriefing shifted to NMFS)
- EFP field project manager on all EFP vessels for first EFP trip and troubleshooting

Other Metrics of Interest

continued

- Video Monitoring on deck and in factory (commitment of follow-up work on fish handling feedback from NMFS Region)
- Observer sampling used to determine amount of factory halibut (90% mortality rate applied as in 2015)
- NMFS standards for work tables on deck and other improvements for chutes used to move halibut from the trawl alley to observer and then overboard

Extensive Chute for Larger Vessel in EFP



Chute for Medium-Sized Vessel



Chute Designed to Address Specific Vessel Deck Configuration Challenges



Chute Set-Up on Smaller Vessel



Note captain out on deck helping with deck sorting

Other Metrics of Interest

- 20% stratified random sampling methods worked well, NMFS made adjustments to avoid hauls with no sampled fish
- Three observers working 8 hour deck/other and 4 hour paperwork worked, could be improved
- Daily fish production loss from not being able to run fish over scale during deck sorting problematic for some EFP vessels. Also production loss from redirecting labor to deck sorting even for factories that are not slowed down by deck sorting

Consistency Between Observer Sampling Estimation and Census in Factory (preliminary)

Observer sampling estimate of factory halibut versus crew census thru Oct 15			
Vessel Name	Weight of Halibut in Factory from Census (MT)	Weight halibut in factory (observer sampling, MT)	Census exceeds obs estimate ?
Arica	8.04	9.28	no
Cape Horn	4.17	4.77	no
Constellation	14.16	12.28	yes
Defender	9.94	9.63	~ same
Katie Ann	4.82	7.81	no
Legacy	16.31	15.32	yes
Northern Glacier	15.40	10.08	yes
Rebecca Irene	17.39	10.13	yes
Seafisher	10.04	6.15	yes
Seafreeze America	5.62	7.61	no
Unimak	20.74	19.98	yes
Total	126.65	113.04	yes

Modifications to EFP for 2017



Modifications to Address What Was Learned in 2016

- Options for two, three, or four observers depending on vessel production constraints
- Overlapping 12 hour shifts for boats using three or more provides ability to run fish over scale during deck sorting (details on how to do that)
- Table height requirements, data collection with NMFS data forms
- Add additional participants, new construction boats

Preparations for 2017 EFP

- Several vessels indicating earlier start to DS EFP participation, some in January/February (jury still out on how often weather will allow for deck sorting. Video available)
- Working with AK Region and FMA to finalize detailed changes to permit
- NMFS AK Region video review with participating captains/crew, operations personnel in January around time of captains meeting
- Work on implementation of regulatory program

Videos illustrating different aspects of 2016 deck sorting

