

## Halibut DMR Working Group

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### Updated DMRs for 2018

At the upcoming October Council meeting, the Halibut DMR working group will present updated discard mortality rates for in-season management of GOA and BSAI groundfish fisheries in 2018. This year, 2017, is the first year that DMRs developed by the working group were specified for these fisheries. Working group methods transitioned DMR estimates from being based on species composition of the catch to estimates based on vessel / gear operational characteristics causatively linked to halibut mortality. Additionally, DMRs this year were based on 3-year averages to better incentivize improved handling practices rather than the previous approach that used 10-year averages to emphasize stability for the fleet. These changes were presented to the Plan Teams last year in a discussion paper (HDMRWG 2016) and the Teams supported transition to the new approach, as did the SSC and Council.

#### Recommendation:

Maintain the new estimation method and apply it to an updated 3-year reference period (2014-2016).

#### Results:

See Tables 1, 2a, and 2b.

#### Notable changes:

- |                                  |                     |
|----------------------------------|---------------------|
| • BSAI NPT CVs                   | increase 52% to 60% |
| • GOA HAL CVs                    | increase 12% to 17% |
| • GOA Rockfish Program (RPP) CVs | decrease 67% to 62% |

#### Combined groupings due to low sample size:

- |   |                           |
|---|---------------------------|
| • BSAI HAL CVs - 2 vessels observed in 2014-2016. | <i>Combined with GOA</i>  |
| • GOA NPT CPs - 10 vessels observed in 2014-2016. | <i>Combined with BSAI</i> |

#### Future directions:

- Two-year reference period likely for 2019 (2016-2017)
- IPHC study on HAL release methods
- Increased use of EM, but human observers still provide data for DMRs
- Improved basis studies for DMRs

#### Questions for PTs:

- Support combined groupings?
- Support reference period?
- Recommend newly estimated DMRs for 2018?

Table 1. Proposed 2018 DMRs and currently specified 2017 DMRs. Green font indicates reduced DMRs and red font indicates increase. DMRs for mothership operations are included under CPs.

2017						
Operational Group				Sample Size (Mean Annual N <sub>Viabilities</sub> )	Estimate DMR?	DMR
Sector	Region	Gear	Target			
CP	BSAI	PTR	all	4,151	N	100%
		NPT	all	1,753	Y	85%
		HAL	all	11,676	Y	8%
		POT	all	571	Y	6%
	GOA	PTR	all	0	N	100%
		NPT	all	196	N	85%
		HAL	all	1,247	Y	11%
		POT	all	479	Y	10%
CV	BSAI	PTR	all	224	N	100%
		NPT	all	2,282	Y	52%
		HAL	all	44	Y	14%
		POT	all	571	Y	6%
	GOA	PTR	all	1	N	100%
		NPT	RPP <sup>e</sup>	547	Y	67%
			non-RPP		Y	65%
		HAL	all	729	Y	12%
POT	all	479	Y	10%		

2018						
Operational Group				Sample Size (Mean Annual N <sub>Viabilities</sub> )	Estimate DMR?	DMR
Sector	Region	Gear	Target			
CP	BSAI	PTR	all	3,097	N	100%
		NPT	all	2,025	Y	84%
		HAL	all	8,838	Y	8%
		POT	all	548	Y	9%
	GOA	PTR	all	0	N	100%
		NPT	all	132	N	84%
		HAL	all	1,493	Y	10%
		POT	all	602	Y	7%
CV	BSAI	PTR	all	151	N	100%
		NPT	all	2,456	Y	60%
		HAL	all	36	Y	17%
		POT	all	548	Y	9%
	GOA	PTR	all	0	N	100%
		NPT	RPP	937	Y	62%
			non-RPP		Y	67%
		HAL	all	1	Y	17%
POT	all	602	Y	7%		

<sup>e</sup> – 2017 RPP DMR calculated by proxy methods based on catch composition. RPP was directly estimated in 2018



Table 2b. Numbers of viabilities and annual DMR estimates for 2009 – 2016 groundfish operations. Shaded cells indicate where DMRs are borrowed due to small sample size (GOA NPT and BSAI HAL) or assumed (Pelagic trawl). Values for pot gear are combined CP/CV.

Sector	Region	Gear	VIABILITIES									
			2009	2010	2011	2012	2013	2014	2015	2016	ave 13-15	ave 14-16
CP	BSAI	PELAGIC	12,098	5,853	8,923	6,613	6,018	4,047	2,389	2,856	4,151	3,097
		NON PELAGIC	8,967	7,375	2,363	1,410	2,868	1,928	463	3,685	1,753	2,025
		HOOK AND LINE	10,350	9,023	11,477	12,841	15,338	10,332	9,357	6,825	11,676	8,838
		POT OR TRAP*	231	616	1,259	1,502	491	498	723	424	571	548
	GOA	PELAGIC	1	0	0	0	0	0	0	0	0	0
		NON PELAGIC	1,170	569	903	591	424	164	1	232	196	132
		HOOK AND LINE	1,246	1,689	2,112	319	660	1,459	1,621	1,399	1,247	1,493
		POT OR TRAP*	78	179	1,067	1,070	363	179	895	732	479	602
CV	BSAI	PELAGIC	1,172	277	1,262	693	316	222	135	97	224	151
		NON PELAGIC	765	2,151	2,972	2,228	2,090	2,780	1,977	2,610	2,282	2,456
		HOOK AND LINE	0	0	0	0	40	72	20	17	44	36
	GOA	PELAGIC	4	28	1	0	4	0	0	0	1	0
		NON PELAGIC	1,783	2,369	1,664	2,882	657	545	440	1,826	547	937
		HOOK AND LINE	90	163	18	147	972	606	609	556	729	590

Sector	Region	Gear	DMRs									
			2009	2010	2011	2012	2013	2014	2015	2016	ave 13-15	ave 14-16
CP	BSAI	PELAGIC	90.0%	90.0%	89.9%	89.9%	90.0%	90.0%	90.0%	90.0%	100%	100%
		NON PELAGIC	87.8%	85.9%	83.3%	80.8%	86.8%	86.7%	81.2%	82.7%	85%	84%
		HOOK AND LINE	9.7%	8.4%	9.5%	8.8%	9.0%	8.5%	7.9%	7.1%	8%	8%
		POT OR TRAP*	8.8%	23.9%	15.7%	12.7%	7.2%	8.4%	6.0%	12.9%	7%	9%
	GOA	PELAGIC	20.0%	NA	NA	NA	NA	NA	NA	NA	100%	100%
		NON PELAGIC	82.3%	85.3%	74.7%	84.7%	82.5%	87.4%	90.0%	88.6%	85%	84%
		HOOK AND LINE	10.0%	8.9%	9.1%	12.3%	12.2%	9.5%	10.7%	9.8%	11%	10%
		POT OR TRAP*	0.0%	7.5%	4.3%	15.6%	16.9%	10.3%	1.6%	9.1%	10%	7%
CV	BSAI	PELAGIC	90.0%	85.8%	87.0%	89.9%	88.0%	81.4%	81.2%	79.0%	100%	100%
		NON PELAGIC	42.1%	67.4%	62.3%	68.3%	43.8%	51.7%	59.6%	68.8%	52%	60%
		HOOK AND LINE	NA	NA	NA	NA	NA	23.7%	3.5%	NA	14%	17%
	GOA	PELAGIC	NA	20.0%	NA	NA	20.0%	NA	NA	NA	100%	100%
		NON PELAGIC	53.0%	62.4%	52.1%	58.7%	66.1%	65.9%	64.3%	70.5%	65%	67%
		RPP	NA	62.1%	58.3%	51.4%	63.9%	64.1%	73.3%	48.2%	67%	62%
HOOK AND LINE	6.9%	9.5%	5.3%	39.0%	13.4%	8.6%	13.9%	27.8%	12%	17%		