

## 18. Assessment of the skate stock complex in the Gulf of Alaska

[2017]

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[NOTE: In accordance with the approved assessment schedule, no stock assessment was conducted for this stock this year, however, a full stock assessment will be conducted in 2019. Until then, the values generated from the previous stock assessment (below) will be rolled over for 2019 specifications]

### Summary of Results

big skate ( <i>Beringraja binoculata</i> )					
Quantity		As estimated or <i>specified</i> <i>last year for</i>		As estimated or <i>recommended this year for:</i>	
		2017	2018	2019	2020
<i>M</i> (natural mortality)		0.1	0.1	<b>0.1</b>	0.1
Specified/recommended Tier		5	5	<b>5</b>	5
Biomass (t)	W	12,112	12,112	<b>6,716</b>	6,716
	C	24,666	24,666	<b>23,658</b>	23,658
	E	14,079	14,079	<b>7,601</b>	7,601
	GOA-wide	50,857	50,857	<b>37,975</b>	37,975
<i>F</i> <sub>OFL</sub> ( <i>F</i> = <i>M</i> )		0.1	0.1	<b>0.1</b>	0.1
<i>maxF</i> <sub>ABC</sub> ( <i>F</i> =0.75* <i>M</i> )		0.075	0.075	<b>0.075</b>	0.075
<i>F</i> <sub>ABC</sub>		0.075	0.075	<b>0.075</b>	0.075
OFL (t)	GOA-wide	5,086	5,086	<b>3,797</b>	3,797
ABC (t; equal to maximum ABC)	W	908	908	<b>504</b>	504
	C	1,850	1,850	<b>1,774</b>	1,774
	E	1,056	1,056	<b>570</b>	570
<b>Status</b>		As determined <i>last year for:</i>		As determined <i>this year for:</i>	
		2015	2016	<b>2016</b>	2017
Overfishing?		<i>no</i>	<i>n/a</i>	<b>no</b>	n/a

<b>longnose skate (<i>Raja rhina</i>)</b>					
<b>Quantity</b>		As estimated or specified last year for		As estimated or recommended this year for:	
		2017	2018	2019	2020
<i>M</i> (natural mortality)		0.1	0.1	<b>0.1</b>	0.1
Specified/recommended Tier		5	5	<b>5</b>	5
Biomass (t)	W	808	808	<b>1,982</b>	1,982
	C	33,503	33,503	<b>37,390</b>	37,390
	E	8,426	8,426	<b>8,260</b>	8,260
	GOA-wide	42,737	42,737	<b>47,632</b>	47,632
<i>F<sub>OFL</sub></i> ( <i>F=M</i> )		0.1	0.1	<b>0.1</b>	0.1
<i>maxF<sub>ABC</sub></i> ( <i>F=0.75*M</i> )		0.075	0.075	<b>0.075</b>	0.075
<i>F<sub>ABC</sub></i>		0.075	0.075	<b>0.075</b>	0.075
OFL (t)	GOA-wide	4,274	4,274	<b>4,763</b>	4,763
ABC (t; equal to maximum ABC)	W	61	61	<b>149</b>	149
	C	2,513	2,513	<b>2,804</b>	2,804
	E	632	632	<b>619</b>	619
<b>Status</b>		As determined last year for:		As determined this year for:	
Overfishing?		2015	2016	<b>2016</b>	2017
		<i>no</i>	<i>n/a</i>	<b>no</b>	<i>n/a</i>

<b>Other Skates (<i>Bathyraja</i> sp.)</b>					
<b>Quantity</b>		As estimated or specified last year for		As estimated or recommended this year for:	
		2017	2018	2019	2020
<i>M</i> (natural mortality)		0.1	0.1	<b>0.1</b>	0.1
Specified/recommended Tier		5	5	<b>5</b>	5
Biomass (t)	GOA-wide	25,580	25,580	<b>18,454</b>	18,454
<i>F<sub>OFL</sub></i> ( <i>F=M</i> )		0.1	0.1	<b>0.1</b>	0.1
<i>maxF<sub>ABC</sub></i> ( <i>F=0.75*M</i> )		0.075	0.075	<b>0.075</b>	0.075
<i>F<sub>ABC</sub></i>		0.075	0.075	<b>0.075</b>	0.075
OFL (t)	GOA-wide	2,558	2,558	<b>1,845</b>	1,845
ABC (t; equal to maximum ABC)	GOA-wide	1,919	1,919	<b>1,384</b>	1,384
<b>Status</b>		As determined last year for:		As determined this year for:	
Overfishing?		2015	2016	<b>2016</b>	2017
		<i>no</i>	<i>n/a</i>	<b>no</b>	<i>n/a</i>