

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	0.1	0.1
Specified/recommended Tier		5	5	5	5
Biomass (t)	W	12,112	12,112	6,716	6,716
	C	24,666	24,666	23,658	23,658
	E	14,079	14,079	7,601	7,601
	GOA-wide	50,857	50,857	37,975	37,975
F_{OFL} ($F=M$)		0.1	0.1	0.1	0.1
$maxF_{ABC}$ ($F=0.75*M$)		0.075	0.075	0.075	0.075
F_{ABC}		0.075	0.075	0.075	0.075
OFL (t)	GOA-wide	5,086	5,086	3,797	3,797
ABC (t; equal to maximum ABC)	W	908	908	504	504
	C	1,850	1,850	1,774	1,774
	E	1,056	1,056	570	570
Status		As determined <i>last year for:</i>		As determined <i>this year for:</i>	
		2015	2016	2016	2017
Overfishing?		<i>no</i>	<i>n/a</i>	no	n/a

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

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