

# **PROPOSED OVERFISHING LIMITS AND POTENTIAL ACCEPTABLE BIOLOGICAL CATCHES FOR 2015 AND 2016 GROUND FISH FISHERIES**

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Table 1. 2014 OFLs (mt) and proposed 2015 and 2016 OFLs (mt) for west coast groundfish stocks (overfished stocks in CAPS; stocks with new assessments in **bold**; component stocks in status quo stock complexes in *italics*).

Stock	2014 OFL	Category	Sub-category	2015 OFL	2016 OFL
<b>OVERFISHED STOCKS</b>					
<b>BOCACCI</b> S. of 40°10' N. latitude	<b>881</b>	<b>1</b>		<b>874</b>	<b>871</b>
CANARY	741	1		733	729
COWCOD S. of 40°10' N. latitude	12			<b>NA</b>	<b>NA</b>
<i>COWCOD (Conception)</i>	<b>7</b>	<b>2</b>	c	<b>NA</b>	<b>NA</b>
<i>COWCOD (Monterey)</i>	5	3	d	<b>NA</b>	<b>NA</b>
<b>DARKBLOTCHED</b>	<b>553</b>	<b>1</b>		<b>560</b>	<b>563</b>
PACIFIC OCEAN PERCH	838	1		842	850
<b>PETRALE SOLE</b>	<b>2,774</b>	<b>1</b>		<b>2,738</b>	<b>2,660</b>
YELLOWEYE	51	2		52	52
<b>NON-OVERFISHED STOCKS</b>					
Arrowtooth Flounder	6,912	2	d	6,599	6,396
Black Rockfish (OR-CA)	1,166	1		1,176	1,183
Black Rockfish (WA)	428	1		421	423
Cabazon (CA)	165	1		161	158
Cabazon (OR)	49	1		49	49
California scorpionfish	122	1		119	117
Chilipepper S. of 40°10' N. latitude	1,722	1		1,703	1,694
Dover Sole	77,774	1		66,871	59,221
<b>English Sole</b>	<b>5,906</b>	<b>2</b>		<b>12,092</b>	<b>8,493</b>
Lingcod N. of 40°10' N. latitude	3,162	1		3,010	2,891
Lingcod S. of 40°10' N. latitude	1,276	2	d	1,205	1,136
Longnose skate	2,816	1		2,449	2,405
<b>Longspine Thornyhead (coastwide)</b>	<b>3,304</b>	<b>1</b>		<b>4,405</b>	<b>4,190</b>
Pacific Cod	3,200	3	b	3,200	3,200
Sablefish (coastwide)	7,158	1		7,857	8,526
Shortbelly	6,950	2	d	6,950	6,950
<b>Shortspine Thornyhead (coastwide)</b>	<b>2,310</b>	<b>1</b>		<b>3,204</b>	<b>3,168</b>
Splitnose S. of 40°10' N. latitude	1,747	1		1,794	1,826
Starry Flounder	1,834	2	d	1,841	1,847
Widow	4,435	1		4,137	3,990
<b>Yellowtail N. of 40°10' N. latitude</b>	<b>4,584</b>	<b>2</b>		<b>12,281</b>	<b>11,647</b>
<b>STOCK COMPLEXES</b>					
Minor Nearshore Rockfish North	110			68	69
<i>Black and yellow</i>	<i>0.0</i>	3	d	<i>0.0</i>	<i>0.0</i>
<i>Blue (CA)</i>	<i>27.4</i>	2	d	<i>27.4</i>	<i>27.7</i>
<i>Blue (OR &amp; WA)</i>	<i>32.3</i>	3	d	<i>32.3</i>	<i>32.3</i>
<b>Brown</b>	<b>5.5</b>	<b>2</b>		<b>NA</b>	<b>NA</b>
<i>Calico</i>	<i>0.0</i>	3	a	<i>0.0</i>	<i>0.0</i>
<b>China</b>	<b>9.8</b>	<b>2</b>		<b>NA</b>	<b>NA</b>
<b>Copper</b>	<b>26.0</b>	<b>2</b>		<b>NA</b>	<b>NA</b>
<i>Gopher</i>	<i>0.0</i>	3	a	<i>0.0</i>	<i>0.0</i>
<i>Grass</i>	<i>0.7</i>	3	d	<i>0.7</i>	<i>0.7</i>
<i>Kelp</i>	<i>0.0</i>	3	d	<i>0.0</i>	<i>0.0</i>
<i>Olive</i>	<i>0.3</i>	3	d	<i>0.3</i>	<i>0.3</i>

Stock	2014 OFL	Category	Sub-category	2015 OFL	2016 OFL
<i>Quillback</i>	7.4	3	d	7.4	7.4
<i>Treefish</i>	0.2	3	d	0.2	0.2
Minor Shelf Rockfish North	2,195			2,207	2,217
<i>Bronzespotted</i>	0.0	3	d	0.0	0.0
<i>Bocaccio</i>	284.0	3	d	284.0	284.0
<i>Chameleon</i>	0.0	3	a	0.0	0.0
<i>Chilipepper</i>	129.6	3	d	128.2	127.5
<i>Cowcod</i>	0.0	3	a	0.0	0.0
<i>Flag</i>	0.1	3	d	0.1	0.1
<i>Freckled</i>	0.0	3	a	0.0	0.0
<i>Greenblotched</i>	1.3	3	c	1.3	1.3
<i>Greenspotted 40°10' to 42° N. latitude</i>	9.4	2		9.3	9.3
<i>Greenspotted N. of 42 N. latitude (OR &amp; WA)</i>	6.1	3	d	6.1	6.1
<i>Greenstriped</i>	1,268.3	2	d	1,281.9	1,292.0
<i>Halfbanded</i>	0.0	3	b	0.0	0.0
<i>Harlequin</i>	0.0	3	a	0.0	0.0
<i>Honeycomb</i>	0.0	3	c	0.0	0.0
<i>Mexican</i>	0.0	3	c	0.0	0.0
<i>Pink</i>	0.0	3	d	0.0	0.0
<i>Pinkrose</i>	0.0	3	b	0.0	0.0
<i>Puget Sound</i>	0.0	3	a	0.0	0.0
<i>Pygmy</i>	0.0	3	a	0.0	0.0
<i>Redstripe</i>	269.9	3	d	269.9	269.9
<i>Rosethorn</i>	12.9	3	d	12.9	12.9
<i>Rosy</i>	3.0	3	d	3.0	3.0
<i>Silvergray</i>	159.4	3	d	159.4	159.4
<i>Speckled</i>	0.2	3	d	0.2	0.2
<i>Squarespot</i>	0.2	3	c	0.2	0.2
<i>Starry</i>	0.0	3	d	0.0	0.0
<b>Stripetail</b>	<b>40.4</b>	<b>3</b>	<b>d</b>	<b>40.4</b>	<b>40.4</b>
<i>Swordspine</i>	0.0	3	d	0.0	0.0
<i>Tiger</i>	1.0	3	d	1.0	1.0
<i>Vermilion</i>	9.7	3	c	9.7	9.7
Minor Slope Rockfish North	1,553			1,804	1,817
<b>Aurora</b>	<b>15.4</b>	<b>1</b>		<b>17.4</b>	<b>17.5</b>
<i>Bank</i>	17.2	3	d	17.2	17.2
<i>Blackgill</i>	4.7	3	c	4.7	4.7
<i>Redbanded</i>	45.3	3	d	45.3	45.3
<b>Rougheye</b>	<b>71.1</b>	<b>1</b>		<b>201.9</b>	<b>205.8</b>
<b>Sharpchin</b>	<b>214.5</b>	<b>2</b>		<b>305.6</b>	<b>297.6</b>
<i>Shortraker</i>	18.7	3	d	18.7	18.7
<i>Splitnose</i>	974.1	1		1,000.6	1,018.2
<i>Yellowmouth</i>	192.4	3	d	192.4	192.4
Minor Nearshore Rockfish South	1,160			793	791
<i>Shallow Nearshore Species</i>	NA	NA	NA	NA	NA
<i>Black and yellow</i>	27.5	3	c	27.5	27.5
<b>China</b>	<b>16.6</b>	<b>2</b>	<b>c</b>	<b>NA</b>	<b>NA</b>
<i>Gopher (N of Pt. Conception)</i>	153.0	1		148.0	144.0
<i>Gopher (S of Pt. Conception)</i>	25.6	3	c	25.6	25.6

Stock	2014 OFL	Category	Sub-category	2015 OFL	2016 OFL
<i>Grass</i>	59.6	3	d	59.6	59.6
<i>Kelp</i>	27.7	3	d	27.7	27.7
<i>Deeper Nearshore Species</i>	NA	NA	NA	NA	NA
<i>Blue (assessed area)</i>	187.8	2	d	188.6	190.3
<i>Blue (S of 34°27' N. latitude)</i>	72.9	3	c	72.9	72.9
<b>Brown</b>	<b>204.6</b>	<b>2</b>		<b>NA</b>	<b>NA</b>
<i>Calico</i>	0.0	3	b	0.0	0.0
<b>Copper</b>	<b>141.5</b>	<b>2</b>		<b>NA</b>	<b>NA</b>
<i>Olive</i>	224.6	3	d	224.6	224.6
<i>Quillback</i>	5.4	3	d	5.4	5.4
<i>Treefish</i>	13.2	3	d	13.2	13.2
Minor Shelf Rockfish South	1,912.9			1,914.1	1,915.4
<i>Bronzespotted</i>	3.6	3	c	3.6	3.6
<i>Chameleon</i>	0.0	3	a	0.0	0.0
<i>Flag</i>	23.4	3	c	23.4	23.4
<i>Freckled</i>	0.0	3	a	0.0	0.0
<i>Greenblotched</i>	23.1	3	d	23.1	23.1
<i>Greenspotted</i>	80.3	2	d	79.0	78.4
<i>Greenstriped</i>	232.7	2	d	235.1	237.0
<i>Halfbanded</i>	0.0	3	b	0.0	0.0
<i>Harlequin</i>	0.0	3	a	0.0	0.0
<i>Honeycomb</i>	9.9	3	c	9.9	9.9
<i>Mexican</i>	5.1	3	c	5.1	5.1
<i>Pink</i>	2.5	3	d	2.5	2.5
<i>Pinkrose</i>	0.0	3	a	0.0	0.0
<i>Pygmy</i>	0.0	3	a	0.0	0.0
<i>Redstripe</i>	0.5	3	d	0.5	0.5
<i>Rosethorn</i>	2.1	3	d	2.1	2.1
<i>Rosy</i>	44.5	3	d	44.5	44.5
<i>Silvergray</i>	0.5	3	d	0.5	0.5
<i>Speckled</i>	39.4	3	d	39.4	39.4
<i>Squarespot</i>	11.1	3	c	11.1	11.1
<i>Starry</i>	62.6	3	d	62.6	62.6
<b>Stripetail</b>	<b>23.6</b>	<b>3</b>	<b>d</b>	<b>23.6</b>	<b>23.6</b>
<i>Swordspine</i>	14.2	3	d	14.2	14.2
<i>Tiger</i>	0.0	3	d	0.0	0.0
<i>Vermilion</i>	269.3	3	d	269.3	269.3
<i>Yellowtail</i>	1,064.4	3	d	1,064.4	1,064.4
Minor Slope Rockfish South	685			806	807
<b>Aurora</b>	<b>26.1</b>	<b>1</b>		<b>74.3</b>	<b>74.3</b>
<i>Bank</i>	503.2	3	d	503.2	503.2
<i>Blackgill</i>	134.0	1		137.0	140.0
<i>Pacific ocean perch</i>	0.0	3	a	0.0	0.0
<i>Redbanded</i>	10.4	3	d	10.4	10.4
<b>Rougheye</b>	<b>0.4</b>	<b>1</b>		<b>4.1</b>	<b>4.2</b>
<b>Sharpchin</b>	<b>9.8</b>	<b>2</b>		<b>76.4</b>	<b>74.4</b>
<i>Shortraker</i>	0.1	3	d	0.1	0.1
<i>Yellowmouth</i>	0.8	3	d	0.8	0.8
Other Flatfish	10,060			11,298	9,948
<i>Butter sole</i>	4.6	3	b	4.6	4.6

Stock	2014 OFL	Category	Sub-category	2015 OFL	2016 OFL
<i>Curlfin sole</i>	8.2	3	b	8.2	8.2
<i>Flathead sole</i>	35.0	3	b	35.0	35.0
<b><i>Pacific sanddab</i></b>	<b>4,801.0</b>	<b>3</b>		<b>4,801.0</b>	<b>4,801.0</b>
<b><i>Rex sole</i></b>	<b>4,371.5</b>	<b>2</b>		<b>5,609.0</b>	<b>4,259.0</b>
<i>Rock sole</i>	66.7	3	c	66.7	66.7
<i>Sand sole</i>	773.2	3	c	773.2	773.2
Other Fish a/	6,802	3		6,374	6,355
<i>Big skate</i>	458.0	3		458.0	458.0
<i>Cabazon (WA)</i>	b/	3		b/	b/
<i>California skate</i>	86.0	3		86.0	86.0
<i>Finescale codling</i>	b/	3		b/	b/
<i>Kelp greenling (CA)</i>	118.9	3	d	118.9	118.9
<i>Kelp greenling (OR &amp; WA)</i>	b/	3		b/	b/
<i>Leopard shark</i>	167.1	3	d	167.1	167.1
<i>Pacific grenadier</i>	1,519.0	3	c	1,519.0	1,519.0
<i>Ratfish</i>	1,441.0	3		1,441.0	1,441.0
<i>Soupin shark</i>	61.6	3	c	61.6	61.6
<i>Spiny dogfish</i>	2,950.0	2	d	2,522.7	2,503.3

a/ Values for these specifications are the sum of known contributions of component stocks.

b/ No OFL contribution for these stocks given the lack of an approved method.

Table 2. The basis for proposed 2015 and 2016 OFLs for west coast groundfish stocks.

Stock	Comments
<b>OVERFISHED STOCKS</b>	
<b>BOCACCI</b> S. of 40°10' N. latitude	<b>Projected using a 50% SPR from the 2011 rebuilding analysis with a 6% reduction to subtract the portion of the assessed stock north of 40°10' N. lat.</b>
CANARY	Projected using a 50% SPR from the 2011 rebuilding analysis.
<b>COWCOD</b> S. of 40°10' N. latitude	Sum of Conception and Monterey OFLs.
<i>COWCOD (Conception)</i>	<b>Not available pending provision of a 2013 rebuilding analysis in Nov. Projected using a 50% SPR from the 2009 rebuilding analysis.</b>
<i>COWCOD (Monterey)</i>	Not yet available. Revised DB-SRA estimate.
<b>DARKBLOTCHED</b>	<b>Projected using a 50% SPR from the 2011 rebuilding analysis.</b>
PACIFIC OCEAN PERCH	Projected using a 50% SPR from the 2011 rebuilding analysis.
<b>PETRALE SOLE</b>	<b>Projected using a 30% SPR from the 2011 rebuilding analysis.</b>
YELLOWEYE	Projected using a 50% SPR from the 2011 rebuilding analysis.
<b>NON-OVERFISHED STOCKS</b>	
Arrowtooth Flounder	Projected using a 30% SPR from the 2007 full assessment.
Black Rockfish (OR-CA)	Projected using a 50% SPR from the 2007 full assessment with the addition of the northern OFL 3% reduction to account for the portion of the stock estimated between Cape Falcon and the Columbia River.
Black Rockfish (WA)	Projected using a 50% SPR from the 2007 full assessment with a 3% reduction to account for the portion of the stock estimated between Cape Falcon and the Columbia River.
Cabazon (CA)	Projected using a 45% SPR from the 2009 full assessment.
Cabazon (OR)	Projected using a 45% SPR from the 2009 full assessment.
California scorpionfish	Projected using a 45% SPR from the 2005 full assessment.
Chilipepper S. of 40°10' N. latitude	Projected using a 50% SPR from the 2007 full assessment. The portion of the coastwide stock south of 40°10' N. lat. (93%) is based on average historical landings.
Dover Sole	Projected using a 30% SPR from the 2011 full assessment.
<b>English Sole</b>	<b>Projected using a 30% SPR from the 2013 data-moderate assessment.</b>
Lingcod N. of 40°10' N. latitude	Projected using a 45% SPR from the 2009 full assessment with 48% of the OFL S. of 42° N. latitude added to account for line shift.
Lingcod S. of 40°10' N. latitude	Projected using a 45% SPR from the 2009 full assessment with 48% of the OFL S. of 42° N. latitude subtracted to account for line shift.
Longnose skate	Projected using a 50% SPR from the 2007 full assessment. 2015 and 2016 OFLs projected using the status quo 45% SPR rate are 2,745 and 2,686 mt, respectively.
<b>Longspine Thornyhead (coastwide)</b>	<b>Projected using a 50% SPR from the 2013 full assessment.</b>
Pacific Cod	Status quo OFL.
Sablefish (coastwide)	Projected using a 45% SPR from the 2011 full assessment.
Shortbelly	MSY estimated from 2007 assessment.
<b>Shortspine Thornyhead</b>	<b>Projected using a 50% SPR from the 2013 full assessment.</b>

Stock	Comments
<b>(coastwide)</b>	
Splitnose S. of 40°10' N. latitude	Projected using a 50% SPR from the 2009 full assessment. The portion of the coastwide stock south of 40°10' N. lat. (64.2%) is based on average historical (1916-2008) landings.
Starry Flounder	Projected using a 30% SPR from the 2005 full assessment.
Widow	Projected using a 50% SPR from the 2011 full assessment.
<b>Yellowtail N. of 40°10' N. latitude</b>	<b>Projected using a 50% SPR from the 2013 data-moderate assessment.</b>
<b>STOCK COMPLEXES</b>	
Minor Nearshore Rockfish North	Sum of OFL contributions of component stocks in the complex.
<i>Black and yellow</i>	<i>DB-SRA estimate.</i>
<i>Blue (CA)</i>	<i>Projected using a 50% SPR from the 2007 full assessment. The portion of the assessed stock in CA north of 40°10' N. lat. (12.7%) is based on average historical landings.</i>
<i>Blue (OR &amp; WA)</i>	<i>DCAC estimate.</i>
<b>Brown</b>	<b>Not yet available. Projected using a 50% SPR from the 2013 data-moderate assessment.</b>
<i>Calico</i>	<i>DB-SRA estimate.</i>
<b>China</b>	<b>Not yet available. Projected using a 50% SPR from the 2013 data-moderate assessment.</b>
<b>Copper</b>	<b>Not yet available. Projected using a 50% SPR from the 2013 data-moderate assessment.</b>
<i>Gopher</i>	<i>No harvest contribution (3a stock).</i>
<i>Grass</i>	<i>DB-SRA estimate.</i>
<i>Kelp</i>	<i>DB-SRA estimate.</i>
<i>Olive</i>	<i>DB-SRA estimate.</i>
<i>Quillback</i>	<i>DB-SRA estimate.</i>
<i>Treefish</i>	<i>DB-SRA estimate.</i>
Minor Shelf Rockfish North	Sum of OFL contributions of component stocks in the complex.
<i>Bronzespotted</i>	<i>DB-SRA estimate.</i>
<i>Bocaccio</i>	<i>DB-SRA estimate.</i>
<i>Chameleon</i>	<i>No harvest contribution (3a stock).</i>
<i>Chilipepper</i>	<i>Projected using a 50% SPR from the 2007 full assessment. The portion of the coastwide stock north of 40°10' N. lat. (7%) is based on average historical landings.</i>
<i>Cowcod</i>	<i>No harvest contribution (3a stock).</i>
<i>Flag</i>	<i>DB-SRA estimate.</i>
<i>Freckled</i>	<i>No harvest contribution (3a stock).</i>
<i>Greenblotched</i>	<i>DB-SRA estimate.</i>
<i>Greenspotted 40°10' to 42° N. latitude</i>	<i>Projection using a 50% SPR from the full 2011 assessment. The portion of the assessed area north of 40°10' N lat. (22.2% of OFL from northern California model) based on average historical catch.</i>
<i>Greenspotted N. of 42 N. latitude (OR &amp; WA)</i>	<i>DCAC estimate</i>
<i>Greenstriped</i>	<i>Projected using a 50% SPR from the full 2009 assessment. The portion of the coastwide stock north of 40°10' N. lat. (84.5%) is based on the</i>



Stock	Comments
	<i>mean of the 2003-2008 swept area biomass estimates from the NMFS trawl survey.</i>
<i>Halfbanded</i>	<i>No harvest contribution (3a stock).</i>
<i>Harlequin</i>	<i>DB-SRA estimate.</i>
<i>Honeycomb</i>	<i>DB-SRA estimate.</i>
<i>Mexican</i>	<i>DB-SRA estimate.</i>
<i>Pink</i>	<i>DB-SRA estimate.</i>
<i>Pinkrose</i>	<i>DB-SRA estimate.</i>
<i>Puget Sound</i>	<i>No harvest contribution (3a stock).</i>
<i>Pygmy</i>	<i>No harvest contribution (3a stock).</i>
<i>Redstripe</i>	<i>DB-SRA estimate.</i>
<i>Rosethorn</i>	<i>DB-SRA estimate.</i>
<i>Rosy</i>	<i>DB-SRA estimate.</i>
<i>Silvergray</i>	<i>DB-SRA estimate.</i>
<i>Speckled</i>	<i>DB-SRA estimate.</i>
<i>Squarespot</i>	<i>DB-SRA estimate.</i>
<i>Starry</i>	<i>DB-SRA estimate.</i>
<b><i>Stripetail</i></b>	<b><i>DB-SRA estimate. Only status determined from 2013 data-moderate assessment, so presumed to remain a cat. 3 stock.</i></b>
<i>Swordspine</i>	<i>DB-SRA estimate.</i>
<i>Tiger</i>	<i>DB-SRA estimate.</i>
<i>Vermilion</i>	<i>DB-SRA estimate.</i>
Minor Slope Rockfish North	Sum of OFL contributions of component stocks in the complex.
<b><i>Aurora</i></b>	<b><i>Projected using a 50% SPR from the 2013 full assessment. The portion of the coastwide stock north of 40°10' N lat. (19%) is based on average survey biomass.</i></b>
<i>Bank</i>	<i>DB-SRA estimate.</i>
<i>Blackgill</i>	<i>DCAC estimate.</i>
<i>Redbanded</i>	<i>DB-SRA estimate.</i>
<b><i>Rougheye</i></b>	<b><i>Projected using a 50% SPR from the 2013 full assessment. The coastwide OFLs are apportioned north (98%) and south (2%) based on average landings during 1985-2012.</i></b>
<b><i>Sharpchin</i></b>	<b><i>Coastwide OFLs projected using a 50% SPR from the 2013 data-moderate assessment. OFLs are apportioned north and south of 40°10' N lat. (80%N, 20% S) based on average swept area biomass estimates from the triennial survey.</i></b>
<i>Shorthead</i>	<i>DB-SRA estimate.</i>
<i>Splitnose</i>	<i>Projected using a 50% SPR from the 2009 full assessment. The portion of the coastwide stock north of 40°10' N. lat. (35.8%) is based on average historical (1916-2008) landings.</i>
<i>Yellowmouth</i>	<i>DB-SRA estimate.</i>
Minor Nearshore Rockfish South	Sum of OFL contributions of component stocks in the complex.
<i>Shallow Nearshore Species</i>	
<i>Black and yellow</i>	<i>DB-SRA estimate.</i>

Stock	Comments
<b>China</b>	<b>Not yet available. Projected using a 50% SPR from the 2013 data-moderate assessment.</b>
<i>Gopher (N of Pt. Conception)</i>	<i>Projected using a 50% SPR from the 2005 full assessment.</i>
<i>Gopher (S of Pt. Conception)</i>	<i>DCAC estimate.</i>
<i>Grass</i>	<i>DB-SRA estimate.</i>
<i>Kelp</i>	<i>DB-SRA estimate.</i>
<i>Deeper Nearshore Species</i>	
<i>Blue (assessed area)</i>	<i>Projected using a 50% SPR from the 2007 full assessment. The portion of the assessed stock in CA south of 40°10' N. lat. (87.3%) is based on average historical landings.</i>
<i>Blue (S of 34°27' N. latitude)</i>	<i>DCAC estimate.</i>
<b>Brown</b>	<b>Not yet available. Projected using a 50% SPR from the 2013 data-moderate assessment.</b>
<i>Calico</i>	<i>DB-SRA estimate.</i>
<b>Copper</b>	<b>Not yet available. Projected using a 50% SPR from the 2013 data-moderate assessment.</b>
<i>Olive</i>	<i>DB-SRA estimate.</i>
<i>Quillback</i>	<i>DB-SRA estimate.</i>
<i>Treefish</i>	<i>DB-SRA estimate.</i>
Minor Shelf Rockfish South	Sum of OFL contributions of component stocks in the complex.
<i>Bronzespotted</i>	<i>DB-SRA estimate.</i>
<i>Chameleon</i>	<i>No harvest contribution (3a stock).</i>
<i>Flag</i>	<i>DB-SRA estimate.</i>
<i>Freckled</i>	<i>No harvest contribution (3a stock).</i>
<i>Greenblotched</i>	<i>DB-SRA estimate.</i>
<i>Greenspotted</i>	<i>Projection using a 50% SPR from the full 2011 assessment. The portion of the assessed area south of 40°10' N lat. (77.8% of OFL from northern California model from average historical catch + the OFL from the southern California model)</i>
<i>Greenstriped</i>	<i>Projected using a 50% SPR from the full 2009 assessment. The portion of the coastwide stock south of 40°10' N. lat. (15.5%) is based on the mean of the 2003-2008 swept area biomass estimates from the NMFS trawl survey.</i>
<i>Halfbanded</i>	<i>No harvest contribution (3a stock).</i>
<i>Harlequin</i>	<i>DB-SRA estimate.</i>
<i>Honeycomb</i>	<i>DB-SRA estimate.</i>
<i>Mexican</i>	<i>DB-SRA estimate.</i>
<i>Pink</i>	<i>DB-SRA estimate.</i>
<i>Pinkrose</i>	<i>DB-SRA estimate.</i>
<i>Pygmy</i>	<i>No harvest contribution (3a stock).</i>
<i>Redstripe</i>	<i>DB-SRA estimate.</i>
<i>Rosethorn</i>	<i>DB-SRA estimate.</i>
<i>Rosy</i>	<i>DB-SRA estimate.</i>
<i>Silvergray</i>	<i>DB-SRA estimate.</i>

Stock	Comments
<i>Speckled</i>	<i>DB-SRA estimate.</i>
<i>Squarespot</i>	<i>DB-SRA estimate.</i>
<i>Starry</i>	<i>DB-SRA estimate.</i>
<b><i>Stripetail</i></b>	<b><i>DB-SRA estimate. Only status determined from 2013 data-moderate assessment, so presumed to remain a cat. 3 stock.</i></b>
<i>Swordspine</i>	<i>DB-SRA estimate.</i>
<i>Tiger</i>	<i>DB-SRA estimate.</i>
<i>Vermilion</i>	<i>DB-SRA estimate.</i>
<i>Yellowtail</i>	<i>DB-SRA estimate.</i>
Minor Slope Rockfish South	Sum of OFL contributions of component stocks in the complex.
<b><i>Aurora</i></b>	<b><i>Projected using a 50% SPR from the 2013 full assessment. The portion of the coastwide stock south of 40°10' N lat. (81%) is based on average survey biomass.</i></b>
<i>Bank</i>	<i>DB-SRA estimate.</i>
<i>Blackgill</i>	<i>Projected using a 50% SPR from the 2011 full assessment.</i>
<i>Pacific ocean perch</i>	<i>No harvest contribution (3a stock).</i>
<i>Redbanded</i>	<i>DB-SRA estimate.</i>
<b><i>Rougheye</i></b>	<b><i>Projected using a 50% SPR from the 2013 full assessment. The coastwide OFLs are apportioned north (98%) and south (2%) based on average landings during 1985-2012.</i></b>
<b><i>Sharpchin</i></b>	<b><i>Coastwide OFLs projected using a 50% SPR from the 2013 data-moderate assessment. OFLs are apportioned north and south of 40°10' N lat. (80%N, 20% S) based on average swept area biomass estimates from the triennial survey.</i></b>
<i>Shortraker</i>	<i>DB-SRA estimate.</i>
<i>Yellowmouth</i>	<i>DB-SRA estimate.</i>
Other Flatfish	Sum of OFL contributions of component stocks in the complex.
<i>Butter sole</i>	<i>Based on the average catch during 1994-1998 + a 60% discard rate estimated from the EDCP study.</i>
<i>Curlfin sole</i>	<i>Based on the average catch during 1994-1998 + a 60% discard rate estimated from the EDCP study.</i>
<i>Flathead sole</i>	<i>Max. catch = 35 mt in 2005</i>
<b><i>Pacific sanddab</i></b>	<b><i>DB-SRA estimate. Only status determined from 2013 full assessment, so presumed to remain a cat. 3 stock.</i></b>
<b><i>Rex sole</i></b>	<b><i>Projected using a 50% SPR from the 2013 data-moderate assessment.</i></b>
<i>Rock sole</i>	<i>DB-SRA estimate.</i>
<i>Sand sole</i>	<i>DB-SRA estimate.</i>
Other Fish a/	No analytical basis for the status quo OFL.
<i>Big skate</i>	<i>Derived from survey biomass and MSY harvest rate estimates</i>
<i>Cabezon (WA)</i>	
<i>California skate</i>	<i>Derived from survey biomass and MSY harvest rate estimates</i>
<i>Finescale codling</i>	
<i>Kelp greenling (CA)</i>	<i>DB-SRA estimate.</i>
<i>Kelp greenling (OR &amp; WA)</i>	
<i>Leopard shark</i>	<i>DB-SRA estimate.</i>
<i>Pacific grenadier</i>	<i>Derived from survey biomass and MSY harvest rate estimates</i>

Stock	Comments
<i>Ratfish</i>	<i>Derived from survey biomass and MSY harvest rate estimates</i>
<i>Soupin shark</i>	
<i>Spiny dogfish</i>	<i>Projected using a 50% SPR from the 2011 full assessment. 2015 and 2016 OFLs projected using the status quo 50% SPR rate are 2,921 and 2,893 mt, respectively.</i>

Table 3. Relationship between the overfishing probability (P\*) and the percent reduction of the OFL for deciding the 2015 and 2016 ABCs for category 1, aurora rockfish, widow rockfish, shortspine thornyhead, category 2, and category 3 stocks based on sigma ( $\sigma$ ) values (i.e., biomass variances) of 0.36, 0.39, 0.41, 0.45, 0.72, and 1.44, respectively.

P*	Assessment Uncertainty ( $\sigma$ )					
	Cat. 1 0.36	Aurora 0.39	Widow 0.41	Shortspine 0.45	Cat. 2 0.72	Cat. 3 1.44
0.5	0	0	0	0	0	0
0.45	4.4%	4.8%	5.0%	5.5%	8.7%	16.6%
0.44	5.3%		6.0%		10.3%	19.5%
0.43	6.2%		7.0%		11.9%	22.4%
0.42	7.0%		7.9%		13.5%	25.2%
0.41	7.9%		8.9%		15.1%	27.9%
0.4	8.7%	9.4%	9.9%	10.8%	16.7%	30.6%
0.39	9.6%		10.8%		18.2%	33.1%
0.38	10.4%		11.8%		19.7%	35.6%
0.37	11.3%		12.7%		21.3%	38.0%
0.36	12.1%		13.7%		22.7%	40.3%
0.35	13.0%	14.0%	14.6%	16.0%	24.2%	42.6%
0.34	13.8%		15.6%		25.7%	44.8%
0.33	14.6%		16.5%		27.1%	46.9%
0.32	15.5%		17.4%		28.6%	49.0%
0.31	16.3%		18.4%		30.0%	51.0%
0.3	17.2%	18.5%	19.3%	21.0%	31.4%	53.0%
0.29	18.1%		20.3%		32.9%	54.9%
0.28	18.9%		21.3%		34.3%	56.8%
0.27	19.8%		22.2%		35.7%	58.6%
0.26	20.7%		23.2%		37.1%	60.4%
0.25	21.6%	23.1%	24.2%	26.2%	38.5%	62.1%
0.24	22.5%		25.1%		39.9%	63.8%
0.23	23.4%		26.1%		41.3%	65.5%
0.22	24.3%		27.1%		42.6%	67.1%
0.21	25.2%		28.2%		44.0%	68.7%
0.2	26.1%	28.0%	29.2%	31.5%	45.4%	70.2%
0.19	27.1%		30.2%		46.9%	71.8%
0.18	28.1%		31.3%		48.3%	73.2%
0.17	29.1%		32.4%		49.7%	74.7%
0.16	30.1%		33.5%		51.1%	76.1%
0.15	31.1%	33.2%	34.6%	37.3%	52.6%	77.5%
0.14	32.2%		35.8%		54.1%	78.9%
0.13	33.3%		37.0%		55.6%	80.2%
0.12	34.5%		38.2%		57.1%	81.6%
0.11	35.7%		39.5%		58.7%	82.9%
0.1	37.0%	39.3%	40.9%	43.8%	60.3%	84.2%
0.09	38.3%		42.3%		61.9%	85.5%
0.08	39.7%		43.8%		63.6%	86.8%
0.07	41.2%		45.4%		65.4%	88.1%
0.06	42.9%		47.1%		67.4%	89.3%
0.05	44.7%	47.3%	49.1%	52.3%	69.4%	90.6%

Table 4. Proposed stock categories and a range of alternative 2015 ABCs (mt) varied by the probability of overfishing (P\*) for west coast groundfish stocks.

Stock	2015 OFL	Category	Range of Alternative 2015 ABCs							
			Overfishing Probability (P*)							
			0.45	0.40	0.35	0.30	0.25	0.20	0.15	0.10
<b>OVERFISHED STOCKS</b>										
<b>BOCACCIO S. of 40°10' N. latitude</b>	<b>874</b>	<b>1</b>	<b>836</b>	<b>798</b>	<b>761</b>	<b>724</b>	<b>685</b>	<b>646</b>	<b>602</b>	<b>551</b>
CANARY	733	1	701	669	638	607	575	542	505	462
COWCOD S. of 40°10' N. latitude	NA		NA	NA	NA	NA	NA	NA	NA	NA
<i>COWCOD (Conception)</i>	NA	2	NA	NA	NA	NA	NA	NA	NA	NA
<i>COWCOD (Monterey)</i>	NA	3	NA	NA	NA	NA	NA	NA	NA	NA
<b>DARKBLOTCHED</b>	<b>560</b>	<b>1</b>	<b>535</b>	<b>511</b>	<b>487</b>	<b>464</b>	<b>439</b>	<b>414</b>	<b>386</b>	<b>353</b>
PACIFIC OCEAN PERCH	842	1	805	769	733	697	660	622	580	530
<b>PETRALE SOLE</b>	<b>2,738</b>	<b>1</b>	<b>2,618</b>	<b>2,500</b>	<b>2,382</b>	<b>2,267</b>	<b>2,147</b>	<b>2,023</b>	<b>1,886</b>	<b>1,725</b>
YELLOWEYE	52	2	47	43	39	35	32	28	24	20
<b>NON-OVERFISHED STOCKS</b>										
Arrowtooth Flounder	6,599	2	6,025	5,497	5,002	4,527	4,058	3,603	3,128	2,620
Black Rockfish (OR-CA)	1,176	1	1,124	1,074	1,023	974	922	869	810	741
Black Rockfish (WA)	421	1	402	384	366	349	330	311	290	265
Cabazon (CA)	161	1	154	147	140	133	126	119	111	101
Cabazon (OR)	49	1	47	45	43	41	38	36	34	31
California scorpionfish	119	1	114	109	104	99	93	88	82	75
Chilipepper S. of 40°10' N. latitude	1,703	1	1,628	1,555	1,482	1,410	1,335	1,259	1,173	1,073
Dover Sole	66,871	1	63,929	61,053	58,178	55,369	52,427	49,418	46,074	42,129
<b>English Sole</b>	<b>12,092</b>	<b>2</b>	<b>11,040</b>	<b>10,073</b>	<b>9,166</b>	<b>8,295</b>	<b>7,437</b>	<b>6,602</b>	<b>5,732</b>	<b>4,801</b>
Lingcod N. of 40°10' N. latitude	3,010	1	2,830	2,659	2,494	2,334	2,172	2,010	1,835	1,637
Lingcod S. of 40°10' N. latitude	1,205	2	1,100	1,004	913	827	741	658	571	478
Longnose skate	2,449	1	2,341	2,236	2,130	2,027	1,920	1,810	1,687	1,543
<b>Longspine Thornyhead (coastwide)</b>	<b>4,405</b>	<b>1</b>	<b>4,211</b>	<b>4,022</b>	<b>3,832</b>	<b>3,647</b>	<b>3,454</b>	<b>3,255</b>	<b>3,035</b>	<b>2,775</b>
Pacific Cod	3,200	3	2,669	2,221	1,837	1,504	1,213	954	720	506
Sablefish (coastwide)	7,857	1	7,511	7,173	6,836	6,506	6,160	5,806	5,413	4,950
Shortbelly	6,950	2	6,345	5,789	5,268	4,768	4,274	3,795	3,294	2,759
<b>Shortspine Thornyhead (coastwide)</b>	<b>3,204</b>	<b>1</b>	<b>3,028</b>	<b>2,858</b>	<b>2,691</b>	<b>2,531</b>	<b>2,365</b>	<b>2,195</b>	<b>2,009</b>	<b>1,801</b>
Splitnose S. of 40°10' N. latitude	1,794	1	1,715	1,638	1,561	1,485	1,406	1,326	1,236	1,130
Starry Flounder	1,841	2	1,681	1,534	1,395	1,263	1,132	1,005	873	731
Widow	4,137	1	3,929	3,729	3,532	3,337	3,138	2,930	2,705	2,446
<b>Yellowtail N. of 40°10' N. latitude</b>	<b>12,281</b>	<b>2</b>	<b>11,213</b>	<b>10,230</b>	<b>9,309</b>	<b>8,425</b>	<b>7,553</b>	<b>6,705</b>	<b>5,821</b>	<b>4,876</b>

Stock	2015 OFL	Category	Range of Alternative 2015 ABCs Overfishing Probability (P*)							
			0.45	0.40	0.35	0.30	0.25	0.20	0.15	0.10
<b>STOCK COMPLEXES</b>										
Minor Nearshore Rockfish North	68		59	51	44	38	32	27	22	17
<i>Black and yellow</i>	0.0	3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
<i>Blue (CA)</i>	27.4	2	25.0	22.9	20.8	18.8	16.9	15.0	13.0	10.9
<i>Blue (OR &amp; WA)</i>	32.3	3	26.9	22.4	18.5	15.2	12.2	9.6	7.3	5.1
<b>Brown</b>	NA	2	NA	NA	NA	NA	NA	NA	NA	NA
<i>Calico</i>	0.0	3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
<b>China</b>	NA	2	NA	NA	NA	NA	NA	NA	NA	NA
<b>Copper</b>	NA	2	NA	NA	NA	NA	NA	NA	NA	NA
<i>Gopher</i>	0.0	3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
<i>Grass</i>	0.7	3	0.5	0.5	0.4	0.3	0.2	0.2	0.1	0.1
<i>Kelp</i>	0.0	3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
<i>Olive</i>	0.3	3	0.3	0.2	0.2	0.1	0.1	0.1	0.1	0.0
<i>Quillback</i>	7.4	3	6.2	5.1	4.2	3.5	2.8	2.2	1.7	1.2
<i>Treefish</i>	0.2	3	0.2	0.2	0.1	0.1	0.1	0.1	0.0	0.0
Minor Shelf Rockfish North	2,207		1,943	1,711	1,505	1,316	1,141	978	818	657
<i>Bronzespotted</i>	0.0	3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
<i>Bocaccio</i>	284.0	3	236.9	197.1	163.0	133.5	107.6	84.6	63.9	44.9
<i>Chameleon</i>	0.0	3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
<i>Chilipepper</i>	128.2	3	106.9	88.9	73.6	60.2	48.6	38.2	28.8	20.3
<i>Cowcod</i>	0.0	3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
<i>Flag</i>	0.1	3	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0
<i>Freckled</i>	0.0	3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
<i>Greenblotched</i>	1.3	3	1.1	0.9	0.7	0.6	0.5	0.4	0.3	0.2
<i>Greenspotted 40°10' to 42° N. latitude</i>	9.3	2	8.5	7.7	7.0	6.4	5.7	5.1	4.4	3.7
<i>Greenspotted N. of 42 N. latitude (OR &amp; WA)</i>	6.1	3	5.1	4.2	3.5	2.9	2.3	1.8	1.4	1.0
<i>Greenstriped</i>	1,281.9	2	1,170.3	1,067.8	971.7	879.4	788.3	699.9	607.6	508.9
<i>Halfbanded</i>	0.0	3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
<i>Harlequin</i>	0.0	3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
<i>Honeycomb</i>	0.0	3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
<i>Mexican</i>	0.0	3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
<i>Pink</i>	0.0	3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
<i>Pinkrose</i>	0.0	3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
<i>Puget Sound</i>	0.0	3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Stock	2015 OFL	Category	Range of Alternative 2015 ABCs							
			Overfishing Probability (P*)							
			0.45	0.40	0.35	0.30	0.25	0.20	0.15	0.10
<i>Pygmy</i>	0.0	3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
<i>Redstripe</i>	269.9	3	225.1	187.3	154.9	126.9	102.3	80.4	60.7	42.6
<i>Rosethorn</i>	12.9	3	10.8	9.0	7.4	6.1	4.9	3.8	2.9	2.0
<i>Rosy</i>	3.0	3	2.5	2.1	1.7	1.4	1.1	0.9	0.7	0.5
<i>Silvergray</i>	159.4	3	133.0	110.6	91.5	74.9	60.4	47.5	35.9	25.2
<i>Speckled</i>	0.2	3	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0
<i>Squarespot</i>	0.2	3	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0
<i>Starry</i>	0.0	3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
<b>Stripetail</b>	<b>40.4</b>	<b>3</b>	<b>33.7</b>	<b>28.0</b>	<b>23.2</b>	<b>19.0</b>	<b>15.3</b>	<b>12.0</b>	<b>9.1</b>	<b>6.4</b>
<i>Swordspine</i>	0.0	3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
<i>Tiger</i>	1.0	3	0.8	0.7	0.6	0.5	0.4	0.3	0.2	0.2
<i>Vermilion</i>	9.7	3	8.1	6.7	5.6	4.6	3.7	2.9	2.2	1.5
Minor Slope Rockfish North	1,804		1,677	1,561	1,453	1,350	1,250	1,151	1,048	933
<b>Aurora</b>	<b>17.4</b>	<b>1</b>	<b>16.6</b>	<b>15.8</b>	<b>15.0</b>	<b>14.2</b>	<b>13.4</b>	<b>12.5</b>	<b>11.6</b>	<b>10.6</b>
<i>Bank</i>	17.2	3	14.4	12.0	9.9	8.1	6.5	5.1	3.9	2.7
<i>Blackgill</i>	4.7	3	3.9	3.3	2.7	2.2	1.8	1.4	1.1	0.7
<i>Redbanded</i>	45.3	3	37.7	31.4	26.0	21.3	17.2	13.5	10.2	7.2
<b>Rougheye</b>	<b>201.9</b>	<b>1</b>	<b>193</b>	<b>184</b>	<b>176</b>	<b>167</b>	<b>158</b>	<b>149</b>	<b>139</b>	<b>127</b>
<b>Sharpchin</b>	<b>305.6</b>	<b>2</b>	<b>279.0</b>	<b>254.6</b>	<b>231.6</b>	<b>209.6</b>	<b>187.9</b>	<b>166.9</b>	<b>144.9</b>	<b>121.3</b>
<i>Shortraker</i>	18.7	3	15.6	13.0	10.7	8.8	7.1	5.6	4.2	3.0
<i>Splitnose</i>	1,000.6	1	956.6	913.6	870.5	828.5	784.5	739.5	689.4	630.4
<i>Yellowmouth</i>	192.4	3	160.5	133.6	110.5	90.4	72.9	57.3	43.3	30.4
Minor Nearshore Rockfish South	793		694	609	534	466	405	348	294	240
<i>Shallow Nearshore Species</i>	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
<i>Black and yellow</i>	28	3	23.0	19.1	15.8	12.9	10.4	8.2	6.2	4.4
<b>China</b>	<b>NA</b>	<b>2</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>
<i>Gopher (N of Pt. Conception)</i>	148	1	141.5	135.1	128.8	122.5	116.0	109.4	102.0	93.2
<i>Gopher (S of Pt. Conception)</i>	26	3	21.4	17.8	14.7	12.0	9.7	7.6	5.8	4.0
<i>Grass</i>	60	3	49.7	41.4	34.2	28.0	22.6	17.8	13.4	9.4
<i>Kelp</i>	28	3	23.1	19.2	15.9	13.0	10.5	8.2	6.2	4.4
<i>Deeper Nearshore Species</i>	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
<i>Blue (assessed area)</i>	189	2	172.2	157.1	142.9	129.4	116.0	103.0	89.4	74.9
<i>Blue (S of 34°27' N. latitude)</i>	73	3	60.8	50.6	41.8	34.3	27.6	21.7	16.4	11.5
<b>Brown</b>	<b>NA</b>	<b>2</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>



Stock	2015 OFL	Category	Range of Alternative 2015 ABCs Overfishing Probability (P*)								
			0.45	0.40	0.35	0.30	0.25	0.20	0.15	0.10	
<i>Calico</i>	0	3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
<b>Copper</b>	<b>NA</b>	<b>2</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>
<i>Olive</i>	225	3	187.4	155.9	128.9	105.6	85.1	66.9	50.5	35.5	
<i>Quillback</i>	5	3	4.5	3.7	3.1	2.5	2.0	1.6	1.2	0.9	
<i>Treefish</i>	13	3	11.0	9.2	7.6	6.2	5.0	3.9	3.0	2.1	
Minor Shelf Rockfish South	1,914		1,621	1,372	1,156	967	800	648	509	378	
<i>Bronzespotted</i>	3.6	3	3.0	2.5	2.1	1.7	1.4	1.1	0.8	0.6	
<i>Chameleon</i>	0.0	3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
<i>Flag</i>	23.4	3	19.5	16.3	13.4	11.0	8.9	7.0	5.3	3.7	
<i>Freckled</i>	0.0	3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
<i>Greenblotched</i>	23.1	3	19.3	16.1	13.3	10.9	8.8	6.9	5.2	3.7	
<i>Greenspotted</i>	79.0	2	72.1	65.8	59.9	54.2	48.6	43.1	37.4	31.4	
<i>Greenstriped</i>	235.1	2	214.7	195.9	178.2	161.3	144.6	128.4	111.5	93.3	
<i>Halfbanded</i>	0.0	3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
<i>Harlequin</i>	0.0	3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
<i>Honeycomb</i>	9.9	3	8.2	6.8	5.7	4.6	3.7	2.9	2.2	1.6	
<i>Mexican</i>	5.1	3	4.2	3.5	2.9	2.4	1.9	1.5	1.1	0.8	
<i>Pink</i>	2.5	3	2.1	1.8	1.5	1.2	1.0	0.8	0.6	0.4	
<i>Pinkrose</i>	0.0	3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
<i>Pygmy</i>	0.0	3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
<i>Redstripe</i>	0.5	3	0.4	0.3	0.3	0.2	0.2	0.1	0.1	0.1	
<i>Rosethorn</i>	2.1	3	1.8	1.5	1.2	1.0	0.8	0.6	0.5	0.3	
<i>Rosy</i>	44.5	3	37.1	30.9	25.5	20.9	16.9	13.3	10.0	7.0	
<i>Silvergray</i>	0.5	3	0.4	0.4	0.3	0.3	0.2	0.2	0.1	0.1	
<i>Speckled</i>	39.4	3	32.8	27.3	22.6	18.5	14.9	11.7	8.9	6.2	
<i>Squarespot</i>	11.1	3	9.2	7.7	6.4	5.2	4.2	3.3	2.5	1.8	
<i>Starry</i>	62.6	3	52.2	43.4	35.9	29.4	23.7	18.6	14.1	9.9	
<b>Stripetail</b>	<b>23.6</b>	<b>3</b>	<b>19.7</b>	<b>16.4</b>	<b>13.6</b>	<b>11.1</b>	<b>9.0</b>	<b>7.0</b>	<b>5.3</b>	<b>3.7</b>	
<i>Swordspine</i>	14.2	3	11.9	9.9	8.2	6.7	5.4	4.2	3.2	2.2	
<i>Tiger</i>	0.0	3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
<i>Vermilion</i>	269.3	3	224.6	186.9	154.6	126.6	102.1	80.2	60.6	42.5	
<i>Yellowtail</i>	1,064.4	3	887.7	738.7	611.0	500.3	403.4	317.2	239.5	168.2	
Minor Slope Rockfish South	806		705	617	540	472	410	353	299	246	
<b>Aurora</b>	<b>74.3</b>	<b>1</b>	<b>70.7</b>	<b>67.3</b>	<b>63.9</b>	<b>60.6</b>	<b>57.1</b>	<b>53.5</b>	<b>49.6</b>	<b>45.1</b>	

Stock	2015 OFL	Category	Range of Alternative 2015 ABCs Overfishing Probability (P*)							
			0.45	0.40	0.35	0.30	0.25	0.20	0.15	0.10
<i>Bank</i>	503.2	3	419.7	349.2	288.8	236.5	190.7	150.0	113.2	79.5
<i>Blackgill</i>	137.0	1	131.0	125.1	119.2	113.4	107.4	101.2	94.4	86.3
<i>Pacific ocean perch</i>	0.0	3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
<i>Redbanded</i>	10.4	3	8.7	7.2	6.0	4.9	3.9	3.1	2.3	1.6
<b><i>Rougheye</i></b>	<b>4.1</b>	<b>1</b>	<b>3.9</b>	<b>3.8</b>	<b>3.6</b>	<b>3.4</b>	<b>3.2</b>	<b>3.0</b>	<b>2.8</b>	<b>2.6</b>
<b><i>Sharpchin</i></b>	<b>76.4</b>	<b>2</b>	<b>69.8</b>	<b>63.6</b>	<b>57.9</b>	<b>52.4</b>	<b>47.0</b>	<b>41.7</b>	<b>36.2</b>	<b>30.3</b>
<i>Shorthead</i>	0.1	3	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0
<i>Yellowmouth</i>	0.8	3	0.7	0.6	0.5	0.4	0.3	0.3	0.2	0.1
Other Flatfish	11,298		9,865	8,620	7,517	6,521	5,606	4,758	3,939	3,126
<i>Butter sole</i>	4.6	3	3.9	3.2	2.7	2.2	1.8	1.4	1.0	0.7
<i>Curlfin sole</i>	8.2	3	6.9	5.7	4.7	3.9	3.1	2.5	1.9	1.3
<i>Flathead sole</i>	35.0	3	29.2	24.3	20.1	16.5	13.3	10.4	7.9	5.5
<b><i>Pacific sanddab</i></b>	<b>4,801.0</b>	<b>3</b>	<b>4,004.0</b>	<b>3,331.9</b>	<b>2,755.8</b>	<b>2,256.5</b>	<b>1,819.6</b>	<b>1,430.7</b>	<b>1,080.2</b>	<b>758.6</b>
<b><i>Rex sole</i></b>	<b>5,609.0</b>	<b>2</b>	<b>5,121.0</b>	<b>4,672.3</b>	<b>4,251.6</b>	<b>3,847.8</b>	<b>3,449.5</b>	<b>3,062.5</b>	<b>2,658.7</b>	<b>2,226.8</b>
<i>Rock sole</i>	66.7	3	55.6	46.3	38.3	31.3	25.3	19.9	15.0	10.5
<i>Sand sole</i>	773.2	3	644.8	536.6	443.8	363.4	293.0	230.4	174.0	122.2
Other Fish	6,374		5,515	4,774	4,123	3,541	3,011	2,525	2,062	1,610
<i>Big skate</i>	458.0	3	382.0	317.9	262.9	215.3	173.6	136.5	103.1	72.4
<i>Cabezon (WA)</i>	a/	3	a/	a/	a/	a/	a/	a/	a/	a/
<i>California skate</i>	86.0	3	71.7	59.7	49.4	40.4	32.6	25.6	19.4	13.6
<i>Finescale codling</i>	a/	3	a/	a/	a/	a/	a/	a/	a/	a/
<i>Kelp greenling (CA)</i>	118.9	3	99.2	82.5	68.2	55.9	45.1	35.4	26.8	18.8
<i>Kelp greenling (OR &amp; WA)</i>	a/	3	a/	a/	a/	a/	a/	a/	a/	a/
<i>Leopard shark</i>	167.1	3	139.4	116.0	95.9	78.5	63.3	49.8	37.6	26.4
<i>Pacific grenadier</i>	1,519.0	3	1,266.8	1,054.2	871.9	713.9	575.7	452.7	341.8	240.0
<i>Ratfish</i>	1,441.0	3	1,201.8	1,000.1	827.1	677.3	546.1	429.4	324.2	227.7
<i>Southern shark</i>	61.6	3	51.4	42.8	35.4	29.0	23.3	18.4	13.9	9.7
<i>Spiny dogfish</i>	2,522.7	2	2,303.2	2,101.4	1,912.2	1,730.6	1,551.5	1,377.4	1,195.8	1,001.5

a/ No ABC contribution for these stocks given the lack of an approved method for estimating the OFL.

Table 5. Proposed stock categories and a range of alternative 2016 ABCs (mt) varied by the probability of overfishing (P\*) for west coast groundfish stocks.

Stock	2016 OFL	Category	Range of Alternative 2016 ABCs							
			Overfishing Probability (P*)							
			0.45	0.40	0.35	0.30	0.25	0.20	0.15	0.10
<b>OVERFISHED STOCKS</b>										
<b>BOCACCIO S. of 40°10' N. latitude</b>	<b>871</b>	<b>1</b>	<b>833</b>	<b>796</b>	<b>758</b>	<b>722</b>	<b>683</b>	<b>644</b>	<b>600</b>	<b>549</b>
CANARY	729	1	697	666	634	604	572	539	502	459
COWCOD S. of 40°10' N. latitude	NA		NA	NA	NA	NA	NA	NA	NA	NA
<i>COWCOD (Conception)</i>	NA	2	NA	NA	NA	NA	NA	NA	NA	NA
<i>COWCOD (Monterey)</i>	NA	3	NA	NA	NA	NA	NA	NA	NA	NA
<b>DARKBLOTCHED</b>	<b>563</b>	<b>1</b>	<b>538</b>	<b>514</b>	<b>490</b>	<b>466</b>	<b>441</b>	<b>416</b>	<b>388</b>	<b>355</b>
PACIFIC OCEAN PERCH	850	1	813	776	740	704	666	628	586	536
<b>PETRALE SOLE</b>	<b>2,660</b>	<b>1</b>	<b>2,543</b>	<b>2,429</b>	<b>2,314</b>	<b>2,202</b>	<b>2,085</b>	<b>1,966</b>	<b>1,833</b>	<b>1,676</b>
YELLOWEYE	52	2	47	43	39	35	32	28	24	20
<b>NON-OVERFISHED STOCKS</b>										
Arrowtooth Flounder	6,396	2	5,840	5,328	4,848	4,388	3,934	3,492	3,032	2,539
Black Rockfish (OR-CA)	1,183	1	1,131	1,080	1,029	980	927	874	815	745
Black Rockfish (WA)	423	1	404	386	368	350	332	313	291	266
Cabezon (CA)	158	1	151	144	137	131	124	117	109	100
Cabezon (OR)	49	1	47	45	43	41	38	36	34	31
California scorpionfish	117	1	111	106	101	97	91	86	80	73
Chilipepper S. of 40°10' N. latitude	1,694	1	1,619	1,547	1,474	1,403	1,328	1,252	1,167	1,067
Dover Sole	59,221	1	56,615	54,069	51,522	49,035	46,429	43,764	40,803	37,309
<b>English Sole</b>	<b>8,493</b>	<b>2</b>	<b>7,754</b>	<b>7,075</b>	<b>6,438</b>	<b>5,826</b>	<b>5,223</b>	<b>4,637</b>	<b>4,026</b>	<b>3,372</b>
Lingcod N. of 40°10' N. latitude	2,891	1	2,719	2,555	2,398	2,245	2,089	1,934	1,766	1,577
Lingcod S. of 40°10' N. latitude	1,136	2	1,037	946	861	779	699	620	539	451
Longnose skate	2,405	1	2,299	2,196	2,092	1,991	1,885	1,777	1,657	1,515
<b>Longspine Thornyhead (coastwide)</b>	<b>4,190</b>	<b>1</b>	<b>4,006</b>	<b>3,825</b>	<b>3,645</b>	<b>3,469</b>	<b>3,285</b>	<b>3,096</b>	<b>2,887</b>	<b>2,640</b>
Pacific Cod	3,200	3	2,669	2,221	1,837	1,504	1,213	954	720	506
Sablefish (coastwide)	8,526	1	8,151	7,784	7,418	7,060	6,684	6,301	5,874	5,371
Shortbelly	6,950	2	6,345	5,789	5,268	4,768	4,274	3,795	3,294	2,759
<b>Shortspine Thornyhead (coastwide)</b>	<b>3,168</b>	<b>1</b>	<b>2,994</b>	<b>2,826</b>	<b>2,661</b>	<b>2,503</b>	<b>2,338</b>	<b>2,170</b>	<b>1,986</b>	<b>1,780</b>
Splitnose S. of 40°10' N. latitude	1,826	1	1,746	1,667	1,589	1,512	1,432	1,349	1,258	1,150
Starry Flounder	1,847	2	1,686	1,539	1,400	1,267	1,136	1,008	875	733
Widow	3,990	1	3,790	3,596	3,407	3,218	3,026	2,826	2,609	2,359
<b>Yellowtail N. of 40°10' N. latitude</b>	<b>11,647</b>	<b>2</b>	<b>10,634</b>	<b>9,702</b>	<b>8,828</b>	<b>7,990</b>	<b>7,163</b>	<b>6,359</b>	<b>5,521</b>	<b>4,624</b>

Stock	2016 OFL	Category	Range of Alternative 2016 ABCs Overfishing Probability (P*)							
			0.45	0.40	0.35	0.30	0.25	0.20	0.15	0.10
<b>STOCK COMPLEXES</b>										
Minor Nearshore Rockfish North	69		59	51	44	38	33	27	22	17
<i>Black and yellow</i>	0.0	3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
<i>Blue (CA)</i>	27.7	2	25.3	23.1	21.0	19.0	17.0	15.1	13.1	11.0
<i>Blue (OR &amp; WA)</i>	32.3	3	26.9	22.4	18.5	15.2	12.2	9.6	7.3	5.1
<b>Brown</b>	NA	2	NA	NA	NA	NA	NA	NA	NA	NA
<i>Calico</i>	0.0	3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
<b>China</b>	NA	2	NA	NA	NA	NA	NA	NA	NA	NA
<b>Copper</b>	NA	2	NA	NA	NA	NA	NA	NA	NA	NA
<i>Gopher</i>	0.0	3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
<i>Grass</i>	0.7	3	0.5	0.5	0.4	0.3	0.2	0.2	0.1	0.1
<i>Kelp</i>	0.0	3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
<i>Olive</i>	0.3	3	0.3	0.2	0.2	0.1	0.1	0.1	0.1	0.0
<i>Quillback</i>	7.4	3	6.2	5.1	4.2	3.5	2.8	2.2	1.7	1.2
<i>Treefish</i>	0.2	3	0.2	0.2	0.1	0.1	0.1	0.1	0.0	0.0
Minor Shelf Rockfish North	2,217		1,952	1,719	1,512	1,323	1,147	983	823	661
<i>Bronzespotted</i>	0.0	3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
<i>Bocaccio</i>	284.0	3	236.9	197.1	163.0	133.5	107.6	84.6	63.9	44.9
<i>Chameleon</i>	0.0	3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
<i>Chilipepper</i>	127.5	3	106.4	88.5	73.2	59.9	48.3	38.0	28.7	20.2
<i>Cowcod</i>	0.0	3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
<i>Flag</i>	0.1	3	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0
<i>Freckled</i>	0.0	3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
<i>Greenblotched</i>	1.3	3	1.1	0.9	0.7	0.6	0.5	0.4	0.3	0.2
<i>Greenspotted 40°10' to 42° N. latitude</i>	9.3	2	8.5	7.7	7.0	6.4	5.7	5.1	4.4	3.7
<i>Greenspotted N. of 42 N. latitude (OR &amp; WA)</i>	6.1	3	5.1	4.2	3.5	2.9	2.3	1.8	1.4	1.0
<i>Greenstriped</i>	1,292.0	2	1,179.6	1,076.2	979.3	886.3	794.6	705.4	612.4	512.9
<i>Halfbanded</i>	0.0	3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
<i>Harlequin</i>	0.0	3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
<i>Honeycomb</i>	0.0	3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
<i>Mexican</i>	0.0	3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
<i>Pink</i>	0.0	3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
<i>Pinkrose</i>	0.0	3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
<i>Puget Sound</i>	0.0	3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Stock	2016 OFL	Category	Range of Alternative 2016 ABCs Overfishing Probability (P*)							
			0.45	0.40	0.35	0.30	0.25	0.20	0.15	0.10
<i>Pygmy</i>	0.0	3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
<i>Redstripe</i>	269.9	3	225.1	187.3	154.9	126.9	102.3	80.4	60.7	42.6
<i>Rosethorn</i>	12.9	3	10.8	9.0	7.4	6.1	4.9	3.8	2.9	2.0
<i>Rosy</i>	3.0	3	2.5	2.1	1.7	1.4	1.1	0.9	0.7	0.5
<i>Silvergray</i>	159.4	3	133.0	110.6	91.5	74.9	60.4	47.5	35.9	25.2
<i>Speckled</i>	0.2	3	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0
<i>Squarespot</i>	0.2	3	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0
<i>Starry</i>	0.0	3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
<b>Stripetail</b>	<b>40.4</b>	<b>3</b>	<b>33.7</b>	<b>28.0</b>	<b>23.2</b>	<b>19.0</b>	<b>15.3</b>	<b>12.0</b>	<b>9.1</b>	<b>6.4</b>
<i>Swordspine</i>	0.0	3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
<i>Tiger</i>	1.0	3	0.8	0.7	0.6	0.5	0.4	0.3	0.2	0.2
<i>Vermilion</i>	9.7	3	8.1	6.7	5.6	4.6	3.7	2.9	2.2	1.5
Minor Slope Rockfish North	1,817		1,691	1,574	1,465	1,363	1,262	1,163	1,059	944
<b>Aurora</b>	<b>17.5</b>	<b>1</b>	<b>16.7</b>	<b>15.9</b>	<b>15.1</b>	<b>14.3</b>	<b>13.5</b>	<b>12.6</b>	<b>11.7</b>	<b>10.6</b>
<i>Bank</i>	17.2	3	14.4	12.0	9.9	8.1	6.5	5.1	3.9	2.7
<i>Blackgill</i>	4.7	3	3.9	3.3	2.7	2.2	1.8	1.4	1.1	0.7
<i>Redbanded</i>	45.3	3	37.7	31.4	26.0	21.3	17.2	13.5	10.2	7.2
<b>Rougheye</b>	<b>205.8</b>	<b>1</b>	<b>197</b>	<b>188</b>	<b>179</b>	<b>170</b>	<b>161</b>	<b>152</b>	<b>142</b>	<b>130</b>
<b>Sharpchin</b>	<b>297.6</b>	<b>2</b>	<b>271.7</b>	<b>247.9</b>	<b>225.6</b>	<b>204.2</b>	<b>183.0</b>	<b>162.5</b>	<b>141.1</b>	<b>118.1</b>
<i>Shortraker</i>	18.7	3	15.6	13.0	10.7	8.8	7.1	5.6	4.2	3.0
<i>Splitnose</i>	1,018.2	1	973.4	929.6	885.8	843.0	798.2	752.4	701.5	641.4
<i>Yellowmouth</i>	192.4	3	160.5	133.6	110.5	90.4	72.9	57.3	43.3	30.4
Minor Nearshore Rockfish South	791		692	607	532	464	403	346	292	238
<i>Shallow Nearshore Species</i>	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
<i>Black and yellow</i>	27.5	3	23.0	19.1	15.8	12.9	10.4	8.2	6.2	4.4
<b>China</b>	<b>NA</b>	<b>2</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>
<i>Gopher (N of Pt. Conception)</i>	144.0	1	137.7	131.5	125.3	119.2	112.9	106.4	99.2	90.7
<i>Gopher (S of Pt. Conception)</i>	25.6	3	21.4	17.8	14.7	12.0	9.7	7.6	5.8	4.0
<i>Grass</i>	59.6	3	49.7	41.4	34.2	28.0	22.6	17.8	13.4	9.4
<i>Kelp</i>	27.7	3	23.1	19.2	15.9	13.0	10.5	8.2	6.2	4.4
<i>Deeper Nearshore Species</i>	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
<i>Blue (assessed area)</i>	190.3	2	173.8	158.5	144.3	130.6	117.0	103.9	90.2	75.6
<i>Blue (S of 34°27' N. latitude)</i>	72.9	3	60.8	50.6	41.8	34.3	27.6	21.7	16.4	11.5
<b>Brown</b>	<b>NA</b>	<b>2</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>

Stock	2016 OFL	Category	Range of Alternative 2016 ABCs Overfishing Probability (P*)							
			0.45	0.40	0.35	0.30	0.25	0.20	0.15	0.10
<i>Calico</i>	0.0	3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
<b>Copper</b>	NA	2	NA	NA	NA	NA	NA	NA	NA	NA
<i>Olive</i>	224.6	3	187.4	155.9	128.9	105.6	85.1	66.9	50.5	35.5
<i>Quillback</i>	5.4	3	4.5	3.7	3.1	2.5	2.0	1.6	1.2	0.9
<i>Treefish</i>	13.2	3	11.0	9.2	7.6	6.2	5.0	3.9	3.0	2.1
Minor Shelf Rockfish South	1,915		1,622	1,373	1,157	968	800	649	510	378
<i>Bronzespotted</i>	3.6	3	3.0	2.5	2.1	1.7	1.4	1.1	0.8	0.6
<i>Chameleon</i>	0.0	3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
<i>Flag</i>	23.4	3	19.5	16.3	13.4	11.0	8.9	7.0	5.3	3.7
<i>Freckled</i>	0.0	3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
<i>Greenblotched</i>	23.1	3	19.3	16.1	13.3	10.9	8.8	6.9	5.2	3.7
<i>Greenspotted</i>	78.4	2	71.6	65.3	59.5	53.8	48.2	42.8	37.2	31.1
<i>Greenstriped</i>	237.0	2	216.4	197.4	179.6	162.6	145.8	129.4	112.3	94.1
<i>Halfbanded</i>	0.0	3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
<i>Harlequin</i>	0.0	3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
<i>Honeycomb</i>	9.9	3	8.2	6.8	5.7	4.6	3.7	2.9	2.2	1.6
<i>Mexican</i>	5.1	3	4.2	3.5	2.9	2.4	1.9	1.5	1.1	0.8
<i>Pink</i>	2.5	3	2.1	1.8	1.5	1.2	1.0	0.8	0.6	0.4
<i>Pinkrose</i>	0.0	3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
<i>Pygmy</i>	0.0	3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
<i>Redstripe</i>	0.5	3	0.4	0.3	0.3	0.2	0.2	0.1	0.1	0.1
<i>Rosethorn</i>	2.1	3	1.8	1.5	1.2	1.0	0.8	0.6	0.5	0.3
<i>Rosy</i>	44.5	3	37.1	30.9	25.5	20.9	16.9	13.3	10.0	7.0
<i>Silvergray</i>	0.5	3	0.4	0.4	0.3	0.3	0.2	0.2	0.1	0.1
<i>Speckled</i>	39.4	3	32.8	27.3	22.6	18.5	14.9	11.7	8.9	6.2
<i>Squarespot</i>	11.1	3	9.2	7.7	6.4	5.2	4.2	3.3	2.5	1.8
<i>Starry</i>	62.6	3	52.2	43.4	35.9	29.4	23.7	18.6	14.1	9.9
<b>Stripetail</b>	<b>23.6</b>	<b>3</b>	<b>19.7</b>	<b>16.4</b>	<b>13.6</b>	<b>11.1</b>	<b>9.0</b>	<b>7.0</b>	<b>5.3</b>	<b>3.7</b>
<i>Swordspine</i>	14.2	3	11.9	9.9	8.2	6.7	5.4	4.2	3.2	2.2
<i>Tiger</i>	0.0	3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
<i>Vermilion</i>	269.3	3	224.6	186.9	154.6	126.6	102.1	80.2	60.6	42.5
<i>Yellowtail</i>	1,064.4	3	887.7	738.7	611.0	500.3	403.4	317.2	239.5	168.2
Minor Slope Rockfish South	807		706	618	541	473	411	354	300	247
<b>Aurora</b>	<b>74.3</b>	<b>1</b>	<b>70.7</b>	<b>67.3</b>	<b>63.9</b>	<b>60.6</b>	<b>57.1</b>	<b>53.5</b>	<b>49.6</b>	<b>45.1</b>

Stock	2016 OFL	Category	Range of Alternative 2016 ABCs Overfishing Probability (P*)							
			0.45	0.40	0.35	0.30	0.25	0.20	0.15	0.10
<i>Bank</i>	503.2	3	419.7	349.2	288.8	236.5	190.7	150.0	113.2	79.5
<i>Blackgill</i>	140.0	1	133.8	127.8	121.8	115.9	109.8	103.5	96.5	88.2
<i>Pacific ocean perch</i>	0.0	3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
<i>Redbanded</i>	10.4	3	8.7	7.2	6.0	4.9	3.9	3.1	2.3	1.6
<b><i>Rougheye</i></b>	<b>4.2</b>	<b>1</b>	<b>4</b>	<b>4</b>	<b>4</b>	<b>3</b>	<b>3</b>	<b>3</b>	<b>3</b>	<b>3</b>
<b><i>Sharpchin</i></b>	<b>74.4</b>	<b>2</b>	<b>67.9</b>	<b>62.0</b>	<b>56.4</b>	<b>51.0</b>	<b>45.8</b>	<b>40.6</b>	<b>35.3</b>	<b>29.5</b>
<i>Shorthead</i>	0.1	3	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0
<i>Yellowmouth</i>	0.8	3	0.7	0.6	0.5	0.4	0.3	0.3	0.2	0.1
Other Flatfish	9,948		8,633	7,496	6,494	5,595	4,775	4,021	3,299	2,590
<i>Butter sole</i>	4.6	3	3.9	3.2	2.7	2.2	1.8	1.4	1.0	0.7
<i>Curlfin sole</i>	8.2	3	6.9	5.7	4.7	3.9	3.1	2.5	1.9	1.3
<i>Flathead sole</i>	35.0	3	29.2	24.3	20.1	16.5	13.3	10.4	7.9	5.5
<b><i>Pacific sanddab</i></b>	<b>4,801.0</b>	<b>3</b>	<b>4,004.0</b>	<b>3,331.9</b>	<b>2,755.8</b>	<b>2,256.5</b>	<b>1,819.6</b>	<b>1,430.7</b>	<b>1,080.2</b>	<b>758.6</b>
<b><i>Rex sole</i></b>	<b>4,259.0</b>	<b>2</b>	<b>3,888.5</b>	<b>3,547.7</b>	<b>3,228.3</b>	<b>2,921.7</b>	<b>2,619.3</b>	<b>2,325.4</b>	<b>2,018.8</b>	<b>1,690.8</b>
<i>Rock sole</i>	66.7	3	55.6	46.3	38.3	31.3	25.3	19.9	15.0	10.5
<i>Sand sole</i>	773.2	3	644.8	536.6	443.8	363.4	293.0	230.4	174.0	122.2
Other Fish	6,355	0	5,498	4,758	4,108	3,527	2,999	2,515	2,053	1,602
<i>Big skate</i>	458.0	3	382.0	317.9	262.9	215.3	173.6	136.5	103.1	72.4
<i>Cabezon (WA)</i>	a/	3	a/	a/	a/	a/	a/	a/	a/	a/
<i>California skate</i>	86.0	3	71.7	59.7	49.4	40.4	32.6	25.6	19.4	13.6
<i>Finescale codling</i>	a/	3	a/	a/	a/	a/	a/	a/	a/	a/
<i>Kelp greenling (CA)</i>	118.9	3	99.2	82.5	68.2	55.9	45.1	35.4	26.8	18.8
<i>Kelp greenling (OR &amp; WA)</i>	a/	3	a/	a/	a/	a/	a/	a/	a/	a/
<i>Leopard shark</i>	167.1	3	139.4	116.0	95.9	78.5	63.3	49.8	37.6	26.4
<i>Pacific grenadier</i>	1,519.0	3	1,266.8	1,054.2	871.9	713.9	575.7	452.7	341.8	240.0
<i>Ratfish</i>	1,441.0	3	1,201.8	1,000.1	827.1	677.3	546.1	429.4	324.2	227.7
<i>Southern shark</i>	61.6	3	51.4	42.8	35.4	29.0	23.3	18.4	13.9	9.7
<i>Spiny dogfish</i>	2,503.3	2	2,285.5	2,085.2	1,897.5	1,717.2	1,539.5	1,366.8	1,186.5	993.8

a/ No ABC contribution for these stocks given the lack of an approved method for estimating the OFL.