

## GROUND FISH MANAGEMENT TEAM REPORT ON BIENNIAL MANAGEMENT MEASURES FOR 2023-2024: OFF-THE-TOP DEDUCTIONS

This report covers Item #3 from the Action Item Checklist ([Agenda Item H.8, Attachment 1](#)). Items #1, 2, and 4-11 (GMT Report 2) and Items #12-18 (GMT Report 3) will be in separate reports.

### **Action Item # 3: Off-the-top Deductions**

#### **Background**

The fishery harvest guideline (HG) is the basis for setting allocations to the directed groundfish sectors (e.g., trawl and non-trawl) and is the result of reducing the annual catch limit (ACL) to account for mortality in exempted fishing permit, tribal, research, and non-directed groundfish fisheries (e.g., pink shrimp), cumulatively known as “off-the-top deductions.” Off-the-top deductions ensure that, together, the total mortality from directed and non-directed groundfish fisheries does not exceed the ACL. That each off-the-top sector’s mortality stay within the sector-specific set-aside is less important, because fisheries do not face in-season management changes or early closure if they exceed their set-asides.

Typically, off-the-top deductions are set conservatively for each sector (e.g., the 15-year high rather than a five-year average), since they are not subject to closures, and most are not managed in-season (e.g., research and incidental open access [IOA] mortality estimates are typically available on a one-year lag). Setting conservative off-the-top deductions reduces the allocation to the directed groundfish fisheries, so should reflect a balance between reducing risk to the ACL and providing allocations for the directed fisheries.

For most stocks where fishery attainments of the ACL are low, the selection of the off-the-top deduction is rather inconsequential. For example, a high off-the-top deduction is not necessary to reduce risks to the ACL for low-attainment stocks, because the total mortality is well below the ACL. At the same time, a low off-the-top deduction for a species that is not targeted provides little benefit to fisheries, which receive more allocation. However, for stocks that are highly-targeted and attained by only part of the fishery, lower off-the-top deductions can be beneficial without creating a conservation concern. For example, low off-the-top deductions of petrale sole can benefit the trawl fishery, which will utilize and profit from any additional allocation, but will not risk exceeding the ACL due to low catch and targeting in non-trawl sectors.

#### **Tribal**

For most stocks, a tribal set-aside is based on the request from the tribes, which will allow them to manage the expected mortality in their upcoming fisheries. The GMT has been notified that the tribes intend on continuing all of their existing groundfish fisheries for 2023 and 2024 and are requesting the set-asides as noted within Agenda Item E.5.a, Supplemental Tribal Report 2. These set-asides are consistent with the off-the-top deductions requested by the tribes during the 2021-2022 biennial specifications process, with the exception of Pacific ocean perch (increased to 130 mt) and darkblotched rockfish (increased to 5 mt).

Pacific ocean perch is landed within both the treaty yellowtail directed mid-water trawl fishery and whiting fisheries. The GMT discussed that the increased tribal request of 130 mt, and associated modification to the HG, should not be constraining to non-treaty fisheries.

The current darkblotched rockfish harvest guideline for the tribes is 0.2 mt. In recent years, treaty harvest of darkblotched rockfish has increased, and the 0.2 mt limit has become constraining to some tribal fisheries. The GMT discussed that increasing the tribal set aside to 5 mt is a relatively small adjustment and impacts would be spread between all sectors, resulting in minimal changes in overall sector allocations.

The GMT also discussed the potential that the Pacific Fishery Management Council (Council) may choose to remove species from a complex and the impact that this could have on off-the-top deductions. Current off-the-top deductions for the tribes include set-asides for nearshore, slope, and shelf rockfish complexes. The Council should expect future development of treaty set-asides and HGs for any species removed from a complex to maintain and develop tribal fisheries.

**The GMT recommends the Council adopt the Tribal requested set-asides, as requested in Agenda Item E.5.a, Supplemental Tribal Report 2 and shown in Appendix 1 and 2.**

## **Research**

Research activities include the National Marine Fisheries Service (NMFS) bottom trawl survey, International Pacific Halibut Commission (IPHC) longline survey, and other federal and state research projects. In previous harvest specification cycles, the approach of the Council was to establish research set-asides equal to the maximum historical scientific research mortality since 2005 for all species other than yelloweye rockfish and cowcod. The GMT reviewed the historical mortality of overfished and highly-attained species with information updated through 2020 from the Groundfish Expanded Multi Year Mortality (GEMM) product (Somers et al. 2021; Table 1). Historical maximums of two species changed from last cycle: lingcod north of 40° 10' N lat. increased from 16.6 to 17.7 mt, and Pacific spiny dogfish increased from 34.3 to 41.9 mt.

**The GMT recommends the Council continue to use the maximum historical scientific research mortality for set-asides for all species, except yelloweye rockfish and cowcod, for 2023 and 2024.**

**Table 1. Recent research mortality (mt), 2005-2020 maximum (mt), and 2022 set aside (mt) for key species.**

Species	2016	2017	2018	2019	2020	2005- 2020 Max Value	2022 Set-aside	GMT recommendation for 2023-2024
Cowcod (south of 40° 10' N lat.) a/	0.3	0.4	0.6	0.6	0.0	0.6	10.0	<b>TBD</b>
Lingcod (north of 40° 10' N lat.)	16.6	3.3	8.8	17.7	0.0	17.7	16.6	<b>17.7</b>
Pacific spiny dogfish	11.7	16.0	27.2	41.9	0.0	41.9	34.3	<b>41.9</b>
Yelloweye rockfish a/	0.9	0.9	0.8	1.02	0.003	1.8	2.92	<b>2.92</b>

a/ Exception to the maximum value for yelloweye rockfish and cowcod.

For yelloweye rockfish, the Council adopted 2.92 mt for 2021 and 2022 research, based on anticipated research needs of the IPHC (1.1 mt); Washington Department of Fish and Wildlife (WDFW; 1 mt); Oregon Department of Fish and Wildlife (ODFW; 0.4 mt); California Department of Fish and Wildlife (CDFW; 0.22 mt); and other projects (0.2 mt). Any data indicating that a deduction for research was exceeded during the fishing year would be evaluated by the Council and NMFS and necessary adjustments could be made to prevent the harvest specifications from being exceeded. Therefore, **the Council should consider the appropriate amount of yelloweye rockfish to set aside for research, based on anticipated projects.**

For cowcod south of 40° 10' N lat., the Council adopted a research set aside of 10 mt for 2021 and 2022 with the intent that it would meet the needs for current and additional research in the event there were changes to the NMFS Hook and Line survey, research conducted under California's Scientific Collect Permit program, federal Scientific Research Permits, or Letters of Authorization. Although the GMT is not aware of any additional research needs at this time, the GMT notes there is a great need for additional biological data and fishery dependent data. Therefore, **the Council should consider the appropriate amount of cowcod south of 40° 10' N lat. to set aside for research, based on anticipated projects.**

### **Incidental Open Access (IOA)**

Similar to the process for establishing off-the-top deductions for scientific research, the Council has adopted off-the-top deductions for IOA fisheries based on the historical maximum mortality for the majority of species (based on the GEMM product, Somers et al. 2021). The GMT did not identify the need to deviate from this general approach for most species (Table 2), other than the potential exceptions described below.

The GMT does note that the maximum mortality for several species increased significantly. Specifically: canary rockfish increased from 1.31 mt to 2.83 mt; darkblotched rockfish increased from 9.8 mt to 17.5 mt; and nearshore rockfish north of 40° 10' N lat. increased from 0.61 mt to 4.15 mt (Table 2). The majority of the darkblotched rockfish impacts in 2020 came from the pink

shrimp fishery. The majority of the increase in the nearshore rockfish mortality was copper rockfish in the directed commercial Pacific halibut fishery (3.37 out of the 4.15 mt). Suggested set-asides for darkblotched rockfish and nearshore rockfish north are further described below. The team also notes that, for bocaccio rockfish south of 40° 10' N. lat. and Pacific ocean perch north of 40° 10' N. lat., the current historical maximums are slightly higher than the 2022 set-aside value due to the addition of recent years (i.e., 2019 and 2020) and any retroactive revisions to the GEMM mortality estimates.

**Table 2. Recent annual IOA mortality (mt), 2005-2020 maximum value (mt), 2022 set-aside (mt), and GMT recommendation for the 2023-2024 set aside (mt) for key species, including those where recommended set-asides differ from maximum historical mortality or where recommended set-asides increased significantly from the previous biennium.**

Species	2016	2017	2018	2019	2020	2005-2020 Max Value	2022 Set-aside	GMT recommendation for 2023-2024
Bocaccio (south of 40° 10' N lat.)	0.18	2.52	0.94	1.63	1.13	2.52	2.22	<b>2.52</b>
Canary rockfish	0.07	0.91	0.91	2.5	2.83	2.83	1.31	<b>2.83</b>
Cowcod (south of 40° 10' N lat.)	0.0	0.16	0.17	0.01	0.05	0.17	0.17	<b>0.17</b>
Darkblotched rockfish	6.41	6.75	3.60	2.89	17.5	24.66	9.8 a/	<b>9.8 b/</b>
Pacific ocean perch (north of 40° 10' N lat.)	0.05	0.27	0.06	0.18	0.56	10.09	10.04	<b>10.09</b>
Petrale sole	6.60	19.60	5.53	4.31	1.94	34.32	13.3 a/	<b>11.1 b/</b>
Sablefish south of 36° N. lat.	0.29	1.79	2.37	0.35	0.56	2.37	25	<b>25 b/</b>
Yelloweye rockfish	0.0	0.67	0.02	7.37	2.62	7.37	0.69	<b>2.66 b/</b>
Nearshore rockfish (north of 40° 10' N lat.)	0.61	0.04	0.01	4.15	1.0	4.15	0.61	<b>1.3 b/</b>

a/ 2021-2022 values set at the historic (2005-2018) average, rather than maximum, value

b/ Reasoning for departures from historic maximum described below

### *Darkblotched Rockfish*

Darkblotched rockfish mortality ranged from 2.89 mt to 6.75 mt during 2015-2019, but 17.46 mt were harvested in 2020, warranting consideration of a departure from the 2022 set-aside of 9.8 mt. The 2021-2022 set-aside amount was based on the long-term (2005-2018) average mortality, rather than the maximum of 24.66 mt ([Agenda Item H.8.a, Supplemental GMT Report 1, November 2019](#)). When the two additional years of data are included, the long-term average (2005-2020) increases by only 0.03 mt and remains at 9.8 mt when rounded. **The GMT recommends continuing to use this long-term average approach and adopting an IOA set-aside of 9.8 mt for darkblotched rockfish for 2023-2024.** Even with the high IOA mortality in 2020, only 41

percent of the darkblotched rockfish ACL was taken that year, and the ACL has not been exceeded in prior years, suggesting that exceedance of the 9.8 mt set-aside does not pose a risk to the ACL.

*Petrale Sole*

The 2005-2020 average value of 11.1 mt is expected to accommodate annual IOA mortality, as the sector has taken less than that each year during the IFQ era (2011-2020), with the exception of 2017. Additionally, low attainments in the non-trawl fishery translate to minimal risk of exceeding the ACL even if the IOA set-aside were to be exceeded. The historical maximum non-trawl mortality of 14.0 mt is far less than the 2023-24 non-trawl allocation of 35-37 mt. Using 11.1 mt for the IOA set-aside, instead of the maximum of 34.3 mt, would result in an additional 23.2 mt for the IFQ fishery, which the GMT projects could add an extra ~\$100,000 in income to fishermen, processors, and fishing support businesses. Therefore, **the GMT recommends using the 2005-2020 average IOA mortality (11.1 mt) instead of the historical (2005-2020) maximum of 34.3 mt (Table 3).**

**Table 3. Historical mortality (mt) of petrale sole in the IOA and non-trawl fisheries.**

<b>Year</b>	<b>IOA</b>	<b>Non-trawl</b>
2005	20.5	0.9
2006	34.3	1.2
2007	11.7	1.5
2008	32.4	5.7
2009	15.4	0.8
2010	11.5	0.8
2011	2.4	1.3
2012	1.8	1.7
2013	2.2	3.2
2014	3.0	1.3
2015	5.2	3.9
2016	6.6	5.5
2017	19.6	7.9
2018	5.5	9.3
2019	4.3	14.0
2020	1.9	8.6
<b>Max</b>	<b>34.3</b>	<b>14.0</b>
<b>Avg</b>	<b>11.1</b>	<b>4.2</b>

### *Sablefish south of 36° N. lat.*

Annual sablefish mortality in the IOA sector has been less than 2.5 mt since 2004. Given this consistently low attainment and the low risk of constraining other fisheries, as well as the potential for increased catch if the non-trawl rockfish conservation area is modified, the **GMT recommends continuing to set the 2021-22 set-aside at 25 mt to cover the IOA sectors without adversely impacting other sectors.**

### *Yelloweye Rockfish*

In September 2021, the GMT discussed the appropriate value for estimated IOA fishery mortality, noting that the majority of mortality in recent years has come from the directed commercial Pacific halibut fishery. In our September 2021 inseason report ([Agenda Item C.7.a, Supplemental GMT Report 1, September 2021](#)), we recommended using an average of the years with observer data in the directed Pacific halibut fishery (2017-2020; 2.66 mt) for 2021 for inseason management. We also stated that unless new data emerged, we would use that same value as the set-aside for IOA fisheries for 2023-2024. Because no new data have arisen, **the GMT recommends a value of 2.66 mt for the yelloweye rockfish IOA set-aside for 2023-2024.**

### *Nearshore Rockfish North of 40° 10' N lat.*

The majority of the increased impacts in 2019 and 2020 came from the directed commercial Pacific halibut fishery. Therefore, the **GMT recommends the same methodology as has been done for yelloweye rockfish to determine the set-aside, which is using the average of the years that the directed Pacific halibut fishery has been observed (2017-2020; 1.3 mt) for the set-aside for 2023 and 2024.**

**Therefore, the GMT recommends that the Council continue to adopt the maximum historical high mortality for off-the-top deductions for all species except: petrale sole (suggested deduction: 11.1 mt), darkblotched rockfish (suggested deduction: 9.8 mt), sablefish south of 36° N. lat. (suggested deduction: 25 mt), yelloweye rockfish (suggested deduction: 2.66), and nearshore rockfish north (suggested deduction: 1.3) to accommodate mortality in IOA fisheries in 2023-24 (Table 2).**

## **Exempted Fishing Permits**

The Council considered exempted fishing permits (EFPs) under Agenda Item E.4. Based on Council action, several EFPs were forwarded for public review, including identifying necessary off-the-top deductions. The set-asides for those EFPs are included in the Appendices. **The GMT recommends the Council adopt the EFP set-asides as approved under Agenda Item E.4.**

## **Summary**

Appendices 1 and 2 summarize off-the-top deductions relative to 2023 and 2024 ACLs and include the proposed tribal set-asides, research, and IOA off-the-top deductions as discussed above, as well as EFP set-asides as adopted by the Council under Agenda Item E.4. These off-the-top deductions provide preliminary fishery HGs for Council consideration. Highlighted numbers represent values that are higher than those adopted for 2021 and 2022.

## **GMT Recommendations**

The GMT recommends the Council adopt for 2023 and 2024 the following set-asides (shown in Appendices 1 and 2):

1. the tribal requested set-asides, as shown in Agenda Item E.5.a, Supplemental Tribal Report 2 and Agenda Item E.5.a, Supplemental Tribal Report 2
2. the maximum historical research mortality for set-asides for all species, except yelloweye rockfish and cowcod
  - a. the appropriate amount of yelloweye rockfish to set aside for research, based on anticipated projects
  - b. the appropriate amount of cowcod to set aside for research, based on anticipated projects
3. the maximum historical IOA mortality for off-the-top deductions for all species except: darkblotched rockfish (suggested deduction: 9.8 mt), petrale sole (suggested deduction: 11.1 mt), sablefish south of 36° N. lat. (suggested deduction: 25 mt), yelloweye rockfish (suggested deduction: 2.66 mt), and nearshore rockfish north (suggested deduction: 1.3 mt) to accommodate mortality in IOA fisheries in 2023-24 (Table 2)
4. the EFP set-asides as approved under Agenda Item E.4.

**Appendix 1. GMT recommended off-the-top deductions for Tribal, research, EFPs, and incidental open access sectors for 2021.** Shaded cells indicate values are higher than what is in the 2022 regulations.

Stock/Complex	Area	ACL	Tribal	EFPs	Research	IOA	Set-aside Total	Fishery HG
Arrowtooth flounder	Coastwide	18,632	2,041	0.0	12.98	41.00	<b>2,094.98</b>	16,537.0
Big skate	Coastwide	1,320	15	0.0	5.49	39.31	<b>59.80</b>	1,260.2
Black rockfish (WA)	Washington	290	18	0.0	0.10	0.00	<b>18.10</b>	271.9
Black rockfish (CA)	California	334		1.0	0.08	1.18	<b>2.26</b>	331.7
Bocaccio	S of 40°10' N. lat.	1,842		40.0	5.60	2.52	<b>48.12</b>	1,793.9
Cabazon (CA)	S of 42° N. lat.	182		1.0	0.02	0.61	<b>1.63</b>	180.4
California scorpionfish	S of 34°27' N. lat.	262		0.0	0.18	3.71	<b>3.89</b>	258.1
Canary rockfish	Coastwide	1,284	50	3.0	10.08	2.83	<b>65.91</b>	1,218.1
Chilipepper	S of 40°10' N. lat.	2,183		70.0	14.04	13.66	<b>97.70</b>	2,085.3
Cowcod	S of 40°10' N. lat.	80		1.00	10.00	0.17	<b>11.17</b>	68.8
Darkblotched rockfish	Coastwide	785	5.0	0.5	8.46	9.80	<b>23.76</b>	761.2
Dover sole	Coastwide	50,000	1,497	0.0	50.84	49.27	<b>1,597.11</b>	48,402.9
English sole	Coastwide	9,018	200	0.0	17.00	42.52	<b>259.52</b>	8,758.5
Lingcod	N of 40°10' N. lat.	4,378	250	0.0	17.71	11.92	<b>279.63</b>	4,098.4
Lingcod	S of 40°10' N. lat.	739		1.5	3.19	8.31	<b>13.00</b>	726.0
Longnose skate	Coastwide	1,708	220	0.0	12.46	18.84	<b>251.30</b>	1,456.7
Longspine thornyhead	N of 34°27' N. lat.	2,295	30	0.0	17.49	6.22	<b>53.71</b>	2,241.3
Longspine thornyhead	S of 34°27' N. lat.	725		0.0	1.41	0.83	<b>2.24</b>	722.8
Pacific cod	Coastwide	1,600	500	0.0	5.47	0.53	<b>506.00</b>	1,094.0
Pacific ocean perch	N of 40°10' N. lat.	3,573	130.0	0.0	5.39	10.09	<b>145.48</b>	3,427.5



Stock/Complex	Area	ACL	Tribal	EFPs	Research	IOA	Set-aside Total	Fishery HG
Pacific whiting	Coastwide	<i>TBD</i>	<i>TBD</i>	0.0	<i>TBD</i>	1,500.00	<b>1,500.00</b>	<i>TBD</i>
Petrале sole	Coastwide	3,485	350	1.0	24.14	11.10	<b>386.24</b>	3,098.8
Sablefish	N of 36° N. lat.	8,486	<b>See Attachment 3</b>					
Sablefish	S of 36° N. lat.	2,338		0.0	2.40	25.00	<b>27.40</b>	2,310.6
Shortspine thornyhead	N of 34°27' N. lat.	1,359	50	0.0	10.48	17.82	<b>78.30</b>	1,280.7
Shortspine thornyhead	S of 34°27' N. lat.	719		0.0	0.71	6.00	<b>6.71</b>	712.3
Spiny dogfish	Coastwide	1,456	275	1.0	41.85	33.63	<b>351.48</b>	1,104.5
Splitnose rockfish	S of 40°10' N. lat.	1,592		1.5	11.17	5.75	<b>18.42</b>	1,573.6
Starry flounder	Coastwide	392	2	0.0	0.57	45.71	<b>48.28</b>	343.7
Widow rockfish	Coastwide	12,624	200	18.0	17.27	3.05	<b>238.32</b>	12,385.7
YELLOW EYE ROCKFISH	Coastwide	66	5	0.12	2.92	2.66	<b>10.70</b>	55.3
Yellowtail rockfish	N of 40°10' N. lat.	5,666	1,000	0.0	20.55	7.00	<b>1,027.55</b>	4,638.5
<b>Stock Complexes</b>								
Nearshore rockfish north	N of 40°10' N. lat.	88	1.5	0.0	0.47	1.30	<b>3.27</b>	84.7
Nearshore rockfish south	S of 40°10' N. lat.	801		0.0	2.68	1.86	<b>4.54</b>	796.5
Shelf rockfish north	N of 40°10' N. lat.	1,283	30	0.0	15.32	25.62	<b>70.94</b>	1,212.1
Shelf rockfish south	S of 40°10' N. lat.	1,465		50.0	15.10	67.67	<b>132.77</b>	1,332.2
Slope rockfish north	N of 40°10' N. lat.	1,540	36	0.0	10.51	18.88	<b>65.39</b>	1,474.6
Slope rockfish south	S of 40°10' N. lat.	701		1.0	18.21	19.73	<b>38.94</b>	662.1
Other fish	Coastwide	223		0.0	6.29	14.95	<b>21.24</b>	201.8
Other flatfish	Coastwide	4,862	60	0.0	23.63	137.16	<b>220.79</b>	4,641.2
Oregon black/blue/deacon rockfish	Oregon	562		0.0	0.08	1.74	<b>1.82</b>	560.2

Stock/Complex	Area	ACL	Tribal	EFPs	Research	IOA	Set-aside Total	Fishery HG
Oregon cabezon/kelp greenling	Oregon	185		0.0	0.05	0.74	<b>0.79</b>	184.2
Washington cabezon/kelp greenling	Washington	20	2	0.0	-	-	<b>2.00</b>	18.0

**Appendix 2. GMT recommended off-the-top deductions for Tribal, research, EFPs, and incidental open access sectors for 2024.** Shaded cells indicate values are higher than what is in the 2022 regulations.

Stock/Complex	Area	ACL	Tribal	EFP	Research	IOA	Set-aside Total	Fishery HG
Arrowtooth flounder	Coastwide	14,178	2,041	0.0	12.98	41.00	<b>2,094.98</b>	12,083.0
Big skate	Coastwide	1,267	15	0.0	5.49	39.31	<b>59.80</b>	1,207.2
Black rockfish (WA)	Washington	289	18	0.0	0.10	0.00	<b>18.10</b>	270.9
Black rockfish (CA)	California	329		1.0	0.08	1.18	<b>2.26</b>	326.7
Bocaccio	S of 40°10' N. lat.	1,828		40.0	5.60	2.22	<b>47.82</b>	1,780.2
Cabezon (CA)	S of 42° N. lat.	171		1.0	0.02	0.61	<b>1.63</b>	169.4
California scorpionfish	S of 34°27' N. lat.	252		0.0	0.18	3.71	<b>3.89</b>	248.1
Canary rockfish	Coastwide	1,267	50	3.0	10.08	2.83	<b>65.91</b>	1,201.1
Chilipepper	S of 40°10' N. lat.	2,121		70.0	14.04	13.66	<b>97.70</b>	2,023.3
Cowcod	S of 40°10' N. lat.	79		1.00	10.00	0.17	<b>11.17</b>	67.8
Darkblotched rockfish	Coastwide	750	5.0	0.5	8.46	9.80	<b>23.76</b>	726.2
Dover sole	Coastwide	50,000	1,497	0.0	50.84	49.27	<b>1,597.11</b>	48,402.9
English sole	Coastwide	8,960	200	0.0	17.00	42.52	<b>259.52</b>	8,700.5
Lingcod	N of 40°10' N. lat.	3,854	250	0.0	17.71	11.92	<b>279.63</b>	3,574.4
Lingcod	S of 40°10' N. lat.	740		1.5	3.19	8.31	<b>13.00</b>	727.0

Stock/Complex	Area	ACL	Tribal	EFP	Research	IOA	Set-aside Total	Fishery HG
Longnose skate	Coastwide	1,660	220	0.0	12.46	18.84	<b>251.30</b>	1,408.7
Longspine thornyhead	N of 34°27' N. lat.	2,162	30	0.0	17.49	6.22	<b>53.71</b>	2,108.3
Longspine thornyhead	S of 34°27' N. lat.	683		0.0	1.41	0.83	<b>2.24</b>	680.8
Pacific cod	Coastwide	1,600	500	0.0	5.47	0.53	<b>506.00</b>	1,094.0
Pacific ocean perch	N of 40°10' N. lat.	3,443	130.0	0.0	5.39	10.09	<b>145.48</b>	3,297.5
Pacific whiting	Coastwide	<i>TBD</i>	<i>TBD</i>	0.0	<i>TBD</i>	1,500.00	<b>1,500.00</b>	<i>TBD</i>
Petrale sole	Coastwide	3,285	350	1.0	24.14	11.10	<b>386.24</b>	2,898.8
Sablefish	N of 36° N. lat.	7,780	<b>See Attachment 3</b>					
Sablefish	S of 36° N. lat.	2,143		0.0	2.40	25.00	<b>27.40</b>	2,115.6
Shortspine thornyhead	N of 34°27' N. lat.	1,328	50	0.0	10.48	17.82	<b>78.30</b>	1,249.7
Shortspine thornyhead	S of 34°27' N. lat.	702		0.0	0.71	6.00	<b>6.71</b>	695.3
Spiny dogfish	Coastwide	1,407	275	1.0	41.85	33.63	<b>351.48</b>	1,055.5
Splitnose rockfish	S of 40°10' N. lat.	1,553		1.5	11.17	5.75	<b>18.42</b>	1,534.6
Starry flounder	Coastwide	392	2	0.0	0.57	45.71	<b>48.28</b>	343.7
Widow rockfish	Coastwide	11,482	200	18.0	17.27	3.05	<b>238.32</b>	11,243.7
YELLOWEYE ROCKFISH	Coastwide	66	5	0.12	2.92	2.66	<b>10.70</b>	55.3
Yellowtail rockfish	N of 40°10' N. lat.	5,560	1,000	0.0	20.55	7.00	<b>1,027.55</b>	4,532.5
<b>Stock Complexes</b>								
Nearshore rockfish north	N of 40°10' N. lat.	87	1.5	0.0	0.47	1.30	<b>3.27</b>	83.7
Nearshore rockfish south	S of 40°10' N. lat.	803		0.0	2.68	1.86	<b>4.54</b>	798.5
Shelf rockfish north	N of 40°10' N. lat.	1,278	30	0.0	15.32	25.62	<b>70.94</b>	1,207.1
Shelf rockfish south	S of 40°10' N. lat.	1,465		50.0	15.10	67.67	<b>132.77</b>	1,332.2

<b>Stock/Complex</b>	<b>Area</b>	<b>ACL</b>	<b>Tribal</b>	<b>EFP</b>	<b>Research</b>	<b>IOA</b>	<b>Set-aside Total</b>	<b>Fishery HG</b>
Slope rockfish north	N of 40°10' N. lat.	1,516	36	0.0	10.51	18.88	<b>65.39</b>	1,450.6
Slope rockfish south	S of 40°10' N. lat.	697		1.0	18.21	19.73	<b>38.94</b>	658.1
Other fish	Coastwide	223		0.0	6.29	14.95	<b>21.24</b>	201.8
Other flatfish	Coastwide	4,874	60	0.0	23.63	137.16	<b>220.79</b>	4,653.2
Oregon black/blue/deacon rockfish	Oregon	553		0.0	0.08	1.74	<b>1.82</b>	551.2
Oregon cabezon/kelp greenling	Oregon	180		0.0	0.05	0.74	<b>0.79</b>	179.2
Washington cabezon/kelp greenling	Washington	17	2	0.0	-	-	<b>2.00</b>	15.0

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