

Fishery harvest guidelines means the harvest guideline or quota after subtracting from the ACL or ACT Pacific Coast treaty Indian tribes allocations and projected catch, projected research catch, deductions for fishing mortality in non-groundfish fisheries, and deductions for EFPs.

c/ Arrowtooth flounder. The stock was last assessed in 2007 and was estimated to be at 79 percent of its unfished biomass in 2007. The OFL of 6,912 mt is based on the 2007 assessment with an  $F_{30\%}$   $F_{MSY}$  proxy. The ABC of 5,758 mt is a 17 percent reduction from the OFL ( $\sigma=0.72/P^*=0.40$ ) as it's a category 2 stock. Because the stock is above  $B_{25\%}$ , the ACL is set equal to the ABC. 2,087.39 mt is deducted from the ACL for the Tribal fishery (2,041 mt), the incidental open access fishery (30 mt), and research catch (16.39 mt), resulting in a fishery HG of 3,671 mt.

d/ Black rockfish north (Washington). A stock assessment was prepared for black rockfish north of 45°46' N. lat. (Cape Falcon, Oregon) in 2007. The biomass in the north was estimated to be at 53 percent of its unfished biomass in 2007. The OFL from the assessed area is based on the 2007 assessment with a harvest rate proxy of  $F_{50\%}$ . The resulting OFL for the area north of 46°16 N. lat. is 428 mt and is 97 percent of the OFL from the assessed area based on the area distribution of historical catch. The ABC of 409 mt for the north is a 4 percent reduction from the OFL ( $\sigma=0.36/P^*=0.45$ ) as it's a category 1 stock. The ACL was set equal to the ABC since the stock is above  $B_{40\%}$ . 14 mt is deducted from the ACL for the Tribal fishery, resulting in a fishery HG of 395 mt.

e/ Black rockfish south (Oregon and California). A stock assessment was prepared for black rockfish south of 45°46' N. lat. (Cape Falcon, Oregon) to Central California in 2007. The biomass in the south was estimated to be at 70 percent of its unfished biomass in 2007. The OFL from the assessed area is based on the 2007 assessment with a harvest rate proxy of  $F_{50\%}$  plus 3 percent of the OFL from the stock assessment prepared for black rockfish north of 45°46' N. lat. The resulting OFL for the area south of 46°16 N. lat. is 1,166 mt. The ABC of 1,115 mt and is a 4 percent reduction from the OFL ( $\sigma=0.36/P^*=0.45$ ) as it's a category 1 stock. The 2013 and 2014 ACL is 1,000 mt, which maintains the constant catch strategy designed to keep the stock biomass above  $B_{40\%}$ . There are no deductions from the ACL thus the fishery HG is equal to the ACL. The black rockfish ACL, in the area south of 46°16' N. lat. (Columbia River), is subdivided with separate HGs being set for waters off Oregon (580 mt/58 percent) and for waters off California (420 mt/42 percent).

f/ Bocaccio. A bocaccio stock assessment update was prepared in 2011 for the bocaccio stock between the U.S.-Mexico border and Cape Blanco. The stock is managed with stock-specific harvest specifications south of 40°10' N. lat. and within the minor shelf rockfish complex north of 40°10' N. lat. Historical catch distribution of approximately 6 percent was used to apportion the assessed stock to the area north of 40°10' N. lat. The bocaccio stock was estimated to be at 26 percent of its unfished biomass in 2011. The OFL of 881 mt is based on the 2011 stock assessment STAT model with an  $F_{MSY}$  proxy of  $F_{50\%}$ . The ABC of 842 mt is a 4 percent reduction from the OFL ( $\sigma=0.36/P^*=0.45$ ) as it's a category 1 stock. The 337 mt ACL is based on a rebuilding plan with a target year to rebuild of 2022 and an SPR harvest rate of 77.7 percent. 8.4 mt is deducted from the ACL for the incidental open access fishery (0.7 mt), EFP catch (6.0 mt) and research catch (1.7 mt), resulting in a fishery HG of 328.6 mt. The California recreational fishery has an HG of 172.5 mt.

g/ Cabezon (Oregon). A cabezon stock assessment was prepared in 2009. The cabezon biomass in waters off Oregon was estimated to be at 52 percent of its unfished biomass in 2009. The OFL of 49 mt was calculated using an  $F_{MSY}$  proxy of  $F_{45\%}$ . The ABC of 47 mt was based on a 4 percent reduction from the OFL ( $\sigma=0.36/P^*=0.45$ ) as it's a category 1 species. Because the stock is above  $B_{40\%}$ , the ACL is set equal to the ABC. There are no deductions from the ACL so the fishery HG is also equal to the ACL at 47 mt. Cabezon in waters off Oregon were removed from the "other fish" complex in 2011.

h/ Cabezon (California). A cabezon stock assessment was prepared in 2009. The cabezon biomass in waters off California was estimated to be at 48 percent of its unfished biomass in 2009. The OFL of 165 mt was calculated using an  $F_{MSY}$  proxy of  $F_{45\%}$ . The ABC of 158 mt was based on a 4 percent reduction from the OFL ( $\sigma=0.36/P^*=0.45$ ) as it's a category 1 stock. Because the stock is above  $B_{40\%}$ , the ACL is set equal to the ABC. There are no deductions from the ACL so the fishery HG is also equal to the ACL at 158 mt.

i/ California scorpionfish was assessed in 2005 and was estimated to be at 80 percent of its unfished biomass in 2005. The OFL of 122 mt is based on the 2005 assessment with a harvest rate proxy of  $F_{50\%}$ . The ABC of 117 mt is a 4 percent reduction from the OFL ( $\sigma=0.36/P^*=0.45$ ) as it's a category 1 stock. Because the stock is above  $B_{40\%}$ , the ACL is set equal to the ABC. 2 mt is deducted from the ACL for the incidental open access fishery, resulting in a fishery HG of 115 mt.

j/ Canary rockfish. A canary rockfish stock assessment update was prepared in 2011 and the stock was estimated to be at 24 percent of its unfished biomass coastwide in 2011. The coastwide OFL of 741 mt is based on the new assessment with a  $F_{MSY}$  proxy of  $F_{50\%}$ . The ABC of 709 mt is a 4 percent reduction from the OFL ( $\sigma=0.36/P^*=0.45$ ) as it's a category 1 stock. The ACL of 119 mt is based on a rebuilding plan with a target year to rebuild of 2030 and