

Stock is above  $B_{40\%}$  coastwide, the ACL is set equal to the ABC. No set-asides were removed so the fishery HG is also equal to the ACL at 48 mt. Cabezon in waters off Oregon were removed from the "other fish" complex, while cabezon of Washington will continue to be managed within the "other fish" complex.

ii/ Cabezon (California) - A new cabezon stock assessment was prepared in 2009. The cabezon south biomass was estimated to be at 48 percent of its unfished biomass in 2009. The OFL of 176 mt was calculated using an  $F_{MSY}$  proxy of  $F_{45\%}$ . The ABC of 168 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  $B_{40\%}$  coastwide, the ACL is set equal to the ABC. No set-asides were removed so the fishery HG is also equal to the ACL at 168 mt.

jj/ Dover sole. A 2005 Dover sole assessment estimated the stock to be at 63 percent of its unfished biomass in 2005. The OFL of 44,826 mt is based on the results of the 2005 stock assessment with an  $F_{MSY}$  proxy of  $F_{30\%}$ . The ABC of 42,843 mt is 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  $B_{25\%}$  coastwide, the ACL could be set equal to the ABC. However, the ACL of 25,000 mt is set at a level below the ABC and higher than the maximum historical landed catch. A set-aside of 1,590 mt is deducted from the ACL for the Tribal fishery (1,497 mt), the incidental open access fishery (55 mt) and research catch (38 mt), resulting in a fishery HG of 23,410 mt.

k/ English sole. A stock assessment update was prepared in 2007 based on the full assessment in 2005. The stock was estimated to be at 116 percent of its unfished biomass in 2007. The OFL of 10,620 mt is based on the results of the 2007 assessment update with an  $F_{MSY}$  proxy of  $F_{30\%}$ . The ABC of 10,150 mt is 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  $B_{25\%}$ , the ACL was set equal to the ABC. A set-aside of 100 mt is deducted from the ACL for the Tribal fishery (91 mt), the incidental open access fishery (4 mt) and research catch (5 mt), resulting in a fishery HG of 10,050 mt.

l/ Petrale sole. A petrale sole stock assessment was prepared for 2009. In 2009 the petrale sole stock was estimated to be at 12 percent of its unfished biomass coastwide, resulting in the stock being declared as overfished. The OFL of 1,279 mt is based on the 2009 assessment with a  $F_{30\%}$   $F_{MSY}$  proxy. The ABC of 1,222 mt is a 4 percent reduction from the OFL ( $\sigma=0.36/P^*=0.45$ ) as it's a category 1 species. The 1,160 mt ACL represents an SPR harvest rate of 32.4 percent. A set-aside of 65 mt is deducted from the ACL for the Tribal fishery (45.4 mt), the incidental open access fishery (1 mt), EFP catch (2 mt) and research catch (17 mt), resulting in a fishery HG of 1,094.6 mt.

m/ 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 14,460 mt is based on the 2007 assessment with a  $F_{30\%}$   $F_{MSY}$  proxy. The ABC of 12,049 mt is a 17 percent reduction from the OFL ( $\sigma=0.72/P^*=0.40$ ) as it's a category 2 species. Because the stock is above  $B_{25\%}$ , the ACL is set equal to the ABC. A set-aside of 2,078 mt is deducted from the ACL for the Tribal fishery (2,041 mt), the incidental open access fishery (30 mt), and research catch (7 mt), resulting in a fishery HG of 9,971 mt.