

Bering Sea/Aleutian Islands Stock Assessments Proposed for Biennial Assessments

Bering Sea/Aleutian Islands species which rely on annual EBS shelf survey data are assessed annually to incorporate the current year's survey data. We propose to place selected lower profile and non-target species on a biennial assessment cycle to be assessed on even years when Gulf of Alaska species are not being assessed. The proposed species are Tier 3 assessments and model projections can be utilized for ABC calculations and harvest specifications in the intervening years. Updated catch information, survey data, projections, and other relevant stock assessment and fishery management information would be presented in executive summaries in odd years commencing in 2013. Full stock assessments will be presented in 2012. If there are large changes to the stock assessment data, model and or fishery in the intervening years which present a concern, a full stock assessment would be compiled and presented.

We note that Bering Sea/Aleutian Islands sharks (Tier 5), sculpins (Tier 5), and squid (Tier 6) have already been placed on biennial even-year assessment cycles and were not assessed in 2011.

We propose the following Bering Sea/Aleutian Islands species and species complexes for a biennial even-year assessment cycle and present the following background information.

Alaska plaice **Tier 3a**

Prior to 2002, Alaska plaice were managed as part of the "other flatfish" complex. Since then an age structured model has been used for the stock assessment allowing Alaska plaice to be managed separately from the "other flatfish" complex as a single species. Alaska plaice have been lightly harvested in most years as no major commercial target fishery exists for them. In recent years between 85 and 87% of the Alaska plaice catch has occurred in the yellowfin sole fishery. Substantial amounts of Alaska plaice are discarded in various eastern Bering Sea target fisheries and primarily in the yellowfin sole fishery due to low market interest. Catches of Alaska plaice are well below ABC levels. In 2011 and 2012 TAC levels were set at 16,000 and 24,000 t, respectively which accommodates bycatch needs.

Arrowtooth flounder **Tier 3a**

Arrowtooth flounder and Kamchatka flounder are very similar in appearance and were managed as a complex until 2011. A concern was raised with regard to overharvest of Kamchatka flounder, as the complex ABC exceeded the Kamchatka flounder biomass. These species were assessed separately in 2010, and separate management and harvest specifications of arrowtooth flounder and Kamchatka flounder were implemented for the 2011 fishing season. Although some limited targeting of arrowtooth flounder occurs in the Gulf of Alaska and the Bering Sea, arrowtooth flounder continue to be captured primarily in pursuit of higher value species and have historically been mostly discarded in the Bering Sea and the Aleutian Islands. With the advent of Amendment 80 in 2008, fishing practices changed and the percentage of arrowtooth flounder retained in catches has increased to 86%. The largest discard amounts

still occur in the Pacific cod fishery and the various flatfish fisheries. The increasing trend of retention is expected to continue in the near future due to the recent changes in fishing practices.

Model estimates indicate that arrowtooth flounder total biomass increased more than four-fold from 1976 to the 2011 value of 1.08 million t. After a rapid increase from 1985-94, the population increase slowed to a lower rate from 1992-1999 before increasing at a higher rate the past few years to the highest level observed in 2011, largely from the influence of the largest eastern Bering Sea shelf survey biomass estimates ever recorded in 2005 and 2006 and consecutive years of good recruitment. Catches of arrowtooth flounder are well below ABC levels. In 2011 and 2012 TAC levels were set at 25,900 and 25,000 t, respectively which accommodates limited fishery and bycatch needs.

Flathead sole Tier 3a

Flathead sole comprise a two-species complex consisting of true flathead sole and its morphologically-similar congener Bering flounder. Flathead sole was formerly a constituent of the "other flatfish" group until 1995 when changes in the directed fishing standards increased retention of flatfish, allowing for higher incidental catches and emerging markets for flathead sole. In 2008, Amendment 80 allocated 100% of the directed fishery flathead sole TAC among the non-American Fisheries Act (non-AFA) trawl catcher processor fleet. Substantial amounts of flathead sole have been discarded in various eastern Bering Sea target fisheries, although retention standards have improved since the implementation of Amendment 80. About 30% of flathead sole catch was discarded prior to 2008 and approximately 10% has been discarded since 2008. In 2010, the directed fishery caught almost 8,500 t and discarded only 1%. The yellowfin sole, bottom pollock, and midwater pollock fisheries also caught substantial amounts of flathead sole (2,988, 2,465 and 2,159 t, respectively). Retention was high in the yellowfin sole fishery (89%) and bottom pollock fishery (97%), while the midwater pollock fishery retained only 44% of flathead sole caught. Model estimates of total biomass show a decline from 2006 to 2010 which was the lowest biomass estimated since 1988. Changes in stock biomass are primarily a function of recruitment as fishing pressure has been relatively light. Although there is a limited directed fishery for flathead sole, catches of flathead sole are well below ABC and TAC levels. In 2011 and 2012, ABC levels were 69,300 and 70,400 t, respectively, and TAC levels were 41,548 and 34,134 t, respectively.