

Text from page 142 of the Draft Nov. 2007 SAFE Report For the AI pollock Stock.

Within the Aleutian Islands Region (Areas 541, 542, and 543), the 2002 AIBT survey indicated the highest densities and estimated biomass levels in the Central Aleutian Islands Area (Area 542), followed by the Eastern (Area 541) and Western areas (Area 543). The 1991-2000 AIBT surveys indicated the highest estimated biomass levels from the NRA Areas was observed in Area 541 followed by Area 542 and Area 543. The earlier RACE AIBT surveys indicated a decline in pollock biomass in the portion of Area 541 east of 174°W longitude from a high of 53,865 t in 1991 to a low of 28,985 t in the 2000 survey. This trend was reversed beginning in the 2002 survey with estimates of 53,368 t, 111,250 t, and 69,522 t from the 2002, 2004, 2006 surveys, respectively (Table 1A.11, page 166).

During the 1991-2002 surveys, a number of large to medium-sized tows were encountered throughout the Aleutians indicating a fairly well distributed population. This is very different from the 2004 and 2006 survey estimates which indicated a low level of pollock abundance in both Area 542 and Area 543, and a much higher pollock density in Area 541. The 2004 survey revealed very few pollock throughout the NRA, except for a single large tow in Seguam pass. The distribution of pollock in the 2006 survey revealed a similar pattern to that of the 2004 survey with high CPUE in the Seguam pass area. The 2006 survey found a higher concentration of pollock in the Delerof Islands that was not observed in 2004, but is consistent with aggregations observed in 2002. Similar to the 2004 survey, there were very few pollock observed west of 180° longitude. Given that there has not been a substantial fishery in the Aleutians since 1999, nor has there been a substantial change in survey methodology or design, the continued decrease in pollock must be attributed to either a change in catchability due to vertical migration of pollock out of the reach of the bottom trawl, increased emigration of pollock out of the surveyed area, decreased recruitment, increased natural mortality exceeding recruitment, or some combination of these factors. Since the AIBT is limited to within the 500 m isobath, the survey biomass estimates do not include midwater pollock, nor do they include pollock located offshore of the 500 m isobath. Survey biomass estimates therefore represent an unknown portion of the total biomass. The biomass in the Aleutian Islands may be under-estimated if the on-bottom/off-bottom distribution is similar to that of the eastern Bering Sea (Ianelli et al. 2005). In addition, climatic and year class variation may cause differences in the proportion of pollock available to the bottom trawl survey.

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In 2006 and 2007 acoustic survey studies were completed aboard a 32m commercial trawler (F/V Muir Milach) equipped with a 38kHz SIMRAD ES-60 acoustic system. The AICASS was conducted to assess the feasibility of using a small commercial fishing vessel to estimate the abundance of pollock in waters off the central Aleutian Islands (Fig. 1A.12). To verify the acoustic data and to support the study, 1,000 t and 3,000 t of groundfish were allocated to be harvested within an area that included waters within 20 nautical miles (nm) of Steller sea lion haulouts in 2006 and 2007 respectively. In 2006, six acoustic surveys were successfully conducted between 14 March and 4 April 2006. The area from North Cape of Atka Island to Koniuji Island (~1 degree longitude) was surveyed three times, while a smaller subset of this area was surveyed on three other occasions (Fig. 1A.13 and Fig. 1A.14). The three larger surveys (180 nm² with transect spacing of 1.5 nm) were conducted in the beginning (Survey 2), middle (Survey 4), and end (Survey 8) of the study period. Survey 5 was conducted parallel to the shelf break and covered only 9 nm² (with transects spaced at 0.5 nm). This survey provided data useful for geostatistical analyses. Surveys 6 and 7 covered 72 nm² with 1.0 nm transect and occurred in the middle of the large survey area coincident with the highest density of pollock. Survey 2,

conducted 14-15 March 2006, provided a biomass estimate for pollock of 8,910 t. The biomass estimate for subsequent surveys were lower (although not statistically significantly lower for Survey 4) and dropped significantly after Survey 4 to a low of 2,845 t for the final survey (Fig. 1A.15 and Fig. 1A.16). A total of 905 t of pollock were harvested during the 2006 study, no other directed pollock fishing was conducted in the Aleutian Islands in 2006. In 2007 two acoustic surveys were conducted, the first was completed between March 18 and March 24 2007 and the second between April 8 and April 15 2007. For both 2007 surveys, the region between 173° and 179° W longitude was surveyed at 2.5 nm transect spacing perpendicular to the shelf break one mile inland from the break and five miles offshore of the break or until pollock sign was no longer observed. Quantitative survey results for 2007 are not yet available, but early qualitative evaluations suggest pollock abundance similar to the latter 2006 surveys. Of the 3,000 t allocated for the study only 1,300 t were harvested, further suggesting low pollock abundance in the central Aleutian Islands area.