

## AFSC/ABL: 2006 Sockeye genetics

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The purpose of this study was to genetically analyze axillary process samples from ~6,000 sockeye salmon harvested in the 2006 and 2007 Districts 101 gillnet and 104 purse seine sockeye fisheries to determine proportions of Canadian and U.S. fish. A SNP genetic baseline of 45 SNPs (41 markers as 3 groups of SNPs are linked) assayed in 84 sockeye populations from southeast Alaska and British Columbia was developed by the ADF&G. The 84 populations were grouped into 14 regions. With the exception of locus One\_Serpin, which failed during genotyping, the same markers were evaluated in the baseline and mixtures. Stock proportions were estimated using a Bayesian mixture analysis. In addition to performing mixture analysis for the 2006 and 2007 fisheries, the sockeye baseline was also expanded as part of the 2007 project. Approximately 1700 fish from 21 locations were genotyped, which will be included in a future updated baseline.