

Buskin River Sockeye Salmon Smolt Abundance Assessment, Kodiak, Alaska, 2010

A total of 13,752 live sockeye salmon smolts were captured at two locations on the Buskin River drainage using a floating incline plane and a modified Canadian fan trap operated from 28 April to 29 June, 2010. The total observed emigration was composed of 4,346 freshwater-age-1 smolts and 9,261 freshwater-age-2 smolts. Louise-Catherine lakes freshwater-age-1 smolt had a mean weight of 11.5 g, mean length of 106 mm, and a mean condition factor of 0.96; Buskin Lake freshwater-age-1 smolts had a mean weight of 4.5 g, mean length of 78 mm, and a mean condition factor of 0.95. Louise-Catherine lakes freshwater-age-2 smolts had a mean weight of 12.0 g, a mean length of 109 mm, and a mean condition factor of 0.93; Buskin Lake freshwater-age-2 smolts had a mean weight of 6.7 g, a mean length of 87 mm, and a mean condition factor of 1.0. At both locations, freshwater-age-2 smolts were most abundant during the first month (17 May- 13 June) of the emigration, whereas freshwater-age-1 smolts were the predominant age class from 14 to 29 June. Due to chronic flooding and other operational problems investigators were unable to estimate the total number of sockeye salmon smolts emigrated from Buskin drainage in 2010. Results demonstrated that mark-recapture techniques deployed in 2010 were not a successful method to estimate Buskin drainage sockeye salmon smolt abundance.

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