

January 7, 2020

**Addendum/Update to the January 1999 Report: PC153**

*The Cape Igvak Salmon Management Plan ---An Artifact of the Kodiak Sockeye Salmon Rebuilding Era?* author: Bruce Barrett, AK Fisheries Consulting

The following is an update by the author of the **Executive Summary, items 5-12**, of the subject report:

5.) The Department conducted a tagging study in 1969 which served as the foundation for assigning an 80% Chignik stock assignment to the Cape Igvak fishery sockeye salmon catch, June through July 25 (Brennan 1998). The original publication defined the results to be 90% but then was *adjusted* to 80% by errantly including 8 tag recaptures from fish caught in Cape Igvak Section, where the original tagging occurred. Undisputedly the change favored Kodiak with an effective 17% allocation not the 15% allocation per regulation. In 2002 the Board corrected the stock assignment to 90%. The miscalculation that stood for 24 years (1978- 2001) resulted in 600,000 Chignik-bound sockeye salmon (consider by Board regulation) being excluded from the 15% allocation.

The Department's 2016 genetic study (ADF&G, FMS 17-07) redefined the contribution of Chignik bound-sockeye salmon in the Cape Igvak fishery. The results: Pre June 28, Chignik sockeye comprised 74%, Kodiak 9%, west of Chignik 8%, and Cook Inlet 6%. In the June 28 through July 25 period, Cook Inlet sockeye were represented at 93% and Chignik sockeye at 6%.

Unfortunately the 2016 genetic findings were not applied in forecasting Chignik's 2017 early and late runs. More than 120,000 sockeye salmon of Upper Cook Inlet origin were assigned to the Chignik sockeye salmon brood-tables which served to corrupt the 2017 Chignik sockeye early and late-run forecasts and have subsequently added an error-component in determining Chignik's sockeye escapement goals on both runs.

6.) Chignik permit values have fallen substantially; the 2015-19 average is \$167,000, while the 1987-91 average is 374,000 or 124% greater. Kodiak purse seine permits have fallen too; the 2015-19 average is \$33,000 as compared to the 1987-91 average of \$104,200 or 213% less. Both Kodiak and Chignik have fewer active permits now; Kodiak's 2014-19 average is 167 permits as compared to the 1987-91 average of 330. Chignik's 2014-19 average is about 68 permits (excluding 2018 with only 6 active permits) as compared to a 101 permits average for the 1987-91 period. Source data: (CFEC, 1,6,20 and ADF&G, FMR 18-32)

7.) From 1973 thru 1977, Chignik averaged a 3.1:1 sockeye catch advantage over the Kodiak purse seine fishery. Now Kodiak purse seiners have the advantage, averaging 1.9:1 over Chignik (2015-19 avg.; ADF&G Kodiak, Todd Anderson 1/7/20; FMR 18-32).



**8.)** Non-salmon fisheries resources are major for Kodiak, while for Chignik much less so. In Kodiak's fisheries, non-salmon harvest revenues account for 75% of their fisheries income. Comparatively, Chignik non-salmon revenues average 14% (CFEC, 1,8,20; 2014-18 avg.).

**9.)** The Kodiak Management Area has more than 40 sockeye systems and two salmon hatcheries (2019 F&G, Kodiak AMR); Chignik has two sockeye runs and no hatcheries. Kodiak non-wild and introduced runs provide about a 400,000 sockeye salmon catch annually to the Kodiak sockeye fishery (2009-18 avg. w/est. 75k Frazer L. avg. harvest (ADF&G, Kodiak AMR, FMR 19-29).

**10.)** Kodiak has experience a 500% increase in its sockeye salmon catch since 1978 when the Igvak Plan was adopted. (1973-1977 avg. 397.5k; 2015-19 avg. 2,326.9k; ADF&G Kodiak AMR, FMR 19-29).

**11.)** In the Kodiak salmon fishery Chignik-bound sockeye salmon used to comprise about 23% of the Kodiak sockeye catch (1973-1977 avg.; ADF&G, FMR 19-29). In the last 5-years Chignik sockeye salmon have averaged 4.9%.

**12.)** Kodiak sockeye runs are healthy and supporting an average 2.33 million harvest ((2015-19 avg.; ADF&G, FMR 19-29). In comparison Chignik have weakened averaging a 0.90 million harvest (2015-19 avg.). In the last 3-years the Chignik harvest has averaged 0.3 million which is 22% of the 20-year 1.4 million average sockeye harvest (1998-2017; ADF&G, FMR18-32). The forecasted harvest for the 2020 Chignik fishery is 586,000 sockeye salmon or 42% of the 1.4 million 20-year average (ADF&G, Kodiak, B. Foster 12/13/19).