



Tuesday, June 2nd, 2020

## 2020 Pre-Season Yukon River Chinook Run Timing Forecast

The 2020 timing for Yukon River Chinook is expected to be close to average. The first significant pulse (15% point) is expected to arrive on the delta by June 14th and 50% of the run is expected to have arrived by June 22nd. Spring-time Bering Sea conditions were a bit of a mix this year between warm and cool. April mean air temperature at Nome, AK was -3.9°C, appreciably warmer than the long-term average of -6.7°C (range -17.1°C to 1.3°C). May mean sea surface temperature, measured along the migratory route between the delta and St. Lawrence Island, came in at -1.4°C, slightly cooler than the long-term average of -0.4°C (range -3.8°C to 2.8°C). Despite April Bering Sea ice extent being the fourth lowest on record [1], mean Spring-time ice cover between the delta and St. Lawrence Island was 53% which is right at the long-term average of 54% (range 8% to 78%) and higher than the last four years.

Based upon the historical relationship with catch-per-unit-effort (CPUE) in the Lower Yukon Test Fishery (LYTF) operated by ADF&G and the previously mentioned environmental variables, the predicted dates of three CPUE percentiles are June 14th (15%), June 16th (25%), and June 22nd (50%).

See the [project website](#) as the season progresses for up to date information about how catches at LYTF match this forecast, historical comparisons of catch, and the environmental data mentioned here. The forecast model used is based on Mundy & Evenson (2011) [2].

### Credits

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### References

[1] <https://nsidc.org/arcticseaicenews/2020/05/storm-damage/>

[2] Phillip R. Mundy, Danielle F. Evenson, Environmental controls of phenology of high-latitude Chinook salmon populations of the Yukon River, North America, with application to fishery

management, ICES Journal of Marine Science, Volume 68, Issue 6, July 2011, Pages 1155–1164,  
<https://doi.org/10.1093/icesjms/fsr080>