ALASKA DEPARTMENT OF FISH AND GAME
DIVISION OF COMMERCIAL FISHERIES
NEWS RELEASE

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2010 LOWER COOK INLET

PRELIMINARY PINK SALMON FORECAST

FORECAST AREA: **Lower Cook Inlet**

SPECIES: **Pink Salmon**

PRELIMINARY FORECAST OF THE 2010 RUN:

	Forecast Estimate (Thousands)	Forecast Range (Thousands)
NATURAL PRODUCTION		
Total Run	913	550–1,580
Escapement	346	127–565
Commercial Harvest	567	423–1,015

Notes:
Columns may not total exactly due to rounding to the nearest thousand fish.
Commercial Harvest = Total Run - Escapement.
Additional harvests may be expected from systems not included in the forecast.

FORECAST METHODS

The forecast of wild pink salmon runs to 10 harvest areas in the Lower Cook Inlet (LCI) Management area was based on a logarithmic regression of total run and escapement from 38 to 44 years of observations. The total run forecast for LCI natural production was the sum of the 10 individual harvest area forecasts. Upper and lower bounds around the total run forecast, however, were derived by multiplying the forecast times the upper and lower values of the percent error ([actual return-forecast return]/actual return) observed during the previous 10 years (excluding 2004). Forecasted commercial harvest ranges were obtained by subtracting corresponding escapement goals from the upper and lower bounds of the forecast range. The forecasted aggregate escapement was the sum of mid-points from the individual escapement

goals. The total forecasted commercial harvest was the total run minus the aggregated escapement.

FORECAST DISCUSSION

Because pink salmon exhibit a 2-year life cycle, comparisons of run size are typically stratified by odd and even years to account for dominance of one line over the other. In LCI, dominance of one line is typically short lived, lasting 2–6 generations, before the opposing line becomes dominant. Despite the relative parity between odd and even year pink salmon returns in LCI over broad time scales, we continue to stratify run size comparisons by odd and even years to account for the short term dominance cycles.

In 2008, the last even-numbered year, all 10 forecasted systems had runs within the forecast range. The 2010 forecast for natural production of 913,000 pink salmon has a forecast range of 550,000 to 1.58 million fish. Strong parent-year escapements in 2008 and reasonably good spawner-return ratios in recent years suggest there is a good likelihood of reaching the point estimate of this forecast range. If realized, a natural run of 913,000 pink salmon would be 7.5% higher than the mean run size of 849,000 fish for even-year returns between 1962 and 2008. The pink salmon cumulative escapement goal is 346,000 fish (range 127–565) for systems with a forecast. If the total run comes in as forecasted for all index streams, the midpoint of the cumulative escapement goal range should be met.

Four districts make up the LCI management area. The harvestable surplus of naturally produced pink salmon in the Southern District is projected to be 106,000 fish, with 57,000 coming from Humpy Creek, 35,000 from Seldovia Bay, and the balance from Port Graham River. Pink salmon are no longer being produced by hatcheries in LCI. Consequently, no supplemental harvest of enhanced pink salmon will occur in 2010.

In the Outer District, the number of naturally produced pink salmon available for harvest is projected to be 395,000 fish, with over 55% (218,000 fish) of the harvest expected to occur in the Port Dick subdistrict. If realized, the Port Dick harvest would be slightly less than the mean even-year catch since 1962. The next largest harvest is projected to occur in Windy Bay (90,000 fish), while smaller harvests ranging from 10,000 to 65,000 fish are anticipated from Port Chatham, Nuka Island, and Rocky Bay.

No pink salmon harvest is expected from the Eastern District in 2010. Commercial fishing specifically directed at pink salmon has not been allowed in the Eastern District in recent years due to a combination of erratic production and potential conflicts with the Resurrection Bay Salmon Management Plan (RBSMP), which limits commercial interference with the sport coho salmon fishery.

In the Kamishak Bay District, the number of naturally produced pink salmon available for harvest is projected to be 65,000 fish, over 68% of which is expected to occur in the Bruin Bay subdistrict. If realized, the Bruin Bay harvest of 45,000 fish would be similar to the mean even-year catch since 1962 for this index area. A small harvestable surplus of 21,000 fish is also projected from Ursus and Rocky coves. However, low market value and lack of tender service and available buyers have limited the incentive to harvest pink salmon in the Kamishak District in recent years.