

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



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**2013 LOWER COOK INLET PRELIMINARY PINK SALMON FORECAST**

Forecast Area: Lower Cook Inlet

Species: Pink Salmon

Preliminary Forecast of the 2013 Run:

	Forecast Estimate (Thousands)	Forecast Range (Thousands)
<b>NATURAL PRODUCTION</b>		
Total Run	279	139-482
Escapement	175	75-415
Commercial Harvest	104	64-67
<b>SUPPLEMENTAL PRODUCTION</b>		
Total Run	339	113-565
Escapement	143	137-148
Commercial Harvest	196	0-434
<b>TOTAL AREA PRODUCTION</b>		
Total Run	618	252-1,047
Escapement	318	212-563
Commercial Harvest	300	64-501

Note: Columns may not total exactly due to rounding to the nearest thousand fish. Commercial Harvest = Total Run - Escapement. Commercial Harvest refers to fish available for harvest; no prediction of fishing effort is made. Additional harvests may be expected from systems not included in the forecast.

## FORECAST METHODS

The forecast of wild pink salmon runs to 9 harvest areas in the Lower Cook Inlet (LCI) Management area was based on a logarithmic regression of total run and escapement from 39 to 47 years of observations. The total run forecast for LCI natural production was the sum of the 9 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 ( $[\text{actual return} - \text{forecast return}] / \text{actual return}$ ) observed during the previous ten years (excluding 2004). Forecasted commercial harvest ranges from natural production 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 minus any expected escapement shortfall. The forecast for supplemental production by the Tutka Bay Lagoon Hatchery was based on a marine survival rate of 3.0 percent (range: 1.0-5.0 percent). Projected harvest from supplemental production was obtained by subtracting broodstock goals from the supplemental production forecast.

## 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 2011, the last odd-numbered year, 4 of 9 forecasted systems had runs within the forecast range. The 2013 forecast for natural production of 279,000 pink salmon has a forecast range of 139,000 to 482,000 fish. Generally poor parent-year escapements in 2011 and modest return-per-spawner ratios in recent years suggest there is only a fair likelihood of reaching the point estimate of this forecast range. If realized, a natural run of 279,000 pink salmon would be less than one-third of the mean run size of 879,000 fish for odd-year returns between 1963 and 2011. The pink salmon cumulative escapement goal is 337,000 fish (range 124,000–551,000) for systems with a forecast. If the total run comes in as forecasted, six of nine index streams will not meet the mid-point of the cumulative escapement goal range. Humpy Creek, Port Chatham, Windy Bay, Rocky Bay, Bruin Bay, and Ursus/Rocky Cove will fall 50.7, 8.3, 3.5, 4.7, 78.2 and 16.6 thousand fish short of their respective goals. The resulting cumulative escapement forecast would then be 175,000 pink salmon.

Four districts make up the LCI management area. The harvestable surplus of naturally produced pink salmon in Southern District is projected to be 40,000 fish, with 28,000 coming from Seldovia and the balance from Port Graham Bay. Humpy Creek is expected to fall short of its escapement goal. Hatchery production of pink salmon in LCI recently resumed after several years of inactivity and the first adult returns are expected to Southern District in 2013. Tutka Bay Lagoon Hatchery is not yet up to full production and is expecting 245,000 pink salmon to return to Tutka Lagoon in 2013. An additional 94,000 fish are forecasted to return to a remote release site in Halibut Cove. The 2013 brood stock goal for the Tutka Hatchery is 131,000 fish. Because cost-recovery requirements are dependent upon inseason fish prices, the allocation of hatchery-produced salmon returns between common property and cost-recovery fisheries cannot yet be determined.

In Outer District, the number of naturally produced pink salmon available for harvest is projected to be 63,000 fish, with all of the harvest expected to occur in Port Dick Subdistrict. If realized, the Port Dick harvest would be less than one-third of the mean odd-year catch since 1963. Port Chatham and Windy and Rocky bays are expected to fall short of their escapement goals.

No pink salmon harvest is expected from Eastern District in 2012. Commercial fishing specifically directed at pink salmon has not been allowed in Eastern District in recent years due to a combination of low production and potential conflicts with the Resurrection Bay Salmon Management Plan (RBSMP), which limits commercial interference with the sport coho salmon fishery.

Poor returns are forecasted for both of the major pink salmon producers in Kamishak Bay District. Escapement shortfalls are expected for Bruin Bay and Ursus and Rocky Cove Subdistricts. Therefore, no commercial harvest of pink salmon is anticipated for Kamishak Bay District in 2013.