

ALASKA DEPARTMENT OF FISH AND GAME

DIVISION OF COMMERCIAL FISHERIES

NEWS RELEASE



Sam Cotten, Commissioner

Jeff Regnart, Director



Contact:

Glenn Hollowell, Area Finfish Management Biologist

Ted Otis, Area Finfish Research Biologist

Ethan Ford, Assistant Finfish Management Biologist

Phone: (907) 235-8191

Homer Area Office

3298 Douglas Place

Homer, AK 99603

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2015 LOWER COOK INLET PRELIMINARY PINK SALMON FORECAST

Preliminary forecast of the 2015 run:

	Forecast Estimate (thousands)	Forecast Range (thousands)
NATURAL PRODUCTION		
Total Run	626	313–1,177
Escapement	229	88–501
Commercial Harvest	397	225–676
SUPPLEMENTAL PRODUCTION		
Total Run	1,536	1,023–2,048
Broodstock	206	200–211
Commercial Harvest	1,330	823–1,854
TOTAL AREA PRODUCTION		
Total Run	2,162	1,336–3,225
Broodstock and Escapement	435	288–712
Commercial Harvest	1,727	1,048–2,530

Notes: Columns may not total exactly due to rounding to the nearest thousand fish. Commercial Harvest = Total Run minus Escapement and/or Broodstock. 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 40 to 49 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 ($[\text{actual run} - \text{forecast run}] / \text{actual run}$) observed during the previous 10 years. 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 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 (TBLH) was based on a marine survival rate of 3.0 % (range: 2.0–4.0 %). 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 runs 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 2013, the last odd-numbered year and also a year with record pink salmon runs to Outer District, 5 of 9 forecasted systems had runs within the forecast range (the remaining four were above the forecast range). The 2015 forecast for natural production of 626,000 pink salmon has a forecast range of 313,000–1,177,000 fish. Generally excellent parent-year escapements in 2013 and good marine survival in 2013–2014 suggest there is a strong likelihood of reaching at least the mid-point of this forecast range. If realized, a natural run of 626,000 pink salmon would be approximately two-thirds of the mean run size of 935,000 fish for odd-year returns between 1963 and 2013. If the mid-point of the forecast range is achieved, only one of nine index areas (Humpy Creek) will not meet the low end of its escapement goal range.

Four districts make up the LCI management area. The harvestable surplus of naturally produced pink salmon in Southern District is projected to be 26,000 fish; with 20,000 pink salmon coming from Seldovia Bay and the balance from Port Graham Bay. Hatchery production of pink salmon in LCI recently resumed after several years of inactivity and significant adult returns are expected to Southern District in 2015. Tutka Bay Lagoon Hatchery is expecting 1,533,000 pink salmon to return to Tutka Lagoon in 2015. An additional 2,820 enhanced pink salmon are forecasted to return to Port Graham Bay. The 2015 brood stock and cost-recovery goals for the TBLH have not been finalized, so the proportion of the forecasted return available for common-property harvest cannot be estimated at this time.

In Outer District, the number of naturally produced pink salmon available for harvest is projected to be 370,000 fish, with over half of the harvest expected to occur in Port Dick Subdistrict. If realized, the Port Dick harvest would be approximately 78% of the mean odd-year catch since 1963. The projected harvests from Port Chatham, Windy, and Rocky bays are 60.3, 64.9, and 44.1 thousand fish, respectively.

No pink salmon harvest is expected from Eastern District in 2015. 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.

Relatively poor runs are forecasted for three of the major pink salmon producers in Kamishak Bay District. Depending on where the actual run falls within the forecast range, escapement shortfalls may occur for Bruin Bay and Ursus and Rocky Cove Subdistricts. Therefore, no commercial harvest of pink salmon is anticipated for Kamishak Bay District in 2015.