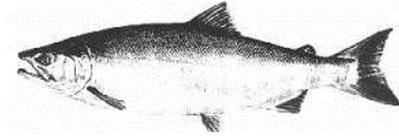


**ALASKA DEPARTMENT OF FISH AND GAME
DIVISION OF COMMERCIAL FISHERIES
NEWS RELEASE**



*Cora Campbell, Commissioner
Jeff Regnart, Director*



Contacts:
Greg Buck & Fred West, Asst. Area Research Biologists
Charles Brazil, Area Research Biologist
Phone: (907) 267-2355
Fax: (907) 267-2442

Anchorage Office
333 Raspberry Road
Anchorage, AK 99518
Date Issued: 10/22/13
Time: 3:00 p.m.

2014 NUSHAGAK RIVER CHINOOK SALMON HARVEST PROJECTION

The 2014 Nushagak River Chinook salmon harvest projection is provided below.

AREA: **Bristol Bay, Nushagak District**

SPECIES: **Chinook Salmon**

PROJECTION OF 2014 COMMERCIAL HARVEST

	Projection (thousands)	Projection Range (thousands)
TOTAL PRODUCTION:		
Commercial Common Property Harvest	21	12-30

While it has been our practice to forecast Chinook salmon total return to the Nushagak River and from that, project the anticipated commercial harvest, the total run forecast model has not performed well in recent years. We will again forgo a total run forecast for 2014 as we did in 2013, and simply project the commercial harvest for 2014 based on historical performance.

The anticipated commercial harvest of Nushagak River Chinook salmon in 2014 is 21,000 fish and is projected to range between 12,000 and 30,000 fish. This projection is based on the 5-year historical average harvest and forecasted mean absolute percent error (MAPE: 43%). During this timeframe, actual commercial harvests have ranged between 11,000 and 26,000 Chinook from the Nushagak River (Table 1).

Various factors account for our inability to accurately forecast future Chinook salmon runs to the Nushagak River. One of the more likely factors is our assessment of escapement using sonar near the village of Portage Creek. The sonar estimates salmon passage in the nearshore area of the river but does not have the ability to detect salmon across the entire river. We believe that our sonar estimate represents true abundance of sockeye salmon which almost exclusively migrate within the counting range of our sonar. Because an unknown portion of migrating Chinook salmon migrate farther offshore, we operate under the premise that our Chinook estimate is an index of abundance. Our assumption has been that we count a consistent proportion of returning Chinook salmon and

that this index therefore provides a solid basis from which to forecast. However, the low return of Chinook salmon in recent years and the recent poor performance of the forecast have cast doubt on that assumption. Additional concerns include recent changes made to the sonar equipment and the methods used to apportion counts to salmon species with gillnets. Research begun in 2011 attempts to address some of the uncertainties associated with estimating Chinook salmon abundance. We believe these efforts will eventually improve our ability to assess the total run of Chinook salmon in the Nushagak River and produce reliable forecasts in the future.

Even with the difficulties in assessing and forecasting the total run of Chinook salmon in the Nushagak River, we believe the 2014 run will be large enough to meet the inriver goal and provide for commercial, sport, and subsistence harvest opportunities. The Nushagak River Chinook salmon run was very weak between 2007 and 2010 but has increased in the three years since. We expect it to remain at current levels in 2014 based on long-term historical trends. We expect that age-1.3, -1.2 and -1.4 fish will make up approximately 46%, 33% and 20% of the 2014 Nushagak River Chinook run.

Greg Buck, Fred West and Charles Brazil
Bristol Bay Research Staff
Anchorage

Table 1.—Commercial harvest of Chinook salmon in the Nushagak fishing district of Bristol Bay, Alaska from 2009 through 2013.

Year	Harvest
2009	24,287
2010	25,501
2011	26,443
2012	11,420
2013	18,786