
2008 HARVEST SURVEYS IN ELSON LAGOON
SUMMARY PRELIMINARY FINDINGS

Prepared by

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INTRODUCTION

Beginning in the summer of 2008 the North Slope Borough Department of Wildlife Management attempted to assess the amount of fishing effort and harvest success for the gillnet subsistence fishery in Elson Lagoon near Barrow, Alaska. The reasons for this attempt are many but include 1) concerns over impacts to fishing created by changing ocean conditions due to climate change, 2) a desire to describe baseline conditions prior to any further advances in oil and gas production in the region, 3) a need to describe fish populations in order to better manage them. The following project is a joint survey that includes cooperation between the NSB, Dr. Larry Moulton of MJM, ADF&G, BLM, and ABR Inc.

The goals of this survey were to:

- 1) Count the number of nets on a daily basis during summer fishing in Elson Lagoon
- 2) Gather information on net length, mesh size, fishing effort and harvest results in order to quantify the fishing effort and estimate harvests in Elson Lagoon for 2008.

- 3) Invite subsistence fishers to participate in a log book program in which harvests are recorded by the fisher and returned at the end of the season to NSB.

The following brief synopsis describes some of the preliminary results of this ongoing survey.

METHODS

Several fishers were invited to participate in a log book program in which results were collected at the end of the fishing season to quantify fishing effort and harvest (Figure 1). Each day during the summer months from June to September a biologist patrolled the coastline from North Salt Lagoon along the road to Pt. Barrow on the Elson Lagoon side and onward to the tip of land south and east along Elson Lagoon. The number of nets encountered was counted each day. In order to help biologists see net locations and keep track of nets, a small stake was placed in the ground onshore from the net being surveyed (Figure 2). Each stake had a unique I.D. that helped biologists differentiate one net from another (Figure 3). Every attempt was made to calculate the net length and net mesh size without disturbing the net in any way. At the end of the fishing season logbooks were collected and a catch per unit of effort (CPUE) was calculated in order to make an estimate of the number of fish caught in Elson Lagoon during the gill net fishery in the summer of 2008.

PRELIMINARY RESULTS

The logbook program was very successful and approximately 10 fishers returned their logbooks complete with all harvest information from subsistence fishing events in 2008. The results of harvests gained from these logbooks were then applied to the total number of nets observed each week in Elson Lagoon. These results allowed project biologists to make estimates of fishing harvest effort and catch rates.

Subsistence fishing in Elson Lagoon during 2008 occurred from approximately mid-June until mid-September (Figure 4). The peak of fishing effort was occurred around the week of July 20 but high fishing effort continued through the week of August 10 (Figure 10). A variety of mesh sizes were used in the subsistence fishery but the dominate mesh sizes used were 5 and 5.5 inches respectively. Together, nets of these mesh sizes composed over 70% of the nets used in 2008 in Elson Lagoon (Figure 5).

Pink salmon were the dominate fish harvested in 2008 in Elson lagoon and catches were high between the weeks of July 20 and August 31. Estimated harvests of pink salmon were as high as 4500 fish for the week of August 31. In total, it is estimated that a total of 19,531 pink salmon were harvested in Elson Lagoon. Estimated harvests of other fish included chum salmon (483 fish), broad whitefish (92 fish), least cisco (75 fish), and char (78 fish) (Figure 6).

This project is ongoing for 2009 and we hope to deliver a full report on subsistence harvest collection for the Barrow area by the end of 2009. If you have questions or comments please contact Dr. Craig George of the North Slope Borough Department of Wildlife Management at 852-0350.

Name of Fisherperson: _____		
Camp or Cabin Name: _____		
Net Length: _____	ft.	Net Mesh: _____
		in.
Date: Time In: Time Checked:		Species Number
Date: Time In: Time Checked:		
Date: Time In: Time Checked:		
Date: Time In: Time Checked:		

Figure 1. Example data sheet from logbooks passed out to interested subsistence fishers.



Figure 2. North Slope Borough I.D. stake for a gill net on Elson Lagoon, 2008.



Figure 3. Example I.D. tag for stakes placed near nets in Elson Lagoon, 2008. These I.D. tags help biologists keep track of the number of nets fishing at any given time.

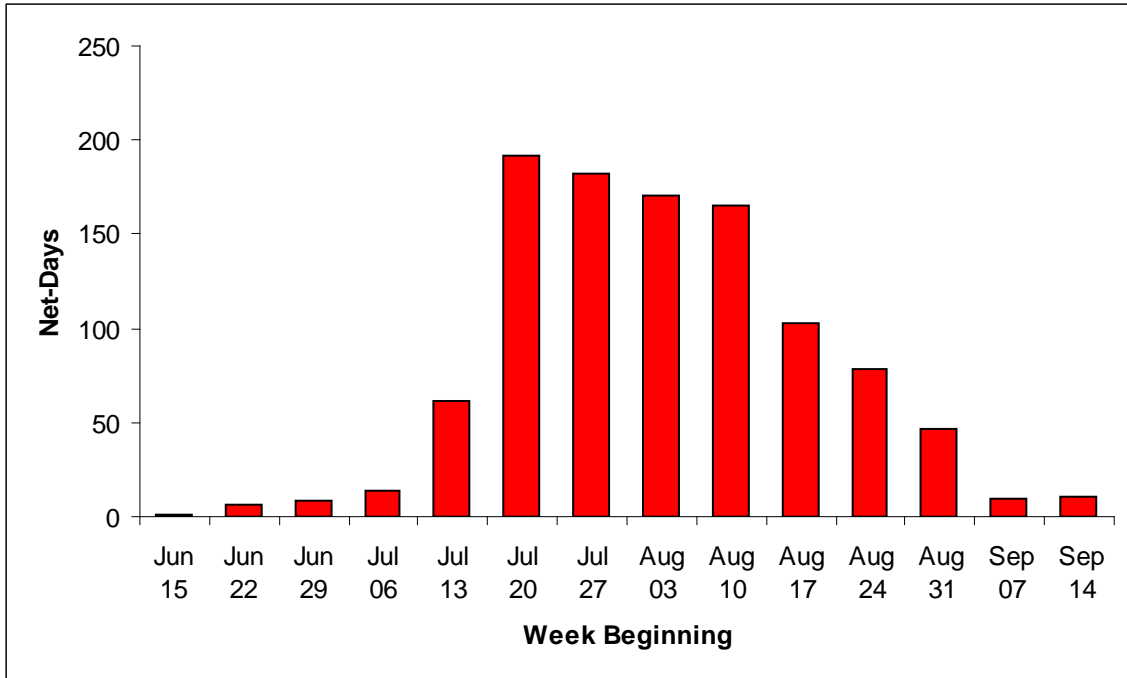


Figure 4. Estimated number of net days (total nets multiplied by 24 hour sets) in Elson Lagoon per week from June 15 to September 14, 2008

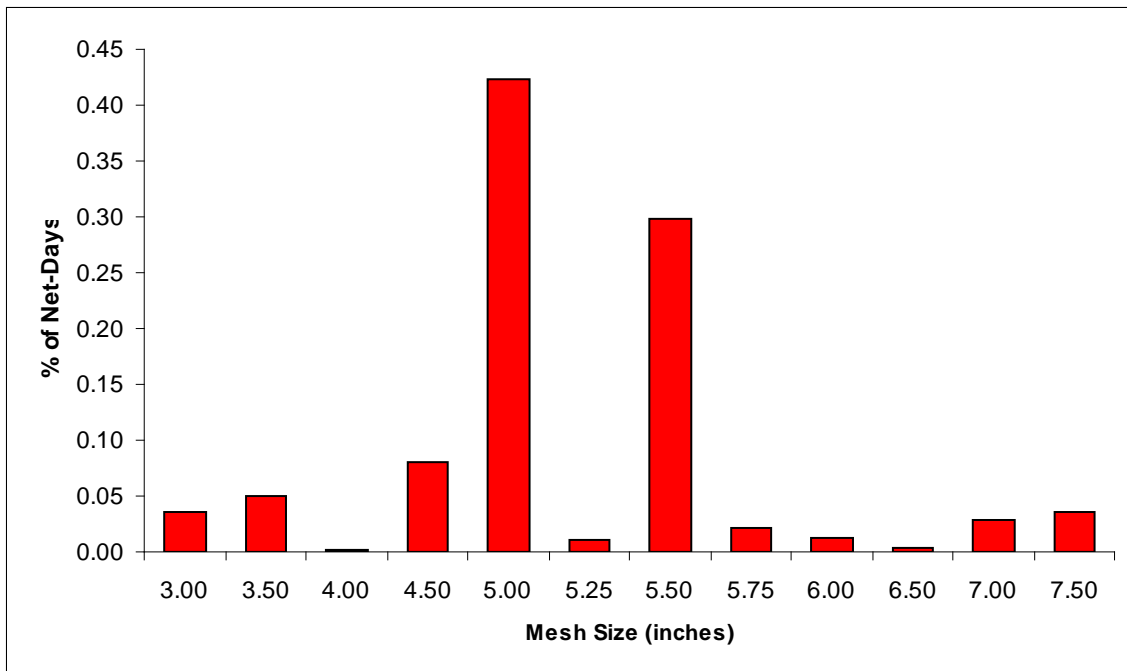


Figure 5. Percentage of total nets represented by each mesh size in Elson Lagoon during June 15 to September 14, 2008

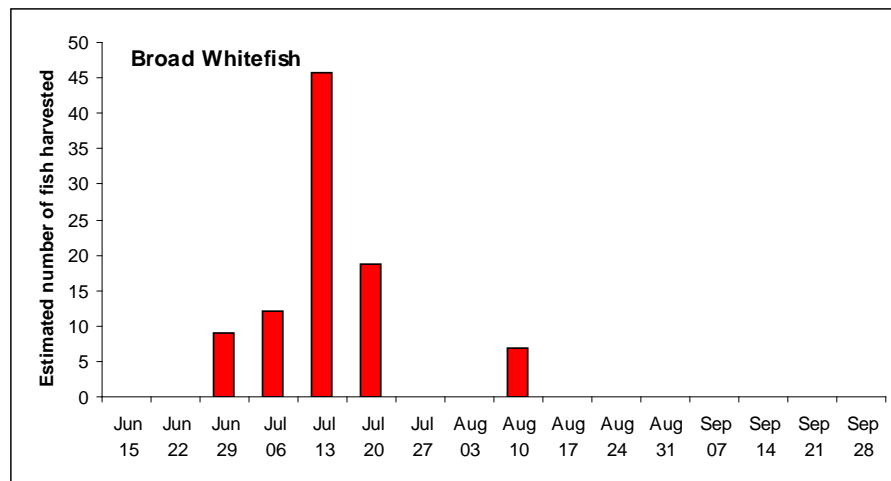
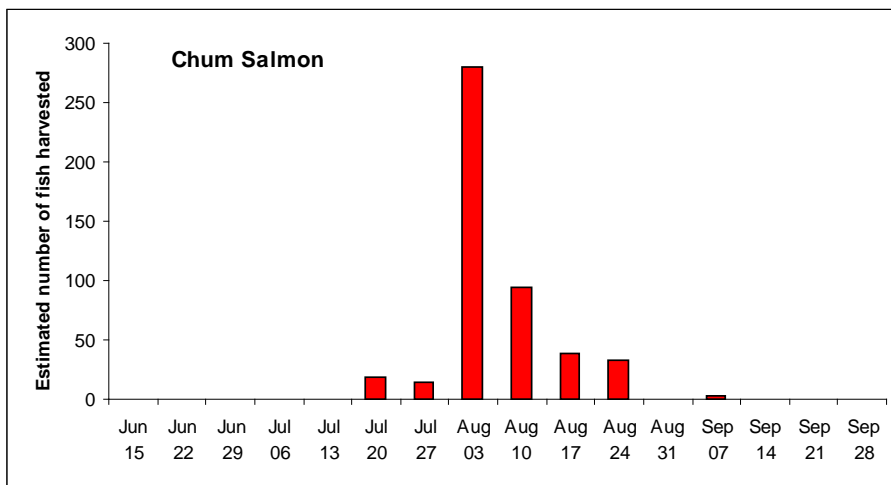
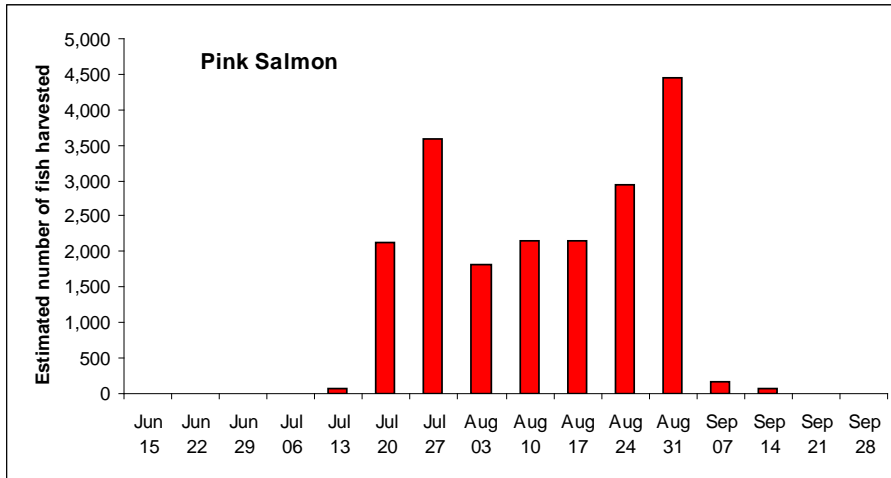


Figure 6. Estimated number of fish harvested by week for selected species in gill nets in Elson Lagoon, 2008.