9 August 2006

Mr. Mike Williams
NMFS/Alaska Region/Protected Resources
Anchorage, Alaska

Dear Mike

Please find enclosed the Humane Observer Report for the 2006 Northern fur seal subsistence harvest on St. Paul Island, Alaska.

The 2006 northern fur seal harvest was similar to last year. I was on St. Paul Island from 14 July through 9 August 2006. The harvest started on 22 July and ended on 8 August. Four harvests were conducted. A total of 396 (last year-479) subadult males were taken this year and one female (06CuA-7, Big Zapadni-28 July 2006) were killed during this time. Seal did not die from hyperthermia. On 22 July a 5-6 year old bull was accidentally killed in the harvest (06CuA-4). Also during that same harvest a SAM was killed that had a fairly severe infected bite wound to the chest; I condemned that carcass for human consumption (06CuA-3). All of the harvests started late again this year, between 1:45PM to 3:26PM in the warmest times of the day. Animals were gathered, handled and killed in a humane fashion at all harvests.

The reasons that only 4 harvests were done were multiple. Many of the sealers are also fisherman and were fishing during good weather. Also it seemed like the seal orders were down. There appeared to lots of construction jobs on the island again this summer. This activity was similar to last year.

Wastage was again observed this summer. I usually discard necropsied pups in the blubber dump where the seal carcasses from the harvest are discarded. On 31 July 2006 I noticed at least 20 bags of seal meat that was fresh, about 10 bags that were a day or two older and a pile of freshly dug sand. I dug up part of this mount of sand and found several more carcasses. All of the material had a extremely small amount of meat takes. In several bags even liver was present. These bags of seal meat probably came from the harvest on 28 and 29 July. On 1 August several people noticed 5 to 7 bags of fresh seal meat that had been thrown over the cliff at Tourist Point, near the gate to Reef/Gorbatch rookery. I confirmed this on 2 August and counted 7 bags of fresh seal meat. The harvest was discontinued until 7 August when a meeting with the tribe convened.

Pelts were not found this season that had been contaminated with oil from beaches. In 1994:23 seals, in 1995:3 seals, in 1996:4 seals, and in 1997:1 seal were found with oil contamination. From 1998 to 2006 pelts of seals were not found with oil contamination.

Thank you for allowing me to be the humane observer this season.

Sincerely

Terry R. Spraker, DVM, PhD, DACVP

**HUMANE OBSERVER REPORT**
**Northern Fur Seal Subsistence Harvest**
**St. Paul Island, Alaska**
**July-August, 2006**
**Terry R. Spraker**

## INTRODUCTION

Northern fur seals (*Callorhinus ursinus*) have been harvested for their pelts for the last 250 years on the Pribilof Islands. During this time period, the native Privilovians could freely take the meat of the harvested animals for food. On St. Paul Island, the commercial harvest for pelts ceased in 1984; therefore, a subsistence harvest began with only immature males taken for food. This subsistence harvest has continued for the last twenty-three years (1984-2006). The harvest is a well-planned and orderly procedure. Young male northern fur seals are gathered by driving them from their haul-out areas to a specific killing field where they are held in a large pod. Five to ten seals are then cut from this large pod and driven to a group of three to four men who stun the animals by hitting them on the skull or upper neck with a solid wooden club. The animals are dragged a short distance away from the killing area where the chest and heart are cut open. The animals are then skinned and butchered for human consumption. For a more detailed description of the procedures of the harvest, see Humane Observer Report: Stoskopf 1984; Letcher, 1985; Dorsey, 1986; Zimmerman et. al., 1986, Spraker 1987-2005. This report will be limited to my observations of the humane activities of the northern fur seal harvest from 14 July to 9 August 2006.

Multiple factors were evaluated during this harvest. These factors included environmental conditions, methods of gathering and herding the animals, and the harvesting of animals. These three areas will be discussed separately.

Northern fur seals were gathered and harvested 4 times this year from 22 July through 8 August 2006 from three haul-out areas (Polovina-once, Gorbatch-twice and Big Zapadni–once. A total of 397 subadult male animals were killed between 22 July and 8 August 2006. One female was killed in the harvest this year (Table 1).

## ENVIRONMENTAL CONDITION

The environmental conditions of the harvest from 22 July through 8 August 2006 were monitored including the average air temperature, degree of precipitation, wind, and cloud cover. The air temperature was taken when the drive began and ranged from

48°F to 52°F, with an overall average of 49.1°F. The air was relative dry 3 times and moist once. A breeze was present at all harvests. The wind speed varied from 10 to 19 knots with an overall average of 13.5 knots. Cloud cover was complete and high once; and complete and low three times (Table 2). The environmental conditions were similar to previous years.

**GATHERING OF ANIMALS**

Five to ten men would go to a specific haul-out area and quickly form a line along the shore thus preventing the seals access to the ocean. Then the seals were gathered into several pods and driven to the killing field. Gathering of the animals started between 1:44 PM to 3:26 PM this summer, but most drives started between 2:00 to 3:00PM. Estimated distance of the drives ranged from 150 to 215 yards. Animals were driven from 10 to 30 yards/minute with an average of 18 yards/minute. The animals were usually rested during the drive. The drives were similar this year as compared to previous years (Table 3).

An estimated difficulty of the drive was graded on a scale of 1+ to 3+, with 1+ being the easiest, and 3+ being the most difficult. These same paths have been used for driving seals to the killing field for several hundred years and were all fairly easy drives (Table 3). The degree of wetness to the grass and terrain was monitored and estimated as this is believed to be an important cooling factor for the animals. The grass was wet once and moist three times. This was similar as compared to previous years (Table 3).

**HARVESTING PERIOD**

The harvesting activity was characterized by holding the animals in a large pod approximately 10 to 20 yards from the stunning area. While a few young boys held the seals, three to four young men would cut out a small pod of seals and drive them to the stunners. The pod size usually was 8 to 15 animals. Animals were killed by hitting them on the skull at the level of the ears or over the 1st/2nd cervical vertebra. The majority of times, the animals were hit just once. These animals would immediately drop and were hit again on the skull. However, sometimes the first hit missed its mark and one or two more hits were required. The number of double and triple-hits were not counted this year, but my overall impression was that the accuracy was about the same this year as in previous years.

Deep body core temperatures of approximately 30-50% of the animals were taken throughout each harvest. The temperatures were then divided into three equal time slots during the harvest for each day. The average body temperatures are presented in Table 4. Temperatures ranged in individual animals from 99.3 to 104.4°F. Cases 0f hyperthermia were not found this season.

Hyperthermia is due to overheating caused by over activity of the animals. Predisposing factors include warm environmental temperatures, lack of cloud cover and/or mist, dry grass, lack of wind, animals being driven too fast (especially uphill), long drives, animals being held too tight in the large holding pods and having too much activity or moving around in the large holding pods. Another predisposing factor is the amount of rest an animal has had before the drive. For example, an animal that has just arrived on the haul-out from a feeding trip may not be "fully rested" and, if they are subjected to a harvest/drive, become exhausted quicker than a totally rested animal.

To avoid hyperthermia seals should be driven slowly; rested at least 15-20 minutes after the drive and the holding pods should be kept loose. If an animal lags behind during the gathering period they should be allowed to drop out of the pod. If the environment temperature is 55$^{o}$F, great care has to be taken during the drive and the harvest and if the temperature is >60$^{o}$F, no cloud cover, wind or mist, the harvest should not be done that day. When the animals in the holding pod show early signs of hyperthermia (including, flipper fanning, open mouth breathing and lying down) the harvest should be stopped and the animals released slowly.

**HEALTH STATUS**

The health status of the animals was evaluated by examining viscera and carcasses throughout the harvest. In general, the harvested animals appear to be thinner during the last several years as previously observed. This may suggest that the over-all nutrition of these animals is decreasing. There also appears to be very few small 2 year old animals.

**OIL CONTAMINATION OF ANIMALS**

This year (as last year) animals were not found with oil on their pelts. The number of animals found with oil on their pelts has decreased since 1994 when 23 contaminated animals were found. In 1994:23 seals, in 1995:3 seals, in 1996:4 seals, and in 1997:1 seal were found with oil contamination. From 1998 to 2006 pelts of seals were not found with oil contamination.

**SUMMARY**

This was a relatively uneventful season except for the finding of wastage of seal meat (see report by Mike Williams). Four harvests were conducted from 22 July through 8 August 2006 taking 396 subadult males from 3 haul-outs. Seal did not die from hyperthermia this season. One female was killed in the harvest this summer. No inhumane acts were observed this season.

**Points to be remembered during the harvest:**

1. Drive the animals slowly to the killing field.

2. Do not unnecessarily harass the seals during the drive.

3. If an animal lacks behind during the drive, leave it alone, because this animal is already exhausted because it has probably just returned from a feeding trip. These are the animals that will develop hyperthermia first and most likely die.

4. Rest the animals 10 to 15 minutes prior to the harvest.

5. Harvest in the morning; thus avoiding warmer afternoon environmental temperatures.

6. Drive small pods to the stunners. Five to seven animals are good, but not 10 to 15 animals at a time.

7. Take a little more time to isolate the selected animals to be killed. This will reduce the number of 5 year old seals killed.

8. If environmental temperatures are $50^{o}$F to $55^{o}$F, give the seals frequent rests during the drive and keep the holding pods loose. If environmental temperature is $55^{o}$F or above, do not have a harvest. If the temperature is $50^{o}$F with no wind a harvest should not take place.

9. Try to "weed out" (release) older animals and females during the drive.

10. When the animals in the holding pod show early signs of hyperthermia (flipper fanning, open mouth breathing, and lying down) the seal should be rested or the harvest should be stopped and the animals released slowly.

11. Discuss driving plans with drivers before drive starts. If drive plans change during the drive because not enough animals are gathered or too many big bulls or females are in the group, the animals should be released in a safe area not near cliffs. I am not sure what to do if animals are running towards a cliff. My impression is that they should be left alone and not disturbed. I think the animals if not pushed will avoid cliffs, but if scared will go over the cliff.

12. Do not allow intoxicated persons to work in any of the positions at the harvest or even to be on the killing field

because of the disruption that they cause and the danger to themselves and others especially if they have a knife.

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**Table 1. Table of dates, locations, and number of northern fur seals killed during the 2006 subsistence harvest on St. Paul Island, Alaska.**

| DATE | LOCATION | SEALS KILLED MALES | SEALS KILLED FEMALE | RUNNING TOTAL KILLED |
|---|---|---|---|---|
| 22 July | Gorbatch | 80 | 0 | 80 |
| 28 July | Big Zapadni | 90 | 1 | 171 |
| 29 July | Polovina | 83 | 0 | 254 |
| 8 Aug | Gorbatch | 143 | 0 | 397 |
| Total | | 396 | 1 | 397 |

**Table 2. Summary of environmental conditions during the 2006 northern fur seal subsistence harvest on St. Paul Island, Alaska.**

| DATE | LOCATION | AIR TEMP (F°) | PRECIPITATION | WIND: KNOTS/DIRECT | CLOUD COVER |
|---|---|---|---|---|---|
| 22 July | Gorbatch | 48 | None | 11 E | Complete/high |
| 28 July | Big Zapadni | 52 | None | 19 SW | Complete/high |
| 29 July | Polovina | 50 | None | 14 SW | Complete/high |
| 8 Aug | Gorbatch | 48 | Misty | 10 SE | Complete/low |

**Table 3: Summary of activity during the drive of northern fur seals to the killing field during the 2006 subsistence harvest St. Paul Island, Alaska.**

| DATE | LOCATION | DURATION OF DRIVE (min) | ESTIMATED DISTANCE OF DRIVE (yards) | ESTIMATED SPEED OF DRIVE – yards/min | TERRAIN TYPE AND WETTNESS OF GRASS, (OVERALL DIFFICULTY OF DRIVE) |
|---|---|---|---|---|---|
| 22 July | Gorbatch | 5 | 150 | 30 | Dirt uphill, downhill grass, moist (+) |
| 28 July | Big Zapadni | 22 | 215 | 10 | Flat sandy, flat grass, up hill, grass, flat grass, moist (++) |
| 29 July | Polovina | 8 | 200 | 15 | Uphill grass, rocky; flat, grass, wet (+) |
| 8 Aug | Gorbatch | 12 | 200 | 17 | Dirt uphill, downhill grass, moist (+) |

**Table 4: Summary of the deep body core temperatures and number of seals dying from hyperthermia during the 2006 northern fur seal subsistence harvest on St. Paul Island, Alaska.**

| DATE | LOCATION | REST TIME (min) | AVERAGE DEEP BODY CORE TEMP F$^{o}$ (First 1/3) | AVERAGE DEEP BODY CORE TEMP F$^{o}$ (Middle 1/3) | AVERAGE DEEP BODY CORE TEMP F$^{o}$ (Last 1/3) | HYPER-THERMIC ANIMALS |
|---|---|---|---|---|---|---|
| 22 July | Gorbatch | 5 | 102.2 | 104.7 | 103.3 | 0 |
| 28 July | Big Zapadni | 12 | 103.5 | 103.1 | 104.1 | 0 |
| 29 July | Polovina | 15 | 103.3 | 103.5 | 104.2 | 0 |
| 8 Aug | Gorbatch | 12 | 101.3 | 102.1 | 102.4 | 0 |

**Table 5: Summary of the rate of kill of northern fur seals during the 2006 subsistence harvest on St. Paul Island.**

| DATE | LOCATION | NUMBER OF ANIMALS KILLED | LENGTH OF TIME OF HARVEST (minutes) | AVERAGE NO. OF ANIMALS KILLED PER MINUTE OF HARVEST |
|---|---|---|---|---|
| 22 July | Gorbatch | 80 | 46 | 1.7 |
| 28 July | Big Zapadni | 91 | 84 | 1.0 |
| 29 July | Polovina | 83 | 54 | 1.5 |
| 8 Aug | Gorbatch | 143 | 104 | 1.4 |