

## APPENDIX A

This appendix contains the following reference material:

- o the Year One Seasonal Round
- o a calendar listing of Year One activities and events
- o Year One data tables
- o Year One data figures (charts and graphs)
- o Year One subsistence harvest site maps

### YEAR ONE SEASONAL ROUND

The following month by month report of subsistence activities documents Barrow resident's annual subsistence cycle from April 1, 1987 through March 31, 1988. This description highlights the month's major subsistence activities, and points out any significant or unusual environmental, social, cultural and/or economic conditions or events that may have affected hunting that month. While the pattern of activities generally remains much the same from year to year, changes in environmental conditions, local resource availability, as well as social and economic factors do affect the actual timing and the relative importance of the different resources harvested from year to year.

All temperatures are given in Fahrenheit, with most being reported as ambient temperature. Windchill temperatures are given where appropriate and when available.

#### APRIL 1987

During April, Barrow hunters focused primarily on harvesting bowhead whales. In early April, whaling captains or one of their crew traveled into the interior to visit their fish camp, retrieve stored caribou and fish, and kill one or two caribou. This food was used to feed the whaling crews while out on the ice. In the meantime, crews made trails through the pressure ridges near shore in order to reach the open lead edge located approximately three miles out from shore.

Seal hunters were active along the lead edge until April 15 when the first crew moved out, at which point the seal hunters refrained from sealing until after the initial bowhead harvest quota was fulfilled. The first bowhead whales moved past Barrow about April 18. Due to southwest winds, the one mile wide lead was blocked by ice floes in front of town after the 15th. Toward the end of the month, the winds switched to the northeast and the lead reopened in front of town. Polar bears were harvested this month by whaling crew members.

## MAY

Bowhead hunting continued into early May with Barrow whalers harvesting three whales with the community's initial quota of nine strikes between May 2 and May 5. A tenth strike was transferred from Savoonga and Barrow whalers harvested a fourth whale on May 17. After the initial four day harvest period, some crews left the ice to prepare for inland waterfowl hunting. The remaining crews (approximately 12) stayed on the ice to wait for additional strikes to be transferred from other whaling villages and to hunt for other marine mammals and eiders.

The first large flocks of eiders flew by Barrow the first week of May. By May 12, families were traveling inland by snowmachine to establish spring hunting camps. Goose hunting continued throughout the month. Families reported encountering a lack of snow inland, causing them to stay closer to town than last year.

During the last week of May, the first *ugruk* (bearded seal) harvests of Year One were reported.

The temperature reached the 30s by mid-month and break-up conditions ensued in Barrow.

## JUNE

According to Barrow residents, adverse weather was influential on their 1987 goose harvests. Conditions did not prevent households from participating in the harvest, but residents attributed lower than expected harvests to high

winds, blowing snow, and fog. The more active goose hunters averaged about two weeks in the field. Typically, one household in an extended family would stay at the camp for the entire period, with other households coming out on the weekends by snowmachine. Many family groups included young grandchildren. Goose hunting locations were scattered throughout Barrow's hunting range, with the heaviest concentrations along the Meade and Inaru rivers.

Incidental harvests of ptarmigan, eider and caribou were also recorded during June.

Barrow's fifth and final spring whale harvest of the year occurred much later than usual. On the evening of June 14, a 51 foot whale was struck and captured in an hour and 55 minutes. Four camps were still on the ice at the time of the harvest and seven boats participated in towing in the whale to shore. Many captains sent crew members onto the ice to assist in the butchering and crewshares were distributed to a total of 32 crews.

Travel to the whale harvest site by snowmachine was made difficult by the large, deep pools of water that had developed on the shorefast ice. Travel on the ice was suspended shortly after the last harvest.

Whale meat and *maktak* (whale skin with a thin layer of the attached blubber) were served at a number of different occasions during May and June. After a crew successfully harvested a whale, everyone was welcome at the successful captain's house for a meal of whale. When a successful crew brought its boat up off the ice, signifying the end of that crew's whaling season, the captain's and crew member's families served fermented whale meat (*mikigaq*), soup, cake, and tea to anyone who came down to the beach. A significant amount of whale was distributed at the *Nalukataq*, the whaling festivals. One was held in Browerville on Monday, June 29 and another in Barrow the following day.

The local rivers began breaking up in early June, effectively bringing most goose hunting trips to an end.

## JULY

Two major shifts in harvest patterns occurred during July: families moved to camps inland and along the coast, and hunting by boat for marine mammals (other than bowheads) began. Subsistence activities at the shooting station or *Pigniq* also increased significantly during July to include eider hunting and fishing. Hunting for marine mammals by boat resulted in the occasional taking of caribou along the beach.

Field observations indicated that weather and ice conditions were major influences on the timing, intensity, and success of subsistence harvest activities in July, especially for marine mammal hunting. The grounded ice effectively prevented boat travel until July 5. During the next three days, the grounded ice floated out and summer boating began. July 9th through 12th was a very active hunting period. The weekend weather was sunny, winds were light, and the ice pack was within boating distance of Barrow (between seven and 20 miles out). Boat travel to camps at Peard Bay also began at this time. During the rest of the month, the ice pack moved in against shore on two occasions, remaining for three days and five days respectively.

Ringed seals, spotted seals, bearded seals, and walrus were harvested during July. Bearded seal was the preferred species and could be considered the target species during most boat hunting trips. An exception to this pattern occurred when the walrus were near shore in large numbers between July 9 and 13. The weather, wind, ice, and the timing (a weekend) all contributed to a successful harvest for many families.

July was not an active caribou harvesting period. The caribou were too lean this time of year to be sought in large numbers. According to one study participant, caribou harvests were limited to one or two, just to have some fresh meat.

During the last week of the month, boat travel began through Elson Lagoon to Admiralty Bay, providing boat access to camps in the Meade, Ikpikpuk, and Chipp river drainages.

## AUGUST

Caribou, marine mammals, eiders, and fish were all harvested during the month of August. However, the weather during August was unusually poor for traveling and hunting. High winds often deterred boat travel and boat hunting. Traveling to camps by plane was often limited by low cloud cover and fog. Residents agreed that the weather was uncharacteristic for August and a common complaint was, "what happened to our summer this year?"

Bearded seal were harvested out in the drifting ice. Ringed seals were not actively pursued. As one participant stated, "we were out after oil," indicating the local preference for bearded seal oil. While the meat of ringed seal is highly desirable, the rendering of bearded seal blubber is much more common than rendering the blubber of ringed seal.

During the last week of August, the westerly winds moved the ice to within easy boating range of Barrow. The reported distance to the ice was a 20 minute boat ride, or approximately seven to eight miles from shore. While some hunters were deterred by the distance and the fog, at least 10 boats participated in a walrus hunt. Four walrus were harvested by one study household.

Unusually high water in the rivers during early August was reported to have a detrimental influence on fishing in Year One. One family was unable to catch as many fish as desired from their camp on the Chipp River, reporting a good day's catch as four or five whitefish. Grayling harvests were reported in August, but again only a few fish a day. Net fishing for salmon took place on the inside of Point Barrow. Capelin were also harvested during the month in the shallows along the beach.

Moose hunting trips to the Colville River took place at the end of the month. Large herds of caribou were sighted north of the Meade River during the last week of August. Caribou were also harvested in the vicinity of inland camps, during boating trips in Admiralty Bay, and during inland hunting trips from coastal camps. While many caribou hunters reported harvesting only one or two caribou, some households reported bringing home as many as seven caribou from a

hunting trip. Many hunters indicated that the emphasis on caribou hunting would be much higher in September when the animals would be fatter.

School began in late August. Adults employed by the schools and school-aged children moved from camp locations back to town.

## SEPTEMBER

Major harvests for September included eider, caribou, and fish. Most caribou hunting and fishing occurred from inland camps. Field observations indicated that high winds blowing predominantly onshore made boat travel fairly uncommon during early September. The first snow fell on September 2. Barrow had occasional snow flurries until mid-month when a record 5.1 inches accumulated on September 14.

By the last week of September, the rivers were reportedly frozen well enough to cross, marking the beginning of easy and safe access by snowmachine to fish camps and caribou herds south of the Meade River. Fall fishing under the ice began near the end of the month and many study participants were preparing to spend time inland during October.

Bowhead whales began migrating south past Point Barrow during September.

## OCTOBER

Travel by snowmachine to inland camps was a common activity throughout October. Cabins and tent sites are usually situated on a river near a traditional fishing area. Trips to other fishing sites and to hunt for caribou were usually day trips based out of those camps. Broad whitefish, humpback whitefish, and least cisco were the most common species caught in nets set in rivers under the ice. Broad whitefish and lake trout were harvested from lakes. Jigging for grayling and burbot both were common activities.

Most caribou hunting occurred on camping trips that varied in length from a few days to two or three weeks. Families would travel inland to their cabins and camp sites where they would set their nets and then travel out from camp in

search of caribou. The rutting season for bull caribou began the second week of October, resulting in hunters targeting young bucks from then on.

Snow cover was light south of the Meade River during October, which reportedly delayed hunters and caused problems with sleds traveling on rough, frozen tundra. Inland weather conditions were favorable to hunting and fishing: clear and cool with usually moderate winds.

At the start of the fall bowhead whale migration, Barrow whalers had no strikes or transfers remaining in their quota. On October 5, Nuiqsut whalers harvested a bowhead. On the 12th, Nuiqsut transferred their remaining strike to Barrow. On the afternoon of the 21st, Barrow harvested its sixth whale for the year, a 51 foot whale that was landed with great difficulty the next afternoon.

On October 26, Kaktovik transferred their two strikes to Barrow and three days later a 28 foot whale was harvested by Barrow whalers. Calm conditions and the smaller size of the whale led to a relatively quick tow to shore by six boats. The whale was entirely butchered by 7:30 that evening. Both whales were harvested on the Beaufort Sea side of the point, north of the barrier islands. Barrow had one strike remaining at the end of the month.

## NOVEMBER

Barrow whaling crews continued hunting through the first week of November. On the 6th, winds increased to 30 mph and continued until the 13th. Fall whaling was officially halted by Barrow whaling captains on November 14.

Seals were taken north of Barrow. Large ice pans were present near Point Barrow and the hunting technique included the use of small single-person boats. The ocean in front of Barrow remained slushy until late in the month. Ice firm enough for walking began to form around Thanksgiving.

Inland activities included fishing and caribou hunting, although these activities were not as intensively pursued as in October. The weather remained cool (-10 degrees to -20 degrees) but calm during the last 10 days of the month. Some hunters endeavored to "get something fresh for Thanksgiving."

## DECEMBER

Seal hunting was the major subsistence activity in December. One participant reported having requests from many elders for fresh seal. He had harvested seven ringed seals and stated that he had yet to finish supplying his extended family with the seals they desired.

Temperatures plummeted at month's end, with a daily average of -20 degrees, and wind speeds averaging 17 to 21 miles per hour during the period between the 26th and the 28th.

## JANUARY 1988

Hunters were targeting the larger ringed seals in January. According to one hunter, the focus on large seals at this time is due in part to the fact that the seals go into rut around late January, tainting the meat. Thus, to obtain the large skin and still be able to use the meat, the big seals are hunted at this time.

The coldest temperature of Year One was recorded on January 26: -43 degrees on a relatively calm day. Another extreme was reached on January 1, when the wind gusts peaked at 58 mph while temperatures were averaging zero degrees.

## FEBRUARY

Seal hunting, polar bear hunting, trapping, and furbearer hunting were the primary harvest activities during February.

The average monthly temperature was lowest for Year One during February at -23 degrees. A relatively calm period occurred between the 8th and the 22nd, providing reportedly favorable traveling and hunting conditions.

## MARCH

Ringed seal hunting continued to be a primary subsistence activity in March. One of the more active seal hunters observed fewer seals this year. Hunters



indicated that sealing was made more difficult much of the time due to a frequent lack of open water.

Wolverine, fox, and caribou hunting also occurred during March. Caribou hunting occurred throughout the month, usually as day-long or overnight hunting trips from town.

Barrow individuals fished for rainbow smelt while visiting Wainwright.

Preparation for the whaling season became a common activity this month. In preparation for whaling and the goose hunting that occurs shortly after whaling, many families were transporting supplies such as fuel and building materials to cabins. This was the month of longer days, good snow cover, and a little extra time before the full-time effort of whaling began.

As a summary to the Seasonal Round, the following list highlights the key community and environmental events that directly or indirectly influenced subsistence activities in Year One.

| <u>DATE</u>    | <u>ACTIVITY OR EVENT</u>                                               |
|----------------|------------------------------------------------------------------------|
| April 15, 1987 | Whaling crews begin to establish camps on the ice.                     |
| April 17-19    | Spring carnival weekend.                                               |
| April 19       | Easter Sunday.                                                         |
| May 1          | Whale harvest, Barrow's 1st whale.                                     |
| May 2          | Whale harvest, Barrow's 2nd whale.                                     |
| May 4          | Whale harvest, Barrow's 3rd whale.                                     |
| May 17         | Whale harvest, Barrow's 4th whale.                                     |
| May 25         | Memorial Day.                                                          |
| June 1         | Rivers beginning to break up.                                          |
| June 14        | Whale harvest, Barrow's 5th whale.                                     |
| June 19        | Wainwright <i>Nalukataq</i> .                                          |
| June 29-30     | Barrow <i>Nalukataq</i> .                                              |
| July 3-5       | Fourth of July games.                                                  |
| July 8         | Boat travel begins through passages in the grounded ice south of town. |
| July 11-13     | Ice floes in front of town, good walrus & ugruk hunting.               |
| July 17        | Open ocean in front, ice north of town.                                |

| <u>DATE</u>        | <u>ACTIVITY OR EVENT</u>                                                                                                               |
|--------------------|----------------------------------------------------------------------------------------------------------------------------------------|
| July 21-26         | Eskimo Olympics in Fairbanks.                                                                                                          |
| July 23            | Passage to ocean blocked in front, open to the Point.                                                                                  |
| July 24            | Boating to inland camps begins about this time.                                                                                        |
| August 27          | First day of school.                                                                                                                   |
| August 31          | Ice floes in front of Barrow, good walrus hunting.                                                                                     |
| September 1        | First light snow in town.                                                                                                              |
| September 7        | Labor Day.                                                                                                                             |
| September 14       | Record snow fall in 24 hours: 5.1 inches.                                                                                              |
| September 24       | Wainwright school fire.                                                                                                                |
| September 26       | Rivers begin to freeze up.                                                                                                             |
| October 6          | Election day, local elections.                                                                                                         |
| October 11         | Caribou bulls are rutting.                                                                                                             |
| October 12         | Columbus day.                                                                                                                          |
| October 17-25      | Alaska Federation of Natives convention in Anchorage.                                                                                  |
| October 19         | Alaska day.                                                                                                                            |
| October 22         | Whale harvest, Barrow's 6th whale.                                                                                                     |
| October 29         | Whale harvest, Barrow's 7th whale.                                                                                                     |
| October 31         | Halloween.                                                                                                                             |
| November 2         | City and Borough run-off elections.                                                                                                    |
| November 4         | One of the last calm days for boat travel.                                                                                             |
| November 6-7       | Siberian medical team in Barrow.                                                                                                       |
| November 11        | Veterans Day.                                                                                                                          |
| November 14        | Whaling officially ends for the year.                                                                                                  |
| November 18        | Sun sets in Barrow for 65 days.                                                                                                        |
| November 23        | Ice firming up in front of town.                                                                                                       |
| November 26        | Thanksgiving Day.                                                                                                                      |
| December 25        | Christmas Day.                                                                                                                         |
| January 7-10, 1988 | Messenger Feast or <i>Kivgiq</i> held in Barrow.                                                                                       |
| January 23         | First sunrise of the year.                                                                                                             |
| February 17-19     | Alaska Eskimo Whaling Convention held in Barrow.                                                                                       |
| March 14           | Native Village of Barrow meeting, agenda includes discussion of U.S. Fish & Wildlife Service prohibitions on spring waterfowl hunting. |

TABLE A-1: TOTAL HARVEST ESTIMATES BY MAJOR RESOURCE CATEGORY - ALL BARROW HOUSEHOLDS, YEAR ONE REVISED (1,2)

| RESOURCE            | CONVERSION                                                    | AVERAGE POUNDS            |                    |       |                                          | PERCENT<br>OF TOTAL<br>USABLE<br>POUNDS<br>HARVESTED | PERCENT<br>OF ALL<br>BARROW<br>HSEHOLDS<br>HRVSTING<br>RESOURCE | SAMPLING STATISTICS            |                                      |                                             |                                              |                                      |
|---------------------|---------------------------------------------------------------|---------------------------|--------------------|-------|------------------------------------------|------------------------------------------------------|-----------------------------------------------------------------|--------------------------------|--------------------------------------|---------------------------------------------|----------------------------------------------|--------------------------------------|
|                     | FACTOR (3)<br>(Usable<br>Weight<br>Per<br>Resource<br>in lbs) | COMMUNITY TOTALS<br>===== | HARVESTED<br>===== |       | PERCENT<br>USABLE<br>POUNDS<br>HARVESTED |                                                      |                                                                 | STANDARD<br>DEVIATION<br>(lbs) | SAMPLING<br>ERROR AT<br>95%<br>(lbs) | LOW<br>ESTIMATE<br>(Mean lbs/<br>Household) | HIGH<br>ESTIMATE<br>(Mean lbs/<br>Household) | SAMPLING<br>ERROR<br>AS %<br>OF MEAN |
| Marine Mammals (4)  | n/a                                                           | n/a                       | 316,229            | 337.5 | 104.9                                    | 51%                                                  | 41%                                                             | 19                             | 36                                   | 301                                         | 374                                          | 11%                                  |
| Terrestrial Mammals | n/a                                                           | n/a                       | 213,834            | 228.2 | 70.9                                     | 34%                                                  | 30%                                                             | 34                             | 66                                   | 162                                         | 294                                          | 29%                                  |
| Fish                | n/a                                                           | n/a                       | 68,448             | 73.1  | 22.7                                     | 11%                                                  | 33%                                                             | 10                             | 19                                   | 54                                          | 92                                           | 27%                                  |
| Birds               | n/a                                                           | n/a                       | 22,329             | 23.8  | 7.4                                      | 4%                                                   | 36%                                                             | 6                              | 12                                   | 12                                          | 36                                           | 51%                                  |
| Other Resources     | n/a                                                           | n/a                       | 216                | 0.2   | 0.1                                      | **                                                   | 3%                                                              | 0                              | 0                                    | 0                                           | 0                                            | 117%                                 |
| Total (4)           | n/a                                                           | n/a                       | 621,055            | 662.8 | 205.9                                    | 100%                                                 | 58%                                                             | 52                             | 101                                  | 561                                         | 764                                          | 15%                                  |

(1) Year One: April 1, 1987 - March 31, 1988.

(2) Estimated sampling errors do not include errors in reporting, recording, and in conversion to usable weight.

(3) See Table D-5 for sources of conversion factors.

(4) Bowhead harvest does not contribute to the sampling error for marine mammals since the bowhead harvest is based on a complete count.

\*\* represents less than .1 percent

n/a means not applicable

Source: Stephen R. Braund & Associates, 1993

TABLE A-2: MONTHLY HARVEST ESTIMATES BY MAJOR RESOURCE CATEGORY - BARROW, YEAR ONE REVISED  
(Pounds of Usable Resource Product)

| MAJOR RESOURCE CATEGORY | TOTALS |        |        |         |        |        |         |       |       |       |        |        |
|-------------------------|--------|--------|--------|---------|--------|--------|---------|-------|-------|-------|--------|--------|
|                         | 1987   |        |        |         |        | *****  |         | 1988  |       |       |        |        |
|                         | April  | May    | June   | July    | August | Sept.  | October | Nov.  | Dec.  | Jan.  | Feb.   | March  |
| Marine Mammals          | 3,933  | 66,641 | 66,489 | 80,286  | 26,998 | 3,444  | 57,857  | 1,015 | 1,358 | 1,079 | 4,725  | 2,405  |
| Terrestrial Mammals     | 702    | 5,068  | 3,915  | 28,674  | 50,174 | 39,449 | 65,144  | 1,371 | 0     | 702   | 9,181  | 9,457  |
| Fish                    | 0      | 724    | 2,491  | 3,510   | 14,786 | 11,740 | 31,248  | 3,886 | 0     | 0     | 0      | 67     |
| Birds                   | 351    | 14,164 | 642    | 2,450   | 4,333  | 273    | 120     | 0     | 0     | 0     | 0      | 0      |
| Total                   | 4,986  | 86,597 | 73,537 | 114,920 | 96,291 | 54,905 | 154,369 | 6,272 | 1,358 | 1,781 | 13,906 | 11,929 |

| MAJOR RESOURCE CATEGORY | PERCENTS |     |      |      |        |       |         |      |      |      |      |           |
|-------------------------|----------|-----|------|------|--------|-------|---------|------|------|------|------|-----------|
|                         | 1987     |     |      |      |        | ***** |         | 1988 |      |      |      |           |
|                         | April    | May | June | July | August | Sept. | October | Nov. | Dec. | Jan. | Feb. | March     |
| Marine Mammals          | 1%       | 21% | 21%  | 25%  | 9%     | 1%    | 18%     | 0%   | 0%   | 0%   | 1%   | 1% = 100% |
| Terrestrial Mammals     | 0%       | 2%  | 2%   | 13%  | 23%    | 18%   | 30%     | 1%   | 0%   | 0%   | 4%   | 4% = 100% |
| Fish                    | 0%       | 1%  | 4%   | 5%   | 22%    | 17%   | 46%     | 6%   | 0%   | 0%   | 0%   | 0% = 100% |
| Birds                   | 2%       | 63% | 3%   | 11%  | 19%    | 1%    | 1%      | 0%   | 0%   | 0%   | 0%   | 0% = 100% |
| All Resources Combined  | 1%       | 14% | 12%  | 19%  | 16%    | 9%    | 25%     | 1%   | 0%   | 0%   | 2%   | 2% = 100% |

Source: Stephen R. Braund & Associates, 1993

TABLE A-3: HARVEST ESTIMATES FOR MARINE MAMMALS - ALL BARROW HOUSEHOLDS, YEAR ONE REVISED (1,2)

| RESOURCE                 | CONVERSION                                        | AVERAGE POUNDS                       |                            |                            |               | PERCENT                                              |                                                      | SAMPLING STATISTICS            |                                      |                                             |                                              |                                      |
|--------------------------|---------------------------------------------------|--------------------------------------|----------------------------|----------------------------|---------------|------------------------------------------------------|------------------------------------------------------|--------------------------------|--------------------------------------|---------------------------------------------|----------------------------------------------|--------------------------------------|
|                          | FACTOR (3)<br>(Usable Weight Per Resource in lbs) | COMMUNITY TOTALS<br>NUMBER HARVESTED | USABLE<br>POUNDS HARVESTED | HARVESTED<br>PER HOUSEHOLD | PER<br>CAPITA | PERCENT<br>OF TOTAL<br>USABLE<br>POUNDS<br>HARVESTED | OF ALL<br>BARROW<br>HSEHOLDS<br>HRVSTING<br>RESOURCE | STANDARD<br>DEVIATION<br>(lbs) | SAMPLING<br>ERROR AT<br>95%<br>(lbs) | LOW<br>ESTIMATE<br>(Mean lbs/<br>Household) | HIGH<br>ESTIMATE<br>(Mean lbs/<br>Household) | SAMPLING<br>ERROR<br>AS %<br>OF MEAN |
| Total Marine Mammals     | n/a                                               | n/a                                  | 316,229                    | 337.5                      | 104.9         | 50.9%                                                | 41%                                                  | 19                             | 36                                   | 301.1                                       | 373.9                                        | 11%                                  |
| Bowhead (4,5)            | 26,375.6                                          | 7                                    | 184,629                    | 197.0                      | 61.2          | 29.7%                                                | 31%                                                  | 0                              | 0                                    | 197.0                                       | 197.0                                        | n/a                                  |
| Walrus                   | 772.0                                             | 84                                   | 64,662                     | 69.0                       | 21.4          | 10.4%                                                | 11%                                                  | 11                             | 21                                   | 47.6                                        | 90.4                                         | 31%                                  |
| Bearded Seal             | 176.0                                             | 236                                  | 41,518                     | 44.3                       | 13.8          | 6.7%                                                 | 25%                                                  | 9                              | 17                                   | 27.4                                        | 61.2                                         | 38%                                  |
| Total Ring. & Spot. Seal | 42.0                                              | 469                                  | 19,675                     | 21.0                       | 6.5           | 3.2%                                                 | 14%                                                  | 5                              | 11                                   | 10.3                                        | 31.7                                         | 51%                                  |
| Ringed Seal              | 42.0                                              | 466                                  | 19,574                     | 20.9                       | 6.5           | 3.2%                                                 | 14%                                                  | 5                              | 11                                   | 10.2                                        | 31.6                                         | 51%                                  |
| Spotted Seal             | 42.0                                              | 2                                    | 101                        | 0.1                        | *             | **                                                   | **                                                   | 0                              | 0                                    | 0.0                                         | 0.2                                          | 56%                                  |
| Polar Bear               | 496.0                                             | 12                                   | 5,744                      | 6.1                        | 1.9           | 0.9%                                                 | 1%                                                   | 3                              | 7                                    | 0.0                                         | 12.7                                         | 107%                                 |

(1) Year One: April 1, 1987 - March 31, 1988.

(2) Estimated sampling errors do not include errors in reporting, recording, and in conversion to usable weight.

(3) See Table D-5 for sources of conversion factors.

(4) Bowhead harvest does not contribute to the sampling error for marine mammals since the bowhead harvest is based on a complete count.

(5) The percent of Barrow households harvesting bowhead represents the percent of Barrow households receiving crew member shares at the whale harvest site, as extrapolated from the sample households.

\* represents less than .1 pound

\*\* represents less than .1 percent

n/a means not applicable

Source: Stephen R. Braund & Associates, 1993

TABLE A-4: MARINE MAMMAL HARVEST ESTIMATES BY SPECIES AND MONTH - BARROW, YEAR ONE REVISED  
(Pounds of Usable Resource Product)

| SPECIES                  | TOTALS |        |        |        |        |       |         |       |       |       |       |       |
|--------------------------|--------|--------|--------|--------|--------|-------|---------|-------|-------|-------|-------|-------|
|                          | 1987   |        |        |        |        |       | 1988    |       |       |       |       |       |
|                          | April  | May    | June   | July   | August | Sept. | October | Nov.  | Dec.  | Jan.  | Feb.  | March |
| Bowhead Whale            | 0      | 66,439 | 64,213 | 0      | 0      | 0     | 53,977  | 0     | 0     | 0     | 0     | 0     |
| Walrus                   | 0      | 0      | 0      | 34,499 | 24,110 | 3,242 | 2,812   | 0     | 0     | 0     | 0     | 0     |
| Bearded Seal             | 0      | 0      | 1,521  | 37,365 | 1,520  | 0     | 1,068   | 42    | 0     | 0     | 0     | 0     |
| Polar Bear               | 2,311  | 0      | 0      | 0      | 0      | 0     | 0       | 0     | 0     | 0     | 3,432 | 0     |
| Total Ring. & Spot. Seal | 1,622  | 202    | 756    | 8,422  | 1,368  | 201   | 0       | 973   | 1,358 | 1,079 | 1,292 | 2,405 |
| Ringed Seal              | 1,622  | 202    | 756    | 8,422  | 1,268  | 201   | 0       | 973   | 1,358 | 1,079 | 1,292 | 2,405 |
| Spotted Seal             | 0      | 0      | 0      | 0      | 101    | 0     | 0       | 0     | 0     | 0     | 0     | 0     |
| All Marine Mammals       | 3,933  | 66,641 | 66,489 | 80,286 | 26,998 | 3,444 | 57,857  | 1,015 | 1,358 | 1,079 | 4,725 | 2,405 |

| SPECIES                  | PERCENTS |     |      |      |        |       |         |      |      |      |      |       |    |      |
|--------------------------|----------|-----|------|------|--------|-------|---------|------|------|------|------|-------|----|------|
|                          | 1987     |     |      |      |        |       | 1988    |      |      |      |      |       |    |      |
|                          | April    | May | June | July | August | Sept. | October | Nov. | Dec. | Jan. | Feb. | March |    |      |
| Bowhead Whale            | 0%       | 36% | 35%  | 0%   | 0%     | 0%    | 29%     | 0%   | 0%   | 0%   | 0%   | 0%    | 0% | 100% |
| Walrus                   | 0%       | 0%  | 0%   | 53%  | 37%    | 5%    | 4%      | 0%   | 0%   | 0%   | 0%   | 0%    | 0% | 100% |
| Bearded Seal             | 0%       | 0%  | 4%   | 90%  | 4%     | 0%    | 3%      | 0%   | 0%   | 0%   | 0%   | 0%    | 0% | 100% |
| Polar Bear               | 40%      | 0%  | 0%   | 0%   | 0%     | 0%    | 0%      | 0%   | 0%   | 0%   | 60%  | 0%    | 0% | 100% |
| Total Ring. & Spot. Seal | 8%       | 1%  | 4%   | 43%  | 7%     | 1%    | 0%      | 5%   | 7%   | 5%   | 7%   | 12%   | 0% | 100% |
| Ringed Seal              | 8%       | 1%  | 4%   | 43%  | 6%     | 1%    | 0%      | 5%   | 7%   | 6%   | 7%   | 12%   | 0% | 100% |
| Spotted Seal             | 0%       | 0%  | 0%   | 0%   | 100%   | 0%    | 0%      | 0%   | 0%   | 0%   | 0%   | 0%    | 0% | 100% |
| All Marine Mammals       | 1%       | 21% | 21%  | 25%  | 9%     | 1%    | 18%     | 0%   | 0%   | 0%   | 1%   | 1%    | 0% | 100% |

Source: Stephen R. Braund & Associates, 1993

TABLE A-5: MARINE MAMMAL HARVEST ESTIMATES BY SPECIES AND MONTH - BARROW, YEAR ONE REVISED  
(Number Harvested)

| SPECIES                  | 1987  |     |      |      |        |       | 1988    |      |      |      |      |       |
|--------------------------|-------|-----|------|------|--------|-------|---------|------|------|------|------|-------|
|                          | April | May | June | July | August | Sept. | October | Nov. | Dec. | Jan. | Feb. | March |
| Bowhead Whale            | 0     | 4   | 1    | 0    | 0      | 0     | 2       | 0    | 0    | 0    | 0    | 0     |
| Walrus                   | 0     | 0   | 0    | 45   | 31     | 4     | 4       | 0    | 0    | 0    | 0    | 0     |
| Bearded Seal             | 0     | 0   | 9    | 212  | 9      | 0     | 6       | 0    | 0    | 0    | 0    | 0     |
| Polar Bear               | 5     | 0   | 0    | 0    | 0      | 0     | 0       | 0    | 0    | 0    | 7    | 0     |
| Total Ring. & Spot. Seal | 39    | 5   | 18   | 201  | 33     | 5     | 0       | 23   | 32   | 26   | 31   | 57    |
| Ringed Seal              | 39    | 5   | 18   | 201  | 30     | 5     | 0       | 23   | 32   | 26   | 31   | 57    |
| Spotted Seal             | 0     | 0   | 0    | 0    | 2      | 0     | 0       | 0    | 0    | 0    | 0    | 0     |

Source: Stephen R. Braund & Associates, 1993

TABLE A-6: HARVEST ESTIMATES FOR TERRESTRIAL MAMMALS - ALL BARROW HOUSEHOLDS, YEAR ONE REVISED (1,2)

| RESOURCE                  | CONVERSION<br>FACTOR (3)<br>(Usable<br>Weight<br>Per<br>Resource<br>in lbs) | COMMUNITY TOTALS    |                               | AVERAGE POUNDS<br>HARVESTED |               | PERCENT<br>OF TOTAL<br>USABLE<br>POUNDS<br>HARVESTED | PERCENT<br>OF ALL<br>BARROW<br>HSEHOLDS<br>HRVSTING<br>RESOURCE | SAMPLING STATISTICS            |                                      |                                             |                                              |                                      |
|---------------------------|-----------------------------------------------------------------------------|---------------------|-------------------------------|-----------------------------|---------------|------------------------------------------------------|-----------------------------------------------------------------|--------------------------------|--------------------------------------|---------------------------------------------|----------------------------------------------|--------------------------------------|
|                           |                                                                             | NUMBER<br>HARVESTED | USABLE<br>POUNDS<br>HARVESTED | PER<br>HOUSEHOLD            | PER<br>CAPITA |                                                      |                                                                 | STANDARD<br>DEVIATION<br>(lbs) | SAMPLING<br>ERROR AT<br>95%<br>(lbs) | LOW<br>ESTIMATE<br>(Mean lbs/<br>Household) | HIGH<br>ESTIMATE<br>(Mean lbs/<br>Household) | SAMPLING<br>ERROR<br>AS %<br>OF MEAN |
| Total Terrestrial Mammals | n/a                                                                         | n/a                 | 213,834                       | 228.2                       | 70.9          | 34.4%                                                | 30%                                                             | 34                             | 66                                   | 162.03                                      | 294.39                                       | 29%                                  |
| Caribou                   | 117.0                                                                       | 1,595               | 186,669                       | 199.2                       | 61.9          | 30.1%                                                | 26%                                                             | 33                             | 64                                   | 135.22                                      | 263.22                                       | 32%                                  |
| Moose                     | 500.0                                                                       | 52                  | 25,786                        | 27.5                        | 8.5           | 4.2%                                                 | 6%                                                              | 13                             | 26                                   | 1.39                                        | 53.65                                        | 95%                                  |
| Dall Sheep                | 99.0                                                                        | 12                  | 1,199                         | 1.3                         | 0.4           | 0.2%                                                 | 1%                                                              | 1                              | 2                                    | 0.00                                        | 3.69                                         | 188%                                 |
| Brown Bear                | 100.0                                                                       | 1                   | 122                           | 0.1                         | *             | **                                                   | **                                                              | 0                              | 0                                    | 0.03                                        | 0.23                                         | 79%                                  |
| Other Terrestrial Mammals |                                                                             | 29                  | 57                            | 0.1                         | *             | **                                                   | 1%                                                              | 0                              | 0                                    | 0.00                                        | 0.15                                         | 146%                                 |
| Porcupine                 | 10.0                                                                        | 5                   | 48                            | 0.1                         | *             | **                                                   | 1%                                                              | 0                              | 0                                    | 0.00                                        | 0.14                                         | 174%                                 |
| Ground Squirrel           | 0.4                                                                         | 24                  | 10                            | 0.0                         | *             | **                                                   | **                                                              | 0                              | 0                                    | 0.00                                        | 0.02                                         | 80%                                  |
| Wolverine                 | n/a                                                                         | 4                   | n/a                           | n/a                         | n/a           | n/a                                                  | **                                                              | n/a                            | n/a                                  | n/a                                         | n/a                                          | n/a                                  |
| Arctic Fox (Blue)         | n/a                                                                         | 192                 | n/a                           | n/a                         | n/a           | n/a                                                  | 3%                                                              | n/a                            | n/a                                  | n/a                                         | n/a                                          | n/a                                  |
| Red Fox (Cross, Silver)   | n/a                                                                         | 8                   | n/a                           | n/a                         | n/a           | n/a                                                  | **                                                              | n/a                            | n/a                                  | n/a                                         | n/a                                          | n/a                                  |

(1) Year One: April 1, 1987 - March 31, 1988.

(2) Estimated sampling errors do not include errors in reporting, recording, and in conversion to usable weight.

(3) See Table D-5 for sources of conversion factors.

\* represents less than .1 pound

\*\* represents less than .1 percent

n/a means not applicable

Source: Stephen R. Braund & Associates, 1993



TABLE A-7: TERRESTRIAL MAMMAL HARVEST ESTIMATES BY SPECIES AND MONTH - BARROW, YEAR ONE REVISED  
(Pounds of Usable Resource Product)

| SPECIES                                           | TOTALS |       |       |        |        |        |         |       |      |      |       |       |
|---------------------------------------------------|--------|-------|-------|--------|--------|--------|---------|-------|------|------|-------|-------|
|                                                   | 1987   |       |       |        |        |        | 1988    |       |      |      |       |       |
|                                                   | April  | May   | June  | July   | August | Sept.  | October | Nov.  | Dec. | Jan. | Feb.  | March |
| Caribou                                           | 702    | 5,068 | 3,915 | 27,465 | 46,397 | 17,315 | 65,096  | 1,371 | 0    | 702  | 9,181 | 9,457 |
| Moose                                             | 0      | 0     | 0     | 1,200  | 2,575  | 22,014 | 0       | 0     | 0    | 0    | 0     | 0     |
| Brown Bear                                        | 0      | 0     | 0     | 0      | 0      | 120    | 0       | 0     | 0    | 0    | 0     | 0     |
| Dall Sheep                                        | 0      | 0     | 0     | 0      | 1,202  | 0      | 0       | 0     | 0    | 0    | 0     | 0     |
| Other Terrestrial Mammals                         | 0      | 0     | 0     | 10     | 0      | 0      | 48      | 0     | 0    | 0    | 0     | 0     |
| Porcupine                                         | 0      | 0     | 0     | 0      | 0      | 0      | 48      | 0     | 0    | 0    | 0     | 0     |
| Ground Squirrel                                   | 0      | 0     | 0     | 10     | 0      | 0      | 0       | 0     | 0    | 0    | 0     | 0     |
| All Terrestrial Mammals<br>(excluding furbearers) | 702    | 5,068 | 3,915 | 28,674 | 50,174 | 39,449 | 65,144  | 1,371 | 0    | 702  | 9,181 | 9,457 |

| SPECIES                                           | PERCENTS |     |      |      |        |       |         |      |      |      |      |       |      |
|---------------------------------------------------|----------|-----|------|------|--------|-------|---------|------|------|------|------|-------|------|
|                                                   | 1987     |     |      |      |        |       | 1988    |      |      |      |      |       |      |
|                                                   | April    | May | June | July | August | Sept. | October | Nov. | Dec. | Jan. | Feb. | March |      |
| Caribou                                           | 0%       | 3%  | 2%   | 15%  | 25%    | 9%    | 35%     | 1%   | 0%   | 0%   | 5%   | 5%    | 100% |
| Moose                                             | 0%       | 0%  | 0%   | 5%   | 10%    | 85%   | 0%      | 0%   | 0%   | 0%   | 0%   | 0%    | 100% |
| Brown Bear                                        | 0%       | 0%  | 0%   | 0%   | 0%     | 100%  | 0%      | 0%   | 0%   | 0%   | 0%   | 0%    | 100% |
| Dall Sheep                                        | 0%       | 0%  | 0%   | 0%   | 100%   | 0%    | 0%      | 0%   | 0%   | 0%   | 0%   | 0%    | 100% |
| Other Terrestrial Mammals                         | 0%       | 0%  | 0%   | 17%  | 0%     | 0%    | 83%     | 0%   | 0%   | 0%   | 0%   | 0%    | 100% |
| Porcupine                                         | 0%       | 0%  | 0%   | 0%   | 0%     | 0%    | 100%    | 0%   | 0%   | 0%   | 0%   | 0%    | 100% |
| Ground Squirrel                                   | 0%       | 0%  | 0%   | 100% | 0%     | 0%    | 0%      | 0%   | 0%   | 0%   | 0%   | 0%    | 100% |
| All Terrestrial Mammals<br>(excluding furbearers) | 0%       | 2%  | 2%   | 13%  | 23%    | 18%   | 30%     | 1%   | 0%   | 0%   | 4%   | 4%    | 100% |

Source: Stephen R. Braund & Associates, 1993

TABLE A-8: TERRESTRIAL MAMMAL HARVEST ESTIMATES BY SPECIES AND MONTH - BARROW, YEAR ONE REVISED  
(Number Harvested)

| SPECIES                   | TOTALS<br>***** |     |      |      |        |       |         |      |      |      |      |       |
|---------------------------|-----------------|-----|------|------|--------|-------|---------|------|------|------|------|-------|
|                           | 1987            |     |      |      |        | 1988  |         |      |      |      |      |       |
|                           | April           | May | June | July | August | Sept. | October | Nov. | Dec. | Jan. | Feb. | March |
| Caribou                   | 6               | 43  | 33   | 235  | 397    | 148   | 556     | 12   | 0    | 6    | 78   | 81    |
| Moose                     | 0               | 0   | 0    | 2    | 5      | 44    | 0       | 0    | 0    | 0    | 0    | 0     |
| Brown Bear                | 0               | 0   | 0    | 0    | 0      | 1     | 0       | 0    | 0    | 0    | 0    | 0     |
| Dall Sheep                | 0               | 0   | 0    | 0    | 12     | 0     | 0       | 0    | 0    | 0    | 0    | 0     |
| Other Terrestrial Mammals | 0               | 0   | 0    | 24   | 0      | 0     | 5       | 0    | 0    | 0    | 0    | 0     |
| Porcupine                 | 0               | 0   | 0    | 0    | 0      | 0     | 5       | 0    | 0    | 0    | 0    | 0     |
| Ground Squirrel           | 0               | 0   | 0    | 24   | 0      | 0     | 0       | 0    | 0    | 0    | 0    | 0     |
| Arctic Fox (Blue)         | 0               | 0   | 0    | 0    | 0      | 0     | 1       | 0    | 93   | 40   | 37   | 21    |
| Red Fox (Cross, Silver)   | 0               | 0   | 0    | 0    | 0      | 0     | 0       | 0    | 0    | 0    | 0    | 8     |
| Wolverine                 | 0               | 0   | 0    | 0    | 0      | 0     | 1       | 0    | 0    | 0    | 2    | 0     |

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Source: Stephen R. Braund & Associates, 1993

TABLE A-9: HARVEST ESTIMATES FOR FISH - ALL BARROW HOUSEHOLDS, YEAR ONE REVISED (1,2)

| RESOURCE                    | CONVERSION | AVERAGE POUNDS   |           |           |        | PERCENT  |           |                     | SAMPLING STATISTICS |            |         |          |
|-----------------------------|------------|------------------|-----------|-----------|--------|----------|-----------|---------------------|---------------------|------------|---------|----------|
|                             | FACTOR (3) | COMMUNITY TOTALS |           | HARVESTED |        | PERCENT  | OF ALL    | SAMPLING STATISTICS |                     |            |         |          |
|                             | (Usable    | =====            |           | =====     |        | OF TOTAL | BARROW    | =====               |                     |            |         |          |
|                             | Weight     | NUMBER           | USABLE    | PER       | PER    | USABLE   | HSEHOLDS  | STANDARD            | SAMPLING            | LOW        | HIGH    | SAMPLING |
| Per                         | HARVESTED  | POUNDS           | HOUSEHOLD | CAPITA    | POUNDS | HRVSTING | DEVIATION | ERROR AT            | ESTIMATE            | ESTIMATE   | ERROR   |          |
| Resource                    |            |                  |           |           |        |          |           | 95%                 | (Mean lbs/          | (Mean lbs/ | AS %    |          |
| in lbs)                     |            |                  |           |           |        |          | (lbs)     | (lbs)               | Household)          | Household) | OF MEAN |          |
| Total Fish                  | n/a        | n/a              | 68,448    | 73.1      | 22.7   | 11.0%    | 33%       | 10                  | 19                  | 53.61      | 92.49   | 27%      |
| Total Whitefish             |            | 27,366           | 51,254    | 54.7      | 17.0   | 8.3%     | 20%       | 7                   | 14                  | 40.82      | 68.58   | 25%      |
| Whitefish (non-spezif.)     | 2.0        | 5,108            | 10,213    | 10.9      | 3.4    | 1.6%     | 3%        | 2                   | 5                   | 6.11       | 15.69   | 44%      |
| Round Whitefish             | 1.0        | 2,122            | 2,118     | 2.3       | 0.7    | 0.3%     | 7%        | 1                   | 1                   | 1.07       | 3.45    | 53%      |
| Broad Whitefish (River)     | 2.5        | 9,388            | 23,472    | 25.1      | 7.8    | 3.8%     | 11%       | 5                   | 10                  | 15.46      | 34.64   | 38%      |
| Broad Whitefish (Lake)      | 3.4        | 1,191            | 4,048     | 4.3       | 1.3    | 0.7%     | 2%        | 1                   | 2                   | 2.10       | 6.54    | 51%      |
| Humpback whitefish          | 2.5        | 1,225            | 3,064     | 3.3       | 1.0    | 0.5%     | 5%        | 1                   | 2                   | 0.79       | 5.75    | 76%      |
| Least cisco                 | 1.0        | 7,024            | 7,028     | 7.5       | 2.3    | 1.1%     | **        | 2                   | 4                   | 3.36       | 11.64   | 55%      |
| Bering, Arctic cisco        | 1.0        | 1,309            | 1,312     | 1.4       | 0.4    | 0.2%     | 3%        | 0                   | 1                   | 0.61       | 2.19    | 57%      |
| Total Other Freshwater Fish |            | 13,944           | 15,198    | 16.2      | 5.0    | 2.4%     | 16%       | 4                   | 8                   | 8.16       | 24.28   | 50%      |
| Arctic grayling             | 0.8        | 12,664           | 10,129    | 10.8      | 3.4    | 1.6%     | 14%       | 3                   | 5                   | 5.54       | 16.08   | 49%      |
| Arctic char                 | 2.8        | 38               | 103       | 0.1       | *      | **       | 3%        | 0                   | 0                   | 0.00       | 0.23    | 107%     |
| Burbot (Ling cod)           | 4.0        | 1,086            | 4,348     | 4.6       | 1.4    | 0.7%     | 7%        | 2                   | 3                   | 1.22       | 8.06    | 74%      |
| Northern pike               | 2.3        | 2                | 9         | 0.0       | *      | **       | **        | 0                   | 0                   | 0.00       | 0.02    | 57%      |
| Lake trout                  | 4.0        | 153              | 609       | 0.7       | 0.2    | 0.1%     | 1%        | 0                   | 0                   | 0.37       | 0.93    | 43%      |
| Total Salmon                |            | 196              | 1,190     | 1.3       | 0.4    | 0.2%     | 3%        | 0                   | 1                   | 0.29       | 2.25    | 77%      |
| Salmon (non-specified)      | 6.1        | 66               | 403       | 0.4       | 0.1    | **       | **        | 0                   | 0                   | 0.18       | 0.68    | 58%      |
| Chum (Dog) salmon           | 6.1        | 11               | 66        | 0.1       | *      | **       | 1%        | 0                   | 0                   | 0.01       | 0.13    | 90%      |
| Pink (Humpback) salmon      | 3.1        | 12               | 37        | 0.0       | *      | **       | **        | 0                   | 0                   | 0.01       | 0.07    | 73%      |
| Silver (Coho) salmon        | 6.0        | 103              | 618       | 0.7       | 0.2    | 0.1%     | 1%        | 0                   | 1                   | 0.00       | 1.59    | 141%     |
| King (Chinook) salmon       | 18.0       | 4                | 66        | 0.1       | *      | **       | **        | 0                   | 0                   | 0.01       | 0.13    | 79%      |
| Total Other Coastal Fish    |            | 4,057            | 806       | 0.9       | *      | **       | 8%        | 1                   | 1                   | 0.00       | 2.36    | 174%     |
| Capelin                     | 0.2        | 3,960            | 796       | 0.9       | *      | **       | 8%        | 1                   | 1                   | 0.00       | 2.35    | 176%     |
| Rainbow smelt               | 0.2        | 97               | 9         | 0.0       | *      | **       | **        | 0                   | 0                   | 0.00       | 0.02    | 100%     |

(1) Year One: April 1, 1987 - March 31, 1988.

(2) Estimated sampling errors do not include errors in reporting, recording, and in conversion to usable weight.

(3) See Table D-5 for sources of conversion factors.

\* represents less than .1 pound

\*\* represents less than .1 percent

n/a means not applicable

Source: Stephen R. Braund & Associates, 1993

TABLE A-10: FISH HARVEST ESTIMATES BY SPECIES AND MONTH - BARROW, YEAR ONE REVISED  
(Pounds of Usable Resource Product)

| SPECIES                     | TOTALS |     |       |       |        |        |         |       |      |      |      |       |
|-----------------------------|--------|-----|-------|-------|--------|--------|---------|-------|------|------|------|-------|
|                             | 1987   |     |       |       |        | *****  |         | 1988  |      |      |      |       |
|                             | April  | May | June  | July  | August | Sept.  | October | Nov.  | Dec. | Jan. | Feb. | March |
| Total Whitefish             | 0      | 300 | 2,160 | 3,236 | 12,102 | 7,875  | 21,707  | 3,871 | 0    | 0    | 0    | 0     |
| Whitefish (non-specified)   | 0      | 0   | 240   | 1,066 | 3,937  | 2,261  | 2,520   | 192   | 0    | 0    | 0    | 0     |
| Round Whitefish             | 0      | 0   | 720   | 0     | 305    | 388    | 709     | 0     | 0    | 0    | 0    | 0     |
| Broad Whitefish (River)     | 0      | 300 | 1,200 | 2,169 | 7,549  | 2,965  | 6,341   | 2,945 | 0    | 0    | 0    | 0     |
| Broad Whitefish (Lake)      | 0      | 0   | 0     | 0     | 0      | 1,287  | 2,028   | 734   | 0    | 0    | 0    | 0     |
| Humpback whitefish          | 0      | 0   | 0     | 0     | 251    | 909    | 1,903   | 0     | 0    | 0    | 0    | 0     |
| Least cisco                 | 0      | 0   | 0     | 0     | 60     | 17     | 6,946   | 0     | 0    | 0    | 0    | 0     |
| Bering, Arctic cisco        | 0      | 0   | 0     | 1     | 0      | 48     | 1,260   | 0     | 0    | 0    | 0    | 0     |
| Total Other Freshwater Fish | 0      | 388 | 259   | 223   | 860    | 3,865  | 9,540   | 14    | 0    | 0    | 0    | 55    |
| Arctic grayling             | 0      | 0   | 259   | 223   | 832    | 2,861  | 5,956   | 0     | 0    | 0    | 0    | 0     |
| Arctic char                 | 0      | 52  | 0     | 0     | 24     | 27     | 3       | 0     | 0    | 0    | 0    | 0     |
| Burbot (Ling cod)           | 0      | 336 | 0     | 0     | 5      | 972    | 2,977   | 0     | 0    | 0    | 0    | 55    |
| Lake trout                  | 0      | 0   | 0     | 0     | 0      | 5      | 594     | 14    | 0    | 0    | 0    | 0     |
| Northern pike               | 0      | 0   | 0     | 0     | 0      | 0      | 10      | 0     | 0    | 0    | 0    | 0     |
| Total Salmon                | 0      | 36  | 72    | 50    | 1,032  | 0      | 0       | 0     | 0    | 0    | 0    | 0     |
| Salmon (non-specified)      | 0      | 0   | 0     | 0     | 403    | 0      | 0       | 0     | 0    | 0    | 0    | 0     |
| Chum (Dog) salmon           | 0      | 0   | 0     | 0     | 66     | 0      | 0       | 0     | 0    | 0    | 0    | 0     |
| Pink (Humpback) salmon      | 0      | 0   | 0     | 0     | 37     | 0      | 0       | 0     | 0    | 0    | 0    | 0     |
| Silver (Coho) salmon        | 0      | 36  | 72    | 50    | 462    | 0      | 0       | 0     | 0    | 0    | 0    | 0     |
| King (Chinook) salmon       | 0      | 0   | 0     | 0     | 65     | 0      | 0       | 0     | 0    | 0    | 0    | 0     |
| Total Other Coastal Fish    | 0      | 0   | 0     | 0     | 792    | 0      | 0       | 0     | 0    | 0    | 0    | 12    |
| Capelin                     | 0      | 0   | 0     | 0     | 792    | 0      | 0       | 0     | 0    | 0    | 0    | 0     |
| Rainbow Smelt               | 0      | 0   | 0     | 0     | 0      | 0      | 0       | 0     | 0    | 0    | 0    | 12    |
| All Fish Species            | 0      | 724 | 2,491 | 3,510 | 14,786 | 11,740 | 31,248  | 3,886 | 0    | 0    | 0    | 67    |

(Continued on next page)

TABLE A-10, CONTINUED: FISH HARVEST ESTIMATES BY SPECIES AND MONTH - BARROW, YEAR ONE REVISED  
(Pounds of Usable Resource Product)

| SPECIES                     | PERCENTS |     |      |      |        |       |         |      |      |      |      |       |      |
|-----------------------------|----------|-----|------|------|--------|-------|---------|------|------|------|------|-------|------|
|                             | 1987     |     |      |      |        | ***** |         | 1988 |      |      |      |       |      |
|                             | April    | May | June | July | August | Sept. | October | Nov. | Dec. | Jan. | Feb. | March |      |
| Total Whitefish             | 0%       | 1%  | 4%   | 6%   | 24%    | 15%   | 42%     | 8%   | 0%   | 0%   | 0%   | 0%    | 100% |
| Whitefish (non-specified)   | 0%       | 0%  | 2%   | 10%  | 39%    | 22%   | 25%     | 2%   | 0%   | 0%   | 0%   | 0%    | 100% |
| Round Whitefish             | 0%       | 0%  | 34%  | 0%   | 14%    | 18%   | 33%     | 0%   | 0%   | 0%   | 0%   | 0%    | 100% |
| Broad Whitefish (River)     | 0%       | 1%  | 5%   | 9%   | 32%    | 13%   | 27%     | 13%  | 0%   | 0%   | 0%   | 0%    | 100% |
| Broad Whitefish (Lake)      | 0%       | 0%  | 0%   | 0%   | 0%     | 32%   | 50%     | 18%  | 0%   | 0%   | 0%   | 0%    | 100% |
| Humpback whitefish          | 0%       | 0%  | 0%   | 0%   | 8%     | 30%   | 62%     | 0%   | 0%   | 0%   | 0%   | 0%    | 100% |
| Least cisco                 | 0%       | 1%  | 5%   | 9%   | 32%    | 13%   | 27%     | 13%  | 0%   | 0%   | 0%   | 0%    | 100% |
| Bering, Arctic cisco        | 0%       | 0%  | 0%   | 0%   | 1%     | 0%    | 99%     | 0%   | 0%   | 0%   | 0%   | 0%    | 100% |
| Total Other Freshwater Fish | 0%       | 3%  | 2%   | 1%   | 6%     | 25%   | 63%     | 0%   | 0%   | 0%   | 0%   | 0%    | 100% |
| Arctic grayling             | 0%       | 0%  | 3%   | 2%   | 8%     | 28%   | 59%     | 0%   | 0%   | 0%   | 0%   | 0%    | 100% |
| Arctic char                 | 0%       | 49% | 0%   | 0%   | 22%    | 25%   | 3%      | 0%   | 0%   | 0%   | 0%   | 0%    | 100% |
| Burbot (Ling cod)           | 0%       | 8%  | 0%   | 0%   | 0%     | 22%   | 69%     | 0%   | 0%   | 0%   | 0%   | 1%    | 100% |
| Lake trout                  | 0%       | 0%  | 0%   | 0%   | 0%     | 1%    | 97%     | 2%   | 0%   | 0%   | 0%   | 0%    | 100% |
| Northern pike               | 0%       | 0%  | 0%   | 0%   | 0%     | 0%    | 100%    | 0%   | 0%   | 0%   | 0%   | 0%    | 100% |
| Total Salmon                | 0%       | 3%  | 6%   | 4%   | 87%    | 0%    | 0%      | 0%   | 0%   | 0%   | 0%   | 0%    | 100% |
| Salmon (non-specified)      | 0%       | 0%  | 0%   | 0%   | 100%   | 0%    | 0%      | 0%   | 0%   | 0%   | 0%   | 0%    | 100% |
| Chum (Dog) salmon           | 0%       | 0%  | 0%   | 0%   | 100%   | 0%    | 0%      | 0%   | 0%   | 0%   | 0%   | 0%    | 100% |
| Pink (Humpback) salmon      | 0%       | 0%  | 0%   | 0%   | 100%   | 0%    | 0%      | 0%   | 0%   | 0%   | 0%   | 0%    | 100% |
| Silver (Coho) salmon        | 0%       | 6%  | 12%  | 8%   | 74%    | 0%    | 0%      | 0%   | 0%   | 0%   | 0%   | 0%    | 100% |
| King (Chinook) salmon       | 0%       | 0%  | 0%   | 0%   | 100%   | 0%    | 0%      | 0%   | 0%   | 0%   | 0%   | 0%    | 100% |
| Total Other Coastal Fish    | 0%       | 0%  | 0%   | 0%   | 99%    | 0%    | 0%      | 0%   | 0%   | 0%   | 0%   | 1%    | 100% |
| Capelin                     | 0%       | 0%  | 0%   | 0%   | 100%   | 0%    | 0%      | 0%   | 0%   | 0%   | 0%   | 0%    | 100% |
| Rainbow Smelt               | 0%       | 0%  | 0%   | 0%   | 0%     | 0%    | 0%      | 0%   | 0%   | 0%   | 0%   | 100%  | 100% |
| All Fish Species            | 0%       | 1%  | 4%   | 5%   | 22%    | 17%   | 46%     | 6%   | 0%   | 0%   | 0%   | 0%    | 100% |

Source: Stephen R. Braund & Associates, 1993

TABLE A-11: FISH HARVEST ESTIMATES BY SPECIES AND MONTH - BARROW, YEAR ONE REVISED  
(Number Harvested)

| SPECIES                     | 1987  |     |       |       |        |       | 1988    |       |      |      |      |       |
|-----------------------------|-------|-----|-------|-------|--------|-------|---------|-------|------|------|------|-------|
|                             | April | May | June  | July  | August | Sept. | October | Nov.  | Dec. | Jan. | Feb. | March |
| Total Whitefish             | 0     | 120 | 1,320 | 1,402 | 5,453  | 3,512 | 14,069  | 1,490 | 0    | 0    | 0    | 0     |
| Whitefish (non-specified)   | 0     | 0   | 120   | 533   | 1,968  | 1,130 | 1,260   | 96    | 0    | 0    | 0    | 0     |
| Round Whitefish             | 0     | 0   | 720   | 0     | 305    | 388   | 709     | 0     | 0    | 0    | 0    | 0     |
| Broad Whitefish (River)     | 0     | 120 | 480   | 868   | 3,020  | 1,186 | 2,537   | 1,178 | 0    | 0    | 0    | 0     |
| Broad Whitefish (Lake)      | 0     | 0   | 0     | 0     | 0      | 379   | 596     | 216   | 0    | 0    | 0    | 0     |
| Humpback whitefish          | 0     | 0   | 0     | 0     | 100    | 364   | 761     | 0     | 0    | 0    | 0    | 0     |
| Least cisco                 | 0     | 0   | 0     | 0     | 60     | 17    | 6,946   | 0     | 0    | 0    | 0    | 0     |
| Bering, Arctic cisco        | 0     | 0   | 0     | 1     | 0      | 48    | 1,260   | 0     | 0    | 0    | 0    | 0     |
| Total Other Freshwater Fish | 0     | 103 | 324   | 278   | 1,050  | 3,830 | 8,342   | 4     | 0    | 0    | 0    | 14    |
| Arctic grayling             | 0     | 0   | 324   | 278   | 1,040  | 3,576 | 7,445   | 0     | 0    | 0    | 0    | 0     |
| Arctic char                 | 0     | 19  | 0     | 0     | 8      | 10    | 1       | 0     | 0    | 0    | 0    | 0     |
| Burbot (Ling cod)           | 0     | 84  | 0     | 0     | 1      | 243   | 744     | 0     | 0    | 0    | 0    | 14    |
| Lake trout                  | 0     | 0   | 0     | 0     | 0      | 1     | 148     | 4     | 0    | 0    | 0    | 0     |
| Northern pike               | 0     | 0   | 0     | 0     | 0      | 0     | 2       | 0     | 0    | 0    | 0    | 0     |
| Salmon                      | 0     | 6   | 12    | 8     | 169    | 0     | 0       | 0     | 0    | 0    | 0    | 0     |
| Salmon (non-specified)      | 0     | 0   | 0     | 0     | 66     | 0     | 0       | 0     | 0    | 0    | 0    | 0     |
| Chum (Dog) salmon           | 0     | 0   | 0     | 0     | 11     | 0     | 0       | 0     | 0    | 0    | 0    | 0     |
| Pink (Humpback) salmon      | 0     | 0   | 0     | 0     | 12     | 0     | 0       | 0     | 0    | 0    | 0    | 0     |
| Silver (Coho) salmon        | 0     | 6   | 12    | 8     | 77     | 0     | 0       | 0     | 0    | 0    | 0    | 0     |
| King (Chinook) salmon       | 0     | 0   | 0     | 0     | 4      | 0     | 0       | 0     | 0    | 0    | 0    | 0     |
| Total Other Coastal Fish    | 0     | 0   | 0     | 0     | 3,960  | 0     | 0       | 0     | 0    | 0    | 0    | 97    |
| Capelin                     | 0     | 0   | 0     | 0     | 3,960  | 0     | 0       | 0     | 0    | 0    | 0    | 0     |
| Rainbow Smelt               | 0     | 0   | 0     | 0     | 0      | 0     | 0       | 0     | 0    | 0    | 0    | 97    |

Source: Stephen R. Braund & Associates, 1993

TABLE A-12: HARVEST ESTIMATES FOR BIRDS - ALL BARROW HOUSEHOLDS, YEAR ONE REVISED (1,2)

| RESOURCE                  | CONVERSION<br>FACTOR (3)<br>(Usable<br>Weight<br>Per<br>Resource<br>in lbs) | COMMUNITY TOTALS    |                               | AVERAGE POUNDS<br>HARVESTED |               | PERCENT<br>OF TOTAL<br>USABLE<br>POUNDS<br>HARVESTED | PERCENT<br>OF ALL<br>BARROW<br>HSEHOLDS<br>STANDARD<br>DEVIATION | SAMPLING STATISTICS |                                             |                                              |                                      |      |
|---------------------------|-----------------------------------------------------------------------------|---------------------|-------------------------------|-----------------------------|---------------|------------------------------------------------------|------------------------------------------------------------------|---------------------|---------------------------------------------|----------------------------------------------|--------------------------------------|------|
|                           |                                                                             | NUMBER<br>HARVESTED | USABLE<br>POUNDS<br>HARVESTED | PER<br>HOUSEHOLD            | PER<br>CAPITA |                                                      |                                                                  | 95%<br>ERROR AT     | LOW<br>ESTIMATE<br>(Mean lbs/<br>Household) | HIGH<br>ESTIMATE<br>(Mean lbs/<br>Household) | SAMPLING<br>ERROR<br>AS %<br>OF MEAN |      |
| Total Birds               | n/a                                                                         | n/a                 | 22,329                        | 23.8                        | 7.4           | 3.6%                                                 | 36%                                                              | 6                   | 12                                          | 11.79                                        | 35.87                                | 51%  |
| Total Geese               |                                                                             | 2,873               | 12,743                        | 13.6                        | 4.2           | 2.1%                                                 | 20%                                                              | 3                   | 6                                           | 7.16                                         | 20.04                                | 47%  |
| Geese (non-specified)     | 4.5                                                                         | 329                 | 1,480                         | 1.6                         | 0.5           | 0.2%                                                 | 3%                                                               | 1                   | 1                                           | 0.50                                         | 2.66                                 | 68%  |
| Brant                     | 3.0                                                                         | 127                 | 384                           | 0.4                         | 0.1           | 0.1%                                                 | 2%                                                               | 0                   | 0                                           | 0.19                                         | 0.63                                 | 54%  |
| White-fronted geese       | 4.5                                                                         | 2,417               | 10,879                        | 11.6                        | *             | **                                                   | 16%                                                              | 3                   | 6                                           | 5.20                                         | 18.02                                | 55%  |
| Total Eider               |                                                                             | 5,173               | 7,752                         | 8.3                         | 2.6           | 1.2%                                                 | 22%                                                              | 3                   | 7                                           | 1.54                                         | 15.00                                | 81%  |
| Eider (non-specified)     | 1.5                                                                         | 5,080               | 7,618                         | 8.1                         | 2.5           | 1.2%                                                 | 21%                                                              | 3                   | 7                                           | 1.40                                         | 14.86                                | 83%  |
| Common eider              | 1.5                                                                         | 7                   | 9                             | 0.0                         | *             | **                                                   | **                                                               | 0                   | 0                                           | 0.00                                         | 0.03                                 | 183% |
| King eider                | 1.5                                                                         | 83                  | 122                           | 0.1                         | *             | **                                                   | 1%                                                               | 0                   | 0                                           | 0.03                                         | 0.23                                 | 74%  |
| Spectacled eider          | 1.5                                                                         | 2                   | 3                             | 0.0                         | *             | **                                                   | **                                                               | 0                   | 0                                           | 0.00                                         | 0.01                                 | 104% |
| Ptarmigan                 | 0.7                                                                         | 2,454               | 1,715                         | 1.8                         | 0.6           | 0.3%                                                 | 16%                                                              | 1                   | 1                                           | 0.58                                         | 3.08                                 | 68%  |
| Other ducks (non-sepcif.) | 1.5                                                                         | 79                  | 122                           | 0.1                         | *             | **                                                   | 3%                                                               | 0                   | 0                                           | 0.00                                         | 0.31                                 | 135% |

(1) Year One: April 1, 1987 - March 31, 1988.

(2) Estimated sampling errors do not include errors in reporting, recording, and in conversion to usable weight.

(3) See Table D-5 for sources of conversion factors.

\* represents less than .1 pound

\*\* represents less than .1 percent

n/a means not applicable

Source: Stephen R. Braund & Associates, 1993

TABLE A-13: BIRD HARVEST ESTIMATES BY SPECIES AND MONTH - BARROW, YEAR ONE REVISED  
(Pounds of Usable Resource Product)

| SPECIES               | TOTALS<br>***** |        |      |       |        |       |         |      |      |      |      |       |
|-----------------------|-----------------|--------|------|-------|--------|-------|---------|------|------|------|------|-------|
|                       | 1987            |        |      |       |        | 1988  |         |      |      |      |      |       |
|                       | April           | May    | June | July  | August | Sept. | October | Nov. | Dec. | Jan. | Feb. | March |
| Total Geese           | 0               | 12,004 | 499  | 4     | 68     | 163   | 0       | 0    | 0    | 0    | 0    | 0     |
| White-fronted goose   | 0               | 10,390 | 488  | 0     | 0      | 0     | 0       | 0    | 0    | 0    | 0    | 0     |
| Brant                 | 0               | 146    | 0    | 4     | 68     | 163   | 0       | 0    | 0    | 0    | 0    | 0     |
| Goose (non-specified) | 0               | 1,468  | 11   | 0     | 0      | 0     | 0       | 0    | 0    | 0    | 0    | 0     |
| Total Eiders          | 351             | 748    | 143  | 2,301 | 4,115  | 101   | 0       | 0    | 0    | 0    | 0    | 0     |
| Eider (non-specified) | 351             | 696    | 68   | 2,291 | 4,115  | 101   | 0       | 0    | 0    | 0    | 0    | 0     |
| Common eider          | 0               | 10     | 0    | 0     | 0      | 0     | 0       | 0    | 0    | 0    | 0    | 0     |
| King eider            | 0               | 42     | 72   | 11    | 0      | 0     | 0       | 0    | 0    | 0    | 0    | 0     |
| Spectacled eider      | 0               | 0      | 4    | 0     | 0      | 0     | 0       | 0    | 0    | 0    | 0    | 0     |
| Ptarmigan             | 0               | 1,412  | 0    | 40    | 135    | 10    | 120     | 0    | 0    | 0    | 0    | 0     |
| Other Ducks           | 0               | 0      | 0    | 105   | 14     | 0     | 0       | 0    | 0    | 0    | 0    | 0     |
| All Bird Species      | 351             | 14,164 | 642  | 2,450 | 4,333  | 273   | 120     | 0    | 0    | 0    | 0    | 0     |

(continued on next page)



TABLE A-13, CONTINUED: BIRD HARVEST ESTIMATES BY SPECIES AND MONTH - BARROW, YEAR ONE REVISED  
(Pounds of Usable Resource Product)

| SPECIES               | PERCENTS |      |      |      |        |       |         |      |      |      |      |       |      |
|-----------------------|----------|------|------|------|--------|-------|---------|------|------|------|------|-------|------|
|                       | 1987     |      |      |      |        | ***** |         | 1988 |      |      |      |       |      |
|                       | April    | May  | June | July | August | Sept. | October | Nov. | Dec. | Jan. | Feb. | March |      |
| Total Geese           | 0%       | 94%  | 4%   | 0%   | 1%     | 1%    | 0%      | 0%   | 0%   | 0%   | 0%   | 0%    | 100% |
| White-fronted goose   | 0%       | 96%  | 4%   | 0%   | 0%     | 0%    | 0%      | 0%   | 0%   | 0%   | 0%   | 0%    | 100% |
| Brant                 | 0%       | 38%  | 0%   | 1%   | 18%    | 43%   | 0%      | 0%   | 0%   | 0%   | 0%   | 0%    | 100% |
| Goose (non-specified) | 0%       | 99%  | 1%   | 0%   | 0%     | 0%    | 0%      | 0%   | 0%   | 0%   | 0%   | 0%    | 100% |
| Total Eiders          | 5%       | 10%  | 2%   | 30%  | 53%    | 1%    | 0%      | 0%   | 0%   | 0%   | 0%   | 0%    | 100% |
| Eider (non-specified) | 5%       | 9%   | 1%   | 30%  | 54%    | 1%    | 0%      | 0%   | 0%   | 0%   | 0%   | 0%    | 100% |
| Common eider          | 0%       | 100% | 0%   | 0%   | 0%     | 0%    | 0%      | 0%   | 0%   | 0%   | 0%   | 0%    | 100% |
| King eider            | 0%       | 33%  | 58%  | 9%   | 0%     | 0%    | 0%      | 0%   | 0%   | 0%   | 0%   | 0%    | 100% |
| Spectacled eider      | 0%       | 0%   | 100% | 0%   | 0%     | 0%    | 0%      | 0%   | 0%   | 0%   | 0%   | 0%    | 100% |
| Ptarmigan             | 0%       | 82%  | 0%   | 2%   | 8%     | 1%    | 7%      | 0%   | 0%   | 0%   | 0%   | 0%    | 100% |
| Other Ducks           | 0%       | 0%   | 0%   | 88%  | 12%    | 0%    | 0%      | 0%   | 0%   | 0%   | 0%   | 0%    | 100% |
| All Bird Species      | 2%       | 63%  | 3%   | 11%  | 19%    | 1%    | 1%      | 0%   | 0%   | 0%   | 0%   | 0%    | 100% |

Source: Stephen R. Braund & Associates, 1993

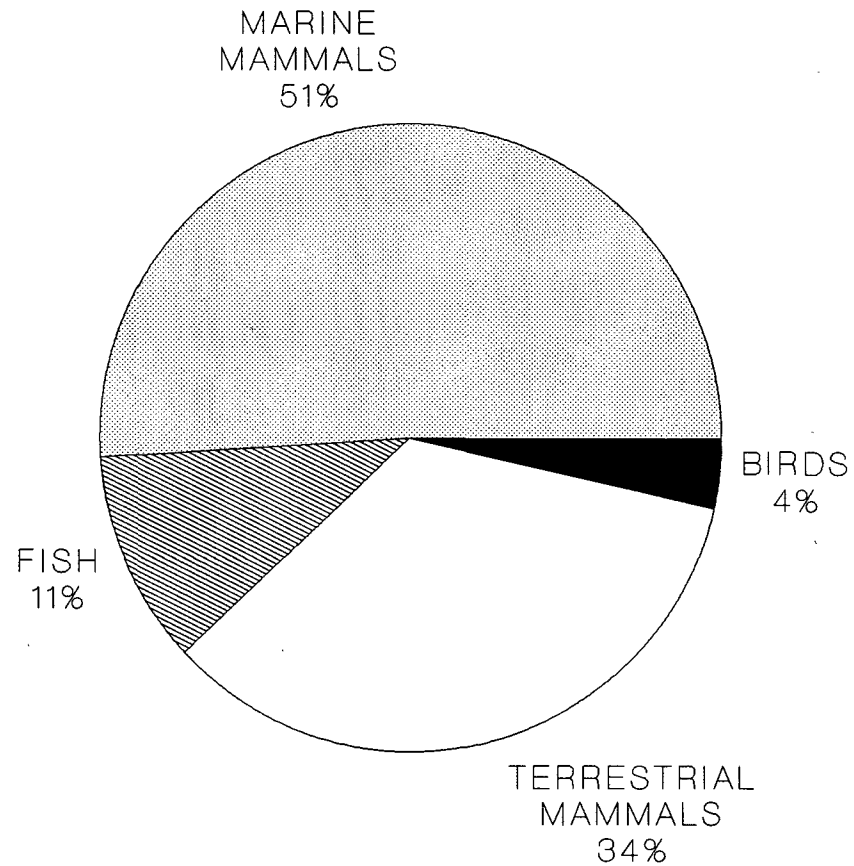
TABLE A-14: BIRD HARVEST ESTIMATES BY SPECIES AND MONTH - BARROW, YEAR ONE REVISED  
(Number Harvested)

| SPECIES               | 1987  |       |      |       |        |       | 1988    |      |      |      |      |       |
|-----------------------|-------|-------|------|-------|--------|-------|---------|------|------|------|------|-------|
|                       | April | May   | June | July  | August | Sept. | October | Nov. | Dec. | Jan. | Feb. | March |
| Total Geese           | 0     | 2,684 | 111  | 1     | 23     | 54    | 0       | 0    | 0    | 0    | 0    | 0     |
| White-fronted goose   | 0     | 2,309 | 108  | 0     | 0      | 0     | 0       | 0    | 0    | 0    | 0    | 0     |
| Brant                 | 0     | 49    | 0    | 1     | 23     | 54    | 0       | 0    | 0    | 0    | 0    | 0     |
| Goose (non-specified) | 0     | 326   | 2    | 0     | 0      | 0     | 0       | 0    | 0    | 0    | 0    | 0     |
| Total Eiders          | 234   | 499   | 95   | 1,534 | 2,743  | 67    | 0       | 0    | 0    | 0    | 0    | 0     |
| Eider (non-specified) | 234   | 464   | 45   | 1,527 | 2,743  | 67    | 0       | 0    | 0    | 0    | 0    | 0     |
| Common eider          | 0     | 7     | 0    | 0     | 0      | 0     | 0       | 0    | 0    | 0    | 0    | 0     |
| King eider            | 0     | 28    | 48   | 7     | 0      | 0     | 0       | 0    | 0    | 0    | 0    | 0     |
| Spectacled eider      | 0     | 0     | 2    | 0     | 0      | 0     | 0       | 0    | 0    | 0    | 0    | 0     |
| Ptarmigan             | 0     | 2,017 | 0    | 57    | 193    | 14    | 172     | 0    | 0    | 0    | 0    | 0     |
| Other ducks           | 0     | 0     | 0    | 70    | 10     | 0     | 0       | 0    | 0    | 0    | 0    | 0     |

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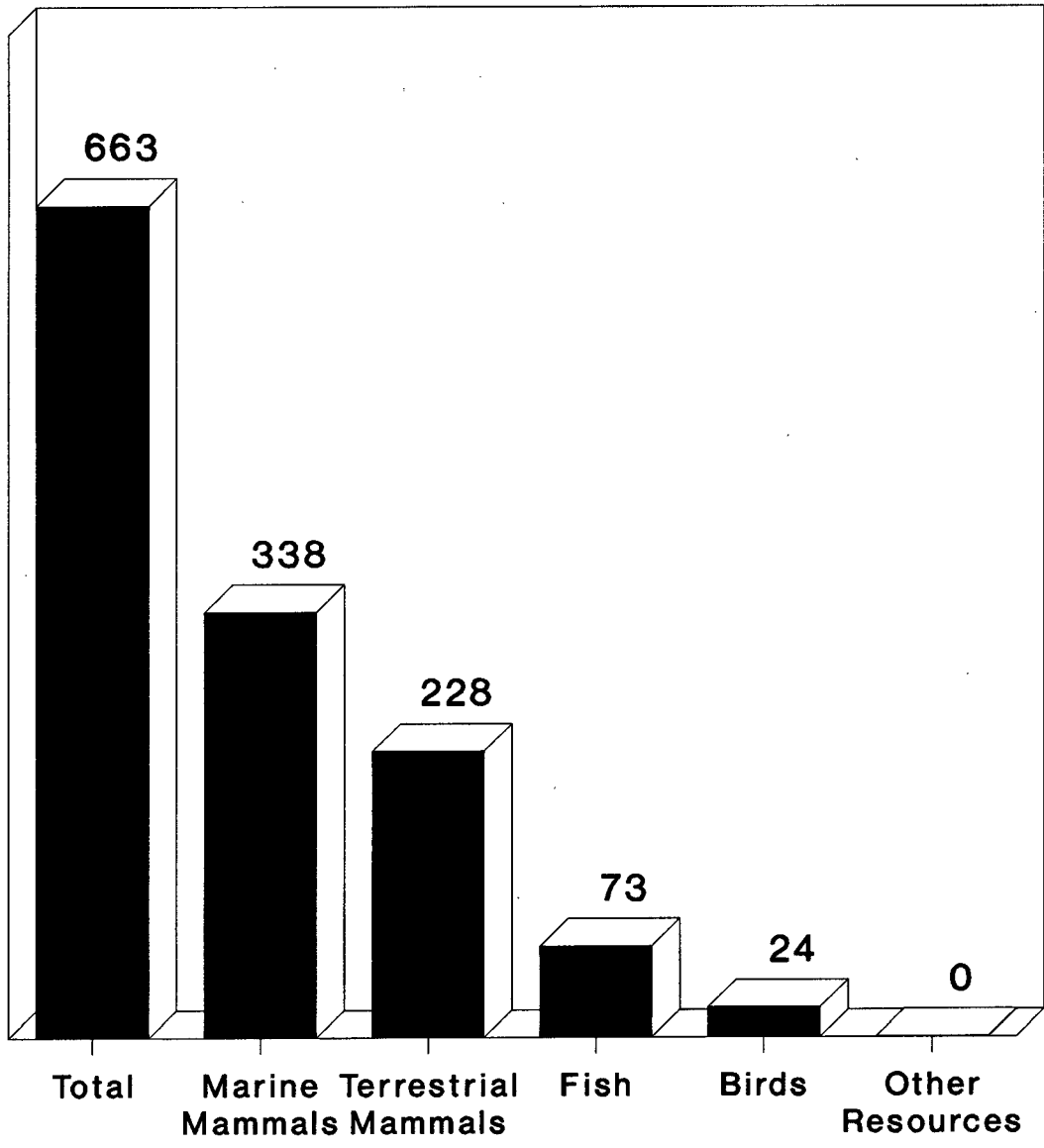
Source: Stephen R. Braund & Associates, 1993

**Figure A-1: Estimated Harvest Percentages by Major Resource Category Barrow, Year One**



Based on usable pounds harvested.  
Year One: April 1, 1987 - March 31, 1988  
Source: Stephen R. Braund & Assoc., 1993

**Figure A-2: Harvest Estimates by Major Resource Category**  
**All Barrow Households, Year One Revised**  
**(Mean Usable Pounds Per Household)**

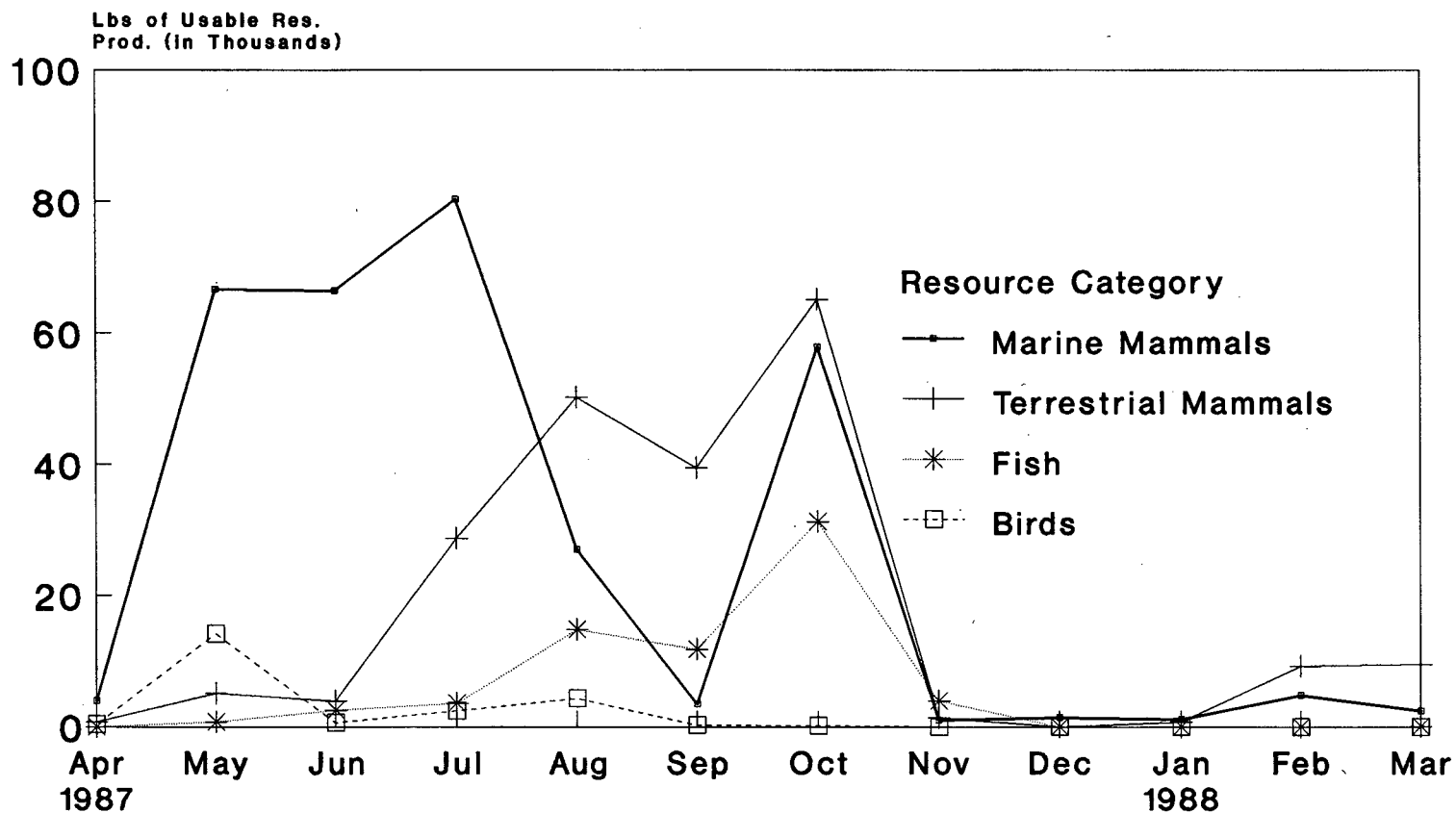


**% of Total:** 100%    51%    34%    11%    4%    <1%

**Year One:** April 1, 1987 - March 31, 1988

**Source:** Stephen R. Braund & Assoc., 1993

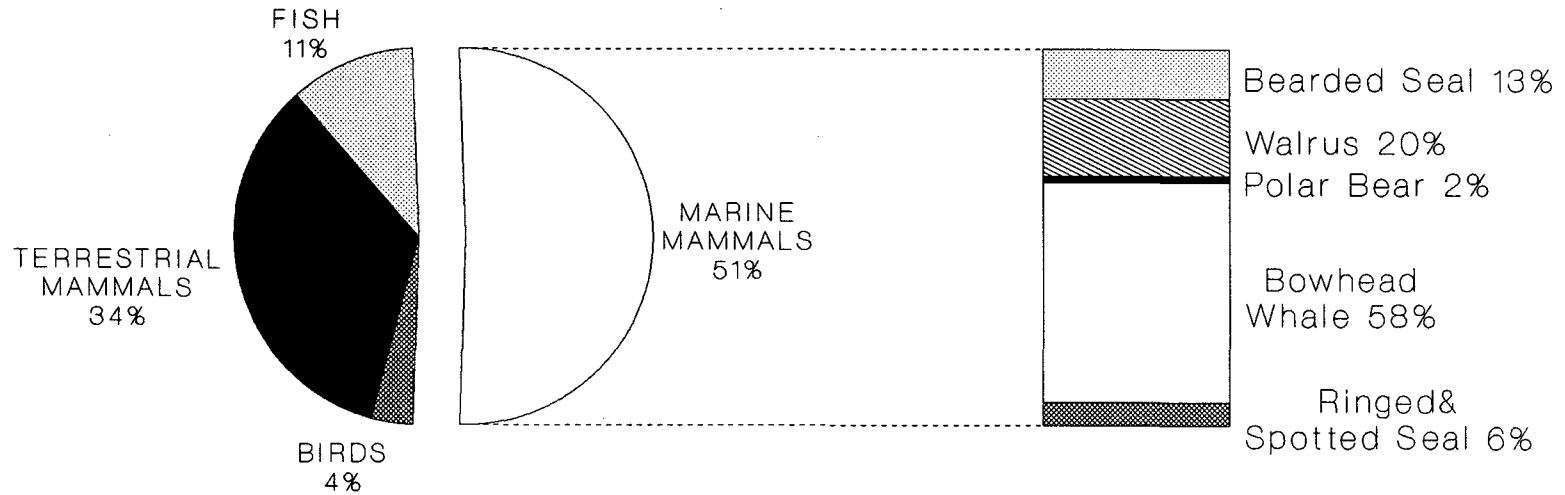
**Figure A-3: Monthly Harvest Estimates  
by Major Resource Category  
All Barrow Households, Year One Revised**



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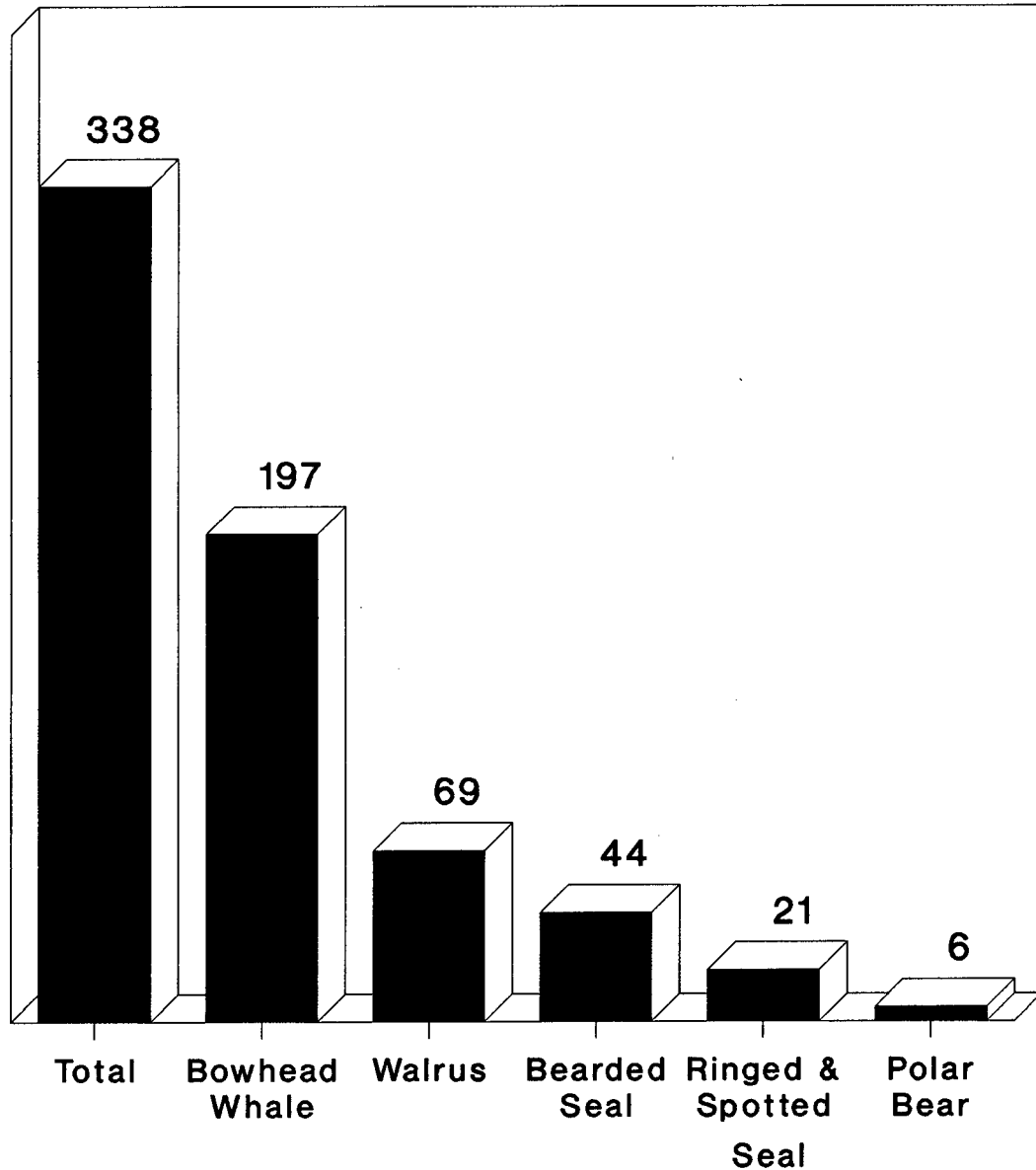
Year One: April 1, 1987 - March 31, 1988  
Source: Stephen R. Braund & Assoc., 1993

**Figure A-4: Estimated Harvest Percentages of Marine Mammals  
Barrow, Year One  
(Usable Pounds Harvested)**



Year One: April 1, 1987 - March 31, 1988  
 Source: Stephen R. Braund & Assoc., 1993

**Figure A-5: Marine Mammal  
Harvest Estimates  
All Barrow Households, Year One Revised  
(Mean Usable Pounds Per Household)**



% of Marine Mammals:

100%

58%

20%

13%

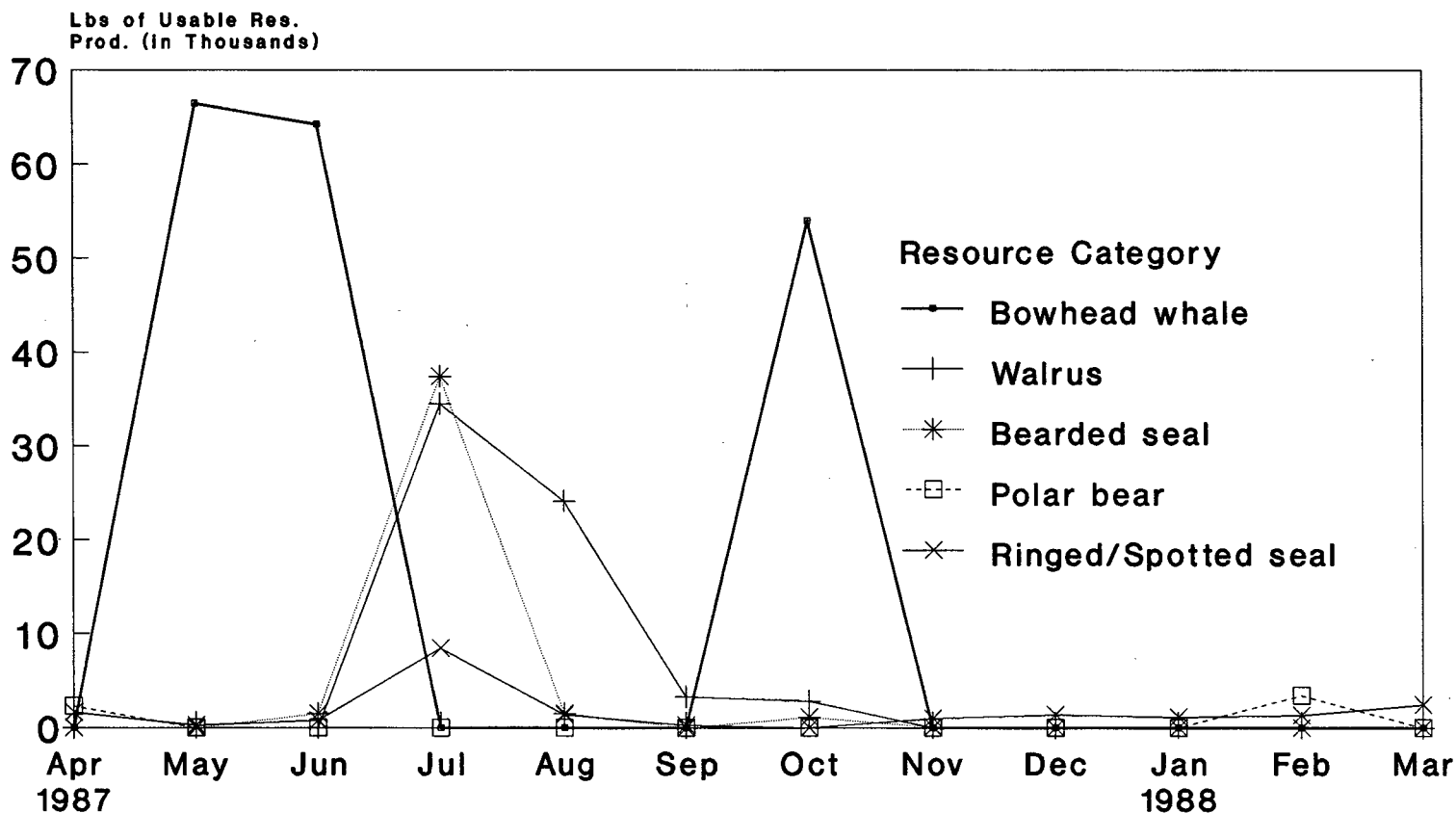
6%

2%

Year One: April 1, 1987 - March 31, 1988

Source: Stephen R. Braund & Assoc., 1993

# Figure A-6: Monthly Marine Mammal Harvest Estimates All Barrow Households, Year One Revised

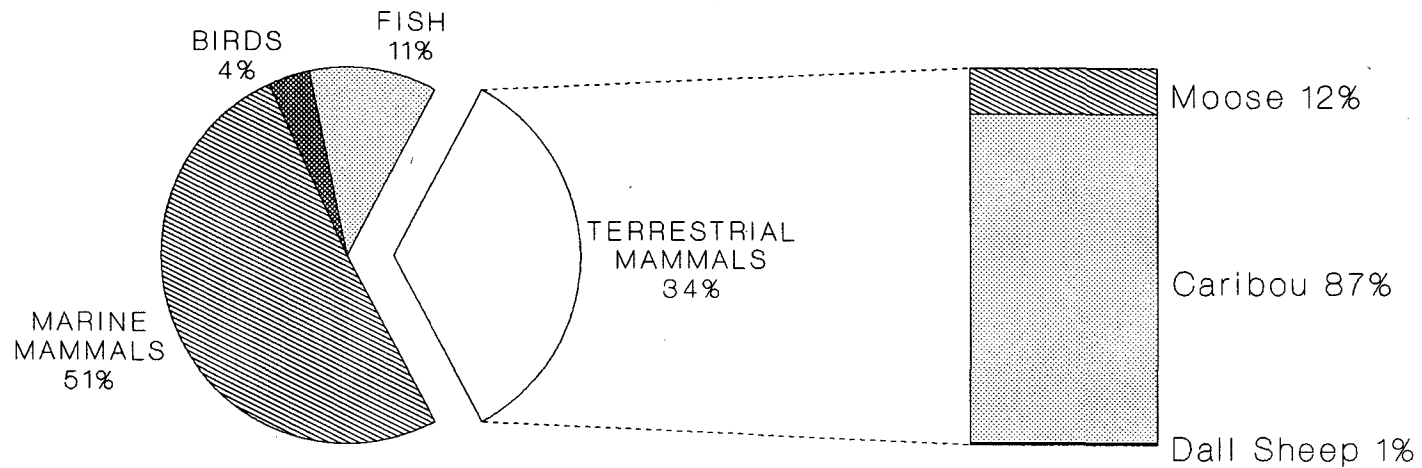


Year One: April 1, 1987 - March 31, 1988  
 Source: Stephen R. Braund & Assoc., 1993

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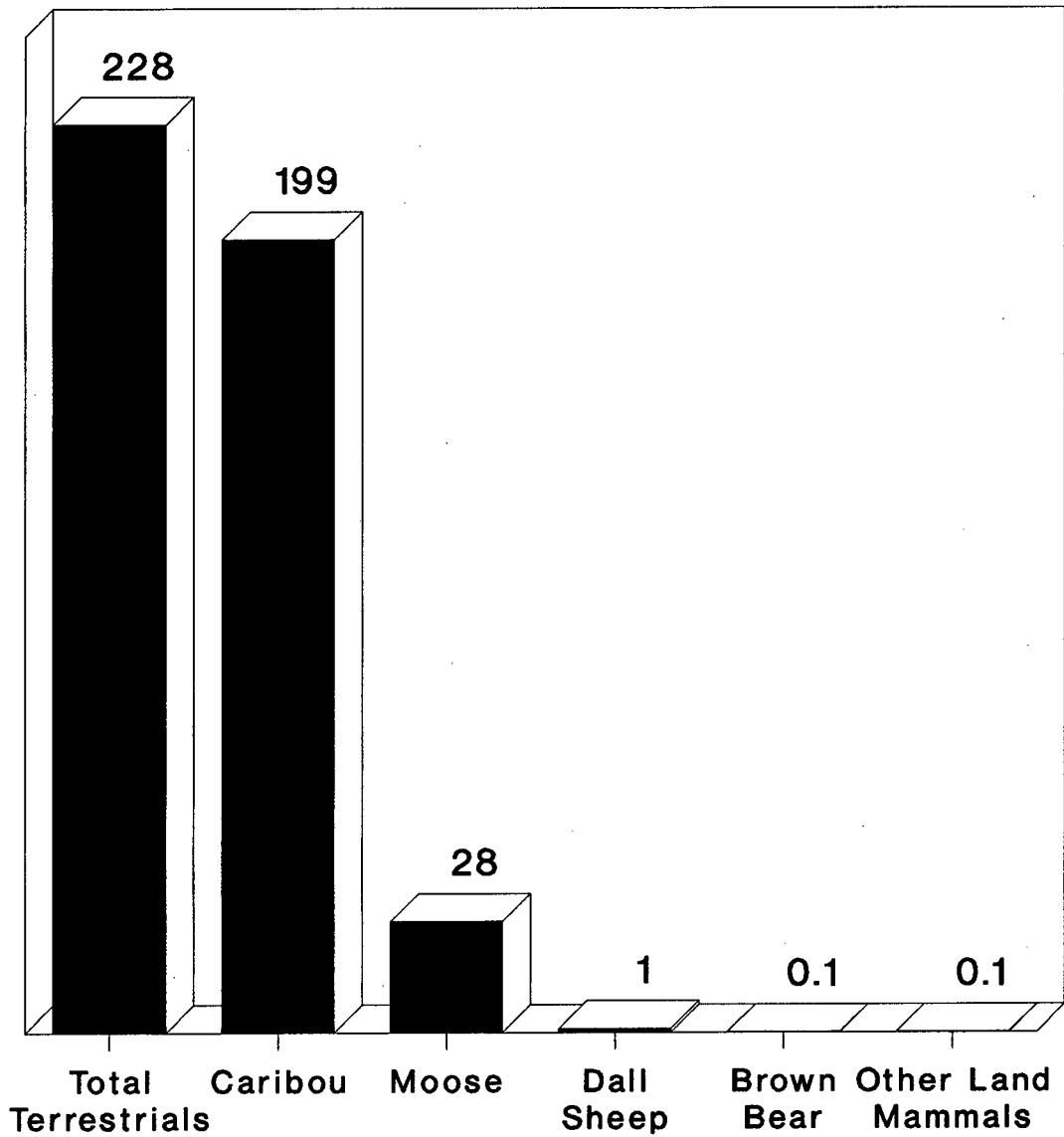
**Figure A-7: Estimated Harvest Percentages of Terrestrial Mammals  
Barrow, Year One  
(Usable Pounds Harvested)**



Year One: April 1, 1987 - March 31, 1988  
Source: Stephen R. Braund & Assoc., 1993

### Figure A-8: Terrestrial Mammal Harvest Estimates

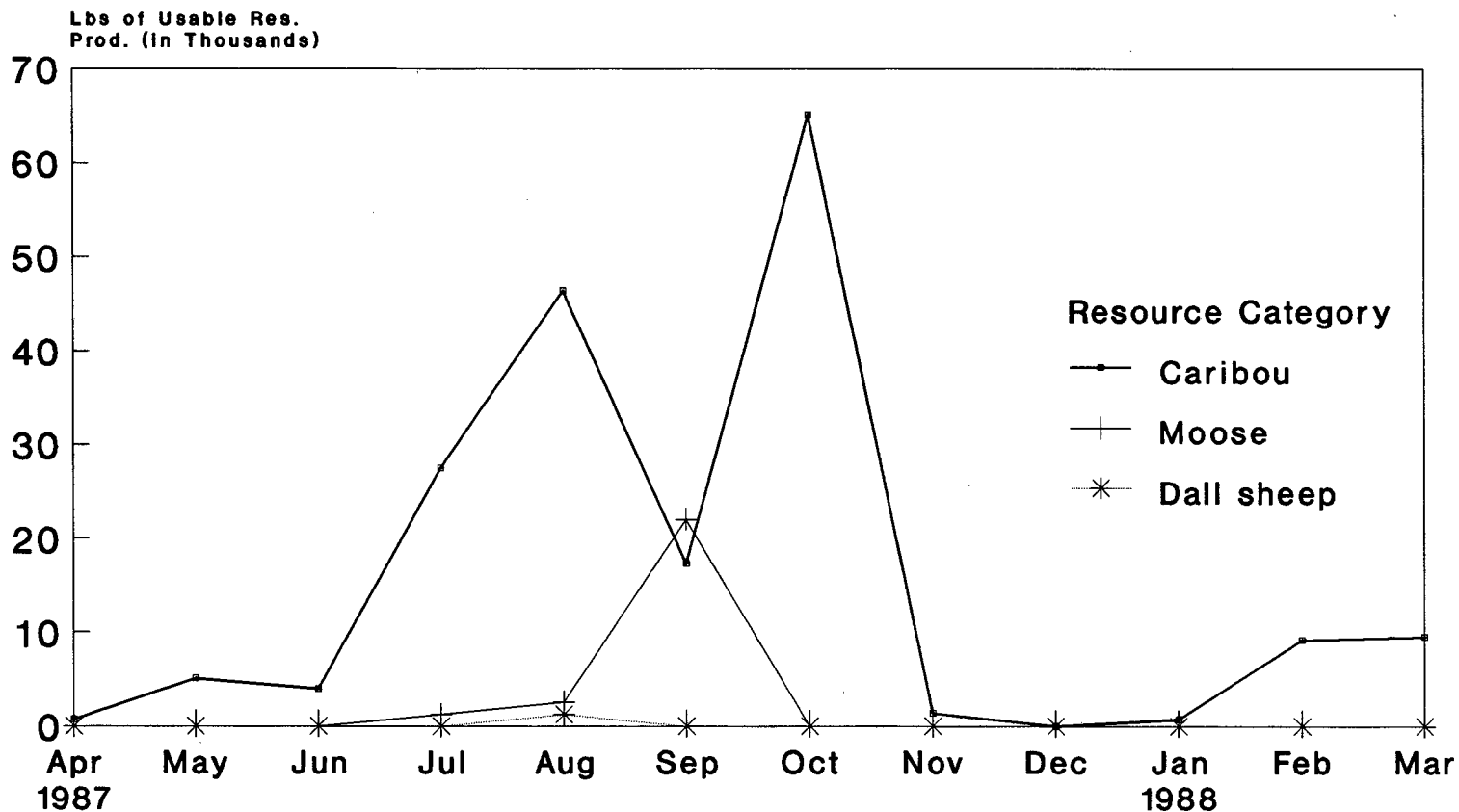
All Barrow Households, Year One Revised  
(Mean Usable Pounds Per Household)



| % of Terrestrial Mammals: | 100%               | 87%     | 12%   | <1%        | <1%        | <1%                |
|---------------------------|--------------------|---------|-------|------------|------------|--------------------|
|                           | Total Terrestrials | Caribou | Moose | Dall Sheep | Brown Bear | Other Land Mammals |

Year One: April 1, 1987 - March 31, 1988  
Source: Stephen R. Braund & Assoc., 1993

# Figure A-9: Monthly Terrestrial Mammal Harvest Estimates All Barrow Households, Year One Revised



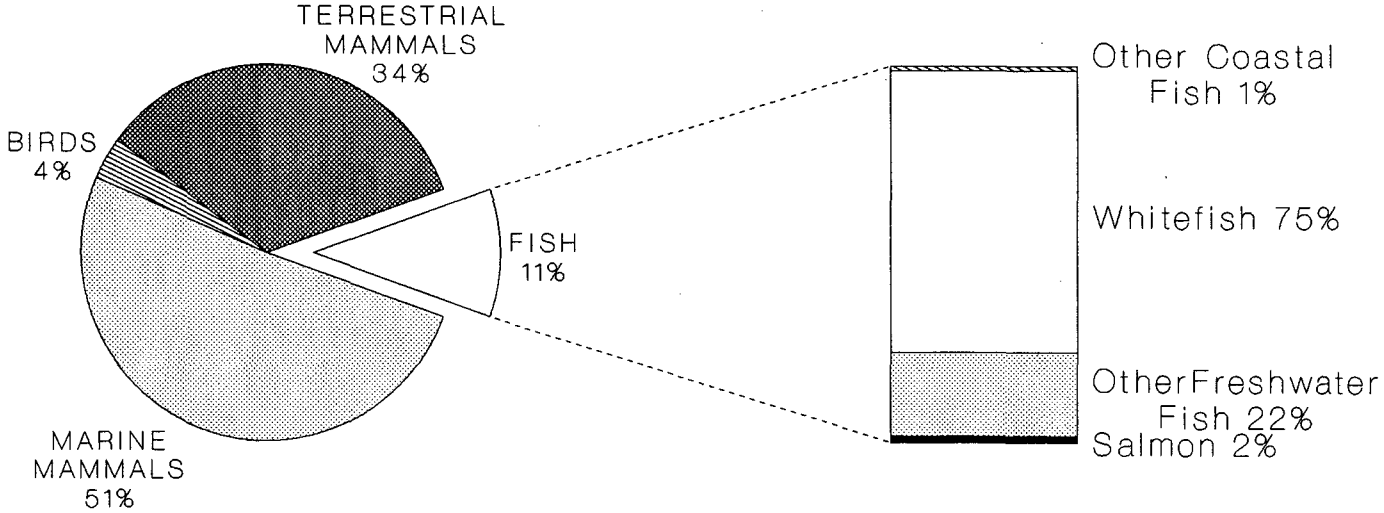
Note: 120 lbs. of brown bear harvested in Sept., 48 lbs. of porcupine harvested in Oct., and 10 lbs. of ground squirrel harvested in July do not appear on this chart due to scale.

Year One: April 1, 1987 - March 31, 1988

Source: Stephen R. Braund & Assoc., 1993

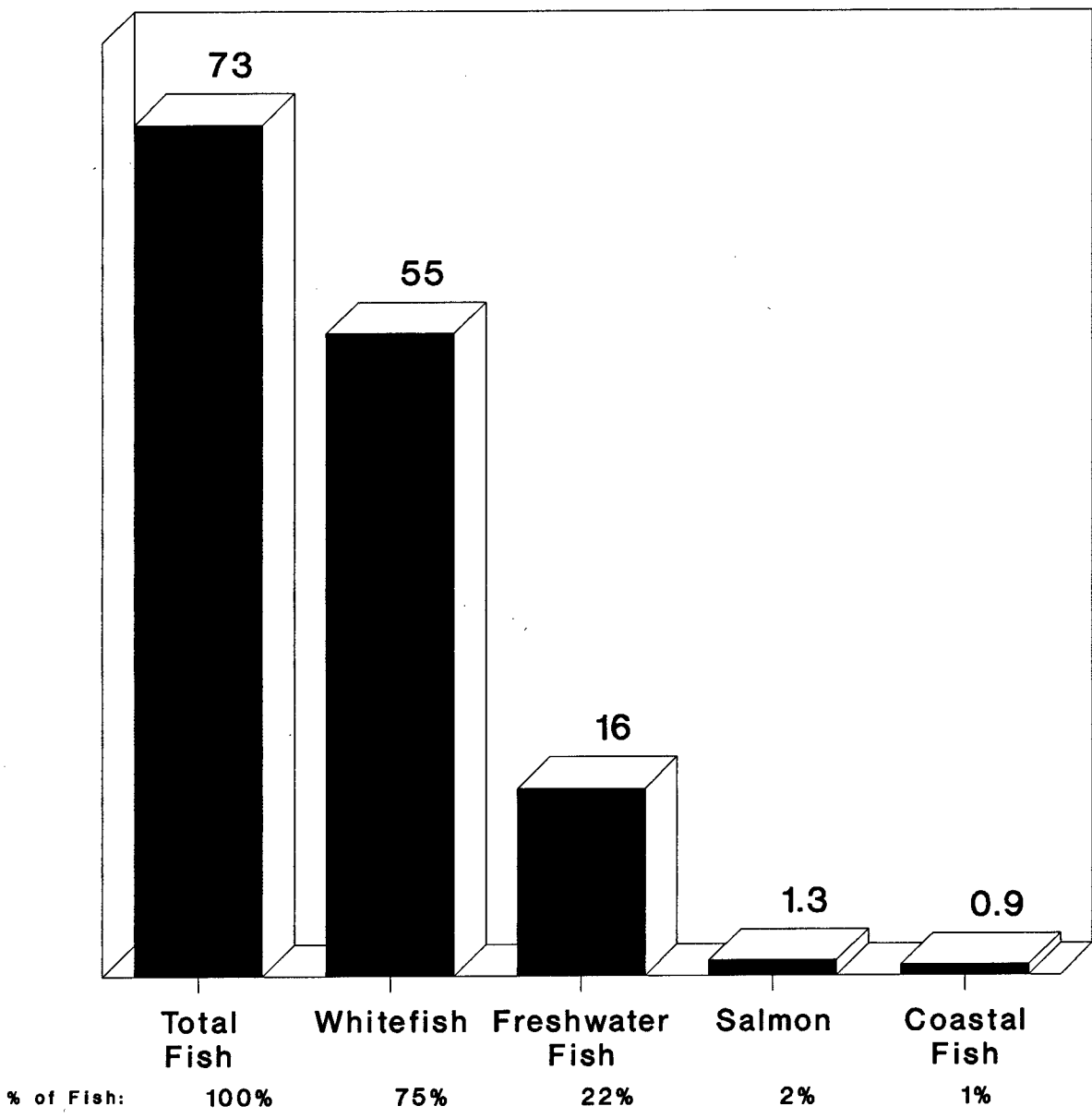
A-35

**Figure A-10: Estimated Harvest Percentages of Fish Barrow, Year One (Usable Pounds Harvested)**



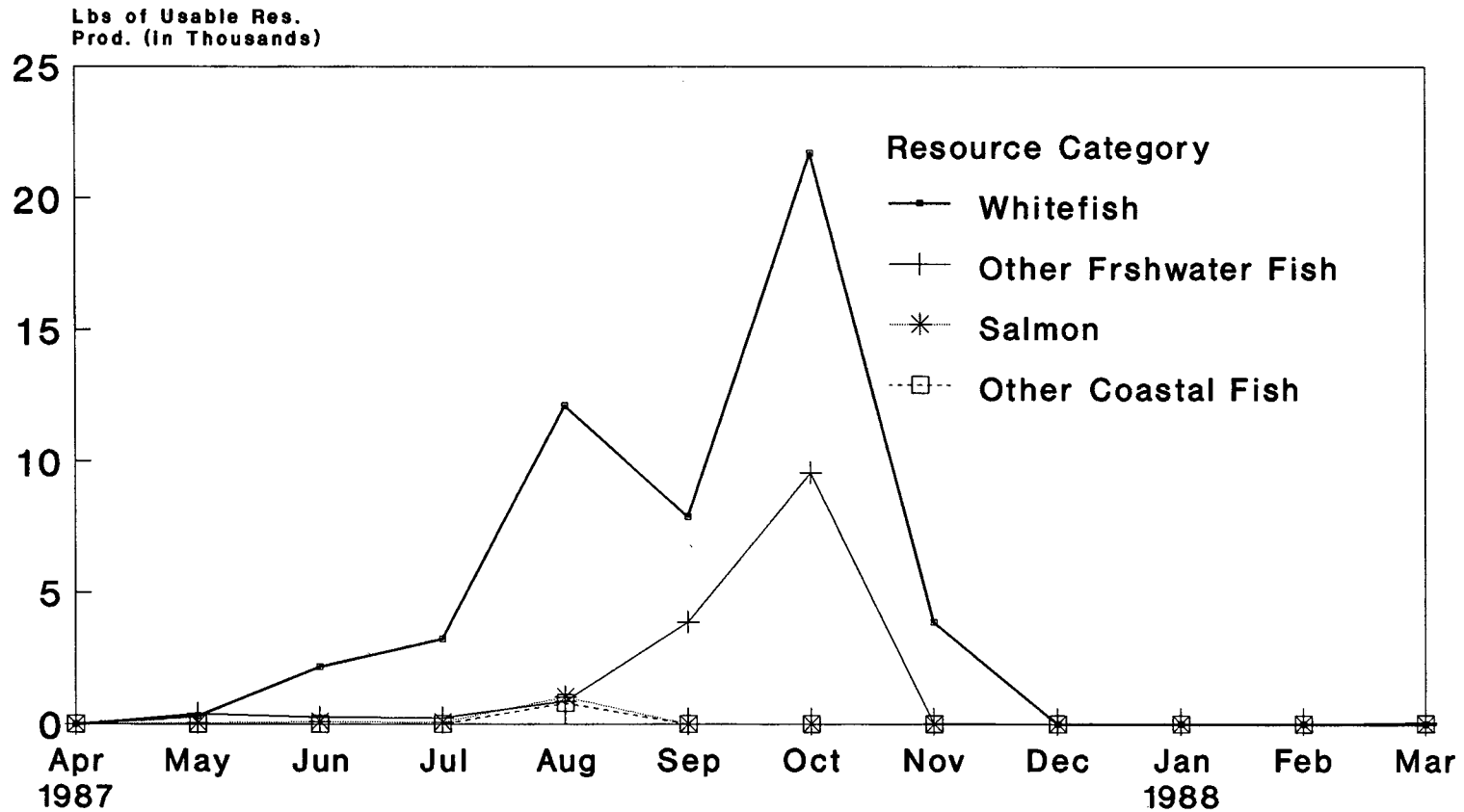
Year One: April 1, 1987 - March 31, 1988  
Source: Stephen R. Braund & Assoc., 1993

**Figure A-11: Fish Harvest Estimates  
All Barrow Households, Year One Revised  
(Mean Usable Pounds Per Household)**



Year One: April 1, 1987 - March 31, 1988  
Source: Stephen R. Braund & Assoc., 1993

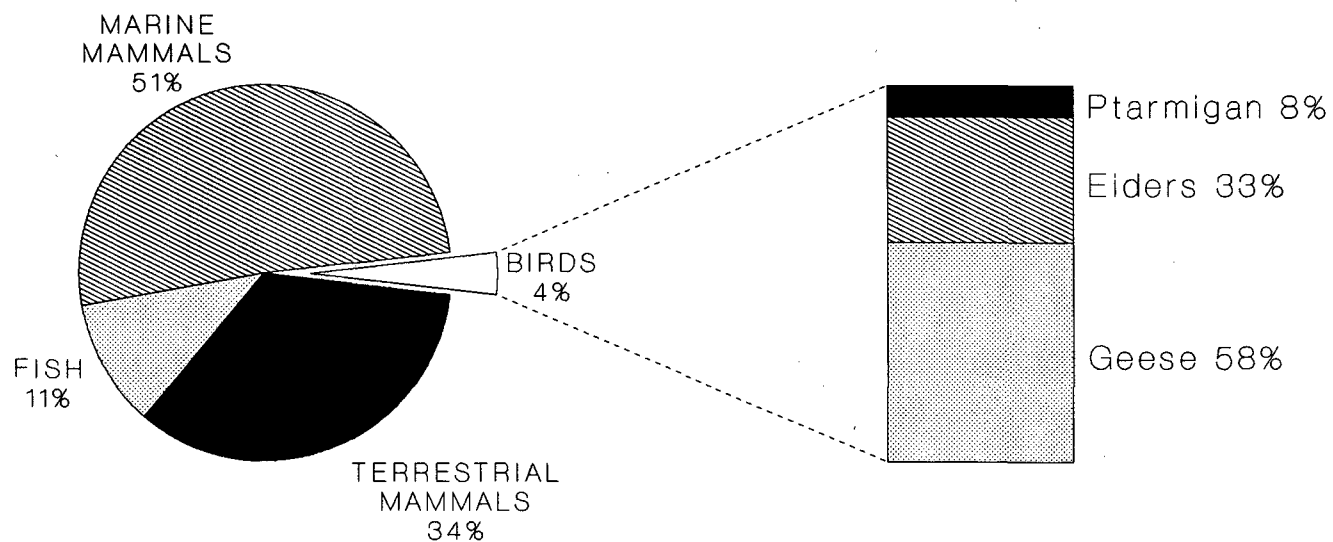
**Figure A-12: Monthly Fish  
Harvest Estimates  
All Barrow Households, Year One Revised**



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Year One: April 1, 1987 - March 31, 1988  
Source: Stephen R. Braund & Assoc., 1993

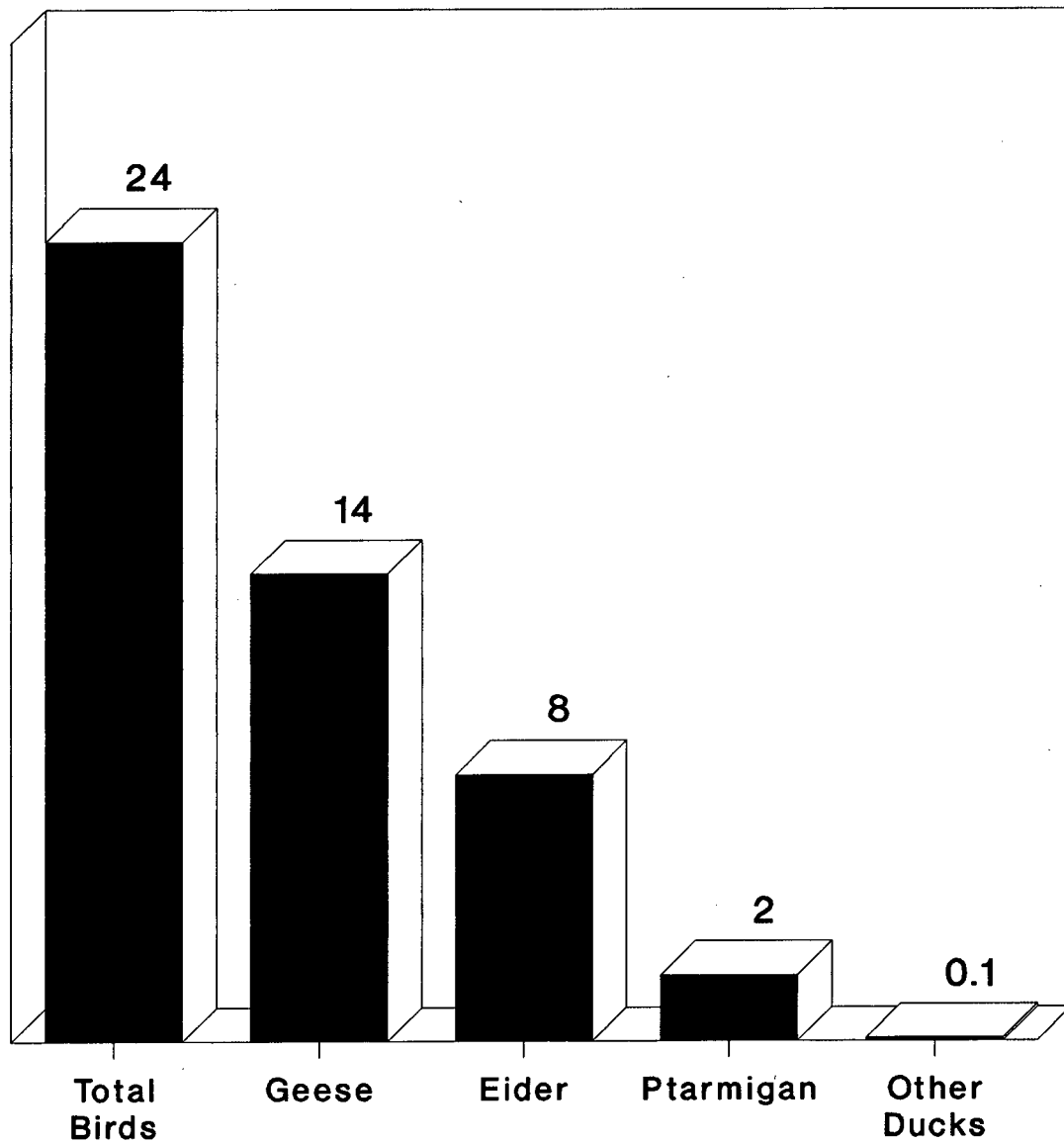
**Figure A-13: Estimated Harvest Percentages of Birds  
Barrow, Year One  
(Usable Pounds Harvested)**



A-39

Year One: April 1, 1987 - March 31, 1988  
Source: Stephen R. Braund & Assoc., 1993

**Figure A-14: Bird Harvest Estimates  
All Barrow Households, Year One Revised  
(Mean Usable Pounds Per Household)**



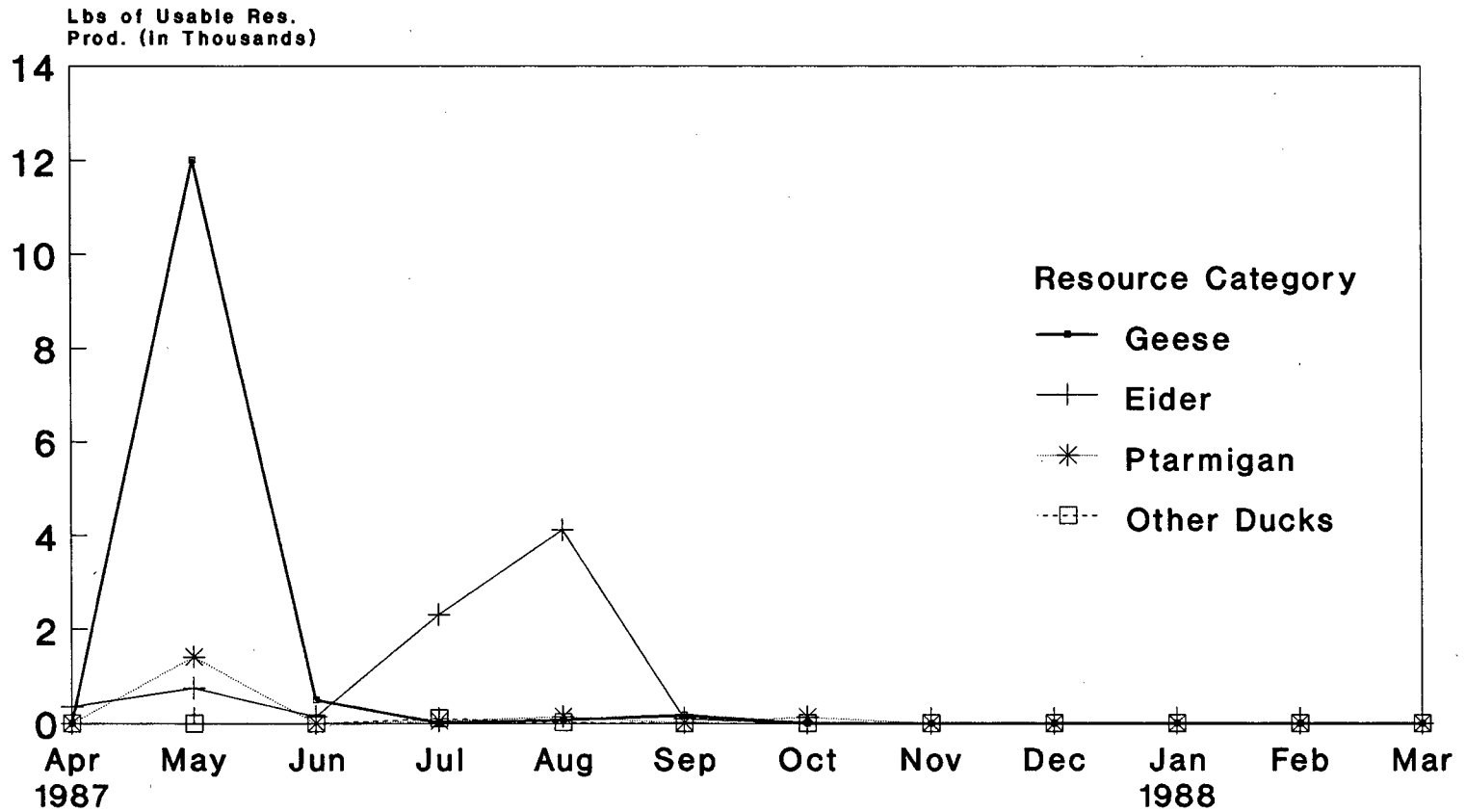
% of Birds: 100%      58%      33%      8%      <1%

Year One: April 1, 1987 - March 31, 1988

Source: Stephen R. Braund & Assoc., 1993



# Figure A-15: Monthly Bird Harvest Estimates All Barrow Households, Year One Revised



A-41

Year One: April 1, 1987 - March 31, 1988  
 Source: Stephen R. Braund & Assoc., 1993




# MAP A-1 NORTH SLOPE SUBSISTENCE STUDY - BARROW: YEAR ONE SUBSISTENCE HARVEST SITES, 1987 - 1988

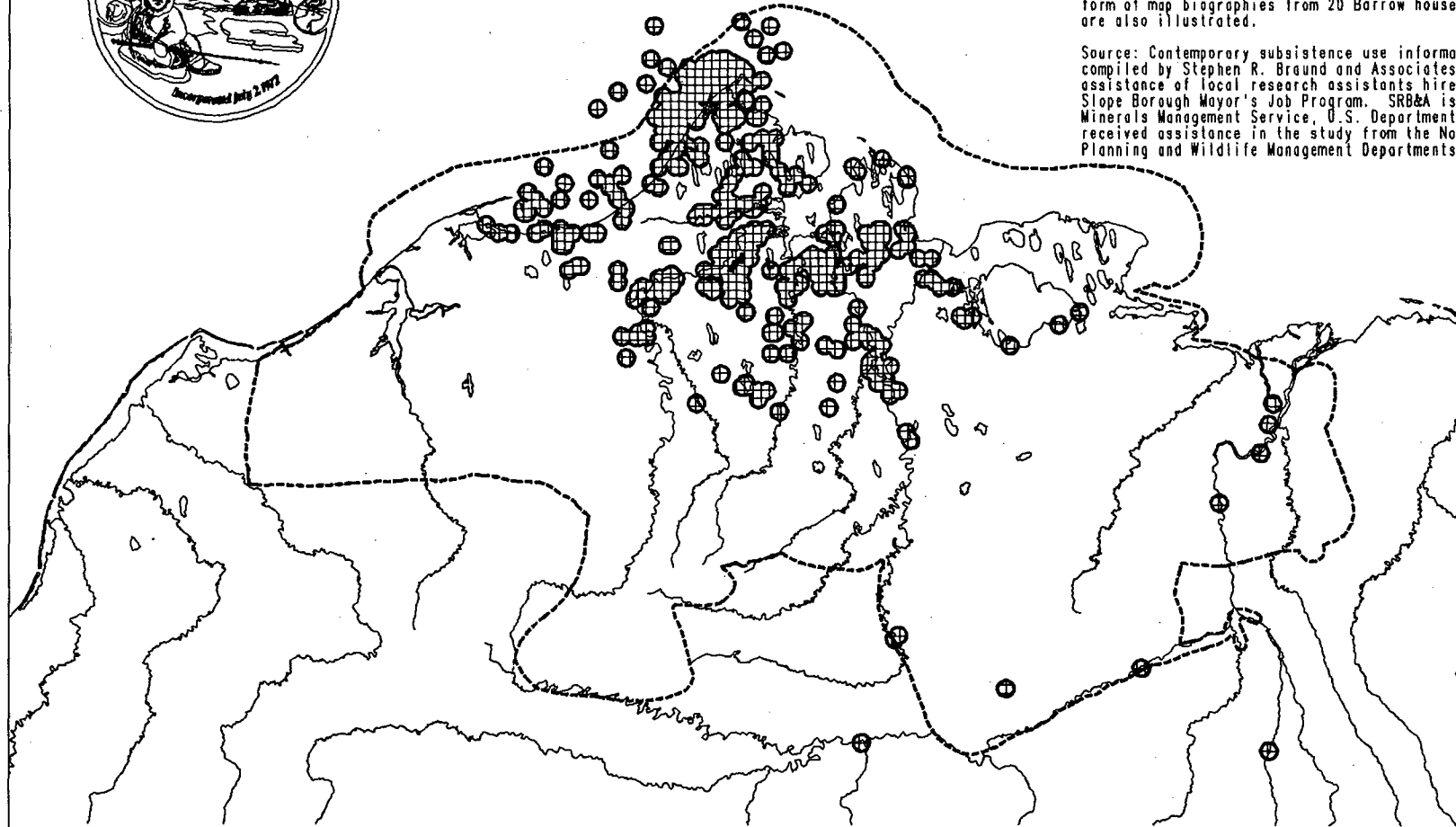


This draft map depicts approximate subsistence harvest sites used by 118 Barrow households (13 percent of the community households). All harvest sites are depicted with a two mile buffer. The map depicts subsistence use for the time period April 1, 1987 through March 31, 1988: Year One of the North Slope Subsistence Study. Additional areas were used by Barrow residents not included in this study. Lifetime-community harvest areas, collected in the form of map biographies from 20 Barrow households (Pedersen 1979), are also illustrated.

Source: Contemporary subsistence use information gathered and compiled by Stephen R. Braund and Associates (SRB&A) with the assistance of local research assistants hired through the North Slope Borough Mayor's Job Program. SRB&A is under contract to the Minerals Management Service, U.S. Department of Interior, and received assistance in the study from the North Slope Borough Planning and Wildlife Management Departments, Barrow, Alaska.

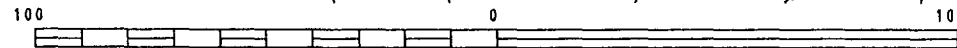
### LEGEND INFORMATION

-  Lifetime community land use (Pedersen 1979).
-  All Species Harvested  
Caribou, Moose, Brown Bear, Wolverine, Fox, Ground Squirrel, Porcupine, Seals, Walrus, Polar Bear, Bowhead Whale, Elders, Other Ducks, Geese, Ptarmigan, Fish, Berries, Bird Eggs, Greens/Roots, Water
-  Barrow



Map Production: North Slope Borough GIS

Date: December 30, 1988



MILES








# MAP A-2 NORTH SLOPE SUBSISTENCE STUDY - BARROW: YEAR ONE SUBSISTENCE HARVEST SITES BY MAJOR RESOURCE CATEGORY

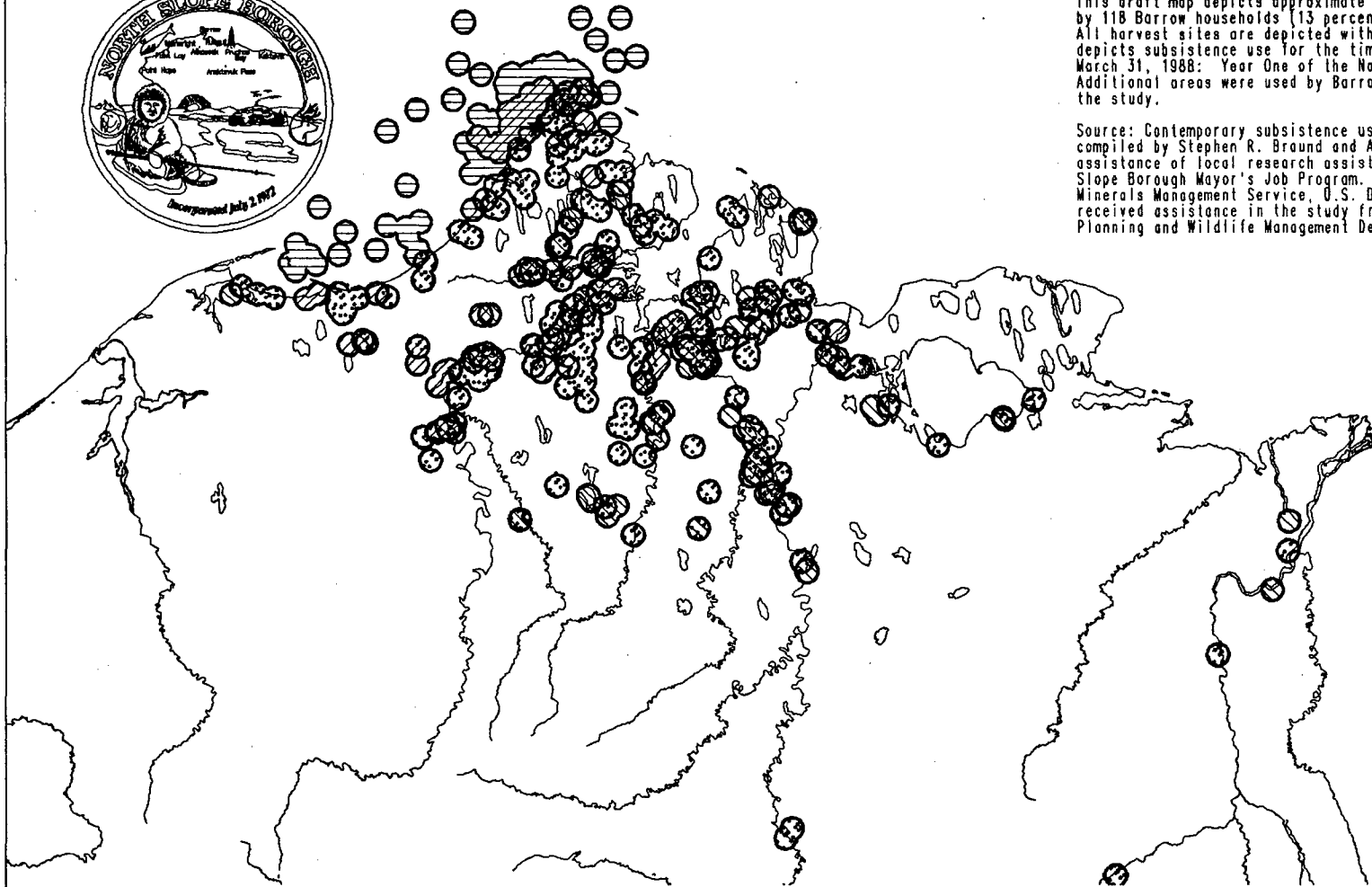


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### LEGEND INFORMATION

-  Marine Mammals  
(Bowhead whale, seals, polar bear, walrus)
-  Terrestrial Mammals  
(Caribou, moose, brown bear, fox, porcupine, ground squirrel, wolverine)
-  Fish  
(Salmon, whitefish, capelin, grayling, arctic char, burbot, northern pike, rainbow smelt, lake trout)
-  Birds  
(Eiders, other ducks, geese, ptarmigan)
-  Barrow



Map Production: North Slope Borough GIS

Date: December 30, 1988

30 0 30 60 90  
MILES




# MAP A-3 NORTH SLOPE SUBSISTENCE STUDY - BARROW: YEAR ONE MARINE MAMMAL HARVEST SITES -- ALL SPECIES

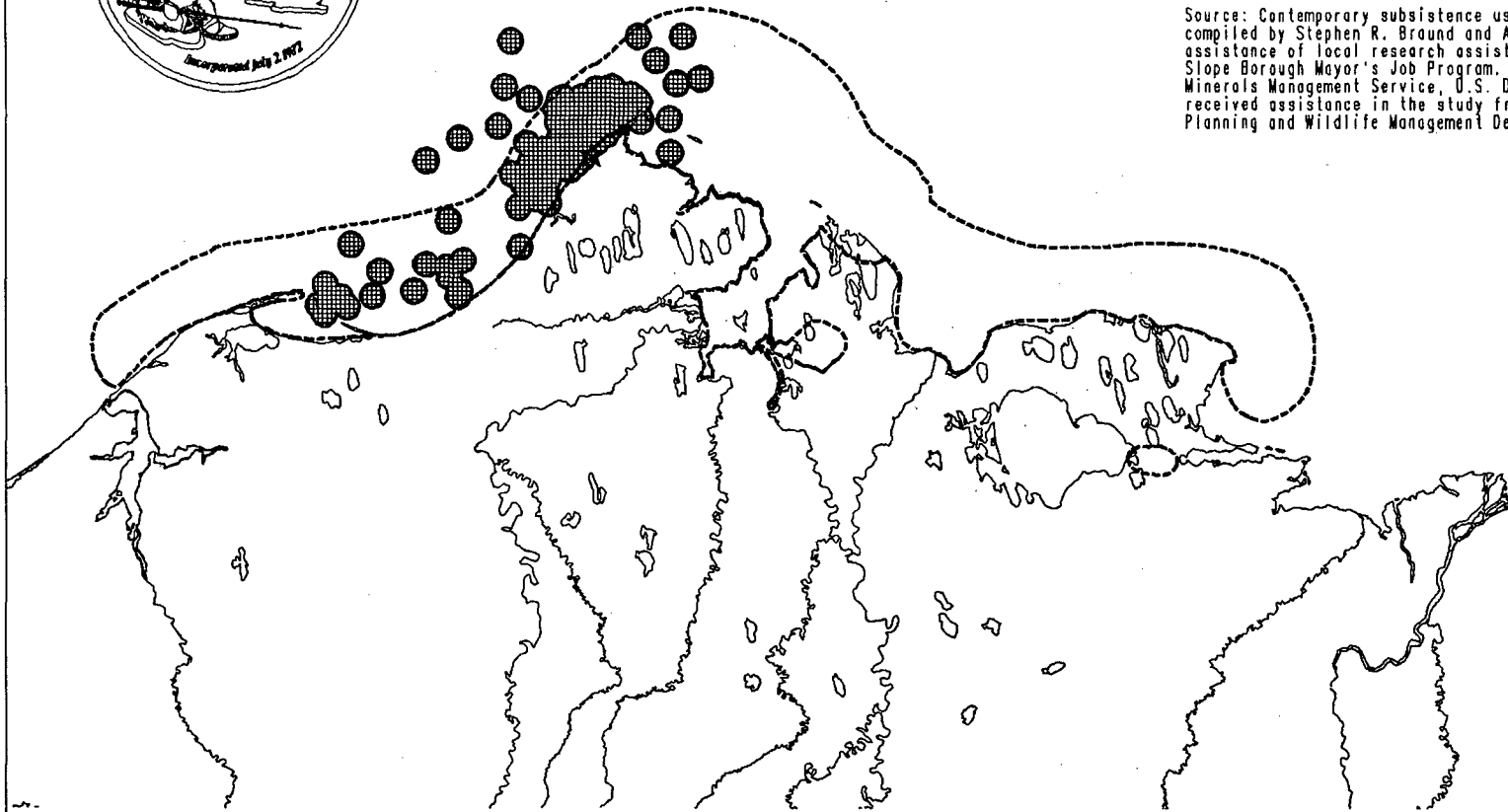


This draft map depicts approximate subsistence harvest sites used by 118 Barrow households (13 percent of the community households). All harvest sites are depicted with a two mile buffer. The map depicts subsistence use for the time period April 1, 1987 through March 31, 1988: Year One of the North Slope Subsistence Study. Additional areas were used by Barrow residents not included in this study. Lifetime-community harvest areas, collected in the form of map biographies from 20 Barrow households (Pedersen 1979), are also illustrated.

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## LEGEND INFORMATION

-  Lifetime community land use (Pedersen 1979).
-  Marine Mammals
  - Bowhead whale
  - Bearded seal
  - Ringed seal
  - Spotted seal
  - Walrus
  - Polar bear
-  Barrow



Map Production: North Slope Borough GIS

Date: December 30, 1988







# MAP A-4 NORTH SLOPE SUBSISTENCE STUDY - BARROW: YEAR ONE MARINE MAMMAL HARVEST SITES BY SPECIES

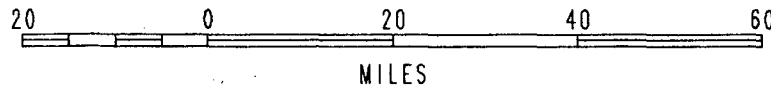
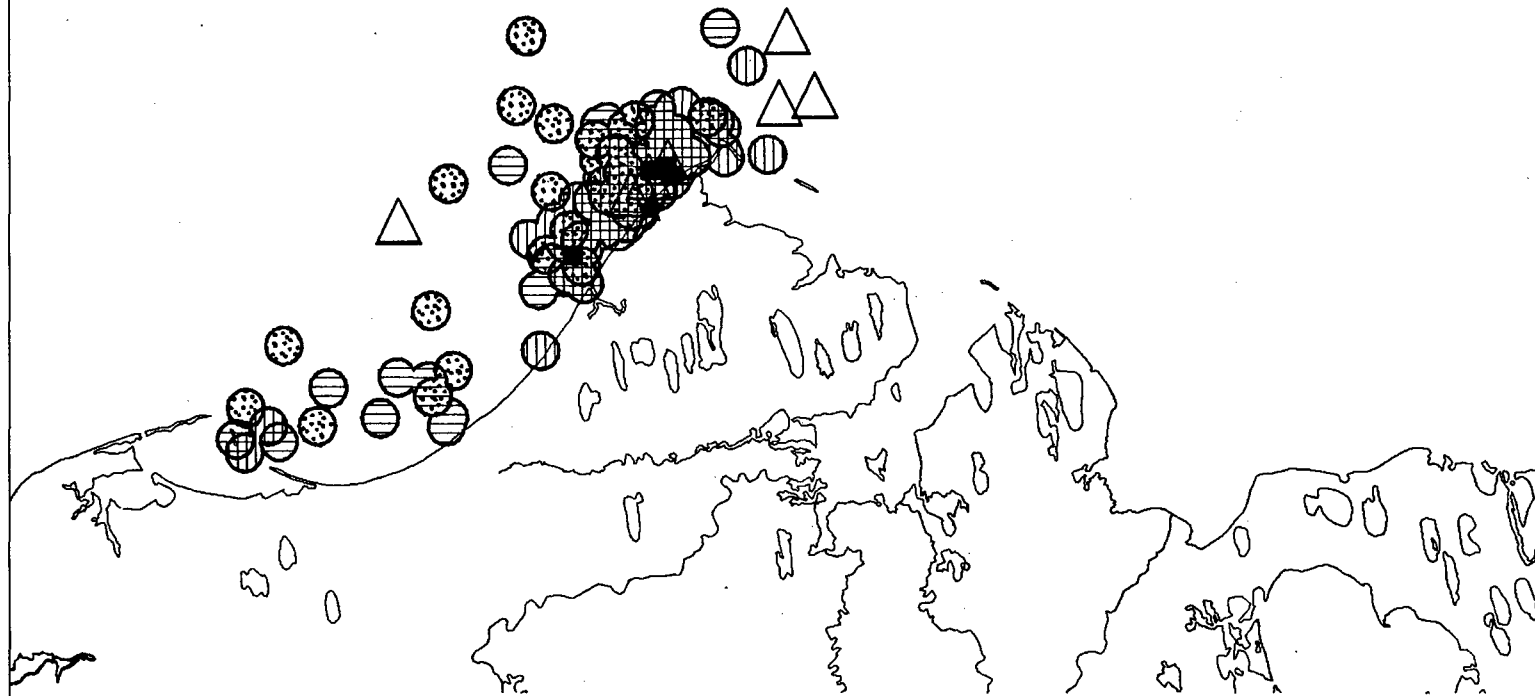


This draft map depicts approximate subsistence harvest sites used by 118 Barrow households (13 percent of the community households). All harvest sites are depicted with a two mile buffer. The map depicts subsistence use for the time period April 1, 1987 through March 31, 1988: Year One of the North Slope Subsistence Study. Additional areas were used by Barrow residents not included in the study.

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### LEGEND INFORMATION

-  Bearded seal
-  Ringed seal
-  Walrus
-  Polar Bear
-  Bowhead Whale
-  Barrow



Map Production: North Slope Borough GIS

Date: December 30, 1988






# MAP A-5 NORTH SLOPE SUBSISTENCE STUDY - BARROW: YEAR ONE MARINE MAMMAL HARVEST SITES BY SEASON

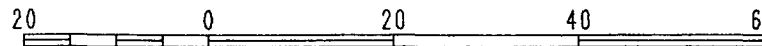
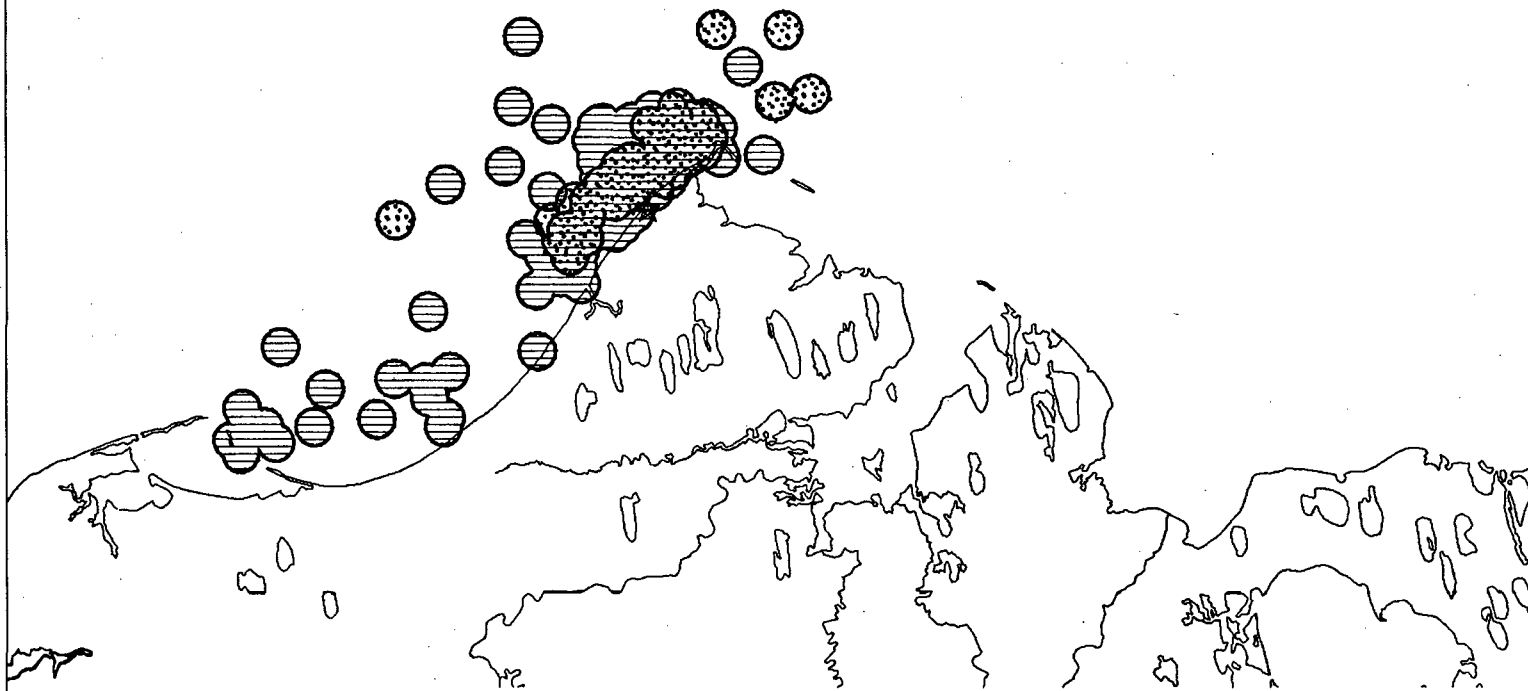


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### LEGEND INFORMATION

-  June - October
-  November - May
-  Barrow



MILES

Map Production: North Slope Borough GIS

Date: December 30, 1988

# MAP A-6 NORTH SLOPE SUBSISTENCE STUDY - BARROW: YEAR ONE TERRESTRIAL MAMMAL HARVEST SITES -- ALL SPECIES




This draft map depicts approximate subsistence harvest sites used by 118 Barrow households (13 percent of the community households). All harvest sites are depicted with a two mile buffer. The map depicts subsistence use for the time period April 1, 1987 through March 31, 1988: Year One of the North Slope Subsistence Study. Additional areas were used by Barrow residents not included in this study. Lifetime-community harvest areas, collected in the form of map biographies from 20 Barrow households (Pedersen 1979), are also illustrated.


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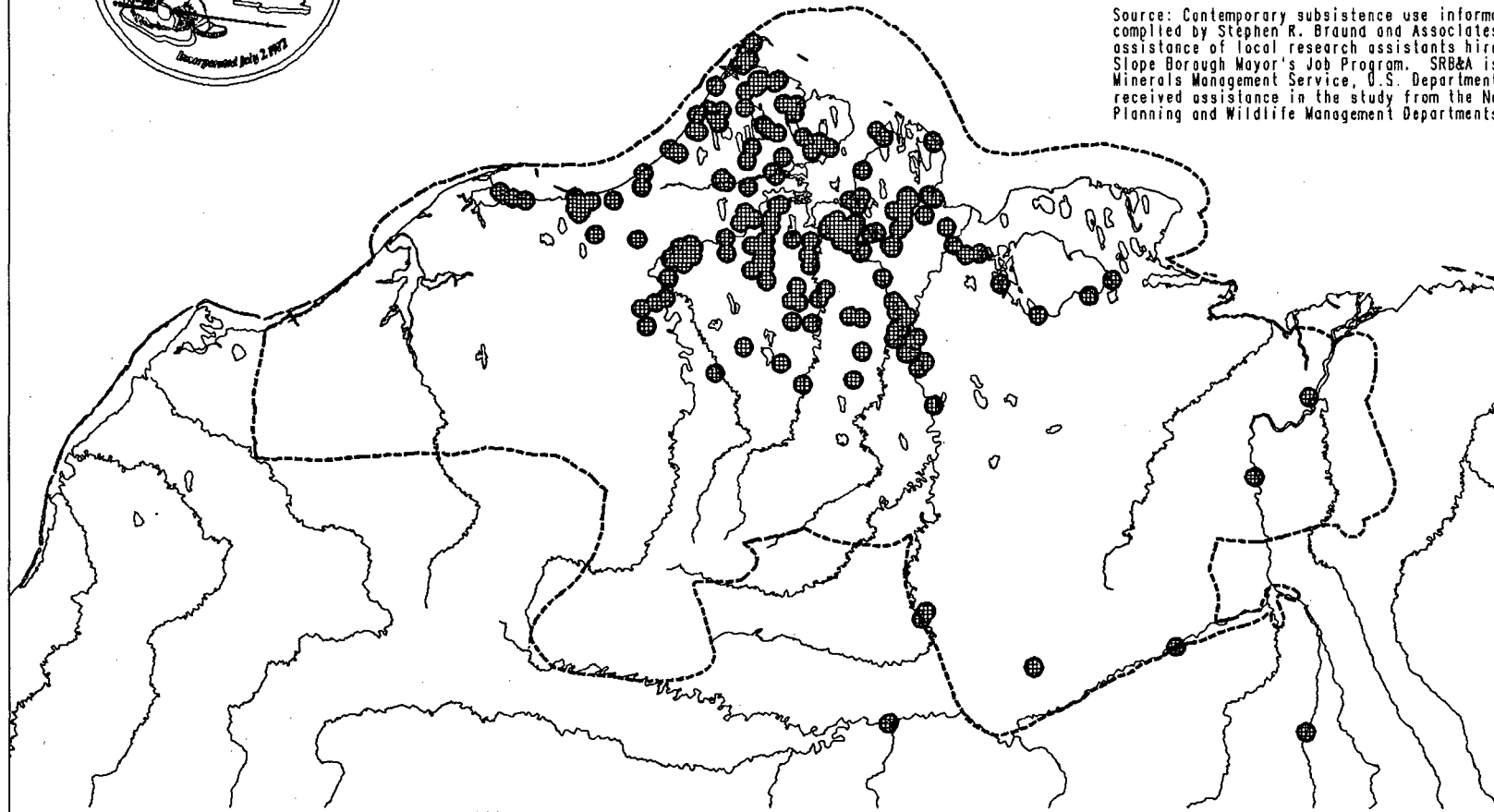
### LEGEND INFORMATION

 Lifetime community land use (Pedersen 1979).

 Terrestrial Mammals

- Caribou
- Moose
- Brown bear
- Porcupine
- Fox
- Wolverine
- Ground squirrel

 Barrow



Map Production: North Slope Borough GIS

Date: December 30, 1988

MILES

# MAP A-7 NORTH SLOPE SUBSISTENCE STUDY - BARROW: YEAR ONE TERRESTRIAL MAMMAL HARVEST SITES BY SPECIES (EXCLUDING CARIBOU)

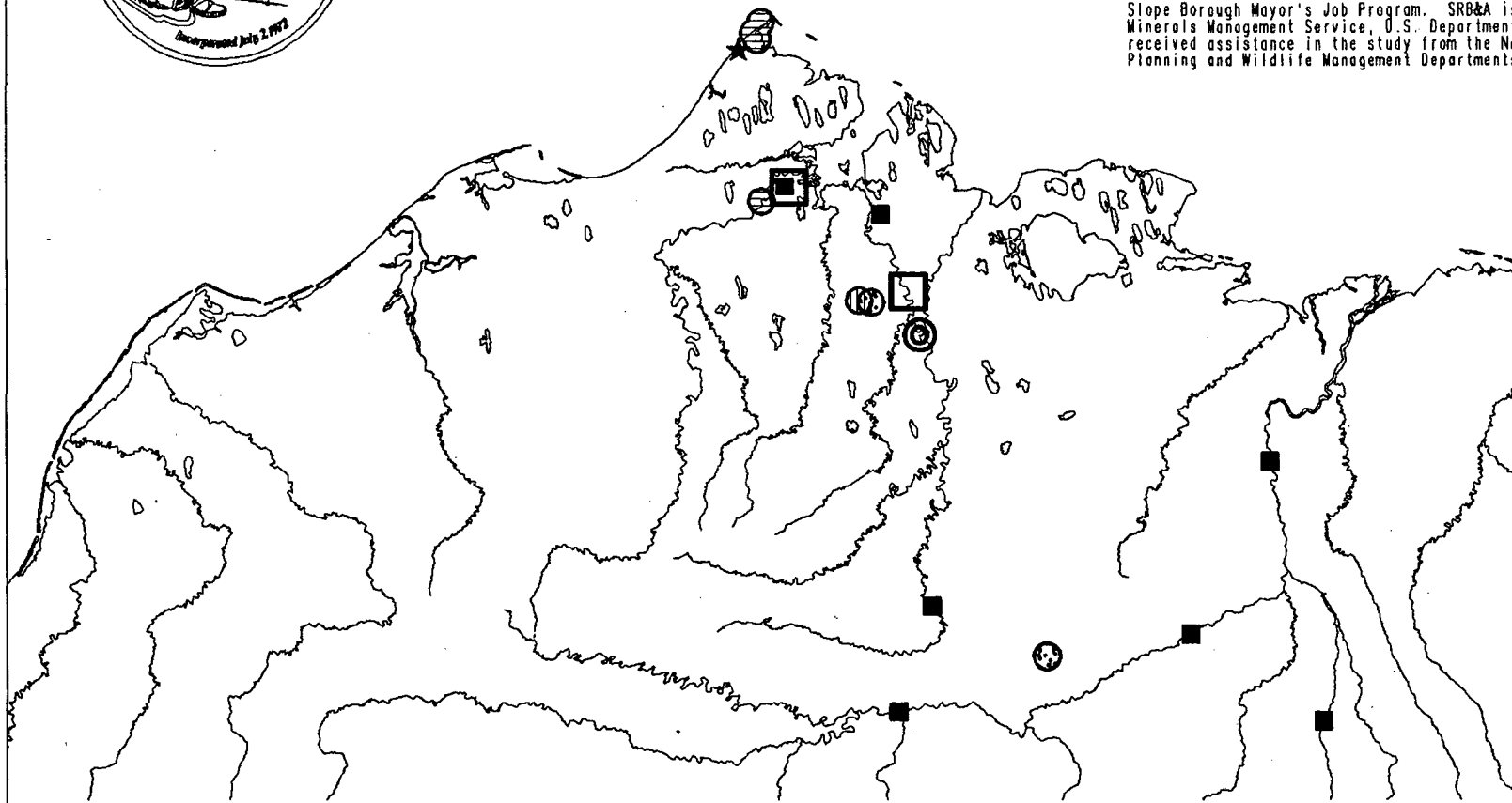


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## LEGEND INFORMATION

-  Fox - Arctic - Red
-  Porcupine
-  Wolverine
-  Moose
-  Brown Bear
-  Ground Squirrel
-  Barrow



Map Production: North Slope Borough GIS

Date: December 30, 1988

MILES








# MAP A-8 NORTH SLOPE SUBSISTENCE STUDY - BARROW: YEAR ONE CARIBOU HARVEST SITES BY SEASON

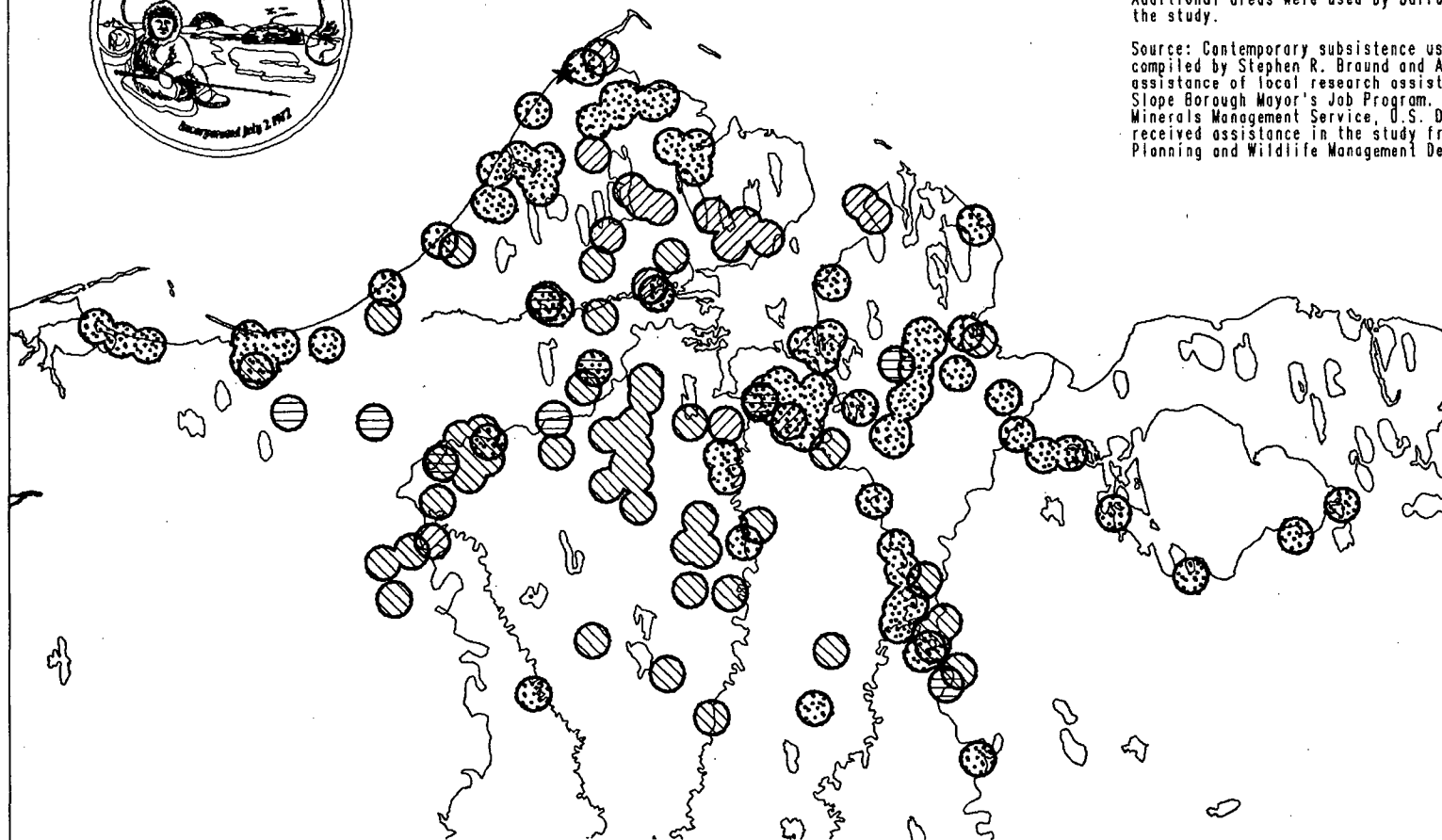


This draft map depicts approximate subsistence harvest sites used by 118 Barrow households (13 percent of the community households). All harvest sites are depicted with a two mile buffer. The map depicts subsistence use for the time period April 1, 1987 through March 31, 1988: Year One of the North Slope Subsistence Study. Additional areas were used by Barrow residents not included in the study.

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### LEGEND INFORMATION

-  April, May  
June 1987
-  July, August  
September 1987
-  October,  
November 1987
-  December 1987,  
January, February,  
March 1988
-  Barrow



Map Production: North Slope Borough GIS

Date: December 30, 1988



# MAP A-9 NORTH SLOPE SUBSISTENCE STUDY - BARROW: YEAR ONE FISH HARVEST SITES -- ALL SPECIES




This draft map depicts approximate subsistence harvest sites used by 118 Barrow households (13 percent of the community households). All harvest sites are depicted with a two mile buffer. The map depicts subsistence use for the time period April 1, 1987 through March 31, 1988: Year One of the North Slope Subsistence Study. Additional areas were used by Barrow residents not included in this study. Lifetime-community harvest areas, collected in the form of map biographies from 20 Barrow households (Pedersen 1979), are also illustrated.

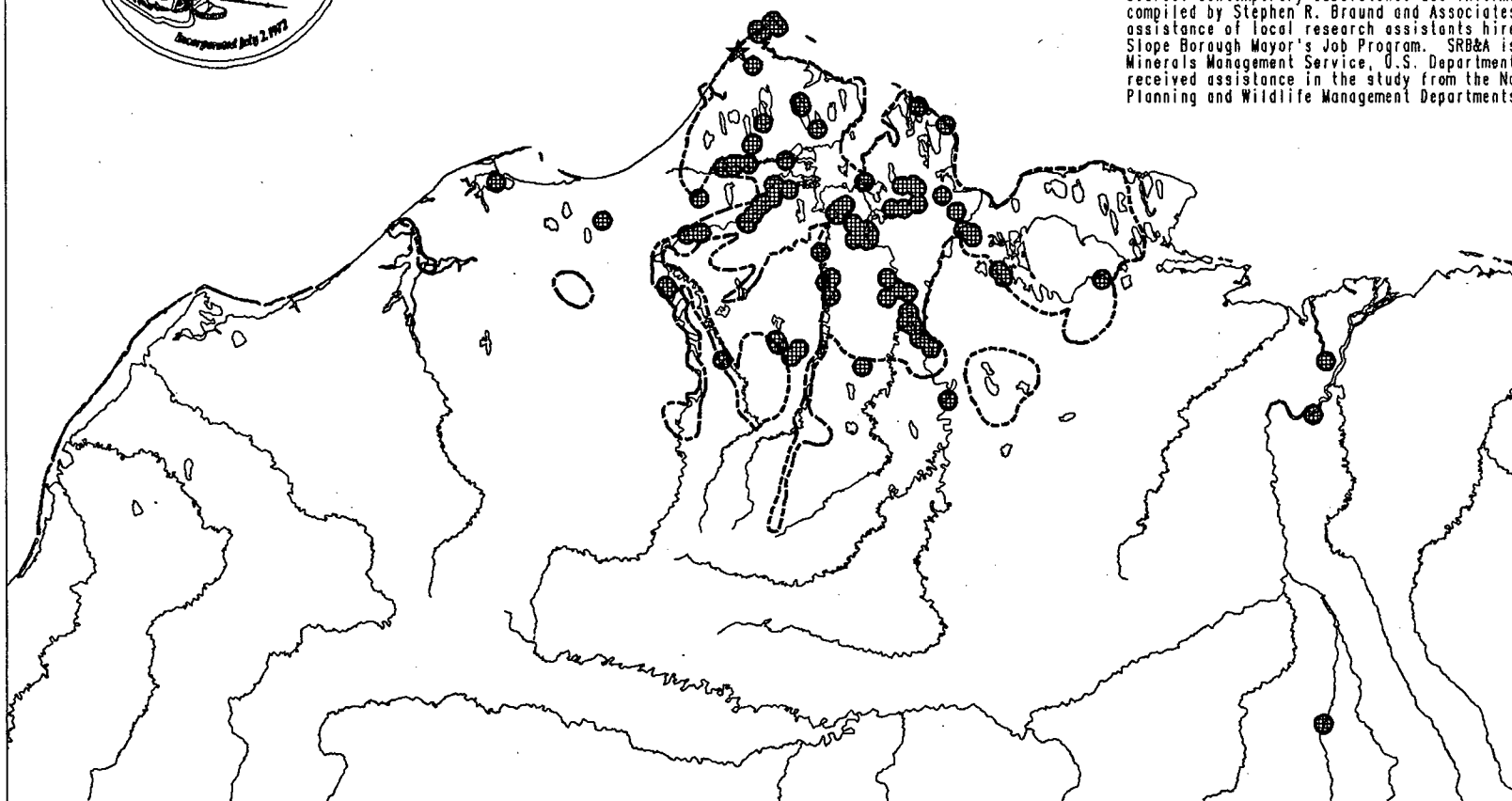
Source: Contemporary subsistence use information gathered and compiled by Stephen R. Braund and Associates (SR&A) with the assistance of local research assistants hired through the North Slope Borough Mayor's Job Program. SR&A is under contract to the Minerals Management Service, U.S. Department of Interior, and received assistance in the study from the North Slope Borough Planning and Wildlife Management Departments, Barrow, Alaska.

### LEGEND INFORMATION

 Lifetime community land use (Pedersen 1979).

 All Fish Species  
 - Salmon  
   - Chum, Silver  
   - Pink, King  
 - Whitefish  
   - Round, Broad,  
   - Humpback,  
   - Arctic Cisco,  
   - Least Cisco  
 - Capelin  
 - Grayling  
 - Arctic Char  
 - Burbot  
 - Northern Pike  
 - Rainbow Smelt  
 - Lake Trout

 Barrow



Map Production: North Slope Borough GIS

Date: December 30, 1988

MILES






# MAP A-10 NORTH SLOPE SUBSISTENCE STUDY - BARROW: YEAR ONE FISH HARVEST SITES BY SPECIES GROUPS

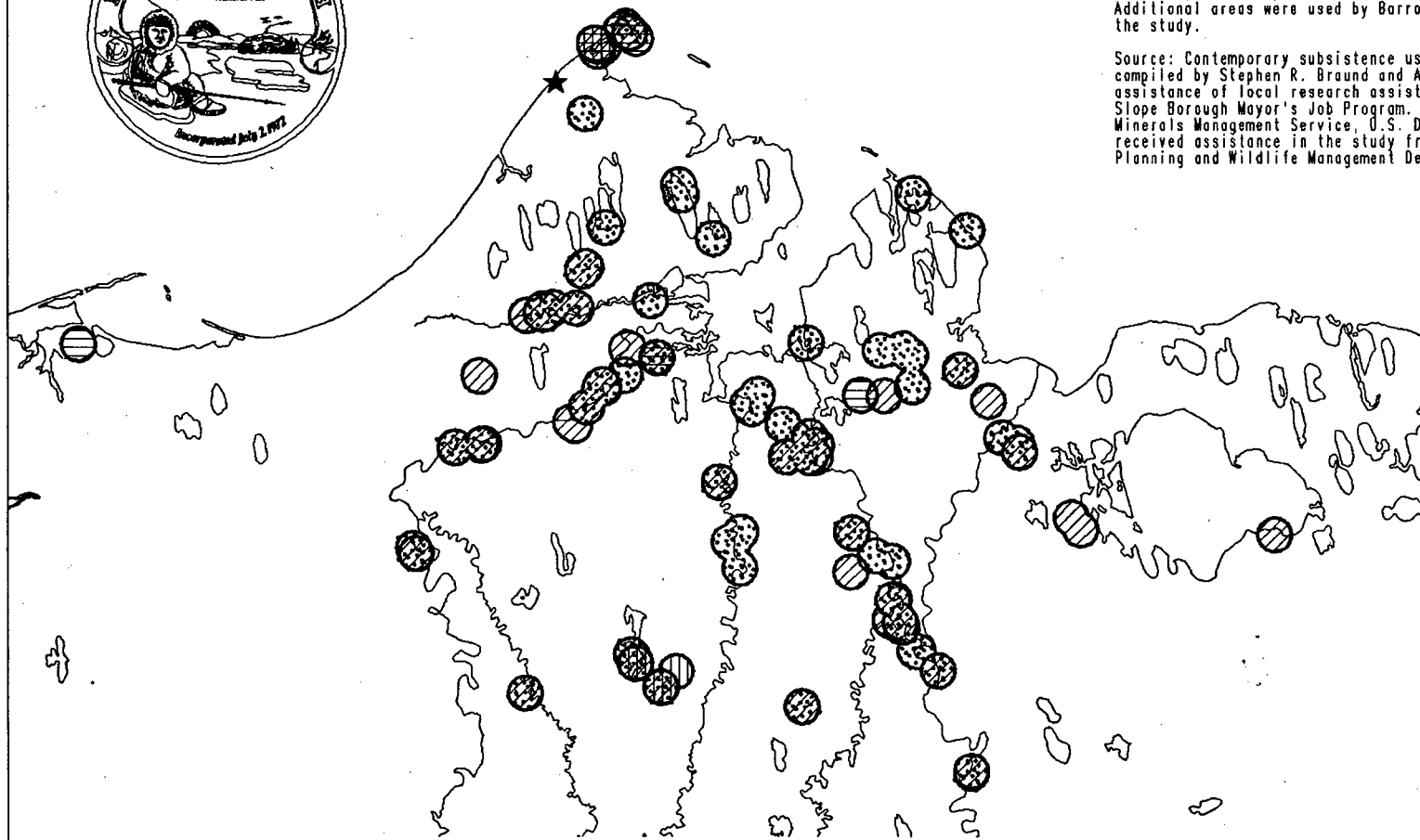


This draft map depicts approximate subsistence harvest sites used by 118 Barrow households (13 percent of the community households). All harvest sites are depicted with a two mile buffer. The map depicts subsistence use for the time period April 1, 1987 through March 31, 1988: Year One of the North Slope Subsistence Study. Additional areas were used by Barrow residents not included in the study.

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### LEGEND INFORMATION

-  Salmon  
Chum, Pink,  
Silver, King
-  Other Coastal Fish  
Capelin,  
Rainbow Smelt
-  Whitefish  
Round, Brood,  
Humpback,  
Arctic Cisco,  
Least Cisco
-  Other Freshwater Fish  
Grayling, Arctic  
Char, Burbot,  
Northern Pike,  
Lake Trout
-  Barrow



Map Production: North Slope Borough GIS

Date: December 30, 1988





# MAP A-12 NORTH SLOPE SUBSISTENCE STUDY - BARROW: YEAR ONE BIRD HARVEST SITES BY SPECIES



This draft map depicts approximate subsistence harvest sites used by 118 Barrow households (13 percent of the community households). All harvest sites are depicted with a two mile buffer. The map depicts subsistence use for the time period April 1, 1987 through March 31, 1988: Year One of the North Slope Subsistence Study. Additional areas were used by Barrow residents not included in the study.

Source: Contemporary subsistence use information gathered and compiled by Stephen R. Braund and Associates (SR&A) with the assistance of local research assistants hired through the North Slope Borough Mayor's Job Program. SR&A is under contract to the Minerals Management Service, U.S. Department of Interior, and received assistance in the study from the North Slope Borough Planning and Wildlife Management Departments, Barrow, Alaska.

### LEGEND INFORMATION



Eiders



Other Ducks



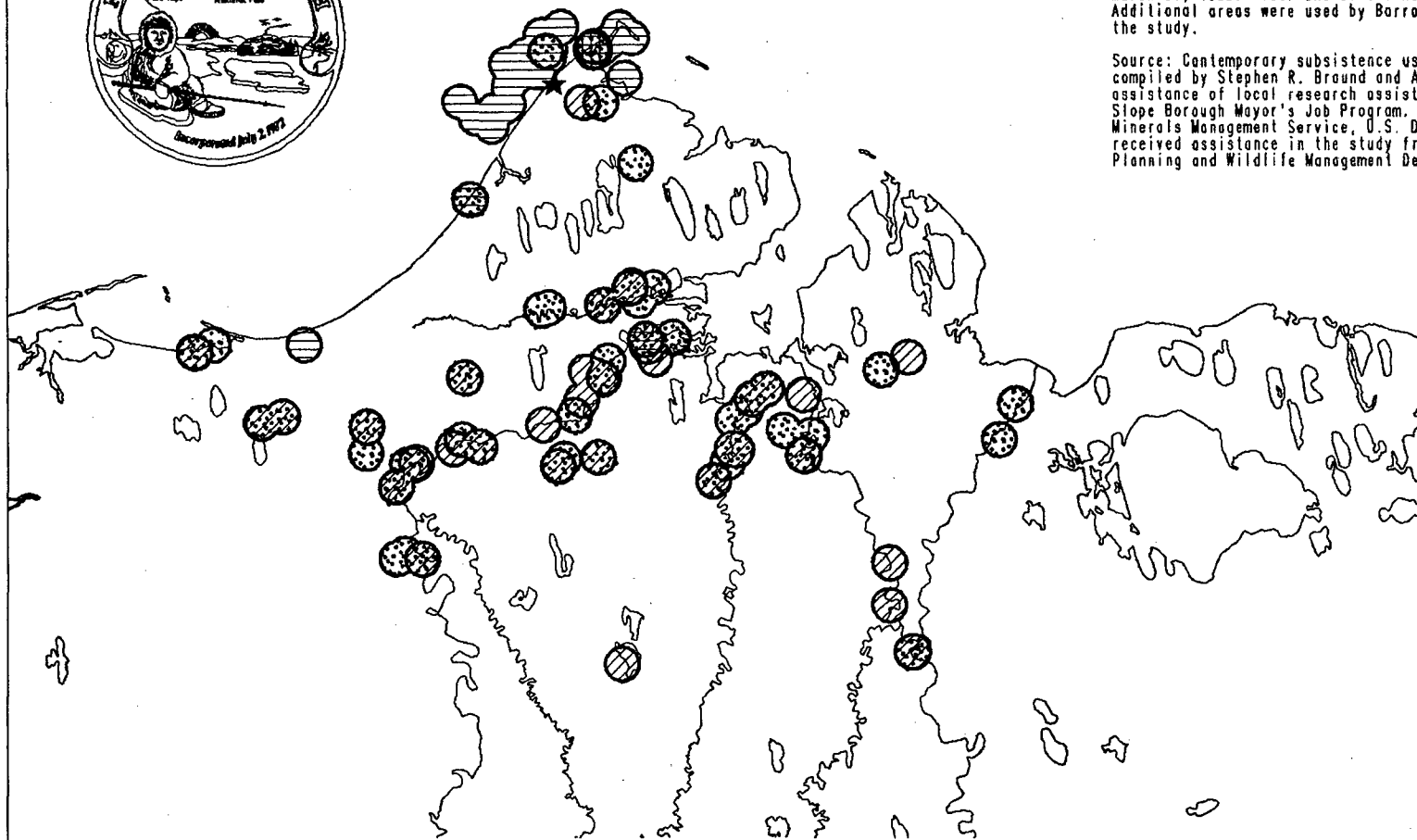
Geese



Ptarmigan



Barrow



Map Production: North Slope Borough GIS

Date: December 30, 1988



MILES



## APPENDIX B

This appendix contains the following reference material:

- o the Year Two Seasonal Round
- o a calendar listing of Year Two activities and events
- o Year Two data tables
- o Year Two data figures (charts and graphs)
- o Year Two subsistence harvest site maps

### YEAR TWO SEASONAL ROUND

The following month by month report of subsistence activities documents Barrow residents' annual subsistence cycle from April 1, 1988 through March 31, 1989. This description highlights the month's major subsistence activities, and points out any significant or unusual environmental, social, cultural and/or economic conditions or events that may have affected hunting that month. While the pattern of activities generally remains much the same from year to year, changes in environmental conditions, local resource availability, as well as social and economic factors do affect the actual timing and the relative importance of the different resources harvested from year to year.

All temperatures are given in Fahrenheit, with most being reported as ambient temperature. Windchill temperatures are given where appropriate and when available.

#### APRIL 1988

Final preparations for whaling were completed in April. New bearded seal (*ugruk*) skins were sewn on the *umiaq* (skin whaling boat) frames. Ice cellars were cleaned out and fresh snow placed inside. Trail building also began in earnest as crews decided where they would locate their camps during the spring bowhead whale migration. At least five trail systems extended out

from major landmarks and traditional camping areas along the coast, from Walakpa Bay 15 miles south of Barrow to off of Point Barrow 10 miles to the north. The ice remained closed the first two weeks of April. When it opened mid-month, the lead was about four miles from shore. Most crews went out about the 23rd, a few days later than last year. On April 24, Jonathan Aiken's crew landed the first Barrow whale of the season. The next day four whales were landed. On the 26th, the lead edge began to close and the camps moved back from the lead. On the 28th, a crack in the ice began to widen only a half mile from shore. The lead edge became established there when a large ice pan broke off and floated out that evening. Crews began re-establishing their camps along the new lead edge the next day. The lead was so close to town that the crews traveled away from town at least ten miles up or down the coast to make camp. According to one whaling captain, "town is too noisy."

## MAY

Three whales were harvested in early May. The whaling season ended for some crews on May 6 when the last whale in Barrow's spring quota was landed. However, a strike was received from Kivalina at mid-month and approximately half of the crews re-established camps on the ice. The brief two day whale hunt proved unsuccessful. A few crews had maintained their camps on the ice throughout the first half of the month. Eiders and seals were harvested at this time. Successful crews especially were attempting to harvest extra subsistence foods to serve at the *Nalukataq* (blanket toss festival) celebrations in June.

Travel conditions were not favorable the second week of May. Blowing snow and average wind speeds of 25 mph, with gusts to 35, limited travel. About mid-month many families began traveling to camps to hunt waterfowl and to get ready for fishing. The major rivers stayed frozen through May and the travel conditions remained favorable, though moderate winds and fog persisted through the end of the month. The more popular waterfowl hunting locations were primarily along the Inaru River and lower section of the Meade River.

Ptarmigan were also harvested at camp. Caribou harvests were uncommon, however. Although a few were harvested to provide food for camp, most hunters

refrained from taking caribou later in the month as fawning time neared. One hunter also reported that the caribou hair falls out easily this time of year and is impossible to keep out of the meat when butchering the animal. Two polar bears that wandered close to town were also harvested this month.

Late in the month, successful crews began hosting their "bring up the boat" celebrations. Usually held on the beaches in front of town or on the cliffs near the old village site, it was a time for the successful crew to again share their good fortune of a successful hunt. The crews usually served a special treat of *mikigaq* on these occasions, a delicacy of fermented whale meat and *maktak*. Fresh eider, goose, and caribou soup were also served at these celebrations, as well as Eskimo donuts, fruit, tea, and cake.

## JUNE

Geese and duck hunting continued in early June. Wind, blowing snow, and migration patterns significantly affected harvest success from one location to another. As the snow receded in the warmer inland areas, families moved their camps closer and closer to Barrow. Although white-fronted geese were the most common variety harvested, one hunter reported seeing many more brant than usual this year.

Seals were harvested during June. Early in the month, most hunters traveled to the lead edge by snowmachine while others walked out to the lead that remained within a half mile of shore. By mid-month, the ice melted near shore preventing easy access to the lead from town. A common practice was for hunters to pull their boats behind snowmachines down the coast for 10 miles or so to an easier point of access to the open lead.

A few whaling crews continued whaling until mid-month but the transferred strikes remained unused. In the previous year a whale was harvested in mid-June, over a month later than the final whale harvest of this spring's season.

Some caribou hunting occurred during the month, primarily from fish camps or marine mammal hunting camps. Fresh fish was a welcome addition to the local



diet and was supplied primarily by families that traditionally supply fish to all who need them this time of year. The Teshekpuk Lake and Chipp River areas produced a significant amount of these early season fish.

By mid-month the eight successful crews and their families and friends were devoting their free time to preparations for *Nalukataq*. Shares of whale were cut into smaller pieces, fish were cut in sections, and caribou and ducks were prepared for soups, all intended for distribution at the community-wide feast. New parkas and parka-covers were sewn and the blankets for the blanket-toss were prepared from the boat skins of the successful crews.

The two *Nalukataq* celebrations took place on June 27 and June 28. Four crews served the people each day. Everyone seemed to be in town for the celebrations and the soon-to-follow Independence Day holiday.

The temperatures were very similar in Years One and Two, averaging in the mid-30s for June, with the high for the month falling on the 28th in both years: 49 in Year One and 54 degrees in Year Two. The winds were more moderate in Year Two. It is also important to note that there were eight "heavy fog" days in Year Two, twice as many as there were in June of Year One.

## JULY

On July 5 and 6, the shorefast ice floated out, opening up the boat launching areas in front of town. That corresponded very closely with the date the ice floated out last summer. Boating from town began in earnest on July 6. Many bearded seal harvests were reported.

Ice conditions favorable for boating in the ocean came to an abrupt end during the evening of July 13. The wind began blowing from the southwest on the 13th and pushed the pack ice tight against the shore. The ice remained against shore through the end of the month. The wind was more often out of the west and southwest in Year Two, blowing westerly or southwesterly almost consistently from July 14 through August 3. July was also extremely foggy in Year Two, with heavy fog recorded for 19 days during the month.

The same winds that blew the ice in to the beach on the Chukchi side of Point Barrow carried the ice out of Elson Lagoon. The lagoon was relatively ice free on July 14 and that signaled the beginning of boating to inland camps. Hunters also began hunting for bearded seal in Elson Lagoon and in the vicinity of the barrier islands east of Point Barrow in the Beaufort Sea. Occasionally hunters ventured into the Chukchi side of the point; however, one experienced ocean hunter reported that with all the ice and the fast current, travel on that side was dangerous unless other conditions (e.g., wind, visibility) were just right. With the foggy conditions most of the month, visibility was seldom favorable for boating among swiftly moving ice floes.

With the opening of Elson Lagoon, the area river systems became accessible to families who wanted to boat to fish camp. Whitefish (broad and humpback) were the major species harvested during the month. Some families also set nets near Point Barrow on the lagoon side of the point. Whitefish, arctic cisco, arctic char, silver salmon, and chum salmon were being caught there by mid-month. Families were also occupying their cabins or setting up camp at the shooting station or *Pigniq* at the base of Point Barrow. Many families enjoyed staying out there, away from the noise of town. One study participant wistfully wanted to move his office to *Pigniq*. Eiders were flying back over the point toward the west and harvests took place primarily at *Pigniq*. The hunters were often young boys 7 to 15 years old, some of whom were just learning how to shoot.

Caribou were very near town. One elder reported driving out the Gaswell road and seeing 5,000 caribou from the road.

## AUGUST

August activities mirrored July to a some extent; however, both boating and marine mammal harvests were more common. Those with free time or with time off from work traveled to fish camps for fish and caribou. Others took weekend trips as often as possible. August was a busy month for travel, as boating had been limited for many in July and school would begin at the end of this month.

In early August, south and southeast winds finally blew the ice offshore in front of town. On August 5, for the first time since mid-July, bearded sealand walrus hunting crews could launch boats from the beaches near town. A portion of the ice pack was blown back to within sight of shore and hunting conditions remained excellent throughout the week with fairly calm winds. Some of the first walrus harvests of the year occurred during that first weekend of the month.

Caribou were available in most areas though usually not taken in large numbers. However, there were exceptions. One family took home 14 caribou for the ice cellar after finding themselves surrounded by thousands of caribou, with room in their boat, and unsure if they would have the time or the opportunity to catch caribou in the fall. A few families were disappointed in not harvesting any caribou during week-long boating trips.

Fishing continued inland at camps and at *Pigniq*, although catches tapered off at *Pigniq* as the month progressed. Fishing was slow at some of the camps. Many families related that high water conditions were moving grass and other debris downstream, causing them to pull their nets to prevent them from being fouled. These high water conditions were similar to last year.

Eiders were harvested as they traveled on their southwesterly migration back over Barrow. A few families gathered greens at camp. The berry season was again poor. It has been three years since a good berry season, according to one person who likes to pick berries near the Meade River. A similar report was given by a family that picks berries in the Teshekpuk area.

School started a little earlier this year, on the 18th of August.

## SEPTEMBER

Boating continued this month until about the 18th. By that time ice had blown in and piled up against the grounded offshore ice to the extent that all passage to open ocean had been blocked. Open water remained in the 300 yard area between shore and ice and seal hunting continued from small boats or near shore through the end of the month.

Barrow whaling crews harvested three whales this month, successfully using all three of their allocated fall strikes. The first was harvested on September 15 and two were harvested on Saturday, September 17. Two males and one female were harvested, all in the 48 to 51 foot range. Over 40 boats participated in pulling in the two whales on the 17th. The ocean was calm and the ice floes scattered during the successful whaling period. The day after the last harvest the wind grounded the ice on shore and conditions favorable to fall whaling were absent for the rest of the season.

Fall fishing under the ice and related caribou hunting began as snow conditions improved during mid-month. Many families were observed going out shortly after the whale harvests. Grayling tend to school and swim downstream in mid to late September, earlier than the whitefish species. Families that know of these good grayling fishing locations were eager to get out as soon as travel conditions permitted. Flying to fish camp was more common during this time of year since neither boating or snowmachine travel conditions were favorable.

Caribou were taken in larger numbers this month; the rut was approaching and the meat of the older bulls would soon become inedible.

The lakes and rivers froze earlier than usual and five families who had boated to their camps were forced to break through ice to get out to open water. Some were able to make it back to Barrow while others had to charter a plane to get back and would retrieve their boats this winter. Although the early freeze-up made boat travel more difficult, fishermen were able to take advantage of the situation and set their nets under the ice earlier than expected.

## OCTOBER

Fishing and caribou hunting were the primary subsistence activities this month. Families traveled extensively to inland cabins and camps.

In addition to jigging for grayling and burbot, one to four nets were commonly set by a family under the ice in rivers and lakes near their camp. Once in place, the nets were usually checked once or twice daily and left at the same location until the family broke camp or until they caught a sufficient amount

of fish. As two households related after their fall fishing trip, once they had sufficient amounts of fish, they left their nets in place for other families who wanted to fish.

In October, caribou hunters traveled out from camp by snowmachine as far as the weather, the daylight, their equipment and fuel, and their navigation skills permitted, or as far as necessary to successfully catch caribou. Many people reported caribou being scarce near their camps on the lower Meade, Topagoruk, and Chipp rivers. Although caribou were present and at times abundant in the vicinity of Barrow during the month, many of the active harvesters were inland at fishing sites and family camp sites. Since caribou were more scarce in those inland locations this year, total harvests for the month were less than in Year One.

A few individuals were jigging for the small arctic cod in the the tidal cracks just in front of town. These are a popular fish that were not caught in very large numbers during the first year of the study.

The snow cover was much deeper this year than last. This had both favorable and unfavorable ramifications for snowmachine travel. On the favorable side, travel was at times much faster this year. Rough stretches of ground were well covered and very few detours were required. More miles could be covered in a day. However, the deep snow conditions also presented significant problems:

- o Deep snow is harder on the machine. Rubber belts burn up quickly especially when pulling a heavy load. One key informant reported burning up three belts on a day trip and then had to abandon his sled and load of caribou when it became apparent he would not otherwise make it home before dark.
- o Gas consumption is much greater in deep snow. Trips were more expensive and reports of running out of gas were more common this year.
- o Deep snow hides drop-offs and ditches. Though snowmachine travel is always a dangerous endeavor in the Arctic, accidents to traveling hunters caused by snow covered hazards this year included a broken collarbone and a broken leg.

The wind and temperature were favorable for hunting and traveling most of the month though white-out conditions became more common near month's end. It was

cooler this year than last, with an average monthly temperature of 2 degrees compared with 22 degrees the year before. Cold temperatures however are not nearly such a limiting factor to subsistence activity levels as are wind, visibility, and ice conditions.

Out on the ice, an open lead formed less than one mile out from town on October 23. These were very favorable conditions for seal hunting as hunters did not have to venture very far out during this time of unstable ice conditions.

Though not a subsistence activity, the Barrow gray whale rescue - Operation Breakthrough - likely had a significant influence on mid- to late October subsistence harvest activities. The whales were discovered on October 7 and the local rescue effort began in earnest on October 16. From that date until the whales eventually escaped the ice on October 28, the local commitment of manpower was extensive. At least 30 people, mostly men, were employed full-time through the Mayor's Job Program on the rescue effort.

#### NOVEMBER

Most families had moved from their camps back to town by mid-month.

Caribou remained in the vicinity of Barrow throughout the month and harvests of caribou during November were triple that of the same month in Year One.

Conditions were very good for fishing arctic cod along the shoreline in front of Barrow. A combination of ice conditions and availability of fish made this fishery much more productive than last year. At least two families traveled to the Admiralty Bay area to fish for arctic cisco.

The last ten days of November especially provided favorable seal hunting conditions, with very moderate wind conditions and an open lead within a mile of town. It was an hour's walk to the edge of the lead according to one hunter. The Thanksgiving holiday also provided extra time for hunting during the favorable conditions for those who wanted fresh seal meat for their families. One pair of hunters harvested seven seals in one day during this period. Other reported harvests varied from zero to one or two seals per hunter.

November was characterized by lower than average temperatures, usually in the -15 to -20 degree range. Wind speeds remained moderate most of the month. One exception was on the 8th when wind speeds to 35 miles per hour pushed the windchill to -65 degrees.

Thanksgiving was the major community event during the month and was a significant occasion for the distribution of subsistence foods. Pre-holiday preparations included cutting up whale meat and *maktak*, cutting fish, making caribou soup, and preparing fruit and donuts. The successful whaling crews and successful fishermen delivered their boxes of whale and fish to the churches early Thanksgiving morning. By noon the churches were full. At 1:30 the food distribution began. Servers continued to walk by for the next three hours with soups and other foods to eat at the church, as well as with whale and fish for each household to take home. Approximately 40 pounds of whale and a few pounds of fish were distributed to each of the families present at the churches. Those with larger families received more.

A portion of the day before Thanksgiving was set aside for a North Slope Borough potluck dinner and the day after Thanksgiving was a North Slope Borough holiday.

## DECEMBER

Caribou remained in the vicinity of Barrow in December, though the harvest of caribou remained relatively low. Hunters perceived the condition of the animals to be not as favorable as in other times of the year. Seal hunting and fox trapping were other subsistence activities in December. All the successful whaling crews distributed whale and other foods at the churches during Christmas. Some of the crews were busy in early December already boxing up the food to be distributed during Christmas.

Community games and competitions were held during the period between Christmas and New Years.

Similar to last year, temperatures plummeted near month's end, the low hitting -42 degrees on the 24th. Wind speeds increased during this same period as

well. Although temperatures increased to -21 degrees on Christmas day, wind speeds increased to 37 mph giving a resultant windchill of -80 degrees. Fog and blowing snow were common throughout the month.

## JANUARY 1989

The *Kivgiq* or Messenger Feast, held during three days in early January was the most significant subsistence related community activity during January. Many people from all the North Slope villages visited Barrow for the recently revived traditional celebration, held for the second year in Barrow. Last year was the first time the gathering had been held since the early 1900s. A community potluck and the exchange of subsistence items (e.g., ivory, furs, crafts) and subsistence foods were important aspects of the event.

Bitter cold persisted the last three weeks of January. The National Weather Service in Barrow recorded -50 degrees on January 24 with winds to 21 miles per hour, taking the wind chill factor to below -100 degrees. Temperatures remained in the -50 degree range for the rest of the week. The monthly average temperature for the month (-24 degrees) was -14 degrees the previous year. Hunting effort, primarily targeted on seals, was very limited during the month. Fox trapping also continued near town.

Because of low temperatures, most air travel to the villages was grounded for close to two weeks except for emergency medical flights. An extreme high pressure settled over the state at the end of the month, grounding even large jets for a few days. Shipments of food, supplies, and equipment to the villages were very limited during the last two weeks of the month. Travelers to the villages became stranded in Barrow and Barrow residents traveling home from Fairbanks and Anchorage were stranded in those cities.

## FEBRUARY

Extremely strong winds blew on February 25, 27 and 28. Drifting snow closed all the roads on those days. This major storm piled blocks of ice the size of houses up onto the beach to a height of 20 feet or higher. Many reported that it was the first time they had seen ice piled that high on the beach so



extensively, stretching from Point Barrow all the way to Skull Cliffs. The trail systems developed by seal hunters out through the ice pack were totally demolished. Travel away from town during the end of February was at a minimum.

Prior to the storm, seal hunters had some success in periodically open stretches of water, usually on the Beaufort Sea side of Point Barrow. The best seal hunting appeared to be around mid-month. After the storms, the Beaufort Sea side of Point Barrow was entirely open water, a phenomenon seldom if ever witnessed at this time of year by current Barrow residents. The open area refroze within the week in a very smooth condition. Seals could be seen sunning themselves out in the middle of the large open flat area, though most attempts at harvesting them were reportedly unsuccessful. The smooth area of ice provided easy access out to the Beaufort side of the point, while the Chukchi side was basically inaccessible without major trail work.

Trapping and hunting of furbearers (i.e., fox, wolverine, and wolves), caribou hunting, and polar bear hunting occurred during the month. Furbearer hunters made extended trips to inland camps located 100 miles or more from Barrow. The first *umiaq* frame of the season was covered with bearded seal skins on February 24. One of the women who sews the skins related that crews are covering their boats earlier these days.

## MARCH

Rough ice conditions and a lack of open water appeared to curtail seal harvests during the month. Many polar bears were sighted in an area 30 miles northeast of Point Barrow but harvests were few. In one instance, a hunter was alone and knew he could only handle a smaller bear by himself, but could see only very big bears. Another hunter wanted to select only a bear with clean fur. Each one he began stalking, however, was soiled with blood and oil from the carcasses on which they had been feeding. The extreme winds in late February caused a continuous stretch of rubble ice in front of town between the shore and the open lead. The open lead was about seven miles from town. A few crews began building trails out through the rubble near town, while others were exploring the smoother ice conditions to the south out from Walakpa Bay and even farther south.

At least 12 hunters traveled inland in search of wolverine and wolves. Reportedly few tracks were seen and fewer wolverine were harvested than last year. No wolves were reported harvested by the study participants. Hunters reported good travel conditions in the foothills because of the deep snow, with the large drifts facilitating river and ravine crossings. Closer to town the solid drifts, which were like cement according to one hunter, hindered travelers and increased travel times.

Caribou were harvested near the Meade and Inaru rivers. Those who traveled further inland reported a scarcity of caribou.

Other whaling activities continued: sewing the bearded seal skins together, stretching the skins over the boat frames, building sleds and preparing other equipment.

The annual Alaska Eskimo Whaling Commission convention was held this month in Barrow, March 8 through 11. The 1989 bowhead whale quota of 41 landed whales was allocated among the nine whaling villages. Barrow received a quota of 14 whales landed, an increase of three over last year.

As a summary to the Seasonal Round, the following list highlights the key community and environmental events that directly or indirectly influenced subsistence activities in Year Two.

| <u>DATE</u>       | <u>ACTIVITY OR EVENT</u>                                                                                                                   |
|-------------------|--------------------------------------------------------------------------------------------------------------------------------------------|
| April 3           | Easter.                                                                                                                                    |
| April 14          | Open lead develops for the first time during the month, approximately four miles from shore.                                               |
| April 15-17       | Barrow Spring Carnival, <i>Piuraagiaqta</i> .                                                                                              |
| April 18          | Gambell: First whale harvest of the 1988 season.                                                                                           |
| April 18          | NSB bowhead whale census crew established camp on the ice.                                                                                 |
| April 22          | First whaling crews go out.                                                                                                                |
| April 24          | Whale harvest, Barrow's first whale of the season.                                                                                         |
| April 25          | Whale harvest, four whales harvested by Barrow crews.                                                                                      |
| April 26          | Lead closes for a few days.                                                                                                                |
| April 28          | New lead develops only a half mile from shore.                                                                                             |
| May 2             | Whale harvest, Barrow's sixth whale.                                                                                                       |
| May 4             | Whale harvest, Barrow's seventh whale.                                                                                                     |
| May 6             | Whale harvest, Barrow's eighth whale and last whale in Barrow's spring quota.                                                              |
| May 7             | Most whaling crews move off ice today.                                                                                                     |
| May 8             | Mother's Day.                                                                                                                              |
| May 16            | International Whaling Convention begins in New Zealand.                                                                                    |
| May 17-18         | Barrow whalers receive two strikes from other villages, strikes are taken unsuccessfully.                                                  |
| May 20            | Barrow high school graduation.                                                                                                             |
| May 26            | School out for the summer.                                                                                                                 |
| May 31            | AEWC announces IWC yearly bowhead whale quota for 1989-91, 44 strikes, with 41 landed per year. Barrow's allocation is 14 landed.          |
| June 7            | Whale strike transferred to Barrow.                                                                                                        |
| June 14-18        | Elders/Youth Conference held in Barrow.                                                                                                    |
| June 28-29        | <i>Nalukataq</i> celebration both days.                                                                                                    |
| July 2-4          | 4th of July games.                                                                                                                         |
| July 7-13         | Shore ice moved offshore, winds fairly calm, good ugruk hunting conditions.                                                                |
| July 14           | Ice moved in against beach at Barrow - through end of month, focus of marine mammal hunting effort moves to Beaufort side of Point Barrow. |
| July 18           | Open water in Dease Inlet allows boating to inland camps.                                                                                  |
| July 19-24        | International Eskimo-Indian Olympics in Fairbanks.                                                                                         |
| August 3          | Shore ice in front of town finally moving out.                                                                                             |
| August 5          | Good walrus hunting.                                                                                                                       |
| August 18         | School starts in Barrow.                                                                                                                   |
| September (early) | Rivers begin freezing.                                                                                                                     |
| September 15      | Whale harvest, Barrow's 9th whale of the season and first fall whale of the year.                                                          |

| <u>DATE</u>                                                                                  | <u>ACTIVITY OR EVENT</u>                                                                                                                                                                                                                       |
|----------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| September 17<br>September 20                                                                 | Two whales harvested, Barrow's 10th and 11th whales.<br>Grounded ice offshore blocks boat passage to the ocean for the season.                                                                                                                 |
| October 7<br>October 12                                                                      | Trapped gray whales discovered off Point Barrow.<br>Journalists begin arriving in Barrow to cover gray whale story.                                                                                                                            |
| October 13-15<br>October (mid)<br>October 17<br>October 19-22                                | North and Northwest Mayor's Conference in Barrow.<br>Caribou rutting time begins.<br>Gray whale rescue operation begins.<br>Alaska Federation of Natives annual meeting begins in Fairbanks.                                                   |
| October 26<br>October 28<br>October (late)<br>October 31                                     | Russian ice breakers arrive off of Barrow.<br>Gray whales swim free.<br>Arctic cod fishing in front of Barrow.<br>Halloween.                                                                                                                   |
| November 8<br>November 18<br>November 24<br>November (late)<br>December 25<br>December 26-31 | High winds, 40+ mph.<br>Sun sets in Barrow for 65 days.<br>Thanksgiving Day.<br>Wolf and wolverine hunting begins.<br>Christmas Day. Major storm, blowing snow and winds to 35 mph.<br>Christmas games.                                        |
| January 1-3<br>January 22<br>January                                                         | <i>Kivgiq</i> or Messenger Feast in Barrow.<br>First sunrise of the year in Barrow.<br>Extremely cold temperatures during last three weeks of January. Flights to villages limited mainly to emergencies.                                      |
| February 12<br>February 20<br>February 25<br>February 27-28                                  | Snow storm, 6 to 8 inches.<br>NSB holiday.<br>Severe wind storm, peak gusts to 74 mph. Ice conditions totally altered, ice piled high all along the beach and extremely rough ice conditions result.<br>High winds again with gusts to 50 mph. |
| March 8-11<br>March 26                                                                       | Alaska Eskimo Whaling Commission annual meeting in Barrow.<br>Easter.                                                                                                                                                                          |

TABLE B-1: TOTAL HARVEST ESTIMATES BY MAJOR RESOURCE CATEGORY - ALL BARROW HOUSEHOLDS, YEAR TWO REVISED (1,2)

| RESOURCE            | CONVERSION FACTOR (3)<br>(Usable Weight Per Resource in lbs) | COMMUNITY TOTALS |                         | AVERAGE POUNDS HARVESTED |            | PERCENT OF TOTAL USABLE POUNDS HARVESTED | PERCENT OF ALL BARROW HSEHOLDS HRVSTING RESOURCE | SAMPLING STATISTICS      |                             |                                    |                                     |                             |
|---------------------|--------------------------------------------------------------|------------------|-------------------------|--------------------------|------------|------------------------------------------|--------------------------------------------------|--------------------------|-----------------------------|------------------------------------|-------------------------------------|-----------------------------|
|                     |                                                              | NUMBER HARVESTED | USABLE POUNDS HARVESTED | PER HOUSEHOLD            | PER CAPITA |                                          |                                                  | STANDARD DEVIATION (lbs) | SAMPLING ERROR AT 95% (lbs) | LOW ESTIMATE (Mean lbs/ Household) | HIGH ESTIMATE (Mean lbs/ Household) | SAMPLING ERROR AS % OF MEAN |
| Marine Mammals (4)  | n/a                                                          | n/a              | 334,069                 | 356.5                    | 110.8      | 54%                                      | 39%                                              | 16                       | 32                          | 324                                | 389                                 | 9%                          |
| Terrestrial Mammals | n/a                                                          | n/a              | 207,005                 | 220.9                    | 68.6       | 34%                                      | 27%                                              | 36                       | 70                          | 151                                | 291                                 | 32%                         |
| Fish                | n/a                                                          | n/a              | 51,069                  | 54.5                     | 16.9       | 8%                                       | 18%                                              | 6                        | 11                          | 44                                 | 65                                  | 20%                         |
| Birds               | n/a                                                          | n/a              | 22,362                  | 23.9                     | 7.4        | 4%                                       | 34%                                              | 4                        | 8                           | 16                                 | 31                                  | 32%                         |
| Other Resources     | n/a                                                          | n/a              | 169                     | 0.2                      | 0.1        | **                                       | 2%                                               | 0                        | 0                           | 0                                  | 0                                   | 168%                        |
| Total (4)           | n/a                                                          | n/a              | 614,673                 | 656.0                    | 203.8      | 100%                                     | 50%                                              | 46                       | 91                          | 565                                | 747                                 | 14%                         |

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(1) Year Two: April 1, 1988 - March 31, 1989.

(2) Estimated sampling errors do not include errors in reporting, recording, and in conversion to usable weight.

(3) See Table D-5 for sources of conversion factors.

(4) Bowhead harvest does not contribute to the sampling error for marine mammals since the bowhead harvest is based on a complete count.

\*\* represents less than .1 percent

n/a means not applicable

Source: Stephen R. Braund & Associates, 1993

TABLE B-2: MONTHLY HARVEST ESTIMATES BY MAJOR RESOURCE CATEGORY - BARROW, YEAR TWO REVISED  
(Pounds of Usable Resource Product)

| MAJOR RESOURCE CATEGORY | TOTALS |        |       |        |         |         |         |        |       |       |        |        |
|-------------------------|--------|--------|-------|--------|---------|---------|---------|--------|-------|-------|--------|--------|
|                         | 1988   |        |       | *****  |         |         |         |        |       | 1989  |        |        |
|                         | April  | May    | June  | July   | August  | Sept.   | October | Nov.   | Dec.  | Jan.  | Feb.   | March  |
| Marine Mammals          | 62,256 | 38,239 | 1,462 | 34,331 | 51,901  | 137,275 | 655     | 2,457  | 2,124 | 145   | 3,372  | 0      |
| Terrestrial Mammals     | 140    | 9,938  | 1,543 | 26,783 | 57,707  | 21,255  | 61,179  | 4,675  | 1,760 | 3,444 | 6,732  | 11,855 |
| Fish                    | 14     | 139    | 2,070 | 4,299  | 6,152   | 8,943   | 25,688  | 3,587  | 0     | 0     | 166    | 0      |
| Birds                   | 5      | 16,393 | 1,696 | 798    | 2,916   | 510     | 38      | 0      | 0     | 0     | 0      | 10     |
| Total                   | 62,416 | 64,709 | 6,771 | 66,212 | 118,677 | 167,983 | 87,560  | 10,719 | 3,884 | 3,590 | 10,270 | 11,865 |

| MAJOR RESOURCE CATEGORY | PERCENTS |     |      |       |        |       |         |      |      |      |      |           |
|-------------------------|----------|-----|------|-------|--------|-------|---------|------|------|------|------|-----------|
|                         | 1988     |     |      | ***** |        |       |         |      |      | 1989 |      |           |
|                         | April    | May | June | July  | August | Sept. | October | Nov. | Dec. | Jan. | Feb. | March     |
| Marine Mammals          | 19%      | 11% | 0%   | 10%   | 16%    | 41%   | 0%      | 1%   | 1%   | 0%   | 1%   | 0% = 100% |
| Terrestrial Mammals     | 0%       | 5%  | 1%   | 13%   | 28%    | 10%   | 30%     | 2%   | 1%   | 2%   | 3%   | 6% = 100% |
| Fish                    | 0%       | 0%  | 4%   | 8%    | 12%    | 18%   | 50%     | 7%   | 0%   | 0%   | 0%   | 0% = 100% |
| Birds                   | 0%       | 73% | 8%   | 4%    | 13%    | 2%    | 0%      | 0%   | 0%   | 0%   | 0%   | 0% = 100% |
| All Resources Combined  | 10%      | 11% | 1%   | 11%   | 19%    | 27%   | 14%     | 2%   | 1%   | 1%   | 2%   | 2% = 100% |

Source: Stephen R. Braund & Associates, 1993

TABLE B-3: HARVEST ESTIMATES FOR MARINE MAMMALS - ALL BARROW HOUSEHOLDS, YEAR TWO REVISED (1,2)

| RESOURCE                 | CONVERSION | COMMUNITY TOTALS |         | AVERAGE POUNDS |        | PERCENT   | PERCENT  | SAMPLING STATISTICS |          |            |            |         |
|--------------------------|------------|------------------|---------|----------------|--------|-----------|----------|---------------------|----------|------------|------------|---------|
|                          | FACTOR (3) | =====            |         | =====          |        |           |          | OF TOTAL            | OF ALL   | STANDARD   | SAMPLING   | LOW     |
|                          | (Usable    | NUMBER           | USABLE  | PER            | PER    | USABLE    | HSEHOLDS | DEVIATION           | ERROR AT | ESTIMATE   | ESTIMATE   | ERROR   |
|                          | Weight     | HARVESTED        | POUNDS  | HOUSEHOLD      | CAPITA | POUNDS    | HRVSTING | (lbs)               | 95%      | (Mean lbs/ | (Mean lbs/ | AS %    |
|                          | Per        |                  |         |                |        | HARVESTED | RESOURCE |                     | (lbs)    | Household) | Household) | OF MEAN |
|                          | Resource   |                  |         |                |        |           |          |                     |          |            |            |         |
|                          | in lbs)    |                  |         |                |        |           |          |                     |          |            |            |         |
| Total Marine Mammals     | n/a        | n/a              | 334,069 | 356.5          | 110.8  | 54.3%     | 39%      | 16                  | 32       | 324.4      | 388.6      | 9%      |
| Bowhead (4,5)            | 21,218.3   | 11               | 233,313 | 249.0          | 77.4   | 38.0%     | 35%      | n/a                 | n/a      | n/a        | n/a        | n/a     |
| Walrus                   | 772.0      | 61               | 47,215  | 50.4           | 15.7   | 7.7%      | 6%       | 9                   | 19       | 31.9       | 68.9       | 37%     |
| Bearded Seal             | 176.0      | 179              | 31,436  | 33.6           | 10.4   | 5.1%      | 11%      | 11                  | 21       | 12.9       | 54.2       | 62%     |
| Total Ring. & Spot. Seal | 42.0       | 392              | 16,454  | 17.6           | 5.5    | 2.7%      | 10%      | 4                   | 8        | 9.8        | 25.3       | 44%     |
| Ringed Seal              | 42.0       | 388              | 16,304  | 17.4           | 5.4    | 2.7%      | 10%      | 4                   | 8        | 9.6        | 25.2       | 45%     |
| Spotted Seal             | 42.0       | 4                | 150     | 0.2            | *      | **        | **       | 0                   | 0        | 0.1        | 0.3        | 60%     |
| Polar Bear               | 496.0      | 11               | 5,650   | 6.0            | 1.9    | 0.9%      | 2%       | 1                   | 2        | 4.2        | 7.9        | 31%     |

(1) Year Two: April 1, 1988 - March 31, 1989.

(2) Estimated sampling errors do not include errors in reporting, recording, and in conversion to usable weight.

(3) See Table D-5 for sources of conversion factors.

(4) Bowhead harvest does not contribute to the sampling error for marine mammals since the bowhead harvest is based on a complete count.

(5) The percent of Barrow households harvesting bowhead represents the percent of Barrow households receiving crew member shares at the whale harvest site, as extrapolated from the sample households.

\* represents less than .1 pound

\*\* represents less than .1 percent

n/a means not applicable

Source: Stephen R. Braund & Associates, 1993

TABLE B-4: MARINE MAMMAL HARVEST ESTIMATES BY SPECIES AND MONTH - BARROW, YEAR TWO REVISED  
(Pounds of Usable Resource Product)

| SPECIES                  | TOTALS |        |       |        |        |         |         |       |       |      |       |       |
|--------------------------|--------|--------|-------|--------|--------|---------|---------|-------|-------|------|-------|-------|
|                          | 1988   |        |       |        |        |         | 1989    |       |       |      |       |       |
|                          | April  | May    | June  | July   | August | Sept.   | October | Nov.  | Dec.  | Jan. | Feb.  | March |
| Bowhead Whale            | 62,004 | 36,037 | 0     | 0      | 0      | 135,360 | 0       | 0     | 0     | 0    | 0     | 0     |
| Walrus                   | 0      | 0      | 0     | 17,409 | 29,808 | 0       | 0       | 0     | 0     | 0    | 0     | 0     |
| Polar Bear               | 0      | 0      | 893   | 1,189  | 595    | 1,190   | 0       | 595   | 1,190 | 0    | 0     | 0     |
| Bearded Seal             | 0      | 422    | 317   | 10,100 | 20,280 | 317     | 0       | 0     | 0     | 0    | 0     | 0     |
| Total Ring. & Spot. Seal | 252    | 1,779  | 252   | 5,633  | 1,218  | 408     | 655     | 1,862 | 934   | 145  | 3,372 | 0     |
| Ringed Seal              | 252    | 1,779  | 252   | 5,532  | 1,168  | 408     | 655     | 1,862 | 934   | 145  | 3,372 | 0     |
| Spotted Seal             | 0      | 0      | 0     | 101    | 50     | 0       | 0       | 0     | 0     | 0    | 0     | 0     |
| All Marine Mammals       | 62,256 | 38,239 | 1,462 | 34,331 | 51,901 | 137,275 | 655     | 2,457 | 2,124 | 145  | 3,372 | 0     |

| SPECIES                  | PERCENTS |     |      |      |        |       |         |      |      |      |      |       |      |
|--------------------------|----------|-----|------|------|--------|-------|---------|------|------|------|------|-------|------|
|                          | 1988     |     |      |      |        |       | 1989    |      |      |      |      |       |      |
|                          | April    | May | June | July | August | Sept. | October | Nov. | Dec. | Jan. | Feb. | March |      |
| Bowhead Whale            | 27%      | 15% | 0%   | 0%   | 0%     | 58%   | 0%      | 0%   | 0%   | 0%   | 0%   | 0%    | 100% |
| Walrus                   | 0%       | 0%  | 0%   | 37%  | 63%    | 0%    | 0%      | 0%   | 0%   | 0%   | 0%   | 0%    | 100% |
| Polar Bear               | 0%       | 0%  | 16%  | 21%  | 11%    | 21%   | 0%      | 11%  | 21%  | 0%   | 0%   | 0%    | 100% |
| Bearded Seal             | 0%       | 1%  | 1%   | 32%  | 65%    | 1%    | 0%      | 0%   | 0%   | 0%   | 0%   | 0%    | 100% |
| Total Ring. & Spot. Seal | 2%       | 11% | 2%   | 34%  | 7%     | 2%    | 4%      | 11%  | 6%   | 1%   | 20%  | 0%    | 100% |
| Ringed Seal              | 2%       | 11% | 2%   | 34%  | 7%     | 2%    | 4%      | 11%  | 6%   | 1%   | 21%  | 0%    | 100% |
| Spotted Seal             | 0%       | 0%  | 0%   | 67%  | 33%    | 0%    | 0%      | 0%   | 0%   | 0%   | 0%   | 0%    | 100% |
| All Marine Mammals       | 19%      | 11% | 0%   | 10%  | 16%    | 41%   | 0%      | 1%   | 1%   | 0%   | 1%   | 0%    | 100% |

Source: Stephen R. Braund & Associates, 1993



TABLE B-5: MARINE MAMMAL HARVEST ESTIMATES BY SPECIES AND MONTH - BARROW, YEAR TWO REVISED  
(Number Harvested)

| SPECIES                  | 1988  |     |      |      |        |       | 1989    |      |      |      |      |       |
|--------------------------|-------|-----|------|------|--------|-------|---------|------|------|------|------|-------|
|                          | April | May | June | July | August | Sept. | October | Nov. | Dec. | Jan. | Feb. | March |
| Bowhead Whale            | 5     | 3   | 0    | 0    | 0      | 3     | 0       | 0    | 0    | 0    | 0    | 0     |
| Walrus                   | 0     | 0   | 0    | 23   | 39     | 0     | 0       | 0    | 0    | 0    | 0    | 0     |
| Polar Bear               | 0     | 0   | 2    | 2    | 1      | 2     | 0       | 1    | 2    | 0    | 0    | 0     |
| Bearded Seal             | 0     | 2   | 2    | 57   | 115    | 2     | 0       | 0    | 0    | 0    | 0    | 0     |
| Total Ring. & Spot. Seal | 6     | 42  | 6    | 134  | 29     | 10    | 16      | 44   | 22   | 3    | 80   | 0     |
| Ringed Seal              | 6     | 42  | 6    | 132  | 28     | 10    | 16      | 44   | 22   | 3    | 80   | 0     |
| Spotted Seal             | 0     | 0   | 0    | 2    | 1      | 0     | 0       | 0    | 0    | 0    | 0    | 0     |

Source: Stephen R. Braund & Associates, 1993

TABLE B-6: HARVEST ESTIMATES FOR TERRESTRIAL MAMMALS - ALL BARROW HOUSEHOLDS, YEAR TWO REVISED (1,2)

| RESOURCE                  | CONVERSION                                                    | AVERAGE POUNDS      |                               |                  |               | PERCENT<br>OF TOTAL<br>USABLE<br>POUNDS<br>HARVESTED | PERCENT<br>OF ALL<br>BARROW<br>HSEHOLDS<br>HRVSTING<br>RESOURCE | SAMPLING STATISTICS            |                                      |                                             |                                              |                                      |
|---------------------------|---------------------------------------------------------------|---------------------|-------------------------------|------------------|---------------|------------------------------------------------------|-----------------------------------------------------------------|--------------------------------|--------------------------------------|---------------------------------------------|----------------------------------------------|--------------------------------------|
|                           | FACTOR (3)<br>(Usable<br>Weight<br>Per<br>Resource<br>in lbs) | COMMUNITY TOTALS    |                               | HARVESTED        |               |                                                      |                                                                 | STANDARD<br>DEVIATION<br>(lbs) | SAMPLING<br>ERROR AT<br>95%<br>(lbs) | LOW<br>ESTIMATE<br>(Mean lbs/<br>Household) | HIGH<br>ESTIMATE<br>(Mean lbs/<br>Household) | SAMPLING<br>ERROR<br>AS %<br>OF MEAN |
|                           |                                                               | NUMBER<br>HARVESTED | USABLE<br>POUNDS<br>HARVESTED | PER<br>HOUSEHOLD | PER<br>CAPITA |                                                      |                                                                 |                                |                                      |                                             |                                              |                                      |
| Total Terrestrial Mammals | n/a                                                           | n/a                 | 207,005                       | 220.9            | 68.6          | 33.7%                                                | 27%                                                             | 36                             | 70                                   | 151.17                                      | 290.67                                       | 32%                                  |
| Caribou                   | 117.0                                                         | 1,533               | 179,314                       | 191.4            | 59.5          | 29.2%                                                | 27%                                                             | 31                             | 61                                   | 130.32                                      | 252.42                                       | 32%                                  |
| Moose                     | 500.0                                                         | 53                  | 26,367                        | 28.1             | 8.7           | 4.3%                                                 | 4%                                                              | 20                             | 40                                   | 0.00                                        | 67.71                                        | 141%                                 |
| Brown Bear                | 100.0                                                         | 1                   | 122                           | 0.1              | *             | **                                                   | **                                                              | 0                              | 0                                    | 0.03                                        | 0.23                                         | 79%                                  |
| Dall Sheep                | 99.0                                                          | 12                  | 1,202                         | 1.3              | 0.4           | 0.2%                                                 | 1%                                                              | 1                              | 2                                    | 0.00                                        | 3.69                                         | 188%                                 |
| Wolverine                 | n/a                                                           | 2                   | n/a                           | n/a              | n/a           | n/a                                                  | **                                                              | n/a                            | n/a                                  | n/a                                         | n/a                                          | n/a                                  |
| Arctic Fox (Blue)         | n/a                                                           | 146                 | n/a                           | n/a              | n/a           | n/a                                                  | **                                                              | n/a                            | n/a                                  | n/a                                         | n/a                                          | n/a                                  |
| Red Fox (Cross, Silver)   | n/a                                                           | 4                   | n/a                           | n/a              | n/a           | n/a                                                  | **                                                              | n/a                            | n/a                                  | n/a                                         | n/a                                          | n/a                                  |

(1) Year Two: April 1, 1988 - March 31, 1989.

(2) Estimated sampling errors do not include errors in reporting, recording, and in conversion to usable weight.

(3) See Table D-5 for sources of conversion factors.

\* represents less than .1 pound

\*\* represents less than .1 percent

n/a means not applicable

Source: Stephen R. Braund & Associates, 1993

TABLE B-7: TERRESTRIAL MAMMAL HARVEST ESTIMATES BY SPECIES AND MONTH - BARROW, YEAR TWO REVISED  
(Pounds of Usable Resource Product)

| SPECIES                                           | TOTALS<br>***** |       |       |        |        |        |         |       |       |       |       |        |
|---------------------------------------------------|-----------------|-------|-------|--------|--------|--------|---------|-------|-------|-------|-------|--------|
|                                                   | 1988            |       |       |        |        |        | 1989    |       |       |       |       |        |
|                                                   | April           | May   | June  | July   | August | Sept.  | October | Nov.  | Dec.  | Jan.  | Feb.  | March  |
| Caribou                                           | 140             | 9,938 | 1,543 | 26,183 | 41,185 | 11,885 | 61,179  | 4,675 | 1,760 | 3,444 | 6,732 | 10,655 |
| Moose                                             | 0               | 0     | 0     | 600    | 15,320 | 9,250  | 0       | 0     | 0     | 0     | 0     | 1,200  |
| Brown Bear                                        | 0               | 0     | 0     | 0      | 0      | 120    | 0       | 0     | 0     | 0     | 0     | 0      |
| Dall sheep                                        | 0               | 0     | 0     | 0      | 1,202  | 0      | 0       | 0     | 0     | 0     | 0     | 0      |
| All Terrestrial Mammals<br>(excluding furbearers) | 140             | 9,938 | 1,543 | 26,783 | 57,707 | 21,255 | 61,179  | 4,675 | 1,760 | 3,444 | 6,732 | 11,855 |

| SPECIES                                           | PERCENTS<br>***** |     |      |      |        |       |         |      |      |      |      |       |      |
|---------------------------------------------------|-------------------|-----|------|------|--------|-------|---------|------|------|------|------|-------|------|
|                                                   | 1988              |     |      |      |        |       | 1989    |      |      |      |      |       |      |
|                                                   | April             | May | June | July | August | Sept. | October | Nov. | Dec. | Jan. | Feb. | March |      |
| Caribou                                           | 0%                | 6%  | 1%   | 15%  | 23%    | 7%    | 34%     | 3%   | 1%   | 2%   | 4%   | 6%    | 100% |
| Moose                                             | 0%                | 0%  | 0%   | 2%   | 58%    | 35%   | 0%      | 0%   | 0%   | 0%   | 0%   | 5%    | 100% |
| Brown Bear                                        | 0%                | 0%  | 0%   | 0%   | 0%     | 100%  | 0%      | 0%   | 0%   | 0%   | 0%   | 0%    | 100% |
| Dall sheep                                        | 0%                | 0%  | 0%   | 0%   | 100%   | 0%    | 0%      | 0%   | 0%   | 0%   | 0%   | 0%    | 100% |
| All Terrestrial Mammals<br>(excluding furbearers) | 0%                | 5%  | 1%   | 13%  | 28%    | 10%   | 30%     | 2%   | 1%   | 2%   | 3%   | 6%    | 100% |

Source: Stephen R. Braund & Associates, 1993

TABLE B-8: TERRESTRIAL MAMMAL HARVEST ESTIMATES BY SPECIES AND MONTH - BARROW, YEAR TWO REVISED  
(Number Harvested)

| SPECIES                 | TOTALS<br>***** |     |      |      |        |       |         |      |      |      |      |       |
|-------------------------|-----------------|-----|------|------|--------|-------|---------|------|------|------|------|-------|
|                         | 1988            |     |      |      |        | ***** |         | 1989 |      |      |      |       |
|                         | April           | May | June | July | August | Sept. | October | Nov. | Dec. | Jan. | Feb. | March |
| Caribou                 | 1               | 85  | 13   | 224  | 352    | 102   | 523     | 40   | 15   | 29   | 58   | 91    |
| Moose                   | 0               | 0   | 0    | 1    | 31     | 19    | 0       | 0    | 0    | 0    | 0    | 2     |
| Brown Bear              | 0               | 0   | 0    | 0    | 0      | 1     | 0       | 0    | 0    | 0    | 0    | 0     |
| Dall sheep              | 0               | 0   | 0    | 0    | 12     | 0     | 0       | 0    | 0    | 0    | 0    | 0     |
| Arctic Fox (Blue)       | 1               | 0   | 0    | 0    | 0      | 0     | 0       | 16   | 42   | 47   | 31   | 10    |
| Red Fox (Cross, Silver) | 0               | 0   | 0    | 0    | 0      | 0     | 0       | 0    | 0    | 0    | 0    | 4     |
| Wolverine               | 0               | 0   | 0    | 0    | 0      | 0     | 0       | 0    | 0    | 0    | 0    | 2     |

Source: Stephen R. Braund & Associates, 1993

TABLE B-9: HARVEST ESTIMATES FOR FISH - ALL BARROW HOUSEHOLDS, YEAR TWO REVISED (1,2)

| RESOURCE                    | CONVERSION | AVERAGE POUNDS   |           |           |           | PERCENT  |          |                     | SAMPLING STATISTICS |            |          |          |
|-----------------------------|------------|------------------|-----------|-----------|-----------|----------|----------|---------------------|---------------------|------------|----------|----------|
|                             | FACTOR (3) | COMMUNITY TOTALS |           | HARVESTED |           | PERCENT  | OF ALL   | SAMPLING STATISTICS |                     |            |          |          |
|                             | (Usable    | =====            |           | =====     |           | OF TOTAL | BARROW   | STANDARD            | SAMPLING            | LOW        | HIGH     | SAMPLING |
|                             | Weight     | NUMBER           | USABLE    | PER       | PER       | USABLE   | HSEHOLDS | DEVIATION           | ERROR AT            | ESTIMATE   | ESTIMATE | ERROR    |
| Per                         | HARVESTED  | POUNDS           | HOUSEHOLD | CAPITA    | POUNDS    | HRVSTING | (lbs)    | 95%                 | (Mean lbs/          | (Mean lbs/ | AS %     |          |
| Resource                    |            |                  |           |           | HARVESTED | RESOURCE |          | (lbs)               | Household)          | Household) | OF MEAN  |          |
| in lbs)                     |            |                  |           |           |           |          |          |                     |                     |            |          |          |
| Total Fish                  | n/a        | n/a              | 51,069    | 54.5      | 16.9      | 8.3%     | 18%      | 6                   | 11                  | 43.67      | 65.33    | 20%      |
| Total Whitefish             |            | 20,628           | 39,766    | 42.4      | 13.2      | 6.5%     | 14%      | 5                   | 9                   | 33.60      | 51.28    | 21%      |
| Whitefish (non-spec.)       | 2.0        | 173              | 347       | 0.4       | 0.1       | 0.1%     | **       | 0                   | 1                   | 0.00       | 0.98     | 165%     |
| Round Whitefish             | 1.0        | 721              | 721       | 0.8       | 0.2       | 0.1%     | **       | 0                   | 1                   | 0.16       | 1.38     | 80%      |
| Broad Whitefish (River)     | 2.5        | 10,494           | 26,236    | 28.0      | 8.7       | 4.3%     | 11%      | 3                   | 6                   | 21.52      | 34.48    | 23%      |
| Broad Whitefish (Lake)      | 3.4        | 937              | 3,186     | 3.4       | 1.1       | 0.5%     | 2%       | 1                   | 1                   | 2.08       | 4.72     | 39%      |
| Humpback whitefish          | 2.5        | 647              | 1,621     | 1.7       | 0.5       | 0.3%     | 4%       | 0                   | 1                   | 0.94       | 2.52     | 46%      |
| Least cisco                 | 1.0        | 7,505            | 7,505     | 8.0       | 2.5       | 1.2%     | 2%       | 2                   | 5                   | 3.24       | 12.78    | 59%      |
| Bering, Arctic cisco        | 1.0        | 151              | 150       | 0.2       | *         | **       | 6%       | 0                   | 0                   | 0.05       | 0.27     | 69%      |
| Total Other Freshwater Fish |            | 9,224            | 9,014     | 9.6       | 3.0       | 1.5%     | 12%      | 2                   | 4                   | 6.01       | 13.23    | 38%      |
| Arctic grayling             | 0.8        | 8,684            | 6,943     | 7.4       | 2.3       | 1.1%     | 11%      | 1                   | 3                   | 4.59       | 10.23    | 38%      |
| Arctic char                 | 2.8        | 76               | 216       | 0.2       | *         | **       | **       | 0                   | 0                   | 0.07       | 0.39     | 71%      |
| Burbot (Ling cod)           | 4.0        | 392              | 1,565     | 1.7       | 0.5       | 0.3%     | 7%       | 0                   | 1                   | 0.73       | 2.61     | 56%      |
| Lake trout                  | 4.0        | 72               | 290       | 0.3       | 0.1       | **       | 1%       | 0                   | 0                   | 0.12       | 0.50     | 63%      |
| Total Salmon                |            | 80               | 490       | 0.5       | 0.2       | 0.1%     | 1%       | 0                   | 0                   | 0.16       | 0.88     | 69%      |
| Salmon (non-specified)      | 6.1        | 3                | 18        | 0.0       | *         | **       | **       | 0                   | 0                   | 0.00       | 0.06     | 191%     |
| Chum (Dog) salmon           | 6.1        | 5                | 31        | 0.0       | *         | **       | **       | 0                   | 0                   | 0.01       | 0.06     | 77%      |
| Pink (Humpback) salmon      | 3.1        | 1                | 3         | 0.0       | *         | **       | **       | 0                   | 0                   | 0.00       | 0.01     | 102%     |
| Silver (Coho) salmon        | 6.0        | 70               | 420       | 0.4       | 0.1       | 0.1%     | **       | 0                   | 0                   | 0.13       | 0.76     | 70%      |
| King (Chinook) salmon       | 18.0       | 1                | 18        | 0.0       | *         | **       | **       | 0                   | 0                   | 0.00       | 0.04     | 96%      |
| Total Other Coastal Fish    |            | 8,150            | 1,799     | 1.9       | *         | **       | 2%       | 1                   | 1                   | 0.70       | 3.14     | 64%      |
| Arctic cod                  | 0.2        | 7,945            | 1,593     | 1.7       | 0.5       | 0.3%     | **       | 1                   | 1                   | 0.55       | 2.85     | 68%      |
| Tomcod                      | 1.0        | 194              | 197       | 0.2       | *         | **       | 1%       | 0                   | 0                   | 0.00       | 0.60     | 185%     |
| Sculpin                     | 0.6        | 11               | 9         | 0.0       | *         | **       | **       | 0                   | 0                   | 0.01       | 0.01     | 41%      |

(1) Year Two: April 1, 1988 - March 31, 1989.

(2) Estimated sampling errors do not include errors in reporting, recording, and in conversion to usable weight.

(3) See Table D-5 for sources of conversion factors.

\* represents less than .1 pound

\*\* represents less than .1 percent

n/a means not applicable

Source: Stephen R. Braund & Associates, 1993

TABLE B-10: FISH HARVEST ESTIMATES BY SPECIES AND MONTH - BARROW, YEAR TWO REVISED  
(Pounds of Usable Resource Product)

| SPECIES                     | TOTALS |     |       |       |        |       |         |       |      |      |      |       |
|-----------------------------|--------|-----|-------|-------|--------|-------|---------|-------|------|------|------|-------|
|                             | 1988   |     |       |       |        | ***** |         | 1989  |      |      |      |       |
|                             | April  | May | June  | July  | August | Sept. | October | Nov.  | Dec. | Jan. | Feb. | March |
| Total Whitefish             | 0      | 120 | 2,070 | 3,827 | 4,961  | 5,669 | 20,522  | 2,593 | 0    | 0    | 0    | 0     |
| Whitefish (non-specified)   | 0      | 0   | 0     | 0     | 0      | 0     | 346     | 0     | 0    | 0    | 0    | 0     |
| Round Whitefish             | 0      | 120 | 120   | 121   | 120    | 120   | 120     | 0     | 0    | 0    | 0    | 0     |
| Broad Whitefish (River)     | 0      | 0   | 1,950 | 3,256 | 4,254  | 4,688 | 10,288  | 1,800 | 0    | 0    | 0    | 0     |
| Broad Whitefish (Lake)      | 0      | 0   | 0     | 0     | 377    | 82    | 2,162   | 565   | 0    | 0    | 0    | 0     |
| Humpback whitefish          | 0      | 0   | 0     | 72    | 168    | 475   | 904     | 0     | 0    | 0    | 0    | 0     |
| Least cisco                 | 0      | 0   | 0     | 372   | 0      | 256   | 6,696   | 180   | 0    | 0    | 0    | 0     |
| Bering, Arctic cisco        | 0      | 0   | 0     | 6     | 42     | 49    | 6       | 48    | 0    | 0    | 0    | 0     |
| Total Other Freshwater Fish | 14     | 19  | 0     | 317   | 849    | 3,274 | 3,823   | 552   | 0    | 0    | 166  | 0     |
| Arctic grayling             | 0      | 0   | 0     | 306   | 798    | 3,009 | 2,835   | 0     | 0    | 0    | 0    | 0     |
| Arctic char                 | 0      | 0   | 0     | 7     | 37     | 0     | 0       | 168   | 0    | 0    | 0    | 0     |
| Burbot (Ling cod)           | 14     | 19  | 0     | 5     | 14     | 212   | 753     | 384   | 0    | 0    | 166  | 0     |
| Lake trout                  | 0      | 0   | 0     | 0     | 0      | 53    | 235     | 0     | 0    | 0    | 0    | 0     |
| Total Salmon                | 0      | 0   | 0     | 151   | 342    | 0     | 0       | 0     | 0    | 0    | 0    | 0     |
| Salmon (non-specified)      | 0      | 0   | 0     | 0     | 21     | 0     | 0       | 0     | 0    | 0    | 0    | 0     |
| Chum (Dog) salmon           | 0      | 0   | 0     | 15    | 15     | 0     | 0       | 0     | 0    | 0    | 0    | 0     |
| Pink (Humpback) salmon      | 0      | 0   | 0     | 0     | 4      | 0     | 0       | 0     | 0    | 0    | 0    | 0     |
| Silver (Coho) salmon        | 0      | 0   | 0     | 137   | 281    | 0     | 0       | 0     | 0    | 0    | 0    | 0     |
| King (Chinook) salmon       | 0      | 0   | 0     | 0     | 22     | 0     | 0       | 0     | 0    | 0    | 0    | 0     |
| Total Other Coastal Fish    | 0      | 0   | 0     | 4     | 1      | 0     | 1,344   | 441   | 0    | 0    | 0    | 0     |
| Tomcod (Saffron Cod)        | 0      | 0   | 0     | 0     | 0      | 0     | 0       | 194   | 0    | 0    | 0    | 0     |
| Arctic Cod                  | 0      | 0   | 0     | 0     | 0      | 0     | 1,344   | 245   | 0    | 0    | 0    | 0     |
| Sculpin                     | 0      | 0   | 0     | 4     | 1      | 0     | 0       | 2     | 0    | 0    | 0    | 0     |
| All Fish Species            | 14     | 139 | 2,070 | 4,299 | 6,152  | 8,943 | 25,688  | 3,587 | 0    | 0    | 166  | 0     |

(Continued on next page)

TABLE B-10, CONTINUED: FISH HARVEST ESTIMATES BY SPECIES AND MONTH - BARROW, YEAR TWO REVISED  
(Pounds of Usable Resource Product)

| SPECIES                     | PERCENTS |     |      |      |        |       |         |      |      |      |      |       |      |
|-----------------------------|----------|-----|------|------|--------|-------|---------|------|------|------|------|-------|------|
|                             | 1988     |     |      |      |        |       | 1989    |      |      |      |      |       |      |
|                             | April    | May | June | July | August | Sept. | October | Nov. | Dec. | Jan. | Feb. | March |      |
| Total Whitefish             | 0%       | 0%  | 5%   | 10%  | 12%    | 14%   | 52%     | 7%   | 0%   | 0%   | 0%   | 0%    | 100% |
| Whitefish (non-specified)   | 0%       | 0%  | 0%   | 0%   | 0%     | 0%    | 100%    | 0%   | 0%   | 0%   | 0%   | 0%    | 100% |
| Round Whitefish             | 0%       | 17% | 17%  | 17%  | 17%    | 17%   | 17%     | 0%   | 0%   | 0%   | 0%   | 0%    | 100% |
| Broad Whitefish (River)     | 0%       | 0%  | 7%   | 12%  | 16%    | 18%   | 39%     | 7%   | 0%   | 0%   | 0%   | 0%    | 100% |
| Broad Whitefish (Lake)      | 0%       | 0%  | 0%   | 0%   | 12%    | 3%    | 68%     | 18%  | 0%   | 0%   | 0%   | 0%    | 100% |
| Humpback whitefish          | 0%       | 0%  | 0%   | 4%   | 10%    | 29%   | 56%     | 0%   | 0%   | 0%   | 0%   | 0%    | 100% |
| Least cisco                 | 0%       | 0%  | 7%   | 12%  | 16%    | 18%   | 39%     | 7%   | 0%   | 0%   | 0%   | 0%    | 100% |
| Bering, Arctic cisco        | 0%       | 0%  | 0%   | 5%   | 0%     | 3%    | 89%     | 2%   | 0%   | 0%   | 0%   | 0%    | 100% |
| Total Other Freshwater Fish | 0%       | 0%  | 0%   | 4%   | 9%     | 36%   | 42%     | 6%   | 0%   | 0%   | 2%   | 0%    | 100% |
| Arctic grayling             | 0%       | 0%  | 0%   | 4%   | 11%    | 43%   | 41%     | 0%   | 0%   | 0%   | 0%   | 0%    | 100% |
| Arctic char                 | 0%       | 0%  | 0%   | 3%   | 17%    | 0%    | 0%      | 79%  | 0%   | 0%   | 0%   | 0%    | 100% |
| Burbot (Ling cod)           | 1%       | 1%  | 0%   | 0%   | 1%     | 14%   | 48%     | 25%  | 0%   | 0%   | 11%  | 0%    | 100% |
| Lake trout                  | 0%       | 0%  | 0%   | 0%   | 0%     | 18%   | 82%     | 0%   | 0%   | 0%   | 0%   | 0%    | 100% |
| Total Salmon                | 0%       | 0%  | 0%   | 31%  | 69%    | 0%    | 0%      | 0%   | 0%   | 0%   | 0%   | 0%    | 100% |
| Salmon (non-specified)      | 0%       | 0%  | 0%   | 0%   | 100%   | 0%    | 0%      | 0%   | 0%   | 0%   | 0%   | 0%    | 100% |
| Chum (Dog) salmon           | 0%       | 0%  | 0%   | 50%  | 50%    | 0%    | 0%      | 0%   | 0%   | 0%   | 0%   | 0%    | 100% |
| Pink (Humpback) salmon      | 0%       | 0%  | 0%   | 0%   | 100%   | 0%    | 0%      | 0%   | 0%   | 0%   | 0%   | 0%    | 100% |
| Silver (Coho) salmon        | 0%       | 0%  | 0%   | 33%  | 67%    | 0%    | 0%      | 0%   | 0%   | 0%   | 0%   | 0%    | 100% |
| King (Chinook) salmon       | 0%       | 0%  | 0%   | 0%   | 100%   | 0%    | 0%      | 0%   | 0%   | 0%   | 0%   | 0%    | 100% |
| Total Other Coastal Fish    | 0%       | 0%  | 0%   | 0%   | 0%     | 0%    | 75%     | 25%  | 0%   | 0%   | 0%   | 0%    | 100% |
| Tomcod (Saffron Cod)        | 0%       | 0%  | 0%   | 0%   | 0%     | 0%    | 0%      | 100% | 0%   | 0%   | 0%   | 0%    | 100% |
| Arctic Cod                  | 0%       | 0%  | 0%   | 0%   | 0%     | 0%    | 85%     | 15%  | 0%   | 0%   | 0%   | 0%    | 100% |
| Sculpin                     | 0%       | 0%  | 0%   | 56%  | 11%    | 0%    | 0%      | 33%  | 0%   | 0%   | 0%   | 0%    | 100% |
| All Fish Species            | 0%       | 0%  | 4%   | 8%   | 12%    | 18%   | 50%     | 7%   | 0%   | 0%   | 0%   | 0%    | 100% |

Source: Stephen R. Braund & Associates, 1993

TABLE B-11: FISH HARVEST ESTIMATES BY SPECIES AND MONTH - BARROW, YEAR TWO REVISED  
(Number Harvested)

| SPECIES                     | 1988  |     |      |       |        |       | 1989    |       |      |      |      |       |
|-----------------------------|-------|-----|------|-------|--------|-------|---------|-------|------|------|------|-------|
|                             | April | May | June | July  | August | Sept. | October | Nov.  | Dec. | Jan. | Feb. | March |
| Total Whitefish             | 0     | 120 | 900  | 1,831 | 2,042  | 2,514 | 12,108  | 1,114 | 0    | 0    | 0    | 0     |
| Whitefish (non-specified)   | 0     | 0   | 0    | 0     | 0      | 0     | 173     | 0     | 0    | 0    | 0    | 0     |
| Round Whitefish             | 0     | 120 | 120  | 121   | 120    | 120   | 120     | 0     | 0    | 0    | 0    | 0     |
| Broad Whitefish             | 0     | 0   | 780  | 1,302 | 1,702  | 1,875 | 4,115   | 720   | 0    | 0    | 0    | 0     |
| Broad Whitefish (Lake)      | 0     | 0   | 0    | 0     | 111    | 24    | 636     | 166   | 0    | 0    | 0    | 0     |
| Humpback whitefish          | 0     | 0   | 0    | 29    | 67     | 190   | 361     | 0     | 0    | 0    | 0    | 0     |
| Least cisco                 | 0     | 0   | 0    | 372   | 0      | 256   | 6,696   | 180   | 0    | 0    | 0    | 0     |
| Bering, Arctic cisco        | 0     | 0   | 0    | 6     | 42     | 49    | 6       | 48    | 0    | 0    | 0    | 0     |
| Total Other Freshwater Fish | 3     | 5   | 0    | 386   | 1,014  | 3,828 | 3,791   | 156   | 0    | 0    | 42   | 0     |
| Arctic grayling             | 0     | 0   | 0    | 382   | 997    | 3,761 | 3,544   | 0     | 0    | 0    | 0    | 0     |
| Arctic char                 | 0     | 0   | 0    | 2     | 13     | 0     | 0       | 60    | 0    | 0    | 0    | 0     |
| Burbot (Ling cod)           | 3     | 5   | 0    | 1     | 3      | 53    | 188     | 96    | 0    | 0    | 42   | 0     |
| Lake trout                  | 0     | 0   | 0    | 0     | 0      | 13    | 59      | 0     | 0    | 0    | 0    | 0     |
| Salmon                      | 0     | 0   | 0    | 25    | 55     | 0     | 0       | 0     | 0    | 0    | 0    | 0     |
| Salmon (non-specified)      | 0     | 0   | 0    | 0     | 3      | 0     | 0       | 0     | 0    | 0    | 0    | 0     |
| Chum (Dog) salmon           | 0     | 0   | 0    | 2     | 2      | 0     | 0       | 0     | 0    | 0    | 0    | 0     |
| Pink (Humpback) salmon      | 0     | 0   | 0    | 0     | 1      | 0     | 0       | 0     | 0    | 0    | 0    | 0     |
| Silver (Coho) salmon        | 0     | 0   | 0    | 23    | 47     | 0     | 0       | 0     | 0    | 0    | 0    | 0     |
| King (Chinook) salmon       | 0     | 0   | 0    | 0     | 1      | 0     | 0       | 0     | 0    | 0    | 0    | 0     |
| Total Other Coastal Fish    | 0     | 0   | 0    | 6     | 1      | 0     | 6,720   | 1,423 | 0    | 0    | 0    | 0     |
| Tomcod (Saffron Cod)        | 0     | 0   | 0    | 0     | 0      | 0     | 0       | 194   | 0    | 0    | 0    | 0     |
| Arctic Cod                  | 0     | 0   | 0    | 0     | 0      | 0     | 6,720   | 1,225 | 0    | 0    | 0    | 0     |
| Sculpin                     | 0     | 0   | 0    | 6     | 1      | 0     | 0       | 4     | 0    | 0    | 0    | 0     |

Source: Stephen R. Braund & Associates, 1993



TABLE B-12: HARVEST ESTIMATES FOR BIRDS - ALL BARROW HOUSEHOLDS, YEAR TWO REVISED (1,2)

| RESOURCE              | CONVERSION | AVERAGE POUNDS   |           |           |        | SAMPLING STATISTICS |           |                     |            |            |         |          |
|-----------------------|------------|------------------|-----------|-----------|--------|---------------------|-----------|---------------------|------------|------------|---------|----------|
|                       | FACTOR (3) | COMMUNITY TOTALS |           | HARVESTED |        | PERCENT             | PERCENT   | SAMPLING STATISTICS |            |            |         |          |
|                       | (Usable    | =====            |           | =====     |        | OF TOTAL            | OF ALL    | =====               |            |            |         |          |
|                       | Weight     | NUMBER           | USABLE    | PER       | PER    | USABLE              | HSEHOLDS  | STANDARD            | SAMPLING   | LOW        | HIGH    | SAMPLING |
| Per                   | HARVESTED  | POUNDS           | HOUSEHOLD | CAPITA    | POUNDS | HRVSTING            | DEVIATION | ERROR AT            | ESTIMATE   | ESTIMATE   | ERROR   |          |
| Resource              |            |                  |           |           |        |                     |           |                     |            |            |         |          |
| in lbs)               |            |                  |           |           |        |                     | (lbs)     | (lbs)               | (Mean lbs/ | (Mean lbs/ | AS %    |          |
|                       |            |                  |           |           |        |                     |           |                     | Household) | Household) | OF MEAN |          |
| Total Birds           | n/a        | n/a              | 22,362    | 23.9      | 7.4    | 3.6%                | 34%       | 4                   | 8          | 16.25      | 31.48   | 32%      |
| Total Geese           |            | 3,334            | 14,669    | 15.7      | 4.9    | 2.4%                | 19%       | 3                   | 5          | 10.23      | 21.08   | 35%      |
| Geese (non-specified) | 4.5        | 69               | 309       | 0.3       | 0.1    | 0.1%                | **        | 0                   | 1          | 0.00       | 0.88    | 167%     |
| Brant                 | 3.0        | 221              | 665       | 0.7       | 0.2    | 0.1%                | 5%        | 0                   | 0          | 0.33       | 1.09    | 53%      |
| White-fronted geese   | 4.5        | 3,035            | 13,652    | 14.6      | *      | **                  | 19%       | 3                   | 5          | 9.38       | 19.76   | 36%      |
| Snow geese            | 4.5        | 8                | 37        | 0.0       | *      | **                  | 1%        | 0                   | 0          | 0.01       | 0.07    | 74%      |
| Canada geese          | 4.5        | 1                | 5         | 0.0       | *      | **                  | **        | 0                   | 0          | 0.00       | 0.01    | 81%      |
| Total Eider           |            | 4,499            | 6,746     | 7.2       | 2.2    | 1.1%                | 20%       | 2                   | 5          | 2.38       | 12.02   | 67%      |
| Eider (non-specified) | 1.5        | 4,455            | 6,681     | 7.1       | 2.2    | 1.1%                | 20%       | 2                   | 5          | 2.31       | 11.95   | 68%      |
| Common eider          | 1.5        | 19               | 28        | 0.0       | *      | **                  | 1%        | 0                   | 0          | 0.00       | 0.08    | 178%     |
| King eider            | 1.5        | 25               | 37        | 0.0       | *      | **                  | **        | 0                   | 0          | 0.02       | 0.06    | 56%      |
| Ptarmigan             | 0.7        | 1,350            | 946       | 1.0       | 0.3    | 0.2%                | 9%        | 0                   | 1          | 0.50       | 1.52    | 51%      |

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(1) Year Two: April 1, 1988 - March 31, 1989.

(2) Estimated sampling errors do not include errors in reporting, recording, and in conversion to usable weight.

(3) See Table D-5 for sources of conversion factors.

\* represents less than .1 pound

\*\* represents less than .1 percent

n/a means not applicable

Source: Stephen R. Braund & Associates, 1993

TABLE B-13: BIRD HARVEST ESTIMATES BY SPECIES AND MONTH - BARROW, YEAR TWO REVISED  
(Pounds of Usable Resource Product)

| SPECIES               | TOTALS |        |       |      |        |       |         |      |      |      |      |       |
|-----------------------|--------|--------|-------|------|--------|-------|---------|------|------|------|------|-------|
|                       | 1988   |        |       |      |        | ***** |         | 1989 |      |      |      |       |
|                       | April  | May    | June  | July | August | Sept. | October | Nov. | Dec. | Jan. | Feb. | March |
| Total Geese           | 0      | 13,244 | 1,256 | 0    | 173    | 0     | 0       | 0    | 0    | 0    | 0    | 0     |
| Geese (non-specified) | 0      | 311    | 0     | 0    | 0      | 0     | 0       | 0    | 0    | 0    | 0    | 0     |
| Brant                 | 0      | 339    | 151   | 0    | 173    | 0     | 0       | 0    | 0    | 0    | 0    | 0     |
| White-fronted geese   | 0      | 12,562 | 1,094 | 0    | 0      | 0     | 0       | 0    | 0    | 0    | 0    | 0     |
| Lesser snow geese     | 0      | 26     | 11    | 0    | 0      | 0     | 0       | 0    | 0    | 0    | 0    | 0     |
| Canada geese          | 0      | 5      | 0     | 0    | 0      | 0     | 0       | 0    | 0    | 0    | 0    | 0     |
| Total Eiders          | 5      | 2,468  | 279   | 758  | 2,743  | 495   | 0       | 0    | 0    | 0    | 0    | 0     |
| Eider (non-specified) | 5      | 2,466  | 279   | 713  | 2,724  | 495   | 0       | 0    | 0    | 0    | 0    | 0     |
| Common eider          | 0      | 0      | 0     | 29   | 0      | 0     | 0       | 0    | 0    | 0    | 0    | 0     |
| King eider            | 0      | 2      | 0     | 16   | 20     | 0     | 0       | 0    | 0    | 0    | 0    | 0     |
| Ptarmigan             | 0      | 681    | 161   | 40   | 0      | 15    | 38      | 0    | 0    | 0    | 0    | 10    |
| All Bird Species      | 5      | 16,393 | 1,696 | 798  | 2,916  | 510   | 38      | 0    | 0    | 0    | 0    | 10    |

(continued on next page)

TABLE B-13, CONTINUED: BIRD HARVEST ESTIMATES BY SPECIES AND MONTH - BARROW, YEAR TWO REVISED  
(Pounds of Usable Resource Product)

| SPECIES               | PERCENTS |      |      |      |        |       |         |      |      |      |      |       |      |
|-----------------------|----------|------|------|------|--------|-------|---------|------|------|------|------|-------|------|
|                       | 1988     |      |      |      |        | ***** |         | 1989 |      |      |      |       |      |
|                       | April    | May  | June | July | August | Sept. | October | Nov. | Dec. | Jan. | Feb. | March |      |
| Total Geese           | 0%       | 90%  | 9%   | 0%   | 1%     | 0%    | 0%      | 0%   | 0%   | 0%   | 0%   | 0%    | 100% |
| Geese (non-specified) | 0%       | 100% | 0%   | 0%   | 0%     | 0%    | 0%      | 0%   | 0%   | 0%   | 0%   | 0%    | 100% |
| Brant                 | 0%       | 51%  | 23%  | 0%   | 26%    | 0%    | 0%      | 0%   | 0%   | 0%   | 0%   | 0%    | 100% |
| White-fronted geese   | 0%       | 92%  | 8%   | 0%   | 0%     | 0%    | 0%      | 0%   | 0%   | 0%   | 0%   | 0%    | 100% |
| Lesser snow geese     | 0%       | 71%  | 29%  | 0%   | 0%     | 0%    | 0%      | 0%   | 0%   | 0%   | 0%   | 0%    | 100% |
| Canada geese          | 0%       | 100% | 0%   | 0%   | 0%     | 0%    | 0%      | 0%   | 0%   | 0%   | 0%   | 0%    | 100% |
| Total Eiders          | 0%       | 37%  | 4%   | 11%  | 41%    | 7%    | 0%      | 0%   | 0%   | 0%   | 0%   | 0%    | 100% |
| Eider (non-specified) | 0%       | 37%  | 4%   | 11%  | 41%    | 7%    | 0%      | 0%   | 0%   | 0%   | 0%   | 0%    | 100% |
| Common eider          | 0%       | 0%   | 0%   | 100% | 0%     | 0%    | 0%      | 0%   | 0%   | 0%   | 0%   | 0%    | 100% |
| King eider            | 0%       | 5%   | 0%   | 43%  | 52%    | 0%    | 0%      | 0%   | 0%   | 0%   | 0%   | 0%    | 100% |
| Ptarmigan             | 0%       | 72%  | 17%  | 4%   | 0%     | 2%    | 4%      | 0%   | 0%   | 0%   | 0%   | 1%    | 100% |
| All Bird Species      | 0%       | 73%  | 8%   | 4%   | 13%    | 2%    | 0%      | 0%   | 0%   | 0%   | 0%   | 0%    | 100% |

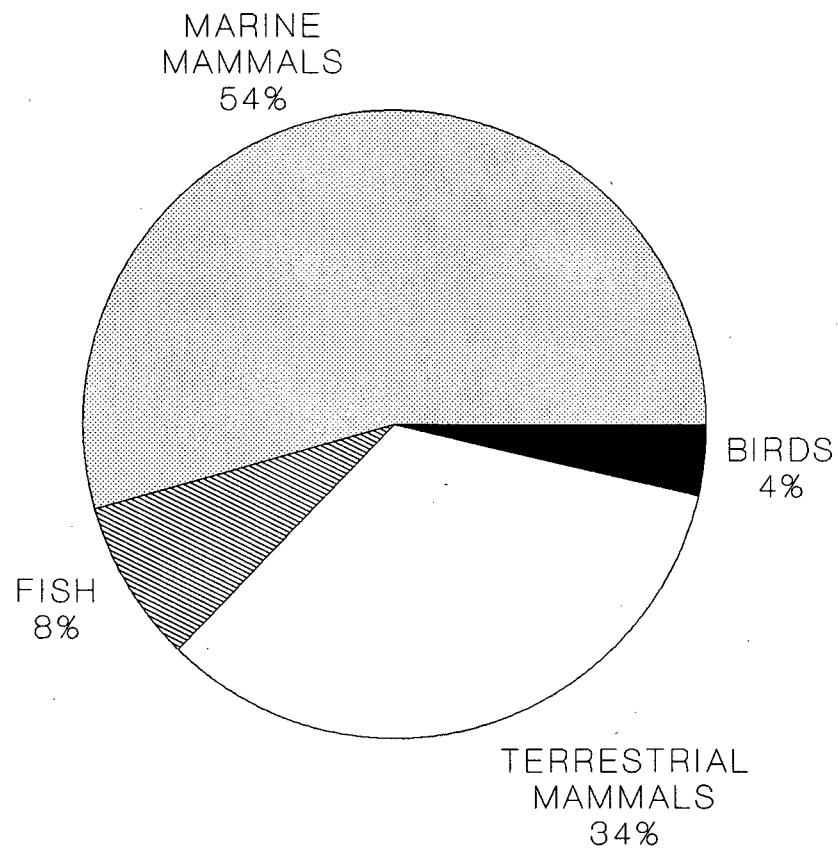
Source: Stephen R. Braund & Associates, 1993

TABLE B-14: BIRD HARVEST ESTIMATES BY SPECIES AND MONTH - BARROW, YEAR TWO REVISED  
(Number Harvested)

| SPECIES               | 1988  |       |      |      |        |       | 1989    |      |      |      |      |       |
|-----------------------|-------|-------|------|------|--------|-------|---------|------|------|------|------|-------|
|                       | April | May   | June | July | August | Sept. | October | Nov. | Dec. | Jan. | Feb. | March |
| Total Geese           | 0     | 2,981 | 296  | 0    | 58     | 0     | 0       | 0    | 0    | 0    | 0    | 0     |
| Geese (non-specified) | 0     | 69    | 0    | 0    | 0      | 0     | 0       | 0    | 0    | 0    | 0    | 0     |
| Brant                 | 0     | 113   | 50   | 0    | 58     | 0     | 0       | 0    | 0    | 0    | 0    | 0     |
| White-fronted geese   | 0     | 2,792 | 243  | 0    | 0      | 0     | 0       | 0    | 0    | 0    | 0    | 0     |
| Lesser snow geese     | 0     | 6     | 2    | 0    | 0      | 0     | 0       | 0    | 0    | 0    | 0    | 0     |
| Canada geese          | 0     | 1     | 0    | 0    | 0      | 0     | 0       | 0    | 0    | 0    | 0    | 0     |
| Total Eiders          | 4     | 1,645 | 186  | 505  | 1,829  | 330   | 0       | 0    | 0    | 0    | 0    | 0     |
| Eider (non-specified) | 4     | 1,644 | 186  | 475  | 1,816  | 330   | 0       | 0    | 0    | 0    | 0    | 0     |
| Common eider          | 0     | 0     | 0    | 19   | 0      | 0     | 0       | 0    | 0    | 0    | 0    | 0     |
| King eider            | 0     | 1     | 0    | 11   | 13     | 0     | 0       | 0    | 0    | 0    | 0    | 0     |
| Ptarmigan             | 0     | 973   | 230  | 58   | 0      | 22    | 54      | 0    | 0    | 0    | 0    | 14    |

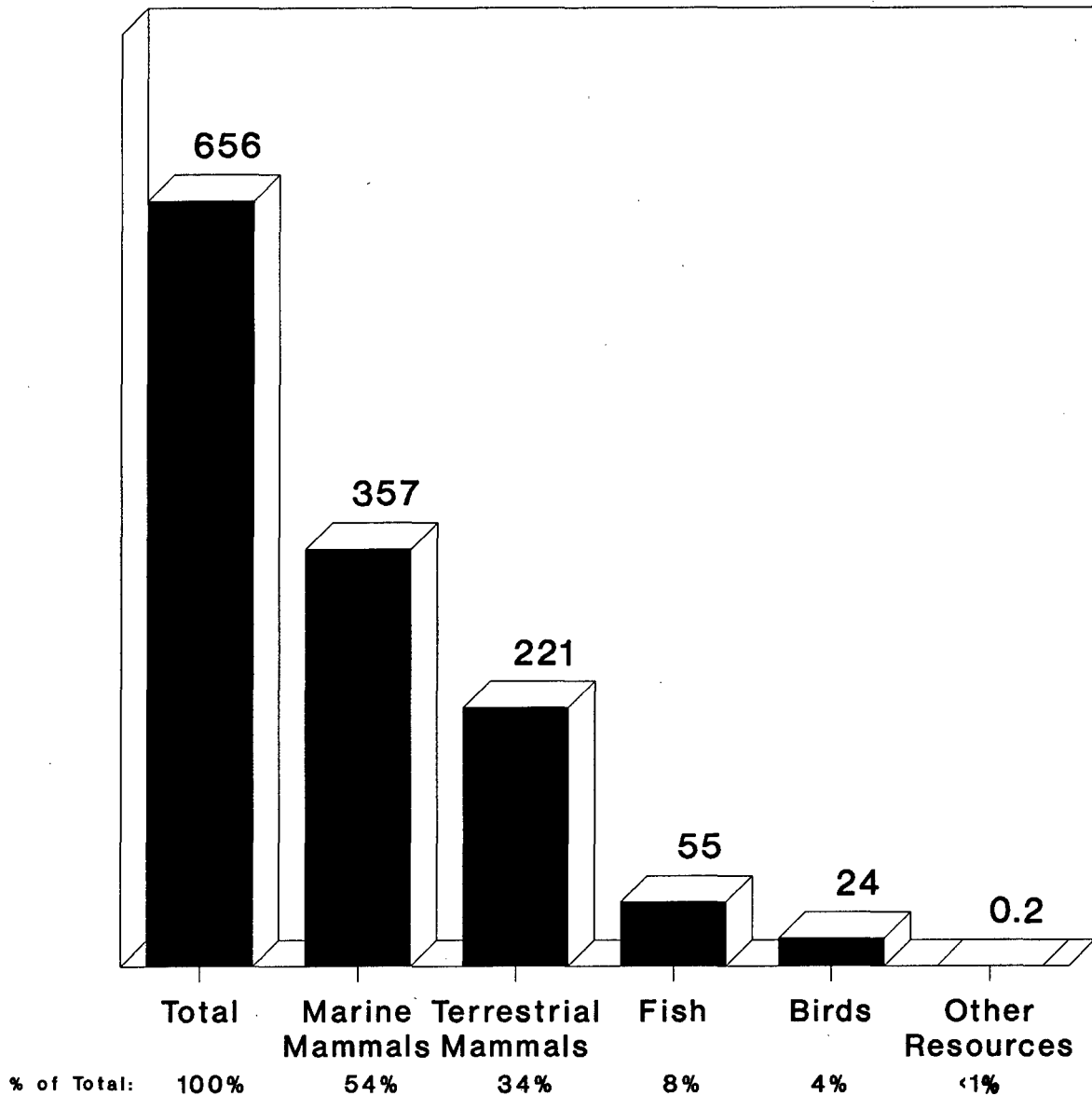
Source: Stephen R. Braund & Associates, 1993

**Figure B-1: Estimated Harvest Percentages by Major Resource Category Barrow, Year Two**



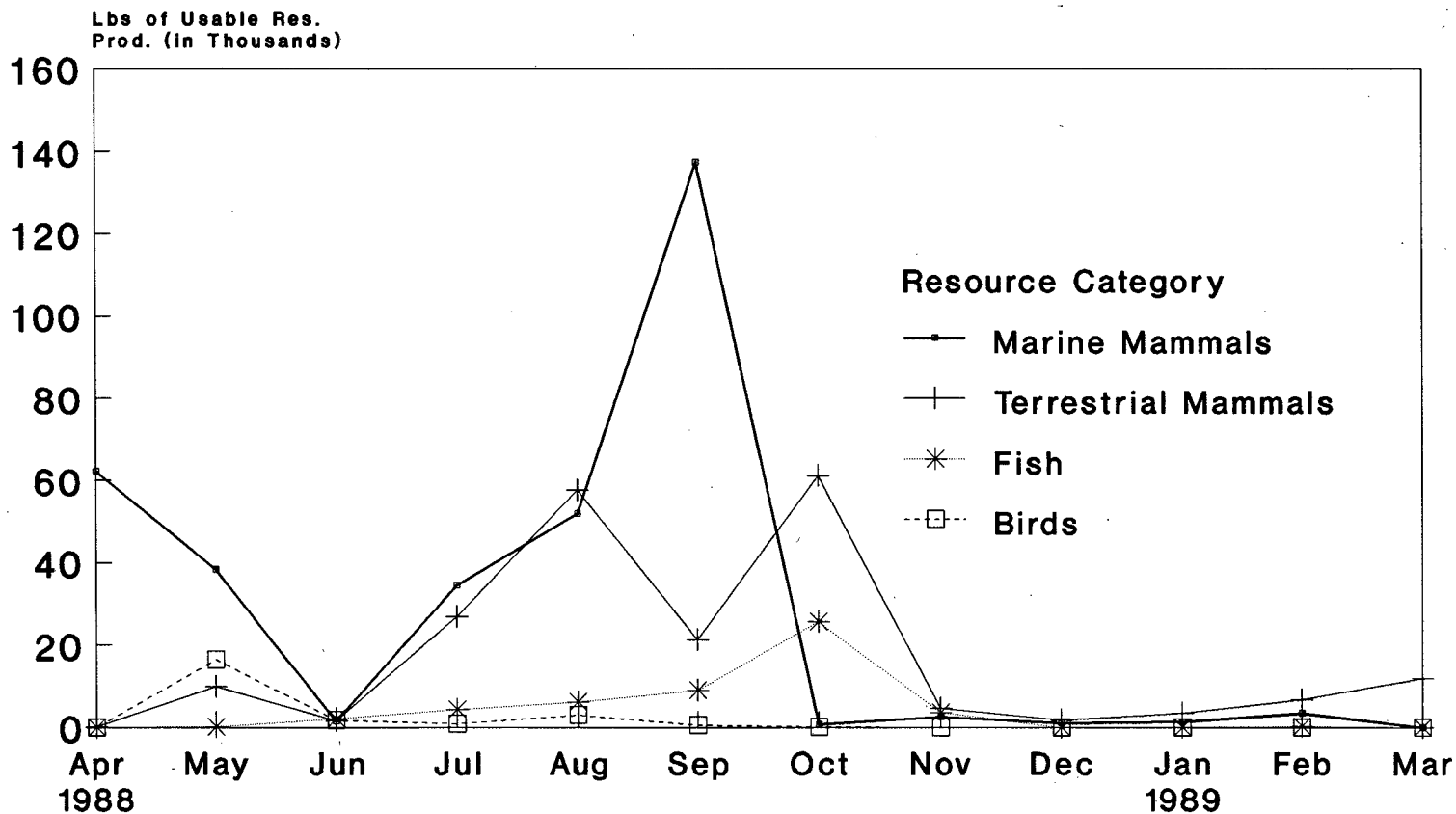
Based on usable pounds harvested.  
Year Two: April 1, 1988 - March 31, 1989  
Source: Stephen R. Braund & Assoc., 1993

**Figure B-2: Harvest Estimates by  
Major Resource Category  
All Barrow Households, Year Two Revised  
(Mean Usable Pounds Per Household)**



Year Two: April 1, 1988 - March 31, 1989  
 Source: Stephen R. Braund & Assoc., 1993

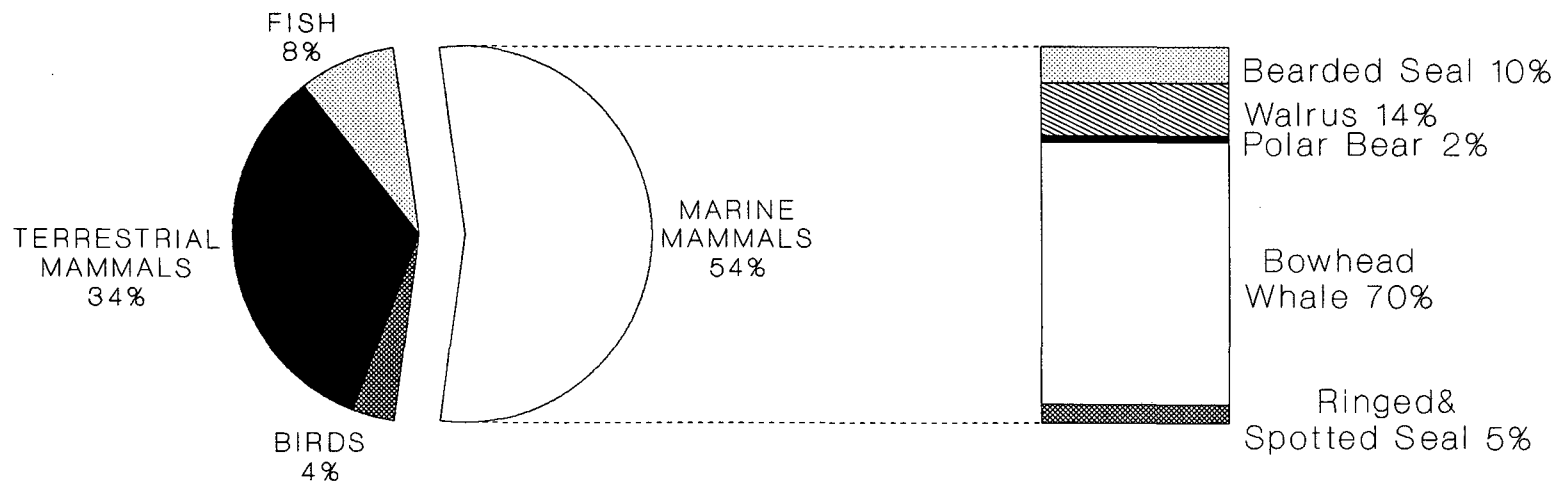
# Figure B-3: Monthly Harvest Estimates by Major Resource Category All Barrow Households, Year Two Revised



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Year Two: April 1, 1988 - March 31, 1989  
 Source: Stephen R. Braund & Assoc., 1993

**Figure B-4: Estimated Harvest Percentages of Marine Mammals  
Barrow, Year Two  
(Usable Pounds Harvested)**

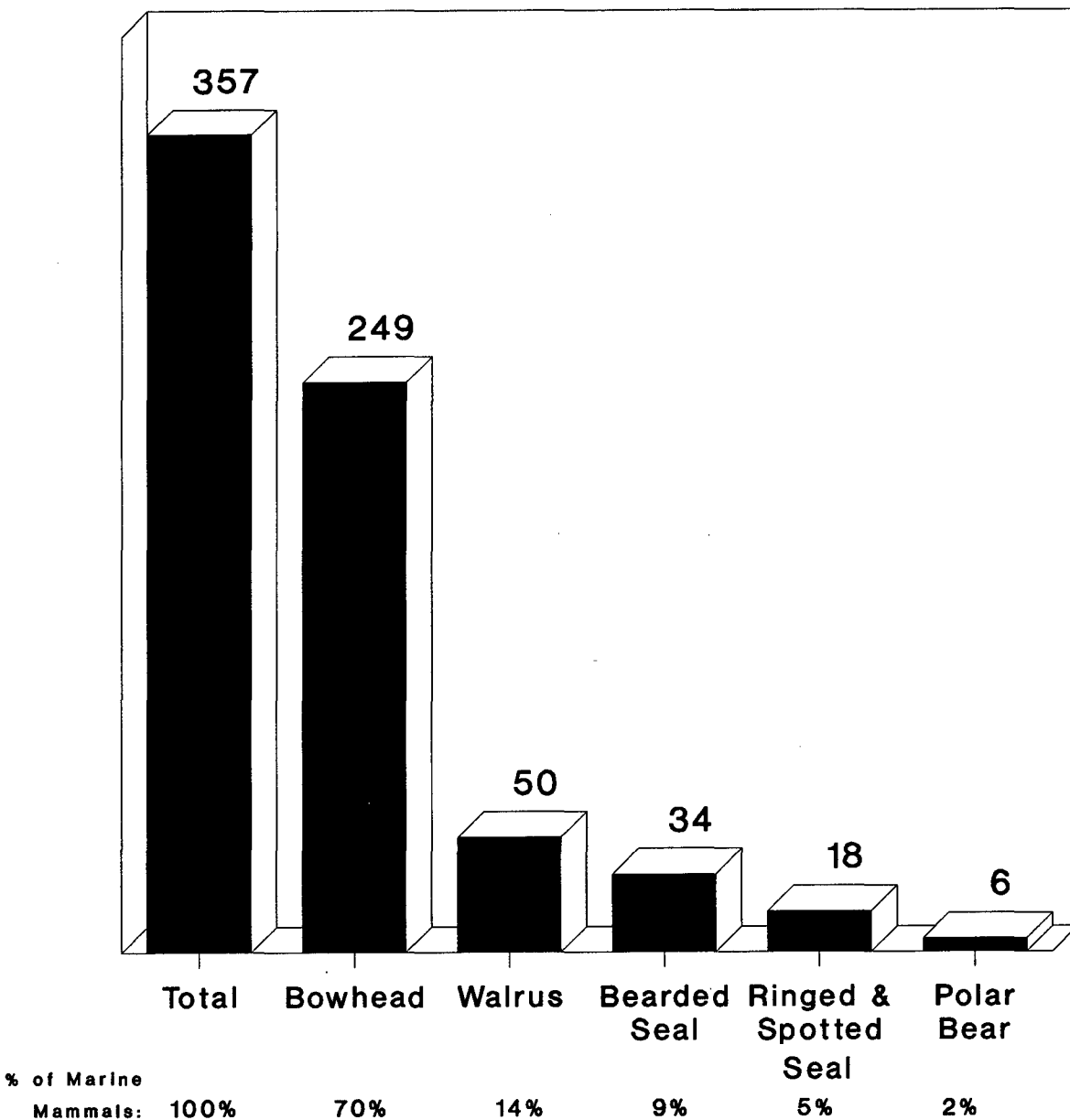


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Year Two: April 1, 1988 - March 31, 1989  
Source: Stephen R. Braund & Assoc., 1993



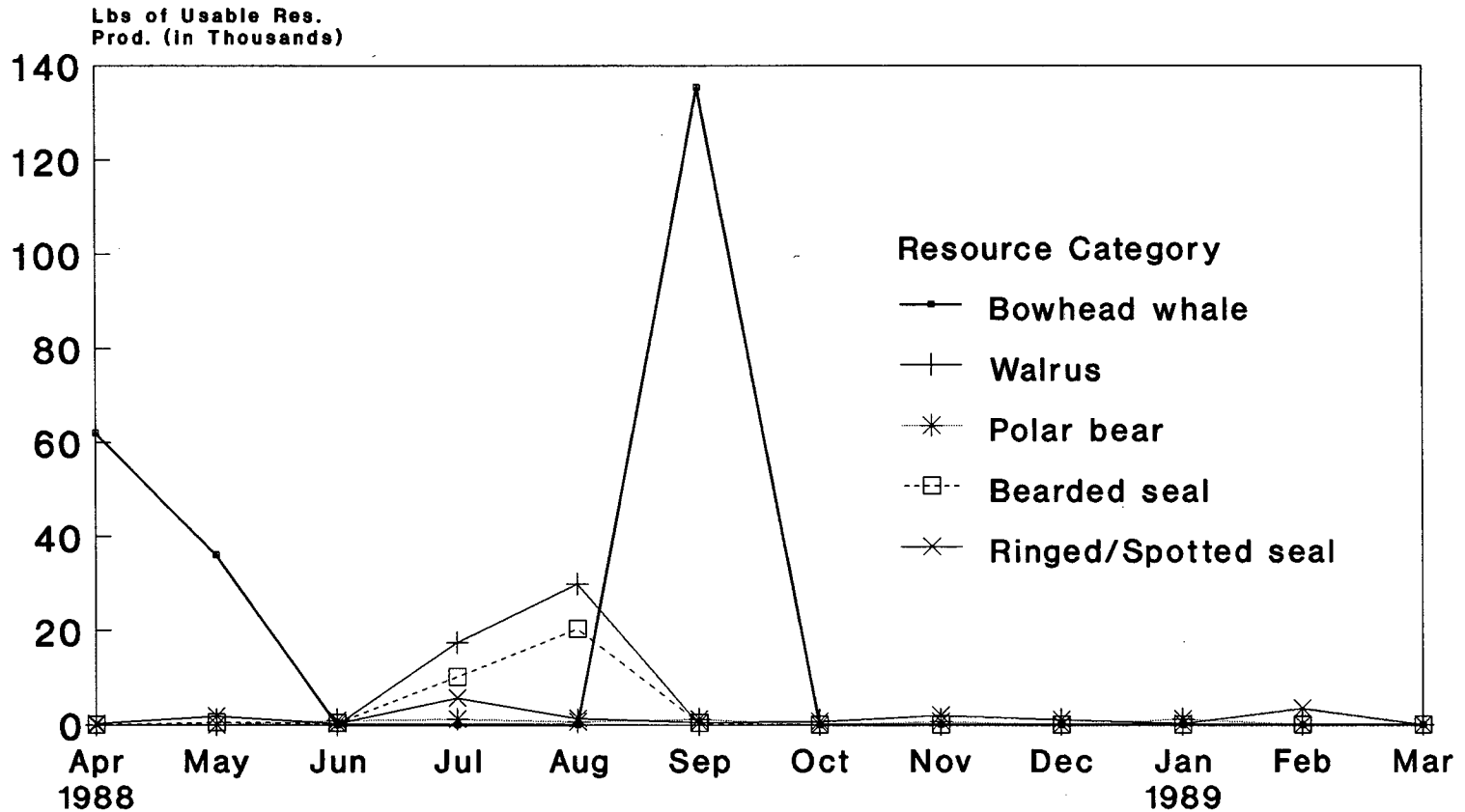
**Figure B-5: Marine Mammal  
Harvest Estimates  
All Barrow Households, Year Two Revised  
(Mean Usable Pounds Per Household)**



Year Two: April 1, 1988 - March 31, 1989  
 Source: Stephen R. Braund & Assoc., 1993

# Figure B-6: Monthly Marine Mammal Harvest Estimates

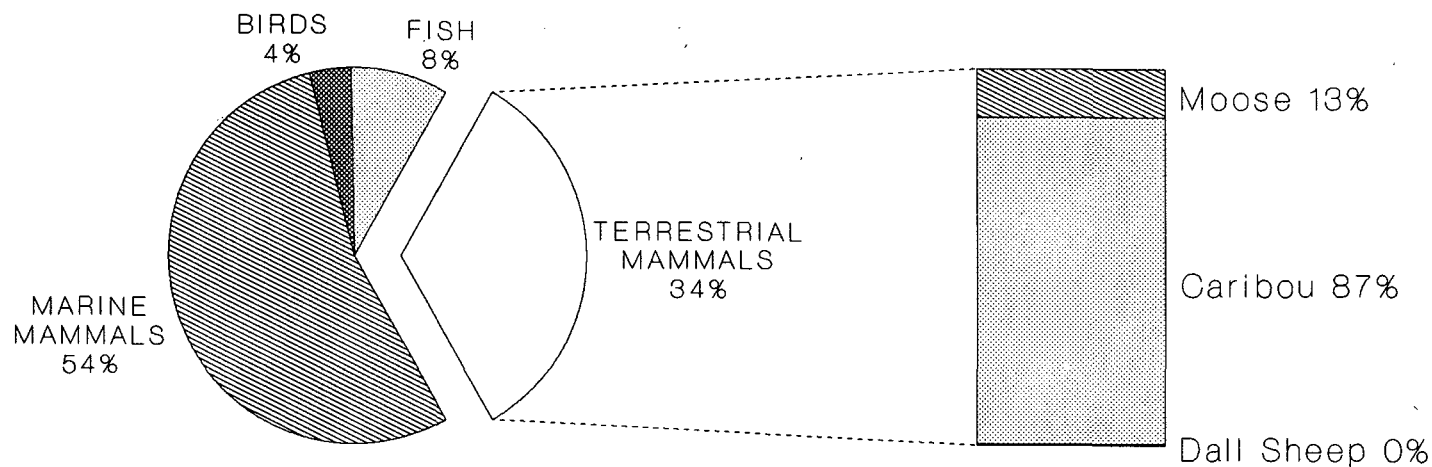
## All Barrow Households, Year Two Revised



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Year Two: April 1, 1988 - March 31, 1989  
 Source: Stephen R. Braund & Assoc., 1993

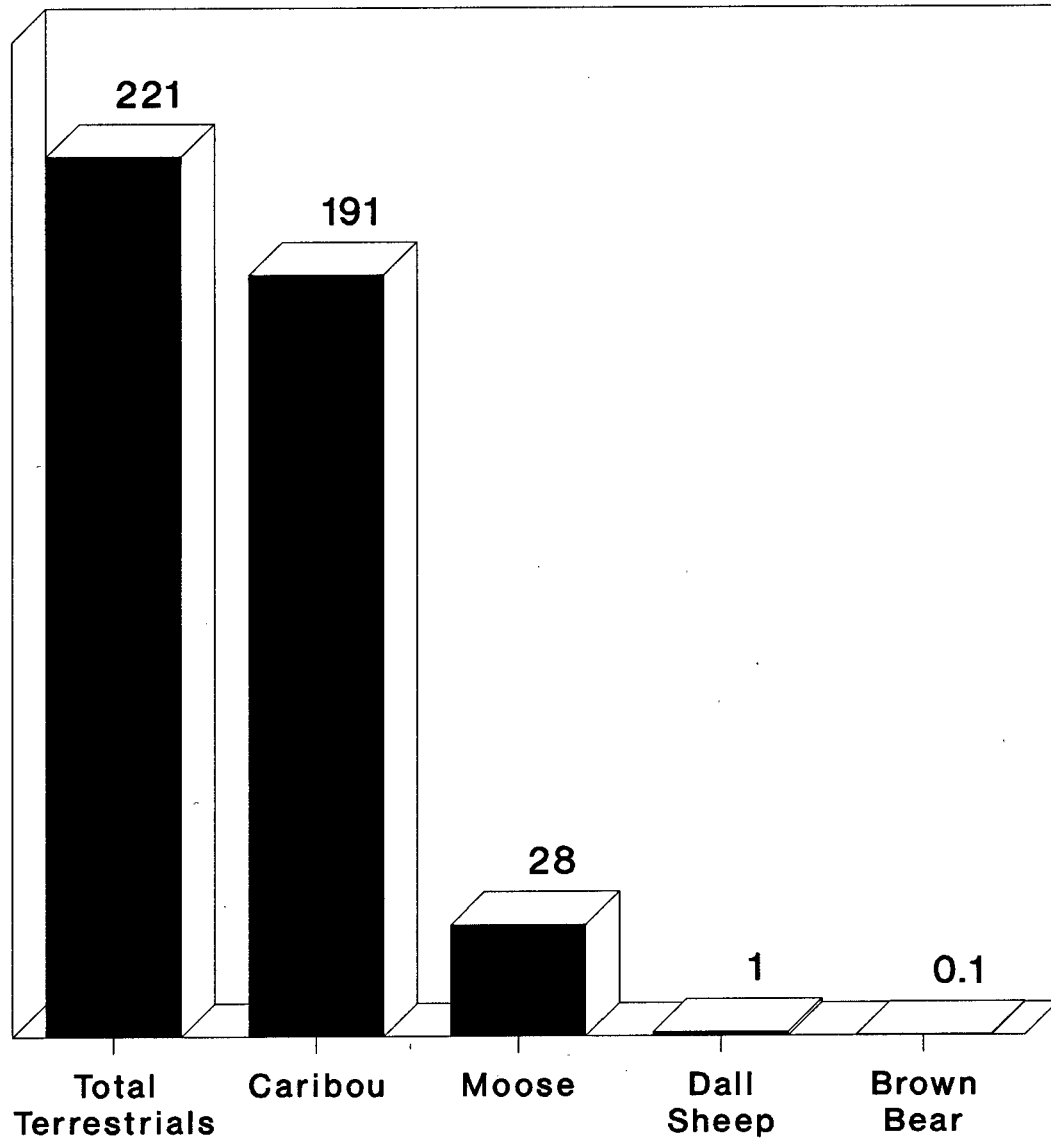
**Figure B-7: Estimated Harvest Percentages of Terrestrial Mammals  
Barrow, Year Two  
(Usable Pounds Harvested)**



B-38

Year Two: April 1, 1988 - March 31, 1989  
Source: Stephen R. Braund & Assoc., 1993

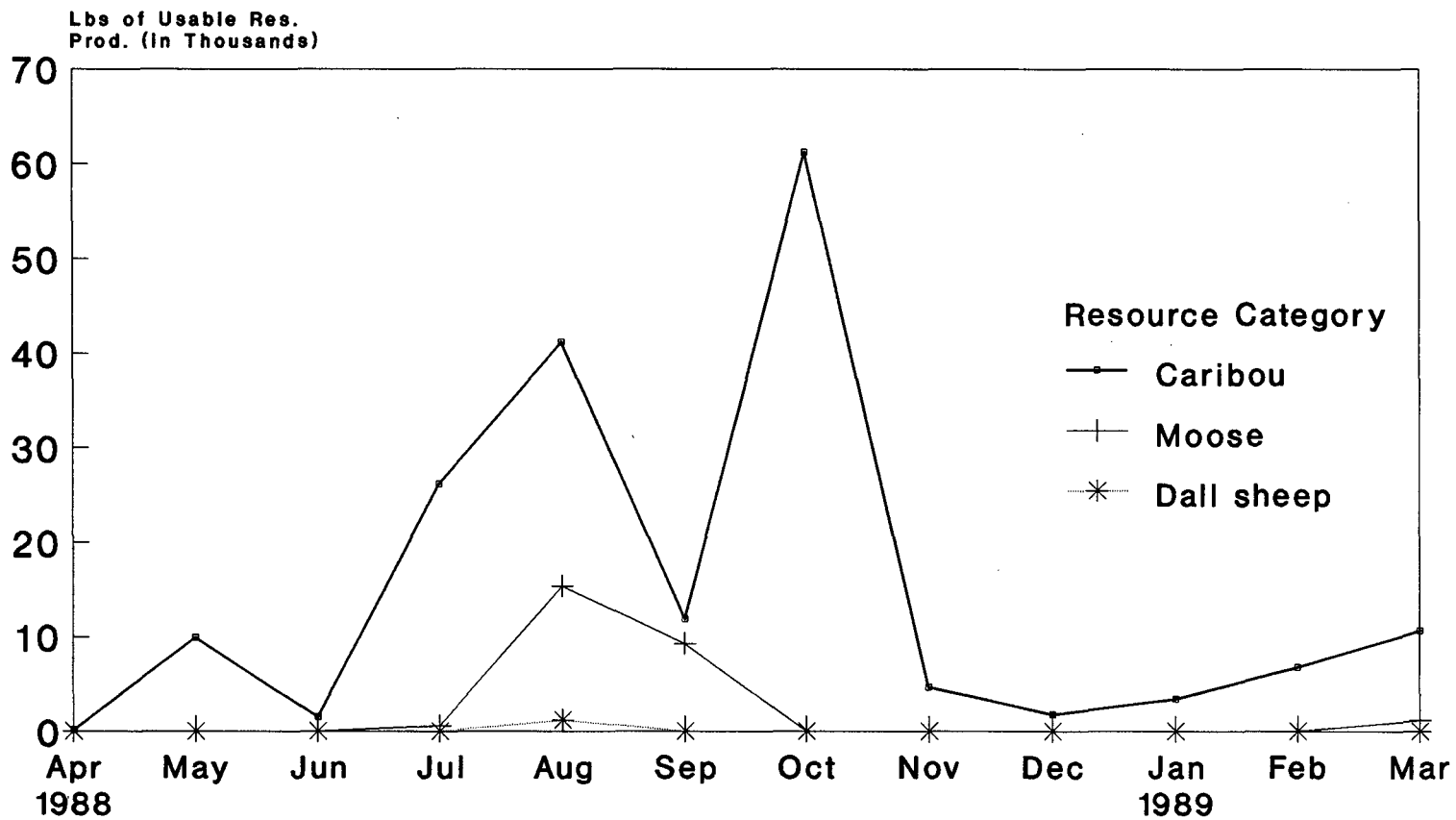
**Figure B-8: Terrestrial Mammal  
Harvest Estimates  
All Barrow Households, Year Two Revised  
(Mean Usable Pounds Per Household)**



|                           |      |     |     |     |     |
|---------------------------|------|-----|-----|-----|-----|
| % of Terrestrial Mammals: | 100% | 86% | 13% | <1% | <1% |
|---------------------------|------|-----|-----|-----|-----|

Year Two: April 1, 1988 - March 31, 1989  
 Source: Stephen R. Braund & Assoc., 1993

**Figure B-9: Monthly Terrestrial  
Mammal Harvest Estimates  
All Barrow Households, Year Two Revised**

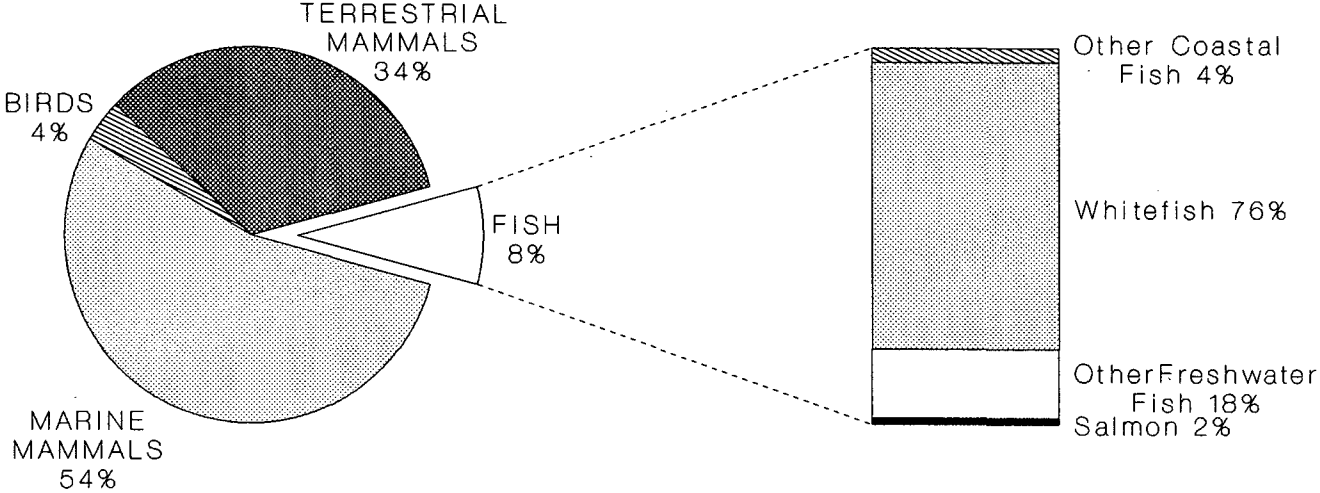


Note: 120 lbs. of brown bear were harvested in September but do not appear on this chart due to scale.

Year Two: April 1, 1988 - March 31, 1989

Source: Stephen R. Braund & Assoc., 1993

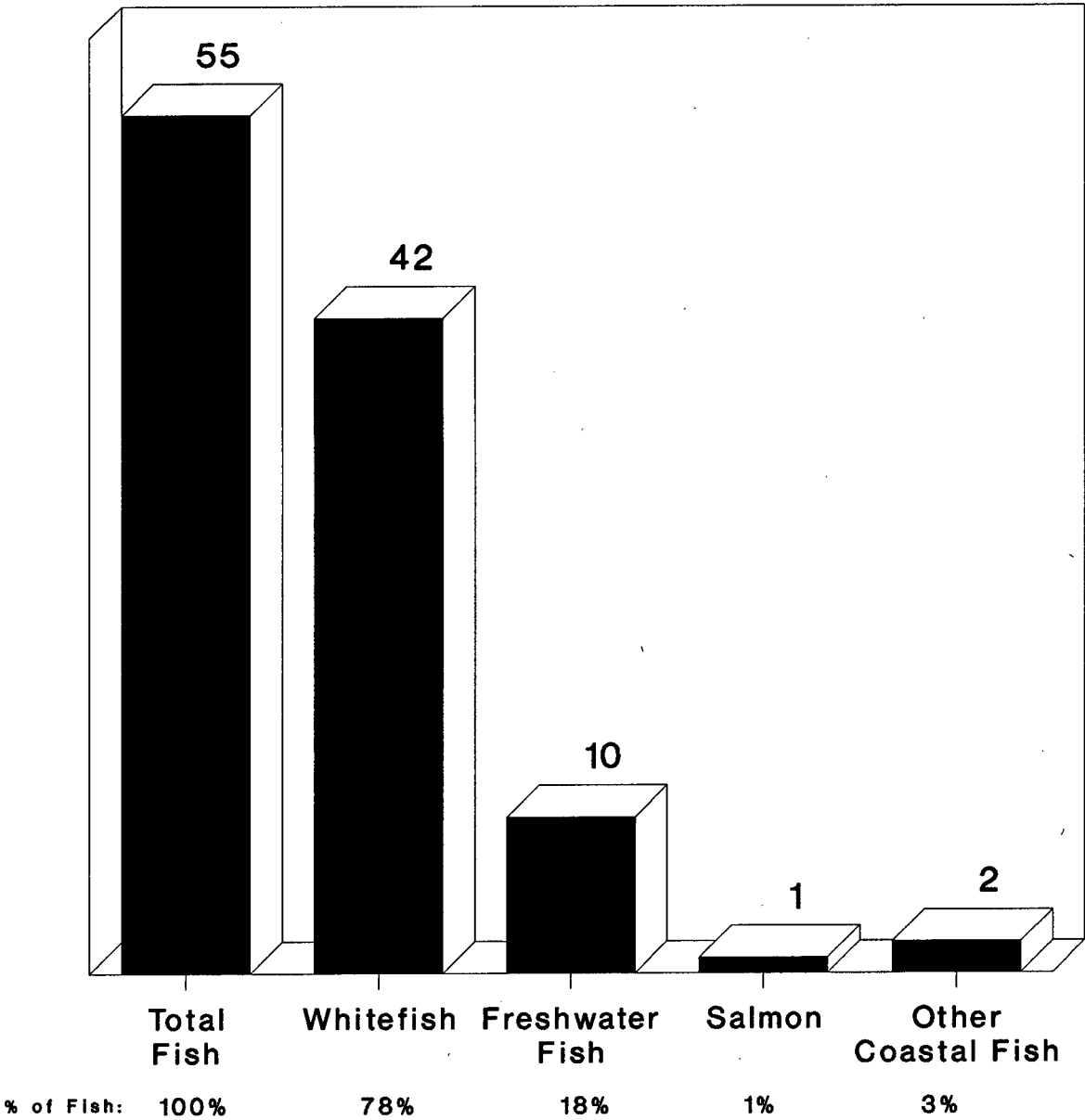
**Figure B-10: Estimated Harvest Percentages of Fish Barrow, Year Two (Usable Pounds Harvested)**



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Year Two: April 1, 1988 - March 31, 1989  
 Source: Stephen R. Braund & Assoc., 1993

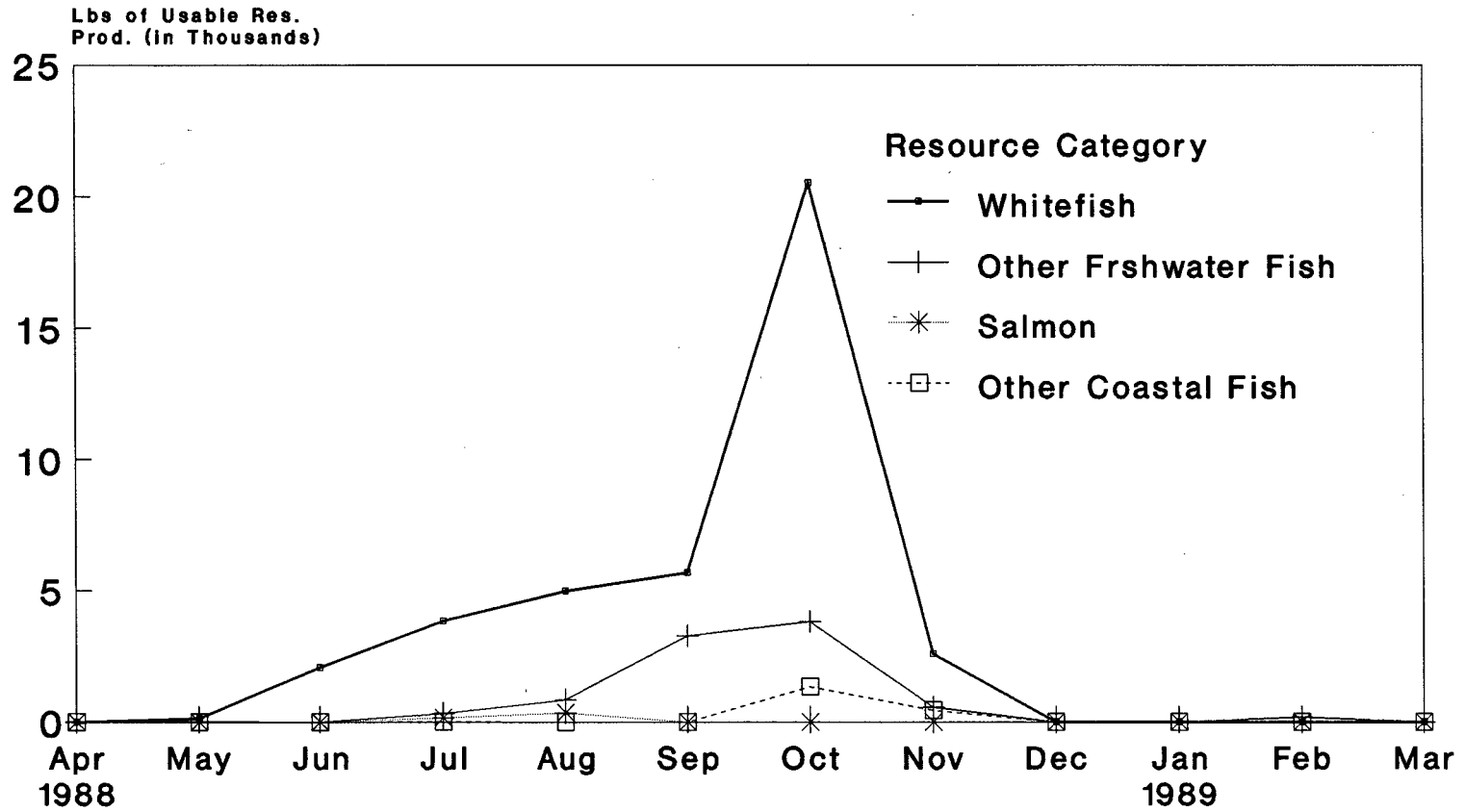
**Figure B-11: Fish Harvest Estimates  
All Barrow Households, Year Two Revised  
(Mean Usable Pounds Per Household)**



Year Two: April 1, 1988 - March 31, 1989  
 Source: Stephen R. Braund & Assoc., 1993

# Figure B-12: Monthly Fish Harvest Estimates

## All Barrow Households, Year Two Revised

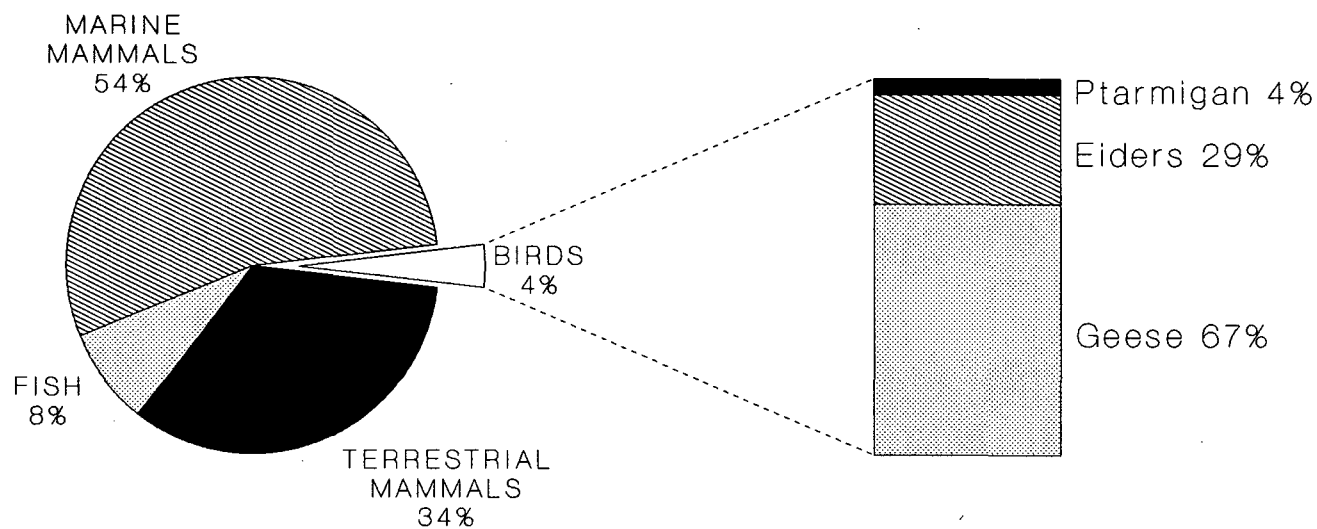


Year Two: April 1, 1988 - March 31, 1989  
 Source: Stephen R. Braund & Assoc., 1993

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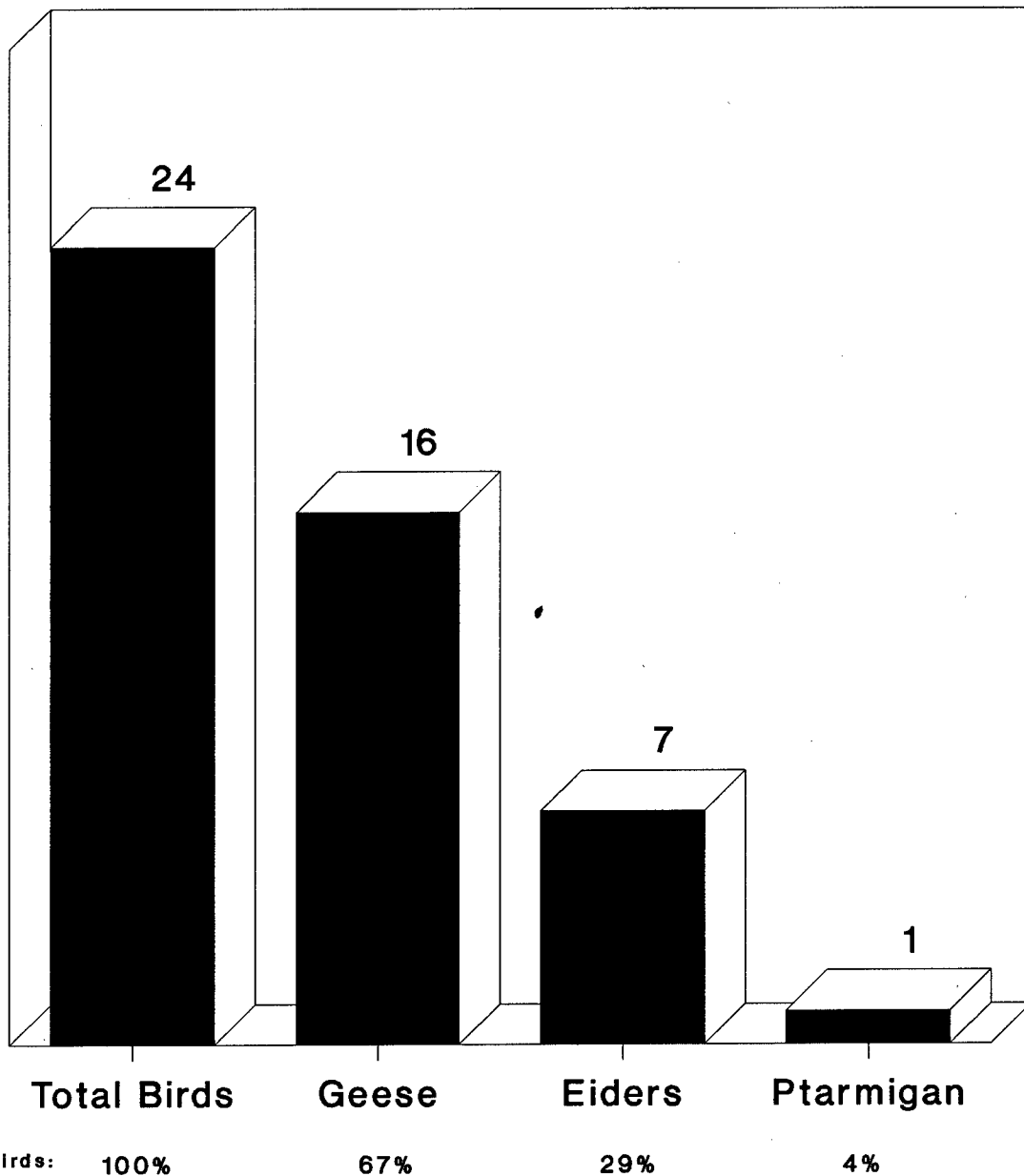
**Figure B-13: Estimated Harvest Percentages of Birds  
Barrow, Year Two  
(Usable Pounds Harvested)**



B-44

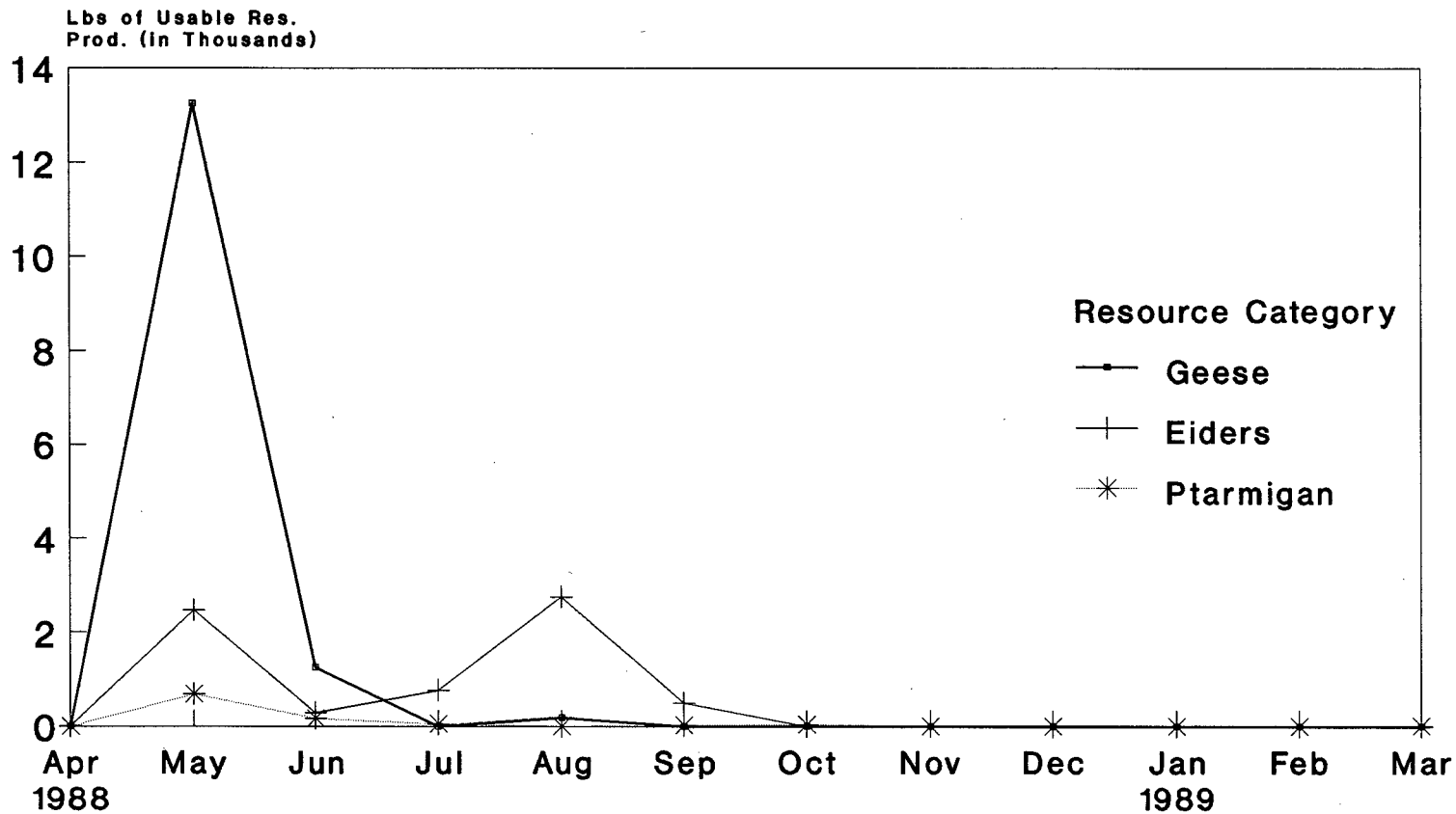
Year Two: April 1, 1988 - March 31, 1989  
Source: Stephen R. Braund & Assoc., 1993

**Figure B-14: Bird Harvest Estimates**  
**All Barrow Households, Year Two Revised**  
**(Mean Usable Pounds Per Household)**



Year Two: April 1, 1988 - March 31, 1989  
Source: Stephen R. Braund & Assoc., 1993

# Figure B-15: Monthly Bird Harvest Estimates All Barrow Households, Year Two Revised



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Year Two: April 1, 1988 - March 31, 1989  
 Source: Stephen R. Braund & Assoc., 1993



MAP B-1  
 NORTH SLOPE SUBSISTENCE STUDY - BARROW: YEAR TWO  
 SUBSISTENCE HARVEST SITES, 1988-1989

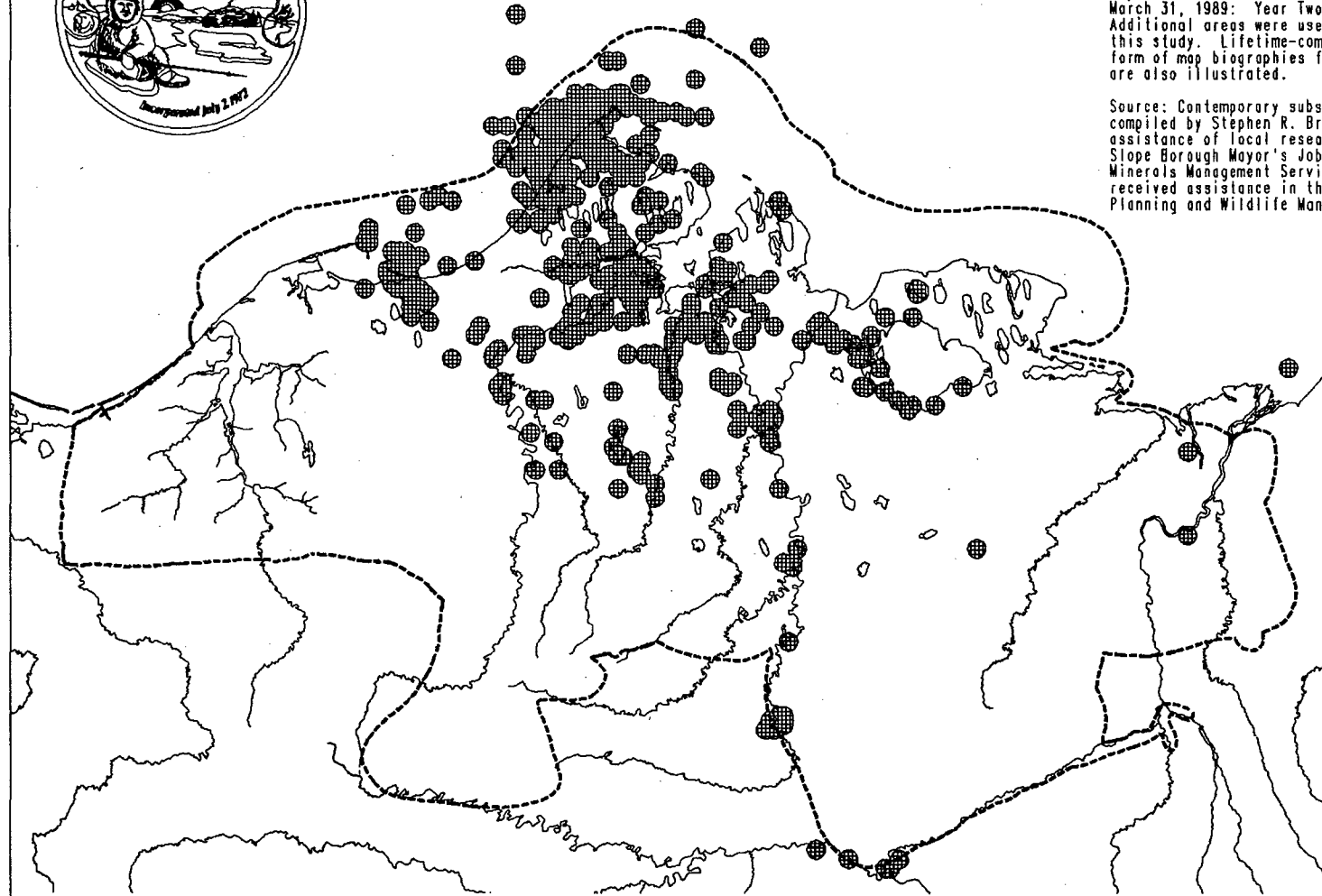


This map depicts approximate subsistence harvest sites used by 118 Barrow households (13 percent of the community households). All harvest sites are depicted with a two mile buffer. The map depicts subsistence use for the time period April 1, 1988 through March 31, 1989: Year two of the North Slope Subsistence Study. Additional areas were used by Barrow residents not included in this study. Lifetime-community harvest areas, collected in the form of map biographies from 20 Barrow households (Pedersen 1979), are also illustrated.

Source: Contemporary subsistence use information gathered and compiled by Stephen R. Braund and Associates (SRB&A) with the assistance of local research assistants hired through the North Slope Borough Mayor's Job Program. SRB&A is under contract to the Minerals Management Service, U.S. Department of Interior, and received assistance in the study from the North Slope Borough Planning and Wildlife Management Departments, Barrow, Alaska.

LEGEND INFORMATION

-  Lifetime community land use (Pedersen 1979).
-  All Species Harvested
- Caribou, Moose  
 Brown Bear, Fox  
 Wolverine, Seals  
 Walrus, Polar Bear  
 Bowhead Whale  
 Geese, Eiders  
 Other Ducks  
 Ptarmigan  
 Fish, Water



Map Production: North Slope Borough GIS  
 Date: June 20, 1989



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# MAP B-2 NORTH SLOPE SUBSISTENCE STUDY - BARROW: YEAR TWO SUBSISTENCE HARVEST SITES BY MAJOR RESOURCE CATEGORY

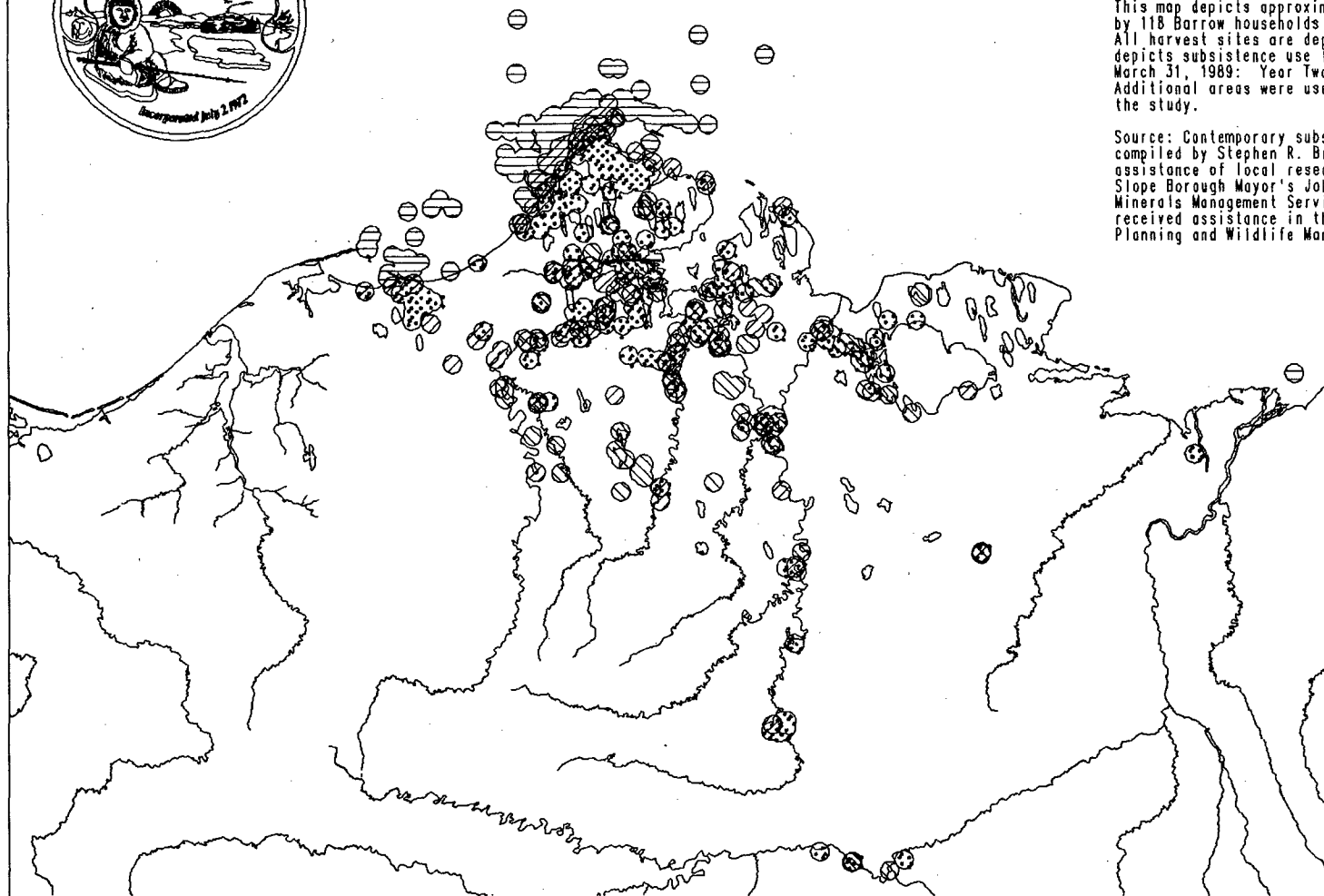


This map depicts approximate subsistence harvest sites used by 118 Barrow households (13 percent of the community households). All harvest sites are depicted with a two mile buffer. The map depicts subsistence use for the time period April 1, 1988 through March 31, 1989: Year Two of the North Slope Subsistence Study. Additional areas were used by Barrow residents not included in the study.

Source: Contemporary subsistence use information gathered and compiled by Stephen R. Braund and Associates (SRB&A) with the assistance of local research assistants hired through the North Slope Borough Mayor's Job Program. SRB&A is under contract to the Minerals Management Service, U.S. Department of Interior, and received assistance in the study from the North Slope Borough Planning and Wildlife Management Departments, Barrow, Alaska.

## LEGEND INFORMATION

-  Marine Mammals  
(Bowhead whale, seals, walrus, polar bear)
-  Terrestrial Mammals  
(Caribou, moose, brown bear, fox, wolverine)
-  Fish  
(Whitefish, other freshwater fish, salmon, other coastal fish)
-  Birds  
(Eiders, geese, ptarmigan)



Map Production: North Slope Borough GIS

Date: June 19, 1989

25 0 25 50 75 100 125

MILES



# MAP B-3 NORTH SLOPE SUBSISTENCE STUDY - BARROW: YEAR TWO MARINE MAMMAL HARVEST SITES - ALL SPECIES



This map depicts approximate subsistence harvest sites used by 118 Barrow households (13 percent of the community households). All harvest sites are depicted with a two mile buffer. The map depicts subsistence use for the time period April 1, 1988 through March 31, 1989: Year Two of the North Slope Subsistence Study. Additional areas were used by Barrow residents not included in this study. Lifetime-community harvest areas, collected in the form of map biographies from 20 Barrow households (Pedersen 1979), are also illustrated.

Source: Contemporary subsistence use information gathered and compiled by Stephen R. Braund and Associates (SRB&A) with the assistance of local research assistants hired through the North Slope Borough Mayor's Job Program. SRB&A is under contract to the Minerals Management Service, U.S. Department of Interior, and received assistance in the study from the North Slope Borough Planning and Wildlife Management Departments, Barrow, Alaska.

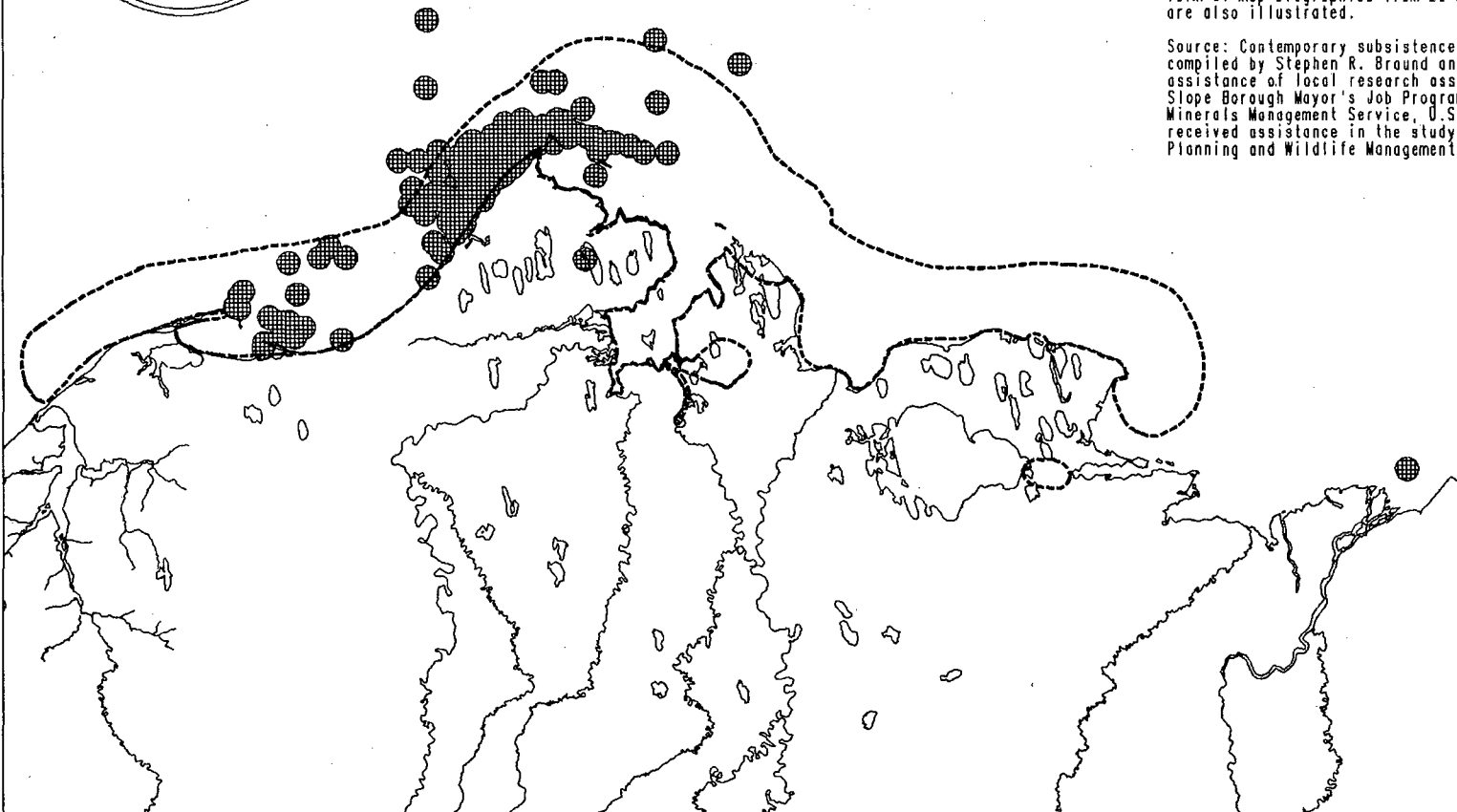
## LEGEND INFORMATION



Lifetime community land use (Pedersen 1979).



Marine Mammals  
 - Bowhead whale  
 - Bearded seal  
 - Ringed seal  
 - Spotted seal  
 - Walrus  
 - Polar bear



Map Production: North Slope Borough GIS

Date: June 19, 1989

MILES




MAP B-4  
 NORTH SLOPE SUBSISTENCE STUDY - BARROW: YEAR TWO  
 MARINE MAMMAL HARVEST SITES BY SPECIES:  
 WALRUS AND SEALS

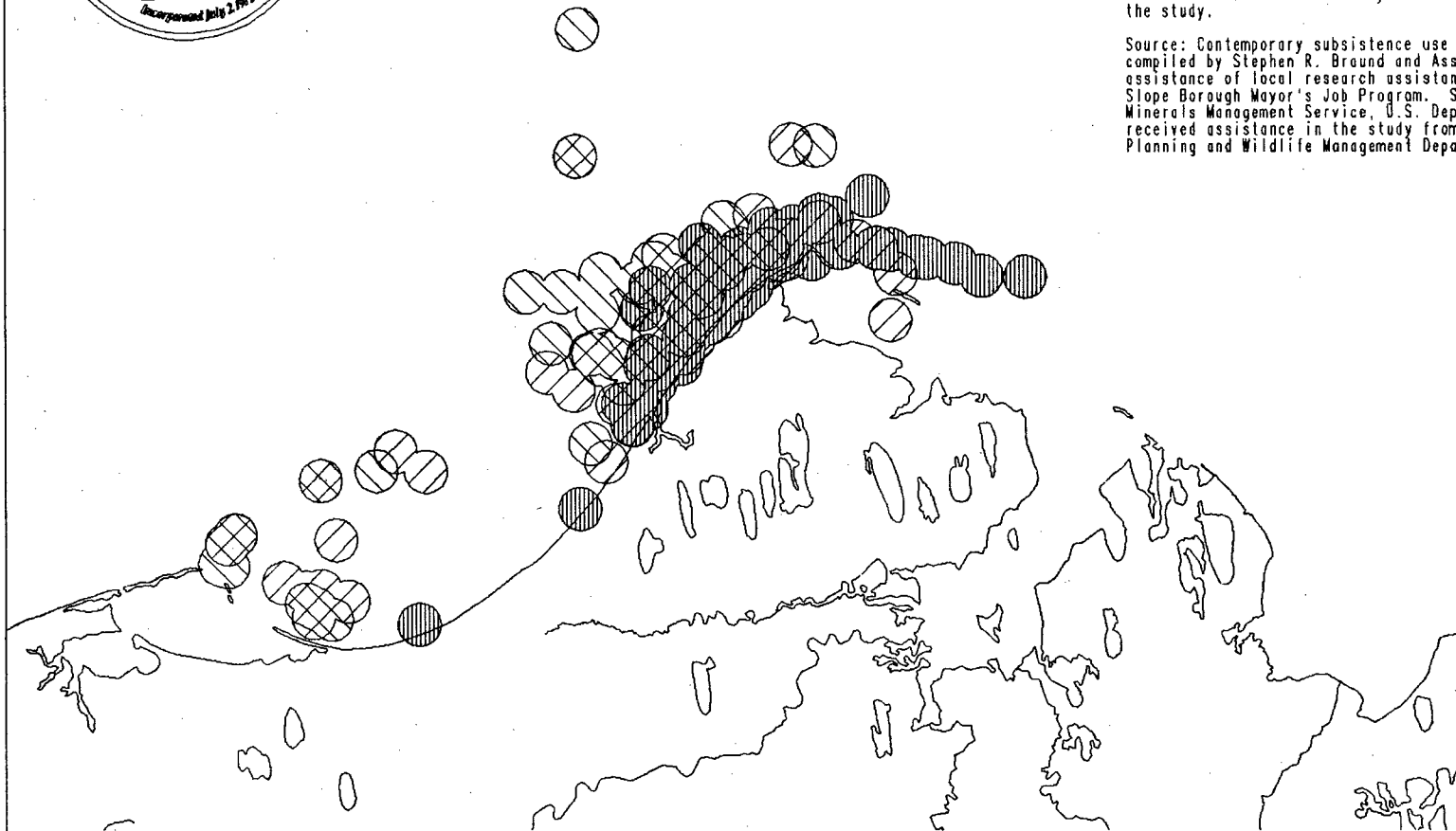


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LEGEND INFORMATION

-  Walrus
-  Bearded seal
-  Ringed and spotted seals



Map Production: North Slope Borough GIS

Date: June 19, 1989





MAP B-5  
 NORTH SLOPE SUBSISTENCE STUDY - BARROW: YEAR TWO  
 MARINE MAMMAL HARVEST SITES BY SPECIES:  
 BOWHEAD WHALE AND POLAR BEAR

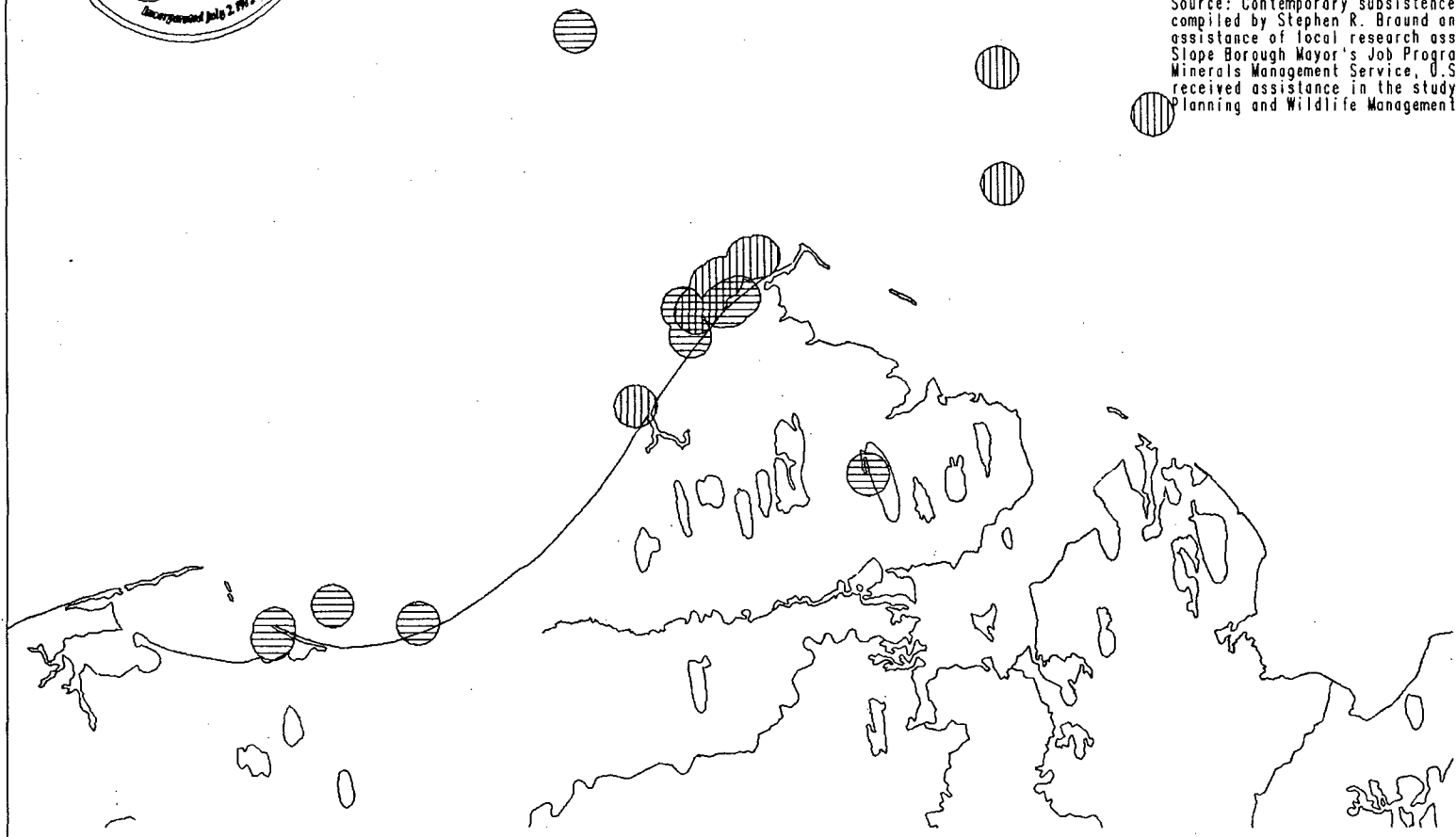


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LEGEND INFORMATION

-  Bowhead Whale
-  Polar Bear



Map Production: North Slope Borough GIS

Date: June 19, 1989







MAP B-6  
 NORTH SLOPE SUBSISTENCE STUDY - BARROW: YEAR TWO  
 MARINE MAMMAL HARVEST SITES BY SEASON

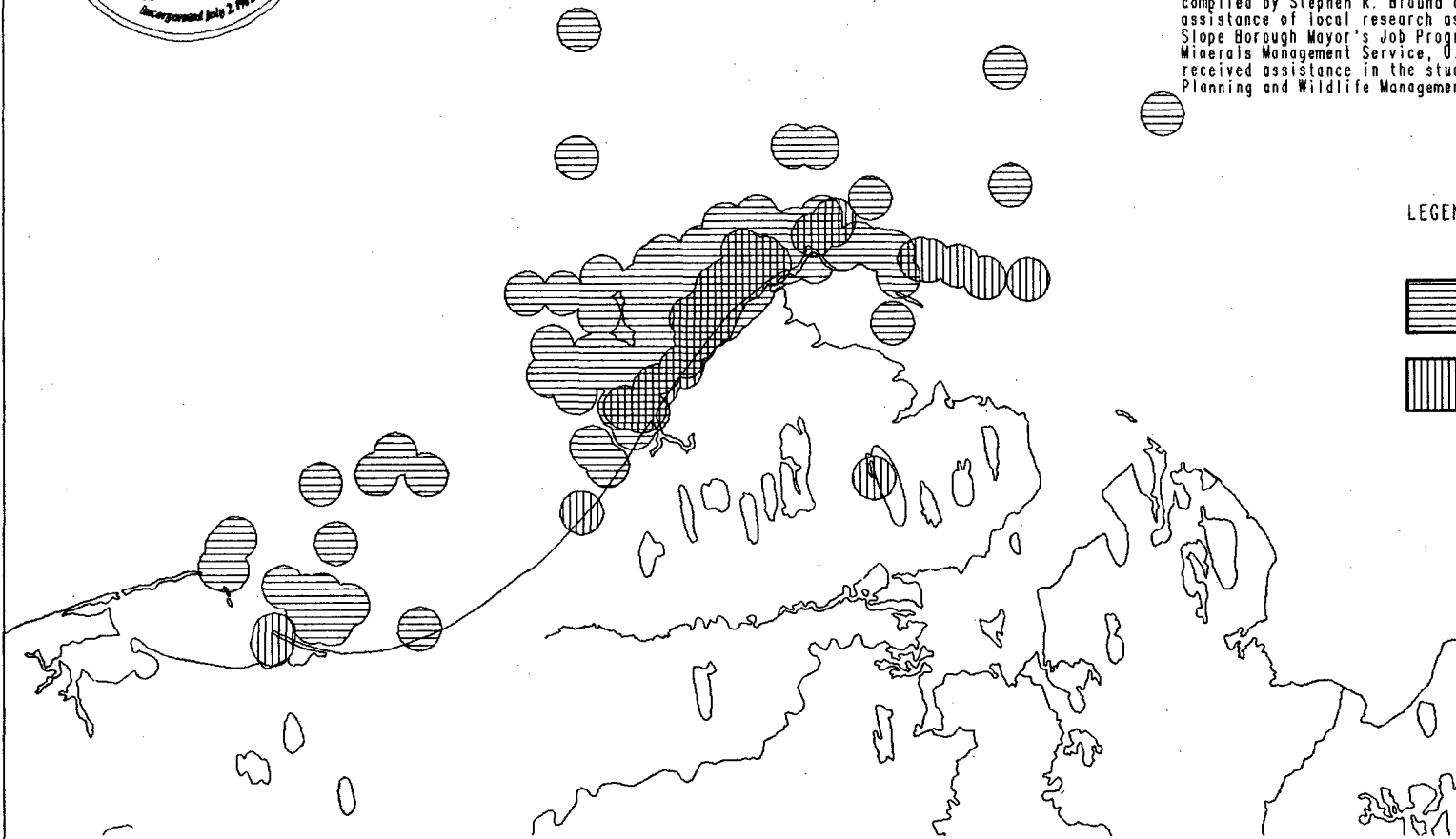


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LEGEND INFORMATION

-  July - October
-  November - June



Map Production: North Slope Borough GIS

Date: June 19, 1989



MILES

# MAP B-7 NORTH SLOPE SUBSISTENCE STUDY - BARROW: YEAR TWO TERRESTRIAL MAMMAL HARVEST SITES - ALL SPECIES



This map depicts approximate subsistence harvest sites used by 118 Barrow households (13 percent of the community households). All harvest sites are depicted with a two mile buffer. The map depicts subsistence use for the time period April 1, 1988 through March 31, 1989: Year Two of the North Slope Subsistence Study. Additional areas were used by Barrow residents not included in this study. Lifetime-community harvest areas, collected in the form of map biographies from 20 Barrow households (Pedersen 1979), are also illustrated.

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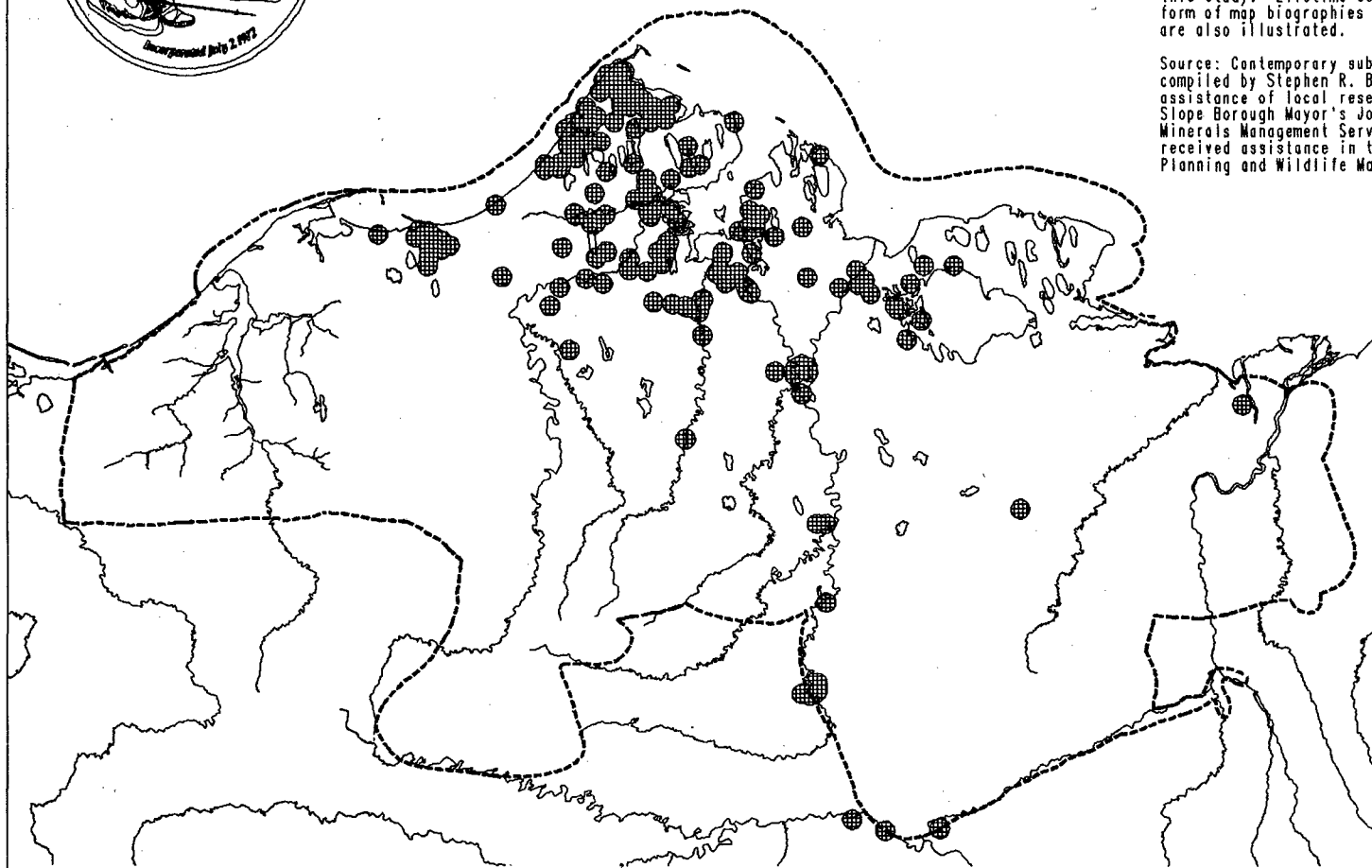
## LEGEND INFORMATION



Lifetime community land use (Pedersen 1979).



Terrestrial Mammals  
- Caribou  
- Moose  
- Brown bear  
- Fox  
- Wolverine



Map Production: North Slope Borough GIS

Date: June 20, 1989

25 0 25 50 75 100 125

MILES







MAP B-8  
 NORTH SLOPE SUBSISTENCE STUDY - BARROW: YEAR TWO  
 TERRESTRIAL MAMMAL HARVEST SITES BY SPECIES (EXCLUDING CARIBOU)

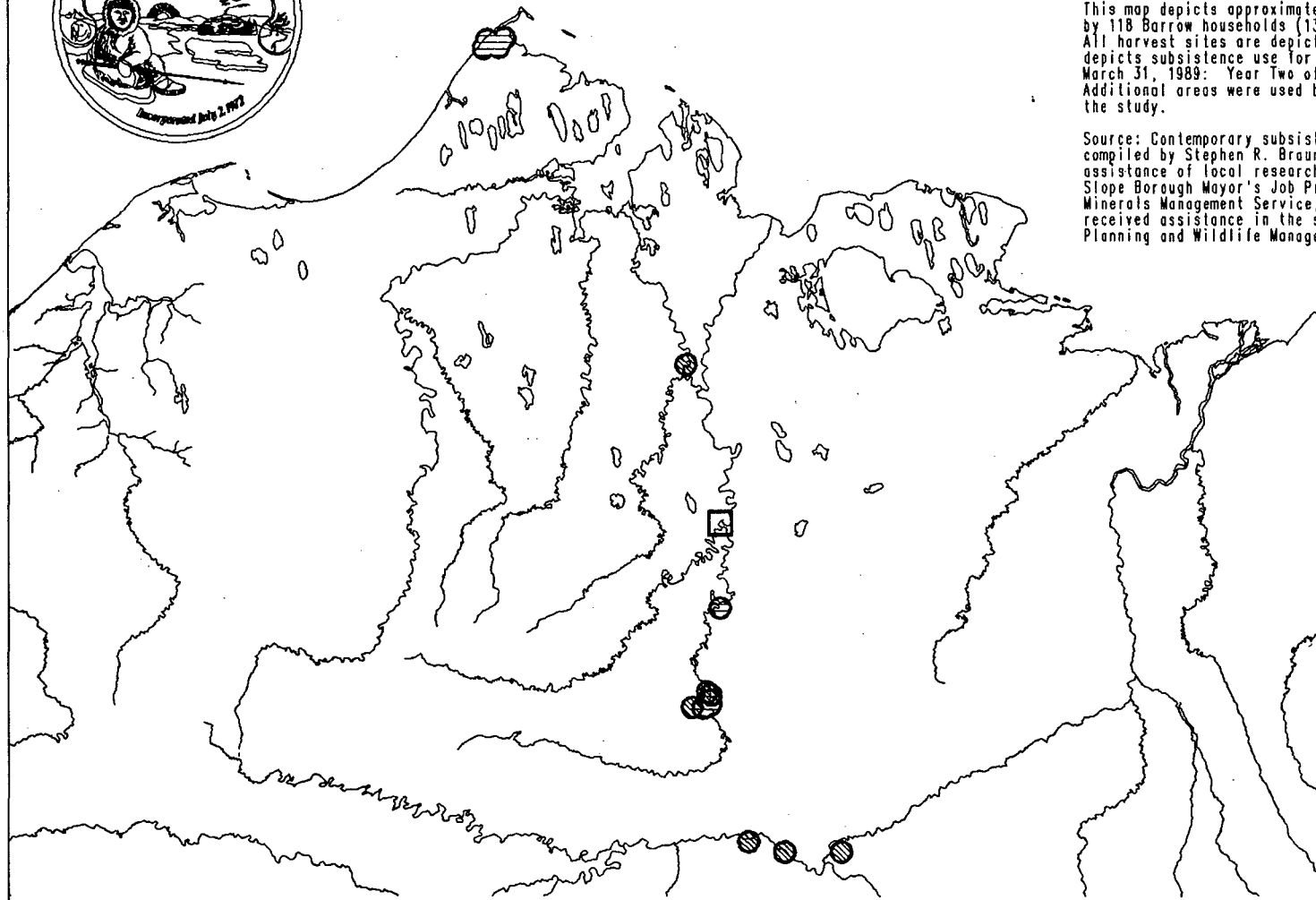


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LEGEND INFORMATION

-  Moose
-  Fox  
- Arctic  
- Red
-  Wolverine
-  Brown bear



Map Production: North Slope Borough GIS

Date: June 20, 1989



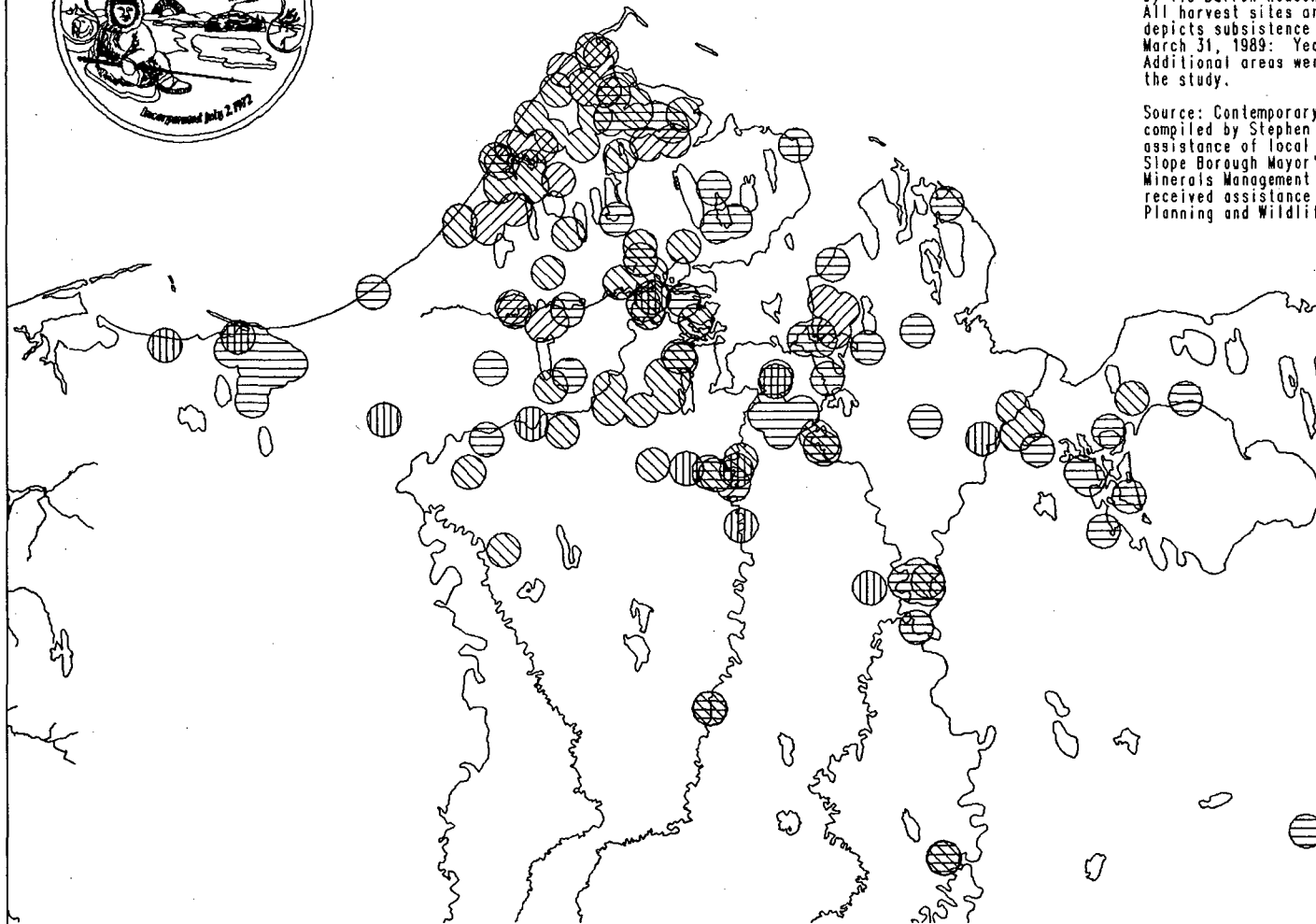
MILES

# MAP B-9 NORTH SLOPE SUBSISTENCE STUDY - BARROW: YEAR TWO CARIBOU HARVEST SITES BY SEASON







This map depicts approximate subsistence harvest sites used by 118 Barrow households (13 percent of the community households). All harvest sites are depicted with a two mile buffer. The map depicts subsistence use for the time period April 1, 1988 through March 31, 1989: Year Two of the North Slope Subsistence Study. Additional areas were used by Barrow residents not included in the study.

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### LEGEND INFORMATION

-  April, May, June 1988
-  July, August, September 1988
-  October, November 1988
-  December 1988, January, February, March 1989

Map Production: North Slope Borough GIS

Date: June 19, 1989

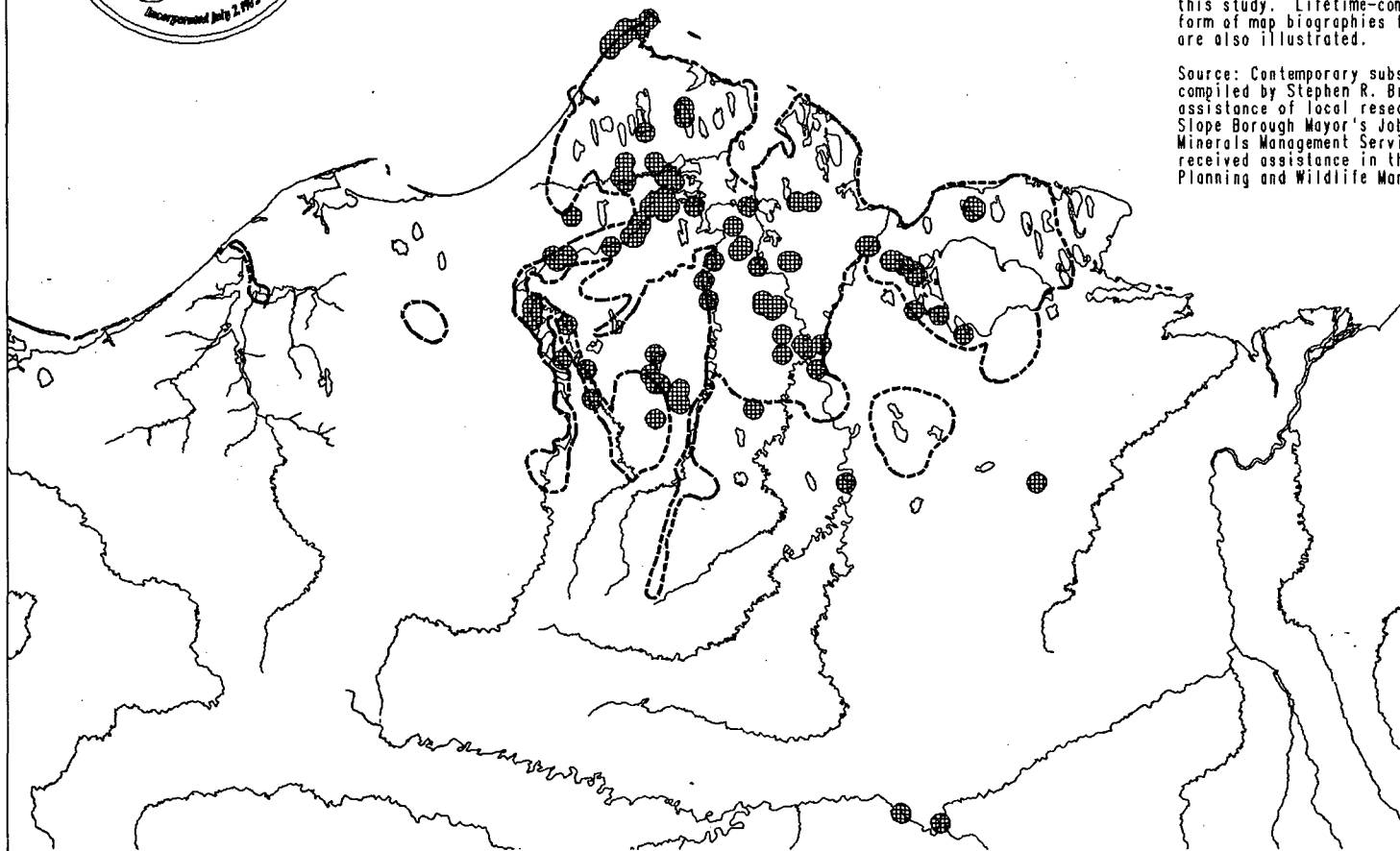


MAP B-10  
 NORTH SLOPE SUBSISTENCE STUDY - BARROW: YEAR TWO  
 FISH HARVEST SITES - ALL SPECIES





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LEGEND INFORMATION

-  Lifetime community land use (Pedersen 1979).
-  All Fish Species
  - Whitefish
    - Round whitefish,
    - broad whitefish,
    - humpback whitefish,
    - least cisco,
    - arctic cisco
  - Other Freshwater Fish
    - Grayling, arctic
    - char, burbot,
    - lake trout
  - Salmon
    - Chum, pink,
    - silver, king
  - Other Coastal Fish
    - Tomcod,
    - arctic cod,



Map Production: North Slope Borough GIS

Date: June 20, 1989

25 0 25 50 75 100 125

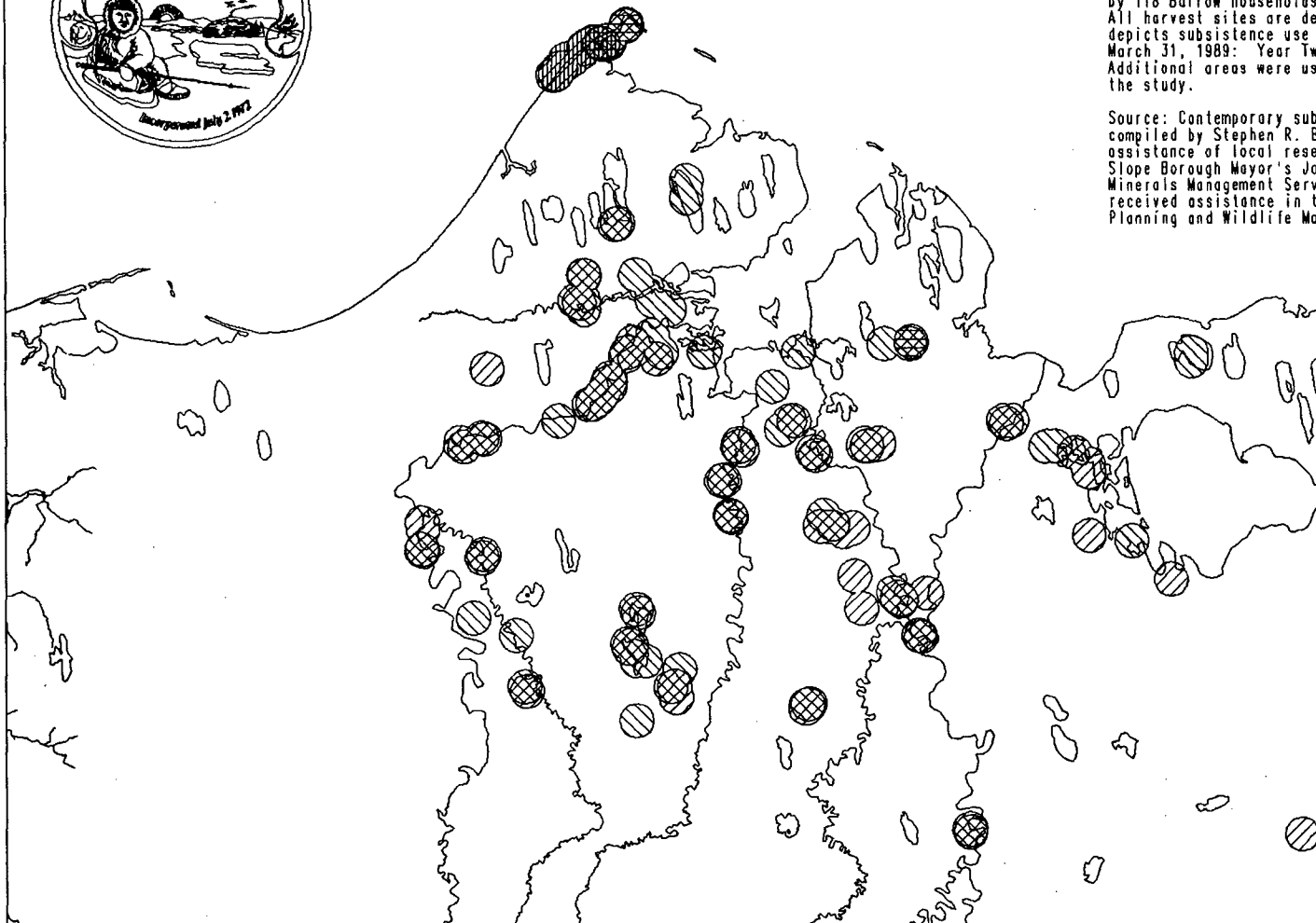
MILES

# MAP B-11 NORTH SLOPE SUBSISTENCE STUDY - BARROW: YEAR TWO FISH HARVEST SITES BY SPECIES GROUPS







This map depicts approximate subsistence harvest sites used by 118 Barrow households (13 percent of the community households). All harvest sites are depicted with a two mile buffer. The map depicts subsistence use for the time period April 1, 1988 through March 31, 1989: Year Two of the North Slope Subsistence Study. Additional areas were used by Barrow residents not included in the study.

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## LEGEND INFORMATION

-  - Whitefish  
Round whitefish, broad whitefish, humpback whitefish, least cisco, arctic cisco
-  - Other Freshwater Fish  
Grayling, arctic char, burbot, lake trout
-  - Salmon  
Chum, pink, silver, king
-  - Other Coastal Fish  
Tomcod, arctic cod.

Map Production: North Slope Borough GIS

Date: June 19, 1989

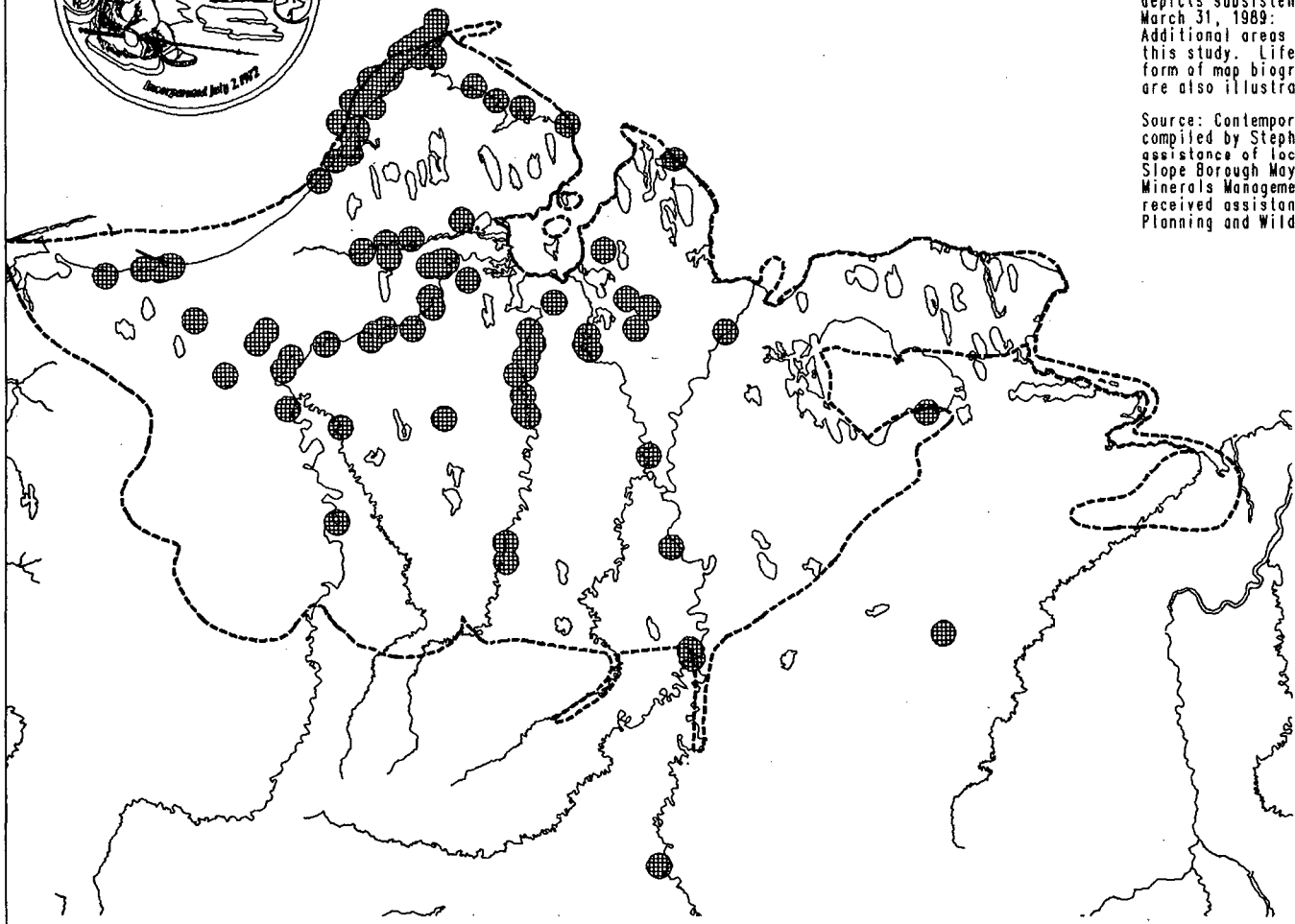


# MAP B-12 NORTH SLOPE SUBSISTENCE STUDY - BARROW: YEAR TWO BIRD HARVEST SITES - ALL SPECIES





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### LEGEND INFORMATION

-  Lifetime community land use (Pedersen 1979).
-  Birds
  - Eiders
  - Common, King
  - Geese
  - White-fronted goose, black brant, lesser snow goose, Canada goose
  - Ptarmigan



Map Production: North Slope Borough GIS  
Date: June 20, 1989

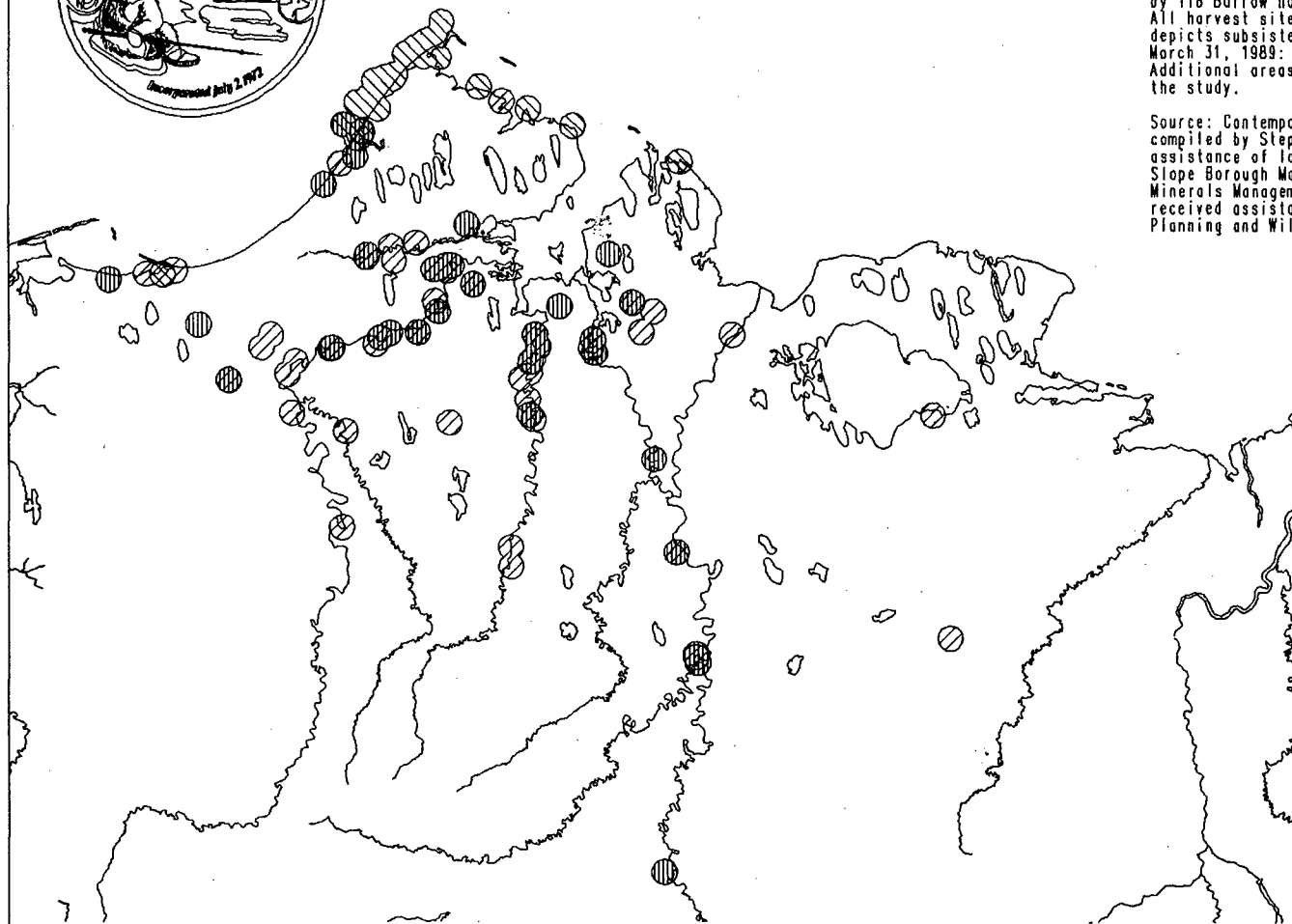
B-58

MAP B-13  
 NORTH SLOPE SUBSISTENCE STUDY - BARROW: YEAR TWO  
 BIRD HARVEST SITES BY SPECIES GROUPS



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LEGEND INFORMATION



Eiders



Geese



Ptarmigan



Map Production: North Slope Borough GIS

Date: June 19, 1989

30 0 30 60 90

MILES