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Division of Wildlife Conservation



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Annual Performance Report of
Survey-Inventory Activities
1 July 1995- 30 June 1996

FURBEARERS

Mary U Hicks, Editor



TOM SCHUNACHER

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STATE OF ALASKA
Tony Knowles, Governor

DEPARTMENT OF FISH AND GAME
Frank Rue, Commissioner

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1995-96

Project Title: Southeast Furbearer Population Management

Project Location: Unit 1A (5,300 mi²)
Ketchikan area including the mainland draining into Behm and Portland Canals

Unit 2 (3,600 mi²)
Prince of Wales Island and adjacent islands south of Sumner Strait and west of Kashevarof Passage and Clarence Strait

Project Objectives and Activities:

1. Regulate seasons and bag limits to maintain viewable and harvestable populations of furbearers.
2. Seal beaver, lynx, marten, otter, and wolverine pelts as they are presented for sealing.
3. Contact reliable observers to obtain general information about the status and trends of furbearer populations, including the use of an annual trapper survey.

Work Accomplished During the Project Segment Period: We sealed furbearer pelts submitted by trappers. We also obtained anecdotal information about the status of furbearer populations from conversations with hunters and trappers and through our trapper survey.

Progress Meeting Project Objectives: The following number of furbearers were harvested from Subunit 1A and Unit 2 during this report period.

<u>Species</u>	<u>Unit 1A</u>	<u>Unit 2</u>
Beaver	32	259
Marten	134	1052
Otter	65	202
Wolverine	0	--

Beaver harvests were down 44% from last season in Subunit 1A and up 44% in Unit 2; marten harvests remained constant in both areas, and otter harvests declined 47% in Subunit 1A and 13% in Unit 2. Trappers believe the Subunit 1A beaver population is presently common (*Index of Abundance* $I_A = 33, n = 3$), the marten population is common ($I_A = 30, n = 5$), and the otter population is abundant ($I_A = 58, n = 6$). Similarly, trappers in Unit 2 believe the beaver population in that unit is presently common ($I_A = 50, n = 4$), the marten population is common ($I_A = 25, n = 4$), and the otter population is abundant ($I_A = 67, n = 3$).

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Project Location: Unit 1B (3,000 mi²)
Southeast Mainland from Cape Fanshaw to Lemesurier Point

Unit 3 (3,000 mi²)
All islands west of Subunit 1B, north of Unit 2, south of the centerline of Frederick Sound, and east of the centerline of Chatham Strait

Project Objectives and Activities:

1. Regulate seasons and bag limits to maintain viewable and harvestable populations of furbearers.
2. Seal beaver, lynx, marten, otter, and wolverine pelts as they are presented for sealing.
3. Contact reliable observers to obtain general information about the status and trends of furbearer populations, including the use of an annual trapper survey.

Work Accomplished During the Project Segment Period: During the sealing process we gathered anecdotal information from trappers. The 1995-96 trapper questionnaires were mailed to area trappers; the data will be compiled when they are returned.

Progress Meeting Project Objectives: The following number of furbearers were harvested from Unit 1B and Unit 3 during this report period:

<u>Species</u>	<u>Unit 1B</u>	<u>Unit 3</u>
Beaver	1	26
Marten	7	232
Otter	4	33
Wolverine	1	1

Project Location: Unit 1C (7,600 mi²)
Southeast mainland and the islands of Lynn Canal and Stephens Passage between Cape Fanshaw and the latitude of Eldred Rock, including Sullivan Island and the drainages of Berners Bay

Project Objectives and Activities:

1. Regulate seasons and bag limits to maintain viewable and harvestable populations of furbearers.
2. Seal beaver, lynx, marten, otter, and wolverine pelts as they are presented for sealing.
3. Contact reliable observers to obtain general information about the status and trends of furbearer populations, including the use of an annual trapper survey.

Work Accomplished During the Project Segment Period: We collected fur harvest data through the mandatory sealing process and used a trapper questionnaire to gain additional information regarding target species abundance, prey abundance, and trapping patterns and conditions.

Progress Meeting Project Objectives: The following number of furbearers were harvested from Unit 1C during this report period:

<u>Species</u>	<u>Unit 1C</u>
Beaver	26
Marten	262
Otter	16
Wolverine	4

Subunit 1C furbearer populations seem healthy. Lynx and beaver harvest decreased, and marten and otter harvest increased. Lynx are present when prey levels are low in Canada; the decreased lynx take is probably reflective of an increasing prey base in Canada. Other changes in the harvest are probably due to differing trapping effort and not population level perturbations. Through the use of trapper questionnaires, we will continue to examine fluctuations in fur harvest in future years.

Project Location: Unit 1D (2,700 mi²)
Southeast mainland north of the latitude of Eldred Rock, excluding Sullivan Island and the drainages of Berners Bay

Project Objectives and Activities:

1. Regulate seasons and bag limits to maintain viewable and harvestable populations of furbearers.
2. Seal beaver, lynx, marten, otter, and wolverine pelts as they are presented for sealing.
3. Contact reliable observers to obtain general information about the status and trends of furbearer populations, including the use of an annual trapper survey.

Work Accomplished During the Project Segment Period: We collected fur harvest data through the mandatory sealing process. A trapper questionnaire was used to gain additional information regarding target species abundance, prey abundance, trapping conditions, and trapping patterns.

Progress Meeting Project Objectives: The following number of furbearers were harvested from Unit 1D during this report period:

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<u>Species</u>	<u>Unit 1D</u>
Marten	99
Otter	2
Wolverine	7

Furbearer populations within Unit 1D appear consistent with historic levels, although the higher than average marten harvest indicates species population density has increased. The absence of lynx in the harvest is probably reflective of improving prey populations in Canada.

Project Location: Unit 4 (5,800 mi²)
Admiralty, Baranof, Chichagof, and adjacent islands

Project Objectives and Activities:

1. Regulate seasons and bag limits to maintain viewable and harvestable populations of furbearers.
2. Seal beaver, lynx, marten, otter, and wolverine pelts as they are presented for sealing.
3. Contact reliable observers to obtain general information about the status and trends of furbearer populations, including the use of an annual trapper survey.

Work Accomplished During the Project Segment Period: Marten, otter, and beaver were sealed within 30 days of harvest. We examined furs at sealing and determined sex; measurements were taken. Trappers were contacted on northeastern Chichagof Island for opinions on declining marten harvests.

Progress Meeting Project Objectives: The following number of furbearers were harvested from Unit 4 during this report period:

<u>Species</u>	<u>Unit 4</u>
Beaver	0
Marten	762
Otter	187

Harvest may not reflect population levels. Marten harvest is increasing as the population recovers from the recent population cycle low. The increased otter harvest probably reflects an overall increase in trapping effort as trappers generally make sets for both species. There is no indication that trapping has depressed furbearer populations in the unit.

Project Location: Unit 5 (5,800 mi²)
Cape Fairweather to Icy Bay, eastern gulf coast

Project Objectives and Activities:

1. Regulate seasons and bag limits to maintain viewable and harvestable populations of furbearers.
2. Seal beaver, lynx, marten, otter, and wolverine pelts as they are presented for sealing.
3. Contact reliable observers to obtain general information about the status and trends of furbearer populations, including the use of an annual trapper survey.

Work Accomplished During the Project Segment Period: Staff sealed furs in Yakutat. Harvest was analyzed from furbearer sealing certificates.

Progress Meeting Project Objectives: The following number of furbearers were harvested from Unit 5 during this report period:

<u>Species</u>	<u>Unit 5</u>
Beaver	0
Lynx	2
Marten	103
Otter	0
Wolverine	0

Residents of Yakutat and nonlocals contributed anecdotal information concerning sighting of furbearers. The harvest of martens and wolverines was greater than the previous year, the result of increased effort by one trapper rather than a population increase. It is doubtful this high harvest level will continue.

Segment Period Project Costs:

	<u>Personnel</u>	<u>Operating</u>	<u>Total</u>
Planned	17.1	3.6	20.7
Actual	24.3	3.6	27.9
Difference	- 7.2	0	-7.2

Additional staff time was devoted to the collection, preparation, and analysis of marten samples.

Project Title: Southcentral Furbearer Population Management

Project Location: Unit 6 (10,150 mi²)
Prince William Sound and north Gulf Coast

Project Objectives: Develop measurable objectives for all furbearer species throughout the region.

Work Accomplished During the Project Segment Period: Appointed sealers and ADF&G staff sealed 169 pelts (48 beavers, 102 otters, and 19 wolverines). Trapper interest was minimal because of low pelt prices. We mailed 57 questionnaires to trappers requesting information on trapping activity and furbearer abundance, and we received 19 responses. Results will be available in fall 1996.

Progress Meeting Objectives: Population objectives have not been established for furbearer species. Progress establishing objectives was limited by insufficient funding and a lack of efficient methods to estimate populations.

Project Location: Units 7 and 15 (8,400 mi²)
Kenai Peninsula

Project Objectives: Develop measurable objectives for all furbearer species by 1996.

Work Accomplished During the Project Segment Period: The Kenai Peninsula has a diverse complement of furbearers which includes all commonly recognized Alaskan furbearers except Arctic fox. The distribution and density of red fox and marten are limited on the Kenai. According to long-time Kenai residents, red fox were abundant before 1930; however, they quickly disappeared as coyotes established and rapidly increased during the 1930s. Marten are moderately abundant in Unit 7 but are rare in Unit 15. Since Marten have never been common in Unit 15, it is suspected that habitat rather than human-induced mortality controls their distribution on the Kenai. Beaver, land otter, wolverine, lynx, coyote, mink and weasel are found throughout the Kenai Peninsula at varying density levels, dependent upon habitat quality or prey abundance.

Harvested marten, beaver, land otter, wolverine and lynx must be reported to the department within a specified period for sealing. Sealing documents for these furbearers indicate the following harvests by unit were reported in 1995-96:

<u>Unit</u>	<u>Marten</u>	<u>Beaver</u>	<u>Land Otter</u>	<u>Wolverine</u>	<u>Lynx</u>
7	102	87	16	12	0
15	0	81	53	17	2
Total	102	168	69	29	2

Lynx hunting and trapping seasons have been closed from 1983/84 in Unit 15A and from 1987/88 in the remainder of the Kenai due to low numbers of animals. One lynx was reported trapped as nontarget species in Unit 15C, and USFWS staff found 1 dead from unknown causes during their lynx study in Unit 15A.

Mink, weasel, muskrat, red fox, and coyote were also harvested on the Kenai; however, sealing is not required for this species. Catch reports from trapper questionnaires indicate harvest of these furbearers was comparable to past years with the exception of coyotes. The harvest and reported sightings of coyotes indicates their numbers have increased..

Progress Meeting Objectives: Furbearer populations on the Kenai provide benefits to a diverse group of resource users including both nonconsumptive and consumptive interests. However, due to low funding levels and lack of staff, objectives for furbearer management are not currently being achieved. Lynx and beaver censuses have been conducted in small study areas and will possibly be extended to estimate densities on a subunit level in the future.

The current monitoring of harvests from sealing and trapper reports suggests all furbearers except lynx are found in harvestable numbers and stable populations. The lynx population declined during the late 1980s and started to increase in 1995. This increase is widespread enough to allow a January 1 to 31 season in Unit 7 and Units 15B and C in 1996-97. No other change in season or bag limit is recommended for 1996-97.

Project Location: Unit 8 (8,750 mi²)
Kodiak Archipelago

Project Objectives: Develop measurable objectives for all furbearer species throughout the region.

Work Accomplished During the Project Segment Period: Twenty four trappers submitted pelts for sealing. Nineteen trappers harvested otters, and 14 trappers harvested beavers. A total of 139 river otters (71 males, 51 females and 17 unknown sex) and 49 beavers were sealed. Highest individual catches were 16 beavers and 28 otters. The average catch was 10.2 otters per trapper and 3.5 beavers per trapper. We mailed trapper questionnaires to 33 individuals who had recently trapped in Unit 8. Seventeen (52%) questionnaires were returned. Twelve of these respondents reported trapping during the 1995-96 season.

Progress Meeting Objectives: Furbearer populations seemed high, but we did not assess population trend. A dramatic increase in trapping effort and harvest for beaver and otter occurred during the 1995-96 season, mostly in road accessible areas on the northeast end of Kodiak Island. Fifty Three otters (38% of the Unit 8 harvest) were taken in the relatively small road-accessible area of Unit 8. This level of harvest was the highest ever recorded for that area and is probably not sustainable. We are evaluating the need to further restrict otter harvest in this area. Should further restrictions be necessary, a regulatory proposal will be developed for consideration by the

Board of Game meeting in March 1997. With the current low harvest in other areas, developing management objectives for furbearers is not a high priority.

Project Location: Units 9 and 10 (45,500 mi²)
Alaska Peninsula, Aleutian, and Pribilof Islands

Project Objectives: Develop measurable objectives for all furbearer species throughout the region.

Work Accomplished During the Project Segment Period: During this report period we did not conduct surveys. We sent questionnaires to a select group of trappers, indirectly estimating furbearer population trends and relative abundance. Active trappers returned only 6 questionnaires. It is difficult to make inferences about population status from such a limited sample. Snow and weather conditions and low fur prices were not conducive to productive trapping.

We derived furbearer harvest information from furbearer sealing certificates. The preliminary harvest for 1995-96 in Unit 9 from sealing certificates was as follows: beavers-63; otters-49; lynx-20; and wolverines 21. No furbearers were sealed from Unit 10. Harvests of all species were down significantly from previous years.

Progress Meeting Objectives: The lack of efficient methods to estimate and directly monitor populations, compounded by unreliable snow conditions, has hampered developing measurable population objectives for furbearers in Units 9 and 10. Research on several species continues in other areas, but unless budgets increase, it is unlikely efforts will be extended on the Alaska Peninsula.

The trapper questionnaire, opportunistic observations, and sealing requirements are adequate for management purposes as long as trapping effort remains relatively low. If fur prices and other factors lead to an increase in harvests, more intensive management may be required.

Project Location: Units 11 and 13 (38,300 mi²)
Wrangell Mountains and Nelchina Basin

Project Objectives: Develop measurable objectives for all furbearer species throughout the region.

Work Accomplished During the Project Segment Period: Trapper questionnaires have been used for 9 years to help determine trapping pressure, harvests, and furbearer abundance. This year we sent questionnaires to 126 Unit 11 and 13 trappers, and 83 (66%) responded. Of those responding, 31 (37%) did not trap during the 1995-96 season. Trappers responding to the questionnaire reported an average of 23 years experience in Alaska. Most trappers averaged between 25 and 100 sets along traplines averaging 29 miles long, down 37% compared with the

average trapline length in 1994-95. Trappers used highway vehicles or snowmachines as transportation. Unit 11 and 13 trappers reported numbers of most furbearers were similar to last year, but hare numbers were increasing. Forty-six of the respondents reported conditions on their trapline as poor, and 90% reported that prices did not affect their trapping effort. Lack of snow caused poor trapline conditions throughout both units during the trapping season.

During September 1995 small mammal trapping was initiated to develop small mammal abundance indices for furbearers. Museum Special traps were set in 4 habitat types during 1 of 3 three-day periods. Twenty traps were set in Black spruce and "forest edge" habitats, while 15 traps were set in alder and aspen forest habitats, for a combined effort of 300 trap nights. A total of 61 mammals and 4 different species were represented in the catch. Red-backed vole (*Clethrionomys rutilus*) accounted for 85% ($n = 52$), Meadow voles (*Microtis pennsylvanicus*) 7% ($n = 4$), Masked shrews (*Sorex cinereus*) 7% ($n = 4$), and Pygmy shrews (*Sorex hoyi*) 2% ($n = 1$). Forty-eight percent ($n = 29$) were caught in the aspen forest habitat while alder forest, black spruce, and "forest edge" habitats accounted for 33% ($n = 20$), 11% ($n = 7$), and 8% ($n = 5$) respectively.

Aerial transects, established in 1988, to monitor lynx abundance and population trends were flown during February 1996. Surveys were not flown in 1994 because of poor snow conditions. The 1996 track count was double the number observed during the 1995 survey, 33% higher than the 1993 count, and 14% higher than the 1992 survey (the end of the last cyclic high for lynx in Units 11 and 13).

During the 1995-96 season, 31 wolverines (20 males, 10 females, 1 sex unknown) were sealed in Unit 13 by 26 different trappers. In Unit 11, 3 trappers sealed 4 wolverines (3 males, 1 female). There were 74 lynx pelts sealed by 27 trappers from Unit 13, while 5 trappers sealed 9 lynx taken in Unit 11. This is the sixth year lynx trapping occurred in these units after a 3-year closed season. Nineteen trappers sealed 64 otters (32 males, 20 females and 12 sex undetermined) in Unit 13 during 1995-96. Twelve otters (8 males, 4 females) were sealed by 5 trappers from Unit 11. In Unit 13, 33 trappers sealed 281 beavers; 18 beavers were taken in Unit 11 by 2 trappers. Six trappers sealed 31 marten taken from Unit 13E.

The 1994-95 trapper questionnaire asked, for the first time, the number of furbearers taken by the responding trapper on a subunit basis. Initially it is difficult to interpret this data because it is unknown what percent of the total unitwide catch is represented by the reported harvest. The value in this data may be in following a trend from year to year in the number of each species taken. The immediate value, however, is that it gives a minimum harvest estimate for important species that are not sealed such as marten and red fox. In Unit 13 during 1995-96, individuals responding to the trapper questionnaire reported taking 191 marten and 141 red fox. In Unit 11 the reported take was 25 marten and 3 red fox. These numbers are much lower than those from 1994-95 when Unit 13 trappers reported 382 marten and 243 red fox, and Unit 11 trappers reported 314 marten and 23 red fox.

Sealing data for wolverine from both units suggest the number of wolverines trapped has stabilized at a lower harvest level over the past 5 years, following a period of decline in the late

1980s. In Unit 13 from 1971 through 1984, the average annual wolverine take was 77 animals but has averaged only 32 since. In Unit 11 the average annual wolverine take was 27 animals between 1971 and 1985, but since has averaged only 10. Overall success rates for wolverine trappers remain low. All wolverines taken in Unit 11 were trapped or snared, while in Unit 13, 4 (13%) were ground shot with the rest trapped or snared.

The 1995-96 lynx harvest in Unit 13 remained higher than expected. Preliminary results show that 74 lynx were harvested in 1995-96 compared with 78 taken in 1994-95. The 1995-96 harvest occurred despite a season that was shortened by 15 days and a lynx cycle which should be in the fourth year of decline. Also unexpected was the observation that kittens composed 43% ($n = 32$) of the harvest. The percentage of kittens in the Unit 13 harvest during 1993 was only 10%, indicating the lynx cycle had already peaked, reproduction had dropped, and lynx numbers would decline. The high harvest was not attributed to increased trapping pressures as trappers reported expending less effort to take lynx because of continued low prices. In Unit 11 the lynx harvest was closer to predictions with a 50% reduction in the number of lynx taken from the previous year (9 in 1995-96 compared with 18 in 1994-95). Unexpected was that kittens accounted for 43% ($n = 4$) of the Unit 11 lynx harvest in 1995-96. However, with such low harvest numbers the percent kittens in the harvest could be a misleading figure. Hare numbers were still low over much of Units 11 and 13, but there were indications they may be increasing in local areas. The last hare cycle of Units 11 and 13 did not result in very high hare numbers and lasted only 1 to 2 years.

Otter harvests in Unit 13 have fluctuated between a high of 68 in 1983 and a low of 5 in 1989. These fluctuations in the take are not caused by changes in the otter population but relate more to trapping effort. The otter harvest over the past 2 seasons (61 in 1994-95 and 64 in 1995-96) has tripled since 1992 and approaches the Unit 13 record harvest of 68. The increase in the otter harvest over the last 2 years reflects increased effort by trappers because of increased demand and higher prices for otters. The otter harvests in Unit 11 was 4 times greater in 1995-96 than 1994-95 (12 compared with 3). Reasons for the Unit 11 increase are similar to those reported for Unit 13.

The Unit 13 beaver harvest has been high during the last 2 seasons (268 in 1994-95 and 281 in 1995-96) and is approaching record harvest levels of 1985-86 and 1986-87, when 333 and 300 beaver were sealed. Beavers seem abundant and harvest regulations have been liberalized in recent years to increase the harvest. In 1995 the BOG extended beaver season to May 10, starting with the 1995-96 season. In Unit 11 beaver harvests have fluctuated in recent seasons from a high of 59 in 1984-85 to a low of 0 in 1993-94. The 1995-96 Unit 11 harvest of 18 beavers was moderate. In both units the catch per trapper has been fairly constant, but the number of beaver trappers fluctuated between years. Harvest chronology indicates most animals are taken either early in the trapping season or late spring.

Lack of snow during the winter of 1995-96 may have had local effects on beaver and muskrat populations in Units 11 and 13. Without adequate snow cover, many ponds which retain water during most winters probably froze completely. Record ice depths recorded for lakes in the area support this assumption. Some ponds that have historically supported beaver were vacant during the spring and summer of 1996. The magnitude of the winter kill due to "freeze out" for beaver

and muskrat is unknown at this time. The overall effect of the past winter on the beaver population should become evident during the upcoming trapping season.

Progress Meeting Project Objectives: Lynx are managed under a tracking harvest strategy where harvests are reduced or eliminated during cyclic declines and lows. The theory behind this is if lynx are not taken during the cyclic low, more adults will be available for breeding during the upswing of the cycle and produce more kittens. The value of this strategy to trappers is they can take more lynx during the high because there are more lynx present.

Based on this management strategy, the current lynx harvest was expected to be much lower than actually observed. Analysis of lynx harvest locations indicate a number of animals were taken from an old burned area in Units 13B and 13C. Hare numbers in this area were higher than any other portion of the unit. I suspect lynx migrated into this burned area as evidenced by the capture of another tagged lynx from the Yukon in 1994-95. Hare numbers in this burn were high enough to allow for successful reproduction. In the remainder of the unit both the lynx harvest and reproduction dropped off as expected. Lynx track surveys in 1996 support harvest data, indicating good lynx numbers on transects within the burned area in Units 13B and 13C, but overall the increase in the number of lynx tracks observed is higher than expected. Because we are in the fourth year of the lynx cycle decline, the harvest tracking strategy calls for restricted seasons, but because of good kitten production, and increased hare numbers and low fur prices resulting in reduced trapping effort, the 1996-97 season will return to 1 December-15 January (an increase of 15 days compared with the 1995-96 season).

Low fur prices resulted in reduced trapping pressure for the fifth year in a row. Some species like red fox and mink received very little pressure compared with that in the early 1980s. Marten have become one of the most important furbearers in Units 11 and 13. Based on the numbers reported taken and the price received for pelts, marten are currently the most valuable furbearer to trappers in both units. Projected fur prices for upcoming season indicate price improvements in short hair furs like beaver, muskrat, otter, and possibly marten. The threat of the European boycott continues to depress the fur market. Trapping pressure for long hair fur like fox and lynx is not expected to increase appreciably. Recommendations for season and bag limit changes for furbearers will be made in March 1997. An effort will be made to incorporate trapper suggestions into draft proposals. At this time, recommended changes include eliminating the 2 wolverine bag limit for Units 11 and 13.

Project Location: Units 14 and 16 (18,900 mi²)
Upper Cook Inlet

Project Objectives: Develop measurable objectives for all furbearer species throughout the region.

Work Accomplished During the Project Segment Period:

Unit 14

During the 1995-96 trapping season 282 beavers, 35 otters, 10 wolverines and 53 marten were sealed from Unit 14. In addition, 10 beavers were taken under nuisance beaver permits. Minimum harvest data for fur species for which sealing is not required were collected with a voluntary reporting form included with the annual trapper questionnaire. Responses indicated at least 29 coyotes, 75 mink, 177 muskrats, 26 red foxes, 11 red squirrels and 54 weasels were taken in Unit 14.

Unit 16

During the 1995-96 trapping season, 65 beavers, 16 otters, 9 wolverines and 229 marten were sealed from Unit 16. In addition, 3 beavers were taken under nuisance beaver permits. Minimum harvest data for fur species for which sealing is not required were collected with a voluntary reporting form included with the trapper questionnaire. Responses indicated at least 8 coyotes, 2 mink, 3 muskrats, 5 red foxes, 22 red squirrels and 26 weasels were taken in Unit 16.

Units 14 and 16

Twenty-six trappers responded to the department's trapper questionnaire. Of these, 18 trapped during 1995-96. Little snow fell until February, making trapping difficult and reducing trapping effort.

With heavy rains and flooding conditions in September, the water level in the mitigation area on Palmer Hay Flats State Game Refuge along the Glenn Highway finally reached the desired depth. However, this was probably too late in the season for dispersing muskrats to take advantage of the new habitat. Muskrat pushup count areas along the Glenn Highway were ground-surveyed during 15-27 March. The number of pushups was 88% lower than that of the base year of 1991 and 83% lower than in 1994. The large decline is probably due to the lack of any snow cover before February and the resulting record frost depths.

Two of 6 established furbearer track count trend lines were surveyed via snowmachine in Units 14A and 14B. Lack of adequate snow cover prevented most surveys.

Progress Meeting Project Objectives: The Board of Game extended the beaver trapping season to May 15 in this area to give trappers more open-water opportunity and hopefully reduce the number of nuisance beaver complaints.

Harvest objectives, based on long-term average harvests, were established in 1992 for the fur species for which sealing is required (except marten). Harvest objectives were met for beavers, otters, and wolverines in Unit 14. In Unit 16 the harvest was roughly 50% of the objective level for otters and wolverines and far below the desired level for beaver.

Developing direct, measurable furbearer population objectives is beyond the limit of our resources. However, track count transects can provide an index of population fluctuations, and these data could be correlated with harvest data. It may be possible, given several years' data, to develop indirect population objectives based on indices of furbearer abundance (e.g., tracks/km on transects). It will be important to continue track transects and also to gather data on track accumulation rates. However, because most trappers in this area trap for recreation, the investment necessary to collect data on actual population numbers and dynamics may not be warranted.

Project Location: Unit 17 (18,000 mi²)
Northern Bristol Bay

Project Objectives: Develop measurable objectives for all furbearer species throughout the region.

Work Accomplished During the Project Segment Period:

Beaver: The compilation of beaver harvest data is not yet available for the 1995-96 trapping season. Preliminary data indicated a harvest of 439 beaver (17A-101; 17B-82; 17C-256). This was considerably lower than the 5-yr average of 892. Trappers again reported that beaver were abundant throughout the unit. Poor weather conditions, including thick ice and a lack of snow, effected the lower harvest. Prices for beaver and most other furbearers were comparable to those of last year, and the prices paid by local furbuyers averaged \$20/pelt with a high of \$40 for super blankets.

Coyote: No objective data were collected on coyote populations in the unit. Incidental observations suggest that coyotes were becoming more common and extending farther west. Pelt prices were up to \$25.

Fox: Red fox populations appeared to stabilize throughout the unit. Prices paid for foxes were lower than in recent years, averaging \$20.

Land Otter: Preliminary data indicated a harvest of 77 otters (49% male) during this period (17A-15; 17B-12; 17C-50). This was the lower than the 5-yr average of 111. Trappers reported otters were abundant throughout the unit. Prices for otter pelts averaged about \$40 and a high of \$70.

Lynx: Trappers harvested 7 lynx (29% male) during this reporting period (17A-0; 17B-5, 17C-2). Lynx numbers seemed to have stabilized at a relatively low level throughout the unit. Prices for lynx pelts averaged \$60/pelt with a high of \$80.

Marten: We collected no data on the number of marten taken from the unit during this period. Trappers reported stable marten numbers along the Nushagak, Mulchatna and Wood River drainages. Marten prices were averaging \$35/pelt.

Mink: We collected no data on the number of mink taken from the unit during this period. Trappers reported stable mink numbers throughout the unit. The highest price paid for a mink pelt was \$10.

Muskrat: Muskrat populations seemed to remain at dangerously low levels. The only muskrats harvested were from the Snake, Weary, and Igushik River drainages.

Wolverine: Preliminary data indicated a harvest of 34 wolverines during the 1995-96 season. This was below the 5-yr average harvest of 37. Trappers reported that wolverine populations remained stable throughout the unit. Prices were low again this year, with the highest price paid at \$200.

Progress Meeting Objectives: We sealed pelts and informally interviewed trappers during sealing. Trapper questionnaires were given to selected local trappers during Beaver Round-up. Several questionnaires were completed and are being analyzed.

No surveys were conducted during this reporting period.

Segment Period Project Costs:

	<u>Personnel</u>	<u>Operating</u>	<u>Total</u>
Planned	87.1	6.0	93.1
Actual	87.1	5.4	92.5
Difference	0.0	0.6 ^a	0.6

^a Because of reduced effort and catch during the 1994-95 season, a fur sealing assistant was not needed at the Dillingham Beaver Round-Up festival.

Submitted by:

Michael G. McDonald
Assistant Management Coordinator

Project Title: Interior Furbearer Population Management

Project Location: Unit 12 (9978 mi²) and Subunit 20E (10681 mi²)

Project Objectives and Activities:

Unit 12

1. Maintain accurate annual harvest records and indices of population trends based on sealing documents and trapper questionnaires.
 - a. Seal furs as they are harvested and presented for sealing and analyze harvest patterns.
 - b. Administer trapper questionnaire and interviews as a basis for determining the status of various furbearer populations.
2. *Lynx*: During the declining phase, the cyclic low, and during the initial recovery, seasons will be eliminated or reduced to less than 6 weeks, and the allowable take may be limited. During the peak population years to 1 year following the peak, seasons will run from 1 November to 28 February with no bag limit.
 - a. Conduct annual lynx and hare track count surveys to determine population trends.
 - b. Collect lynx carcasses from trappers to determine the sex and age of the harvested population and to estimate population reproductive performance.
3. *Wolverine*: Manage wolverine harvest based on wolverine population size and trend and on trapping intensity.
 - a. Obtain a wolverine population estimate in southern Unit 12 and western Unit 20E by 1997.
 - b. Maintain a current map of active traplines in Unit 12 and Unit 20E.

Unit 20E

1. Maintain accurate annual harvest records and indices of population trends based on sealing documents and trapper questionnaires.
 - a. Seal furs as they are harvested and presented for sealing and analyze harvest patterns.
 - b. Administer trapper questionnaire and interviews to determine the status of various furbearer populations.
2. *Lynx*: During the declining phase, the cyclic low, and during the initial recovery, seasons will be eliminated or reduced to less than 6 weeks, and the allowable take may be limited. During the peak population years to 1 year following the peak, seasons will run from 1 November to 28 February with no bag limit.
 - a. Conduct annual lynx and hare track count surveys to determine population trends.
 - b. Collect lynx carcasses from trappers to determine the sex and age of the harvested population and to estimate population reproductive performance.

3. *Wolverine*: Manage wolverine harvest based on wolverine population size and trend and on trapping intensity.
 - a. Obtain a wolverine population estimate in southern Unit 12 and western Unit 20E by 1997.
 - b. Maintain a current map of active traplines in Unit 12 and Unit 20E.

Work Accomplished During the Project Segment Period:

Unit 12

The reported 1995-96 furbearer harvest as of 22 June 1995 was 4 land otters, 14 beavers, 7 wolverines, and 47 lynx. Kitten lynx composed 23.4% of the harvest, exceeding levels found in 1992-93 (2.2%), 1993-94 (1.7%), and 1994-95 (13.6%), indicating the lynx population is increasing. Furbearer harvest was down for all species probably due to low fur prices and unfavorable weather conditions during most of the trapping season. Lynx harvest was also affected by a shorter season. Wolverine and lynx harvest declined by 67% and 47%, respectively, from 1994-95.

Results from the trapper questionnaire were not available for this report, but discussions with local trappers indicated beavers, muskrats, mink and ermine were common in Unit 12 during 1995-96, and snowshoe hares continued to increase, especially in the western portion of the unit. Microtines increased but still were scarce to common. During 1995-96, the lynx population continued to be low but was starting to increase most notably in the northwestern portion of the unit. Lynx season was only 1 month (15 December-15 January) in response to the current lynx and snowshoe hare cycles. Lynx trapping season length will stay at one month during 1996-97 to further enhance kitten survival and population recovery. The marten population increased slightly but still was not common throughout suitable habitat. Marten harvest was probably lower this year because of the difficult trapping and travel conditions. Red fox populations have declined since 1992-93 and remain at low levels. Wolverines were uncommon and stable, except in the mountainous country in southern Unit 12 where they are common. Area trappers do not select for wolverines, but harvest is probably high enough to limit range extension or population growth in most of the unit. Low market prices continue to negatively affect trapper effort for most furbearer species.

Past track surveys in Unit 12 indicated trapping was limiting the lynx population but may be benefiting the hare population. We found lower numbers of lynx and fewer concentration areas compared with an area surveyed in Unit 20A but found a wider distribution of hares. I believe the reduced harvest during 1995-96 will allow the lynx population to increase more rapidly. Lynx kitten production indicates that hare numbers are now at a level which can support a greater lynx population.

Unit 20E

The following furbearers were sealed during 1995-96: 0 land otter, 5 beavers, 4 wolverines, and 23 lynx. Harvest levels are comparable to last year's level but compared to the 5-year averages, lynx and beaver harvest continue to be low by about 50%. The percentage of kittens in the harvest

was 17, exceeding levels during 1994-95 (13%), 1993-94 (2.3%), and 1992-93 (4.5%). Most of the kitten harvest occurred in the Ladue River area in the southeastern portion of the unit.

Comments by local trappers, track surveys, and observations by department personnel suggest the marten population is continuing to increase, but it is still at a low level unitwide. Microtine populations, especially red-backed voles, increased; the red fox population remained low; the wolverine population was low but stable; and the lynx population remained low but was increasing in several areas of the subunit where hares were more common and increasing. The lynx trapping season was shortened to 1 month (15 December-15 January) in 1995-96 and will remain the same length during 1996-97. Although hare numbers are beginning to increase, the lynx population is expected to stay low for least 1 more year.

Progress Meeting Project Objectives: We maintained accurate annual harvest records for the 4 species sealed. Data from lynx carcass collections, trapper questionnaires, and field observations by department personnel, hunters, and trappers provided adequate information about furbearer population status and trend. However, we need to conduct a wolverine census in both units. To monitor trapper effort, distribution, and probable effects on the furbearer populations, we mapped the active traplines in Unit 12 and Unit 20E, tracked fur prices, and interviewed a sample of trappers on trapping intensity.

Project Location: Unit 19 and Subunits 21A and 21E (59,756 mi²)

Project Objectives and Activities:

1. Annually determine current status and population trends for each furbearer species and their primary prey species, assess trapper effort and distribution, and collect estimates of harvest for all furbearer species.
 - a. Seal furs as they are harvested and presented for sealing and analyze harvest patterns.
 - b. Conduct trapper questionnaire and interviews as a basis for determining the status of various furbearer populations.

Beaver

1. Manage the various subpopulations to maintain a mean pelt size >50 inches and <25% kits in the annual harvest.
2. Manage the population to maintain a mean density of not less than 1 active colony per 3.2 km of suitable waterway, as determined through periodic fall cache surveys.

Marten

1. Collect accurate estimates of annual harvests through comparisons of Fur Acquisition Reports, Fur Export Reports, and trapper questionnaires.
2. Manage the population to maintain >50% males in the annual harvest and a ratio of young:adult females of not less than 2:1 in the annual harvest.

Lynx, River Otter, and Wolverine

1. Maintain accurate annual harvest records based on sealing documents.
2. Manage the wolverine population to maintain >50% males in the annual harvest.

Work Accomplished During the Project Segment Period: Because all sealing documents for the 1995-96 season have not yet been processed, the following data are based on the 1994-95 trapping season. For Unit 19, 164 beavers, 12 coyotes, 133 red foxes, 45 lynx, 2391 martens, 42 mink, 24 muskrats, 18 river otters, and 101 wolverines were harvested. According to Units 19, 21A, and 21E trapper questionnaires, coyotes were stable but still scarce, lynx were stable but scarce, red fox declined to moderate levels, marten were common and stable, muskrats were stable but scarce, mink were stable at moderate populations, beavers were abundant and stable, wolverines were stable at moderate populations, and river otters were common at stable population levels.

We sent questionnaires to 97 trappers in the area to evaluate status and trends in populations as well as numbers harvested. Fifty responses were returned. Results have been tabulated for the 1994-95 season. Marten carcass collections were repeated. We sealed pelts throughout the trapping seasons and analyzed harvest of beavers, river otters, lynx and wolverines by evaluating sealing documents.

Furbearer harvests remained very low compared with previous years, largely as a result of low fur prices. Eight of the 50 respondents to the trapper survey indicated they did not trap. The primary reasons for not trapping were low fur prices and the chance to "let the line rest."

During the 1995-96 trapping season, 217 marten carcasses were collected and sex and age ratios were evaluated. The male:female ratio in the harvest was 1.36:1 and the young:adult female ratio was 4.61:1. As in the previous 4 years, both these indices indicate a healthy and growing marten population. With few participants, there is little threat of overharvest.

Progress Meeting Project Objectives: All harvest objectives for furbearers were met during this report period. Sealing of furbearer pelts was accomplished through the use of several village sealing agents, traveling furbuyers, or efforts of department personnel. Analyses of harvest and population trends will be completed for the 1995-96 season when all sealing certificates, acquisition, export, and trapper questionnaires are submitted.

Population assessment objectives were not met. Weather and budgetary constraints did not permit track surveys. Beaver cache counts were conducted over 408km², and 113 active lodges were noted. This indicates a continued slight decline in beaver numbers, probably due to declines in preferred food supplies. However, other sources of information (i.e., trapper questionnaires, flights for other reasons) indicate healthy populations.

Project Location: Subunits 20A, 20B, 20C, 20F, and 25C (39,228 mi²)

Project Objectives and Activities:

1. Maintain accurate records of furbearer harvest, pelt export, pelt acquisition, and population trends.

- a. Compile and summarize data on sealing certificates, fur export reports, fur acquisition reports, and trapper questionnaires.
2. Maintain furbearer trapping seasons during times of peak pelt primeness.

Beaver

1. Manage beaver in the lower Chena River portion of Unit 20B for an annual fall beaver colony density of <0.5 colonies/km of river and mitigate problems arising from beaver activities.
 - a. Conduct annual fall beaver cache surveys in the lower Chena River and Badger Slough. Open a limited registration trapping season if densities are ≥ 0.5 colonies/km.
 - b. Issue nuisance beaver permits to remove problem animals.
 - c. Coordinate with Department of Transportation and Public Facilities (DOT&PF) to minimize dammed culverts and flooded roads.
2. Manage beaver in Units 20A, 20C, 20F, 25C and the remainder of 20B for an annual unit harvest that includes $<20\%$ kits when the harvest for that unit exceeds 50 beaver.

Lynx

1. Manage lynx with a tracking harvest strategy whereby seasons are most liberal when lynx are abundant and most conservative when lynx are scarce.
 - a. Estimate the annual sex and age of harvested lynx by examining carcasses from Units 20A and 20B.
 - b. Develop and implement aerial track surveys in Units 20A and 20B to provide indices to trend in lynx and hare populations.
 - c. Determine whether or not lynx pelt measurements can be used to index the number of kittens in the harvest.
 - d. Develop maps of trapline distribution through interviews with successful trappers.

Wolverine

1. Manage wolverine harvests in Unit 20A based on estimates of sustainable yield derived from density estimates and modeling.
 - a. During winter 1995-1996, complete aerial surveys to estimate density of wolverine in Unit 20A.
 - b. Use the model of Gardner et al. (1993) to estimate sustainable wolverine harvests in 20A.

Work Accomplished During the Project Segment Period: Preliminary sealing certificate data for 1995-96 indicate trappers harvested 474 beavers, 90 lynx, 47 otters, and 21 wolverines from the Fairbanks area. The unit harvest of these 4 species, respectively, was 64, 20, 5, and 5 in Unit 20A; 297, 36, 34, and 3 in Unit 20B; 112, 24, 7, and 9 in Unit 20C; 0, 0, 1, and 0 in Unit 20F; and 1, 5, 0, and 4 in Unit 25C.

In 1994 export and acquisition reports indicated trappers exported or sold to furbuyers 6382 furs from Unit 20, 63% of which were marten. This was an increase from 1993 when 4509 were exported or sold, 62% of which were marten.

Responses to the Trapper Questionnaire were synthesized for the 1994-95 season statewide report. The mailing list for 1995-96 was reviewed. In April 1995, 82 questionnaires were sent out, 26 responses were received as of this date, and a reminder letter is being sent to all nonreporting trappers.

A beaver cache survey was conducted 3 October 1995 along the Chena River and Badger Slough. The cache estimate was 0.6 caches per kilometer of the Chena River. Seven registration permit trappers killed 11 beavers during the 1 December-31 January season. No registration permits were issued for Badger Slough.

We issued 37 nuisance beaver permits which resulted in at least 51 beavers being taken during regulatory year 1995. Distinct problem areas seem to be the sloughs that flow through and around North Pole.

Lynx carcasses were purchased from trappers during the 1995-96 season. Data was collected from these carcasses as part of the tracking harvest strategy. Analysis of the data is not complete at the time of this report.

Lynx/hare/otter surveys were conducted in Minto Flats (20B) and in the Tanana Flats(20A). Data from these surveys indicate hare populations are increasing throughout the area. No activities were conducted towards determining whether lynx pelt measurement can be used to directly index kittens harvest.

We began to map trapline locations of area trappers.

Furbearer seasons are being maintained during the peak of pelt primeness.

Progress Meeting Project Objectives: We are meeting the objective of maintaining accurate fur harvest records and our objective to maintain seasons during the peak of primeness, except for nuisance beavers.

We are not meeting our cache density objectives for the permit area on the Chena River. However, problems within the registration permit trapping area have been minimal. We are conducting annual cache surveys within the permit area. We are also maintaining a limited registration permit trapping season within the area. We are issuing nuisance permits for areas with acute problems and coordinating with trappers to concentrate in-season efforts in those areas with beaver problems of less urgency. Nuisance permits address problems on a short-term basis; however, chronic problem areas exist. The chronic problem areas characteristically are easily accessible by immigrant beavers. Specifically they are the slough system in and around North Pole which is linked to both the Tanana and Chena Rivers and the Chena River/Badger Slough drainage.

Along with educating the public on safeguarding property against beaver damage, we coordinate with the DOT/PF to combat problem areas where beaver activity damages roads.

Preliminary data for 1995 indicate we are meeting our objective of less than 20% kits in the beaver harvest in units with harvests over 50. Increasing beaver pelt prices could increase harvest, and we should continue to monitor percent kits.

The lynx tracking harvest strategy seems to be working well to adjust the lynx harvest in relationship to population cycles. We have not yet analyzed the pelt measurement data for its use as an index to kittens in the harvest. We are working toward completing the area trapline maps.

We did not meet our activity objective to do aerial wolverine surveys in Unit 20A. The funds originally intended for wolverine work were reallocated to another program. Therefore, we are not meeting our objective of using the model to estimate sustainable harvest.

We recommend the following change to the objectives:

- Change the wolverine aerial survey date from winter 1995-1996 to winter 1997-1998.

Project Location: Subunit 20D (5637 mi²)

Project Objectives and Activities:

1. Monitor furbearer population trends and annual harvest of furbearers using sealing documents, fur acquisition reports, fur export reports, trapper questionnaires, and trapper interviews.
 - a. Seal furs as they are harvested and presented for sealing and analyze harvest patterns.
 - b. Conduct trapper questionnaire and interviews to determine the status of various furbearer populations.
2. Monitor trends in abundance of furbearer prey species by establishing snowshoe hare and small mammal trend surveys.
 - Conduct snowshoe hare track surveys and small mammal trapline surveys to monitor prey abundance.

Lynx:

1. Determine lynx reproductive status by purchasing and examining lynx carcasses and reproductive tracts as needed.

Work Accomplished During the Project Segment Period: Pelts were sealed for beaver, lynx, otter, and wolverine trapped in Unit 20D during the 1995-96 trapping season. Preliminary trapper harvest totaled 21 beavers, 26 lynx, 2 otters, and 3 wolverines.

Trapper questionnaires were mailed to trappers in Unit 20D. Responses were tabulated to quantify trapper responses to furbearer abundance and population trends. No small mammal abundance data were collected in fall 1995 due to higher priority tasks in Unit 20D.

Ten lynx carcasses were purchased from trappers during this reporting period. Carcasses were necropsied but data has not been analyzed at this time. Lynx aerial transect surveys were also flown on February 14, 1996. Transects totaled 134 linear miles and 19 sets of lynx tracks were seen (0.14 track/mile).

Progress Towards Meeting Project Objectives: Management objectives were accomplished during this reporting period by sealing furs of beavers, lynx, otters, and wolverines and analyzing harvest patterns. We mailed trapper questionnaires to trappers and analyzed the results. No trends in prey abundance were monitored. We purchased and necropsied lynx carcasses and flew lynx transect surveys to monitor population trends.

Project Location: Subunits 21B, 21C, AND 21D (20,655 mi²)

Project Objectives and Activities:

1. Manage furbearer populations to sustain furbearers at levels high enough to provide maximum consumptive and nonconsumptive use.
 - a. Seal furs and analyze harvest patterns.
 - b. Conduct trapper questionnaire and interviews to determine the status of various furbearer populations.

Work Accomplished During the Project Segment Period: Sealing certificates received in Galena through 26 June 1996 indicated harvest of furbearers from Subunits 21B, 21C, and 21D were 140 beavers, 4 lynx, 15 otters, and 6 wolverines. Harvest of beavers continues to be low and the wolverine catch was also still low. Lynx tracks after the trapping season indicated lynx were still fairly common; the low catch indicates a lack of effort rather than a reduction in lynx numbers. Hare numbers in the unit are increasing in the area earlier than normal in their 10-year cycle which could indicate the next peak will be much higher than the last two peaks.

With a priority on marten, most unit trappers set incidentally for lynx, otter, and wolverine. Low marten prices and no snow during the early part of the season directly influenced trapping effort. Beaver and otter continue to be abundant.

Progress Meeting Project Objectives: A variety of circumstances influence trapper effort and catch within the unit. Fur prices, social activities, cultural backgrounds, and weather conditions all contribute to the effort trappers expend. These factors keep harvests low enough to meet the objectives.

Project Location: Unit 24 (26,055 mi²)

Project Objectives and Activities:

1. Manage furbearer populations to sustain furbearers at levels high enough to provide maximum consumptive and nonconsumptive use.
 - a. Seal furs and analyze harvest patterns.
 - b. Conduct trapper questionnaire and interviews to determine the status of various furbearer populations.

Work Accomplished During the Project Segment Period: Preliminary analysis of sealing certificates indicates a harvest of 26 otters, 25 wolverines, 30 lynx and 234 beavers during this report period. The number of lynx harvested was about 100 less than in prior years, and 1 more than last year, indicating the 10-year population low has been reached and numbers are beginning to recover. Effort remained high in the northern reaches of the unit. The beaver harvest has started to increase due to more effort by trappers in the southern part of the unit. The harvest is still 90% lower than it was 10 years ago.

Most unit trappers set for lynx, otter, and wolverine incidentally to marten trapping. Low marten prices and no snow during the early part of the season directly influenced trapping effort. Beaver and otter continue to be abundant in the southern portion of the unit.

Progress Meeting Project Objectives: A variety of circumstances influence trapper effort and catch within the unit. Fur prices, social activities, cultural backgrounds, and weather conditions all contribute to the effort trappers expend. These factors keep harvests low enough to meet the objectives.

Project Location: Subunits 25A, 25B, 25D, 26B, and 26C (73,800 mi²)

Project Objectives and Activities:

1. Maintain accurate annual harvest records and indices of population trends based on sealing documents and trapper questionnaires.
 - a. Seal furs as they are harvested and presented for sealing and analyze harvest patterns.
 - b. Conduct trapper questionnaire and interviews to determine the status of various furbearer populations.
2. Develop more specific population objectives for furbearers by 1995.
3. Cooperate with local residents and USFWS in investigating the relationship between beaver and local fish populations.
4. Test the feasibility of aerial track counts in monitoring lynx and hare population trends.

Work Accomplished During the Project Segment Period: Harvest data for sealed species including lynx, wolverine, beaver, and otter are being compiled and analyzed based on sealing forms. Final harvest figures are not available, but as in previous years the harvest of sealed species was greatest in Unit 25. Fur prices have remained low for several years, and trapping effort has declined accordingly. The remaining trapping effort is focused primarily on marten and lynx. Snowshoe hare numbers are starting to increase, and lynx harvests are increasing. Small mammals and furbearer populations have recovered from an extended flood in May 1992 on the flats around Fort Yukon. Considerable effort was devoted to developing revised beaver trapping regulations in response to local interests in harvesting more beaver for food and in reducing beaver numbers on creeks where beaver dams are thought to be reducing migratory whitefish populations. Beaver trapping regulations were changed in 1995-96 to allow people to shoot 1 beaver per day between April 16 and June 1. The bag limit for shooting was raised to 2 per day for 1996-97. An aerial reconnaissance of the Christian River and Marten Creek drainages revealed that fish movements

between rivers and some adjacent lakes could be affected by beaver dams, especially during low water. A plan to evaluate aerial track counts to monitor lynx and hare populations was not pursued in the Fort Yukon area, although the method was tested with positive results near Fairbanks.

Progress Meeting Project Objectives: Harvests of all furbearer species sealed by ADF&G personnel were within population management objectives. Objectives involving maintaining accurate harvest records, sealing furs, and obtaining trapper observations on furbearer numbers are being met. Population objectives for furbearers are being developed. I suggest objective 4 be deleted for 1996-97.

Segment Period Project Costs:

	<u>Personnel</u>	<u>Operating</u>	<u>Total</u>
Planned	113.3	52.9	166.2
Actual	83.7	22.7	106.4
Difference	29.6	30.2	59.8

Explanation: Personnel and operating expenditures were less than planned because unsuitable snow conditions prevented a wolverine survey in Unit 20E and the initiation of intensive wolverine survey and inventory work in Unit 19.

Submitted by:

David James
Management Coordinator

Project Title: Western Alaska Furbearer Population Management

Project Location: Unit 18 (42,000 mi²)
Yukon-Kuskokwim Delta

Project Objectives and Activities:

1. Maintain furbearer population at existing levels in Unit 18.
 - a. Estimate abundance and use of selected furbearers in Unit 18.
 - b. Provide support to the fur sealing program.
2. Minimize adverse interactions between furbearers and the public.
3. Develop updated population management objectives in consultation with the public and other agencies.

Work Accomplished During the Project Segment Period: Public notices were sent out to all village post offices and fur sealers for the fifth year informing hunters and trappers that all harvests of beaver, lynx, otter, wolves, and wolverines need to be sealed. Also, notices were sent explaining the use of fur export permits and the importance of reporting all furbearer harvests. All fur sealers were contacted about proper procedures for sealing pelts and filling out fur acquisition reports. Twenty-nine fur sealers were active in Unit 18 during the 1995-96 season, of which 2 were also licensed furbuyers. One of the largest furbuyers in Alaska was inactive during the 1995-96 season.

A trapper questionnaire was sent out during March 1996. A summary of the responses will be prepared for the next reporting period.

Beaver dam and damage complaints were received from the city of Bethel and other villages throughout the Yukon-Kuskokwim Delta. Several villages asked about removing the beaver dams with the use of dynamite and were referred to Habitat Division in Anchorage.

Pelts were sealed at the office in Bethel and in the villages on an opportunistic basis, usually incidental to public meetings and license vending. Also, pelts from other units were sealed as well. Fur sealing certificates were coded and filled out properly so harvests for different drainages could be evaluated.

Progress Meeting Project Objectives: We received very few responses to the 1995-96 trapper questionnaire. Furbearer trends and abundance were evaluated for each species using trapper responses and sealing certificate records. Abundance of all species of furbearers remained high, especially beaver, fox, marten, muskrat and otter. Some trappers reported lower abundance of mink, but this may have been caused by late freeze-up and lack of snow for travel to trapping areas. Trappers could not get to mink trapping areas until several weeks after the trapping season began; this may have lowered their harvests.

The preliminary harvest of furbearers in Unit 18 during the 1995-96 regulatory year is estimated at <1000 beaver, 500 foxes (red and white combined), 10 lynx, 100 martens, 2000 mink, 1000

muskrats, and 300 otters. These harvest records indicate there is very little interest in the sale of pelts except beaver, red fox, mink, and otter. Fur prices have been very depressed since the 1989-90 trapping season and continue to be marginal. Mink prices and interest in buying Kuskokwim mink pelts was the only exception during the 1995-96 season. However, lack of snow and absence of a local furbuyer substantially reduced the harvest of mink. The decrease in harvest for all furbearers, except lynx, was the result of low prices paid for pelts rather than low abundance of furbearers. Observations by trappers and staff indicate that all furbearer species are abundant and continue to increase throughout the Yukon-Kuskokwim Delta. Lynx, wolf and wolverine numbers continue to increase steadily and all three species have been trapped in close proximity to villages where they were rarely seen in previous years.

The department responded to nuisance beaver complaints and it was agreed by all parties that trapping of beavers during the open season was the best solution to the problem. Compliance with fur sealing requirements has increased, presumably because of the public notices posted in all the villages and the personal contacts made by department staff..

Project Location: Unit 22 (25,230 mi²)
Seward Peninsula and eastern Norton Sound

Project Objectives and Activities:

1. Establish and maintain viable numbers of furbearers in Unit 22.
 - a. Assess harvest, interview hunter/trappers, and seal all furs presented for sealing.
 - b. Establish and maintain license vendors and sealers in all Unit 22 villages.
 - c. Improve compliance with current sealing requirements through public communication and education.
2. Minimize adverse interactions between furbearers and the public.
3. Develop updated population management objectives in consultation with the public and other agencies.

Work Accomplished During the Project Segment Period: We collected the following harvest data through the furbearer sealing program:

Beaver - Three Unit 22 residents harvested 12 beaver (11 from Unit 22A and 1 from Unit 22C). Harvest chronology data are as follows: November - 3; December - 8; and April - 1. All were taken with traps or snares; snowmobiles were the predominant method of transportation.

Lynx - One unit resident using a snowmobile for transportation trapped 1 lynx (sex unknown) from Unit 22B during March 1996.

River Otter - One unit resident using a snowmobile for transportation harvested 1 otter from Unit 22E during March 1996.

Wolverine - Seven hunters/trappers, all residents of Unit 22, harvested 9 wolverines (5 males, 3 females, 1 sex unknown) from Unit 22B. Chronology of the harvest is: November - 1, February - 1; March - 6; and April - 1. Two were trapped and the others were shot. Snowmobiles were used for transportation by all 7 hunters/trappers.

We continued to use the educational program developed several years ago to explain wildlife management concepts and regulations in the schools throughout Unit 22. We made several trips to villages to explain the need for regulations and harvest reporting, as well as to assist license vendors. We also distributed regulations, prepared public information releases, and supported license vendors and fur sealing agents in Unit 22.

Progress Towards Meeting Project Objectives: We suspect there is considerable unreported harvest of furbearers each year in Unit 22. Efforts to inform the public of the importance of wildlife conservation and the need for regulations are starting to show results in some communities because the number of individuals purchasing licenses has increased. We need additional contact with local residents, primarily within the villages, if more complete compliance with current regulations is to be realized.

Increasing beaver populations are causing damage and control problems along the road corridors in Units 22B and 22D. We need to work more closely with landowners and managers to minimize or alleviate this problem.

Project Location: Unit 23 (43,000 mi²)
Kotzebue Sound and Western Brooks Range

Project Objectives and Activities:

1. Maintain furbearer populations capable of sustaining harvests at the 1983-93 levels, recognizing that populations will fluctuate in response to environmental factors.
2. Increase the number of fur sealers in Unit 23 villages.
3. Minimize adverse interactions between furbearers and the public.

Work Accomplished During the Project Segment Period: We collected information regarding the population status of beavers, lynx, river otters, and wolverines from fur sealing certificates, conversations with unit residents, and observers of furbearers and their tracks during other wildlife surveys. We maintained furbearer sealing and furbuyer reporting programs to monitor harvest.

Beaver - Increasing sign of beaver in the lower Noatak River drainage was reported. We received observations of new beaver activity on the Baldwin Peninsula and Squirrel River drainage. Residents of the Kobuk River drainage report beaver populations at "medium" levels, and either stable or increasing in abundance. Selawik beaver populations are still high based on observations of beavers in marginal habitat. Two hunters sealed 10 beaver during the reporting period.

Lynx - Lynx population levels remained low during 1995-96. Single sets of tracks were observed in the Noatak and Kobuk drainages by agency personnel and residents. This year, the snowshoe hare population increased noticeably in the Selawik drainage. If hare populations continue to increase, we anticipate an increase in lynx within the next few years. One lynx was sealed from the Buckland River. Hare and lynx numbers are increasing rapidly to the north of Unit 23 in Unit 26A.

Mink and Marten - No information is available regarding the populations or harvest of mink or marten.

Red Fox - Local residents reported rabid foxes throughout the unit, suggesting an outbreak of rabies as the fox populations reach high levels. Four foxes shot in villages tested positive for rabies. We prepared public service announcements for the local radio stations and news media describing the behavior of rabid animals and preventative steps to take to avoid exposure. There were no incidents of human exposure to rabies.

River Otter - Based on observations during other wildlife surveys, river otters are increasing in the Noatak and Kobuk drainages. A Buckland hunter sealed 1 river otter in 1995-96.

Wolverine - Based on opportunistic sightings by staff and residents, wolverine populations are stable. During the 1995-96 regulatory year, 5 hunters sealed 7 wolverines. One animal was trapped and 6 were ground shot. Hunters took an additional 12 wolverines from the Kobuk and northern Seward Peninsula but did not seal them (This information from the U.S. Fish and Wildlife Service carcass collection project.) No wolverines were reported taken from the Noatak River drainage. Due to noncompliance with sealing requirements, actual harvests are undoubtedly much higher than the number sealed.

Progress Meeting Project Objectives: The department continued to maintain open communication with area trappers to assess trapper effort and distribution. We encouraged 2 residents in different villages to become fur sealers. Current furbearer populations seem capable of sustaining target harvest levels, with the exception of lynx.

Lynx densities remained low. Observations of both hare and lynx tracks allowed us to identify general areas which may be suitable for trend count areas as populations increase. Potential trend count areas include the northern Seward Peninsula, Kobuk River, and Selawik River drainages.

Project Location: Unit 26A (53,000 mi²)
Western North Slope

Project Objectives and Activities:

1. Maintain productive populations and allow harvest opportunities within sustained yield limits.
2. Minimize adverse interactions between furbearers and the public.

3. Develop updated population management objectives in consultation with the public and other agencies.

Work Accomplished During the Project Segment Period:

Arctic Fox - Arctic foxes were fairly abundant in Unit 26A. Because hunters and trappers are not required to seal foxes, harvest data are not available for arctic foxes. Low fur prices resulted in relatively few foxes being trapped.

Coyote - Coyotes are very rare in Unit 26A. No population or harvest data are available.

Lynx - Lynx population density is currently very low in Unit 26A. No lynx were reported harvested in the Unit.

Red Fox - No population data are available for red foxes in Unit 26A. No red foxes were reported harvested.

River Otter - Although river otters are found in Unit 26A, their densities are very low. No river otters were reported harvested during 1995-96.

Wolverine - In 1984 the department estimated a minimum population of 821 wolverines in Unit 26A. We do not have a more recent estimate of population size. We observed 3 wolverines during 7 hours of moose count flights in Unit 26A during 21-24 April 1996.

Sixteen wolverines from Unit 26A were sealed during 1995-96. Three were females, 12 were males and 1 was unspecified. Fifteen were ground shot and 1 was trapped. Trappers used snowmachines for transportation for 13, airplanes for 1, and 2 were taken by unknown methods. One was taken during September, 1 during December, 2 during January, 8 during March, 3 during April, and 1 during May. We believe many more wolverines were harvested and not reported; however, reliable data for the unreported harvest are not available. Sixteen wolverines were also taken in 1994-95 and this represents a larger harvest than other previous years. Hunters and trappers reported seeing more wolverines than normal.

Progress Meeting Project Objectives: It is difficult to determine whether current harvest levels are within sustained yield limits because of limited population and harvest information. Additional efforts are needed to assess the status of furbearer populations and monitor the harvest. Inventory of furbearer populations, other than wolves, remains low in priority in Unit 26A compared with other species. The department is assisting the North Slope Borough in developing a harvest monitoring program in each North Slope village which will provide much better harvest information in the future.

Rabid furbearers, particularly arctic foxes, continue to be a problem around human settlements. We work with the North Slope Borough to educate people about rabid animals and having their pets immunized. Rabid arctic foxes are destroyed when they are reported near villages.

Segment Period Project Costs:

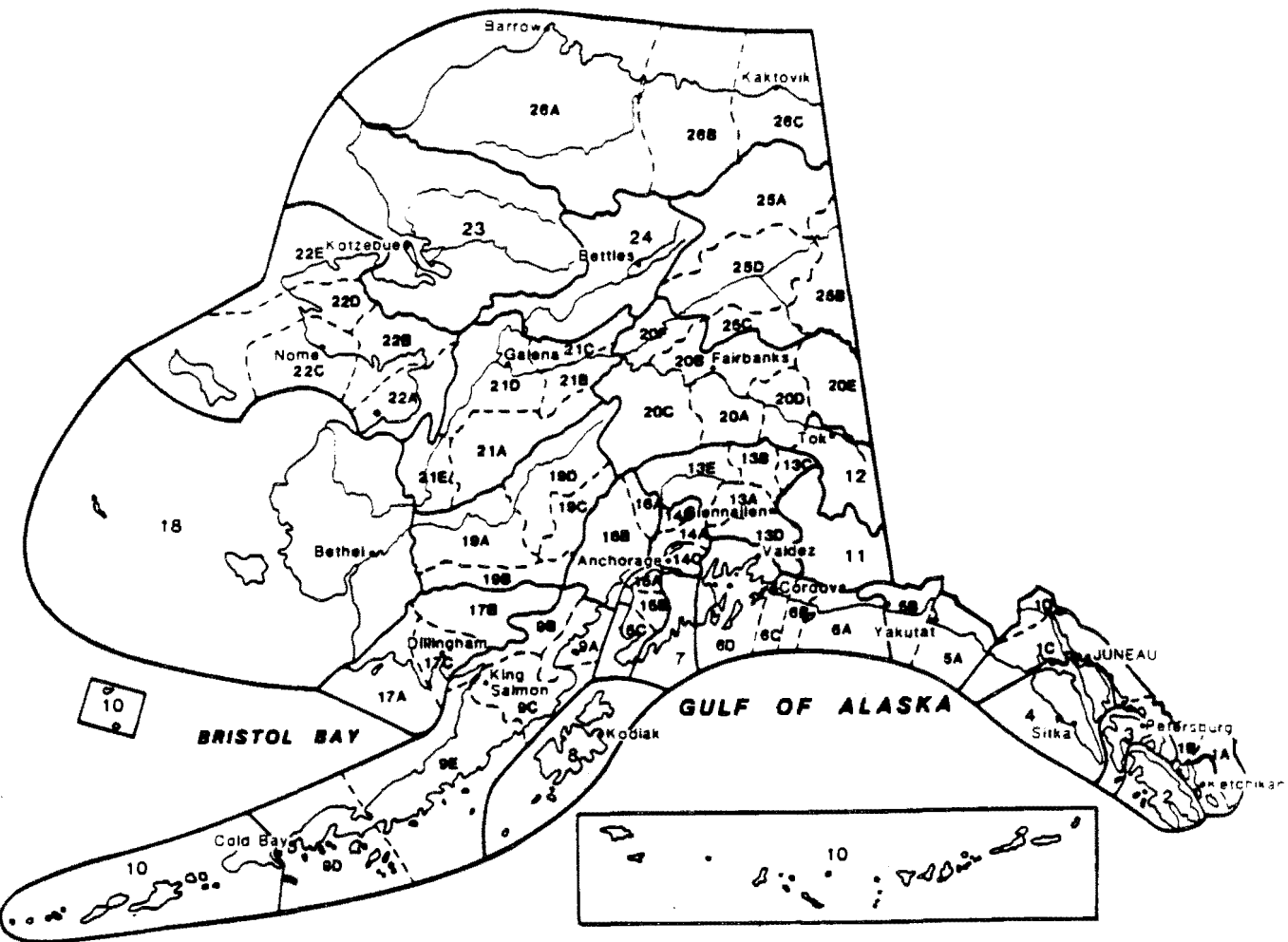
	Personnel	Operating	Total
Planned	32.2	6.0	38.2
Actual	41.5	0.2	41.7
Difference	-9.3	5.8	-3.5

Submitted by:

Peter Bente
Survey-Inventory Coordinator

ARLIS
Alaska Resources
Library & Information Services
Anchorage, AK

Alaska's Game Management Units



The Federal Aid in Wildlife Restoration Program consists of funds from a 10% to 11% manufacturer's excise tax collected from the sales of handguns, sporting rifles, shotguns, ammunition, and archery equipment. The Federal Aid program allots funds back to states through a formula based on each state's geographic area and number of paid hunting license holders. Alaska receives a maximum 5% of revenues collected each year. The Alaska Department of Fish and Game uses federal aid funds to help restore, conserve, and manage wild birds and mammals to benefit the public. These funds are also used to educate hunters to develop the skills, knowledge, and attitudes for responsible hunting. Seventy-five percent of the funds for this report are from Federal Aid.



RICHARD BLOOMQUIST