Alaska Department of Fish and Game
Division of Wildlife Conservation
Federal Aid in Wildlife Restoration
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Survey-Inventory Activities
1 July 1989-30 June 1990

FURBEARERS

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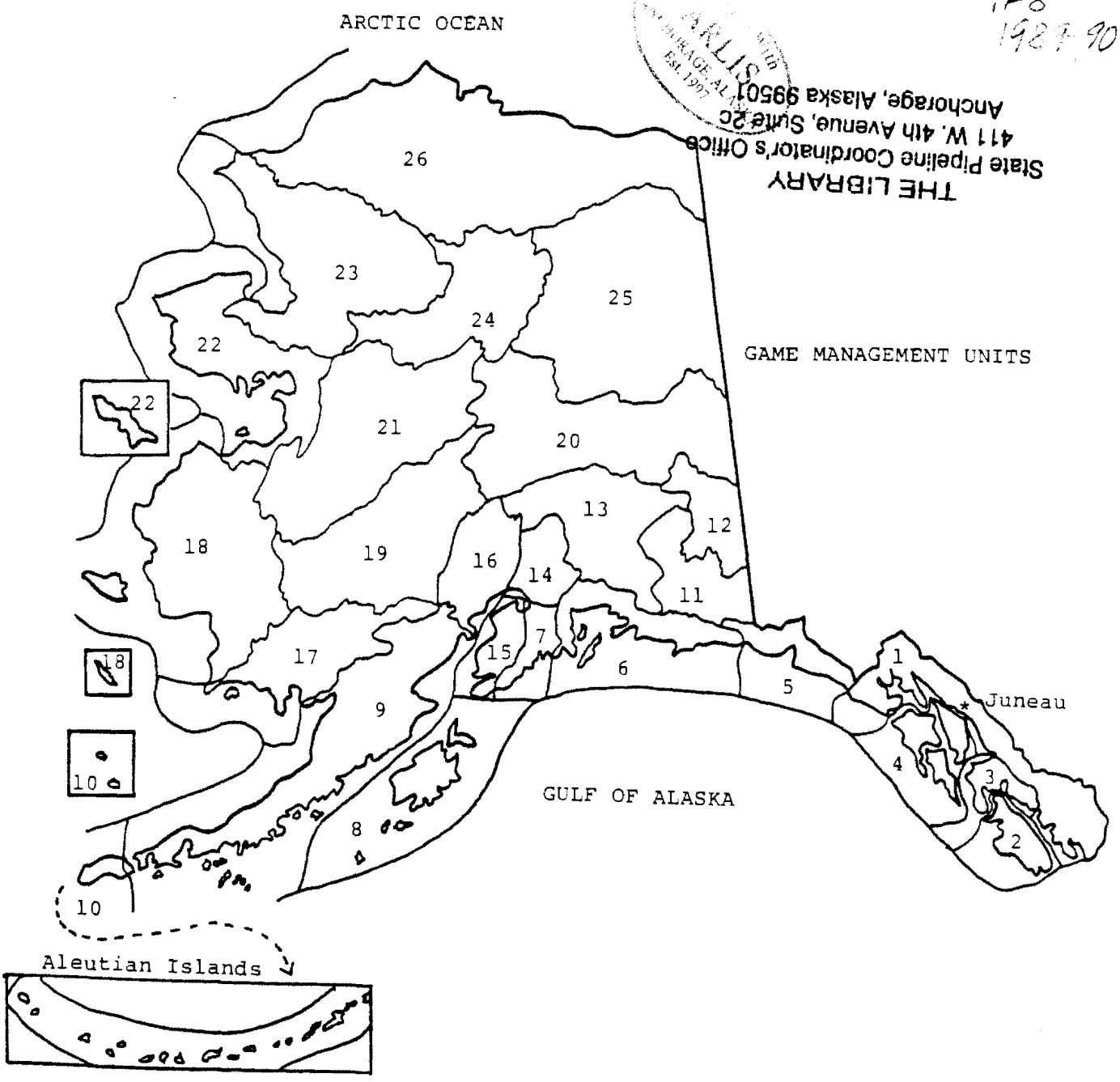

PROJECT TITLE: Southeast Furbearer Population Management

OVERVIEW: Principal furbearer species in the southeast Alaska region include marten, otters, beavers, mink, wolverines and lynx. Because the levels of harvest for furbearers are generally a function of market prices, rather than species availability, they are not a reliable indicator of population status. However, information from trappers, observations in the field, and harvest data suggest that furbearer populations in the region are stable.

PROJECT LOCATION: Units 1A and 2 (8,900 mi^2)
Ketchikan area including mainland areas draining into Behm and Portland Canals and Prince of Wales and adjacent islands south of Sumner Strait and west of Kashevarof Passage and Clarence Strait.

POPULATION OBJECTIVES:

To maintain furbearer populations capable of sustaining harvest at the 1984-85 level as follows:

Species	Unit 1A	Unit 2
Beaver	39	224
Marten	203	1,039
Otter	65	192
Wolverine and Lynx	occasional	not present

WORK ACCOMPLISHED DURING THE PROJECT SEGMENT PERIOD:

Between 1 July 1989 and 30 June 1990 the following furbearers were sealed:

Species	Unit 1A	Unit 2
Beaver	10	396
Marten	246	897
Otter	81	155
Wolverine	1	0

Anecdotal information was collected on general population levels during discussions with trappers and from personal observations made during field activities.

PROGRESS TOWARDS MEETING PROJECT OBJECTIVES:

Harvest levels are generally controlled by fur prices that, in turn, control trapper effort. Prices were low for all species except marten, which were moderately valued. Consequently, more

trapping effort was directed toward marten than the other species.

From all indications, populations of mink and otters were at high levels in Units 1A and 2. Beavers were at high levels within Unit 1A and at moderate levels in Unit 2, where the extensive road access creates more favorable conditions for trappers and results in higher harvests. Marten were at moderate levels within Unit 1A, and populations seem to be increasing. Trappers have reported reasonable catches, where several years ago they were rare. In Unit 2, where roads have extended into previously inaccessible areas, marten harvest may have been excessive; however, the dropping prices during the last several years helped offset that ease of access. Close attention should be paid to marten prices and a resulting increase in trapper effort in Unit 2. All furbearer management objectives, with the possible exception of marten in Unit 2, were met.

PROJECT LOCATION: Units 1B and 3 (5,900 mi^2)
Southeast Mainland from Cape Fanshaw to Lemesurier Point and Adjacent Islands

PROJECT OBJECTIVES:

To maintain furbearer populations capable of sustaining harvest at the 1984-85 levels as follows:

Species	Unit 1B	Unit 3
Beaver	4	52
Marten	185	250
Otter	15	141
Wolverine	4	3

WORK ACCOMPLISHED DURING THE PROJECT SEGMENT PERIOD:

During the sealing process, trappers were questioned about their impressions of populations and regulations. Most felt that populations were in good condition, except for some small areas around communities where trapping effort, especially for marten, may have been excessive. No desire for more restrictive regulations were expressed.

One permit was issued to the U.S. Forest Service for the removal of beaver at 2 sites involving fish enhancement projects. The installation of "beaver excluders" was recommended to control nuisance beavers in several other cases where they were damming road culverts.

PROGRESS TOWARDS MEETING PROJECT OBJECTIVES:

The harvest of furs in any one year is often more of an indication of the prevailing market prices than of furbearer abundance. Population trends can only be determined over long periods of time, if at all, in this region where trapping is usually a secondary source of income or pursued only as a hobby. As the following table shows, the reported harvest was mixed, compared with the objectives. There were no indications that any populations were being reduced by trapping.

Species	Unit 1B	Unit 3
Beaver	83	49
Marten	174	174
Otter	20	70
Wolverine	15	0

PROJECT LOCATION: Unit 1C (7,600 mi^2)
The southeast Alaska mainland and the islands of Lynn Canal and Stephens Passage lying between Cape Fanshaw and the latitude of Eldred Rock, including Sullivan Island and the drainages of Berners Bay

PROJECT OBJECTIVES:

To maintain furbearer populations capable of sustaining harvest at the 1984-85 level as follows:

Species	Unit 1C
Beaver	36
Lynx	1
Marten	245
Otter	34
Wolverine	9

WORK ACCOMPLISHED DURING THE PROJECT SEGMENT PERIOD:

Fur harvest data were collected 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. Trappers were also asked to comment on the impacts of timber harvests or other development on their traplines. Results will be compiled before the 1990-91 season.

PROGRESS TOWARDS MEETING PROJECT OBJECTIVES:

Furbearer populations appear to be stable. Harvest levels were at or near management goals for all species except wolverine. Trappers took 34 beavers, 256 marten, 34 otters, and 6 wolverines. Although wolverine harvests were down from the 10 taken the previous year, fluctuations of this nature are expected with such small sample sizes. No lynx have been taken in this area since 1984-85.

PROJECT LOCATION: Unit 1D (2,700 mi^2)
That portion of the southeast Alaska mainland lying north of the latitude of Eldred Rock, excluding Sullivan Island and the drainages of Berners Bay

PROJECT OBJECTIVES:

To maintain furbearer populations capable of sustaining harvest at the 1984-85 level as follows:

Species	Unit 1D
Marten	100
Otter	6
Wolverine	9

WORK ACCOMPLISHED DURING THE PROJECT SEGMENT PERIOD:

Fur harvest data were collected 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. Trappers were also asked to comment on the impacts of timber harvest or other development near their traplines. Results will be complied before the 1990-91 season.

PROGRESS TOWARDS MEETING PROJECT OBJECTIVES:

Although furbearer populations within appear stable harvests of wolverines and otters were well below average; only one of each was sealed. Trapper effort may have decreased because of high winter employment levels, a result of the filming of a major motion picture in Haines. Marten harvests were near average and (113) slightly above management objectives.

PROJECT LOCATION: Unit 4 (5,800 mi^2)
Admiralty, Baranof, Chichagof and adjacent islands

PROJECT OBJECTIVES:

To maintain furbearer populations capable of sustaining harvest at the 1984-85 level as follows:

Species	Unit 4
Beaver	14
Marten	1,355

WORK ACCOMPLISHED DURING THE PROJECT SEGMENT PERIOD:

Marten, otters, and beavers were sealed within 30 days of harvest. Furs were examined at sealing, sex was determined, and measurements taken. Anecdotal information was collected from trappers.

PROGRESS TOWARDS MEETING PROJECT OBJECTIVES:

It is not possible to determine if the objective of maintaining a population adequate to provide a harvest of 12 beavers and 1,355 marten was met. The harvest may not reflect populations. A total of 644 marten and 8 beavers were harvested and sealed. There is no indication that trapping has depressed furbearer populations. We remain concerned that marten are being overharvested on northeastern Chichagof Island.

PROJECT LOCATION: Unit 5 (5,800 mi^2)
Cape Fairweather to Icy Bay, eastern gulf coast

PROJECT OBJECTIVES:

To maintain furbearer populations capable of sustaining harvest at the 1984-85 level as follows:

Species	Unit 5
Beaver	3
Lynx	1
Marten	44
Otter	2
Wolverine	2

WORK ACCOMPLISHED DURING THE PROJECT SEGMENT PERIOD:

The harvest was analyzed from furbearer sealing certificates. Anecdotal information about furbearer abundance was collected opportunistically from hunters, Department staff, and Fish & Wildlife Protection officers.

PROGRESS TOWARDS MEETING PROJECT OBJECTIVES:

Department staff in Yakutat sealed furbearers as they were presented in Anchorage and Yakutat. Residents of Yakutat and other nonlocals contributed anecdotal information concerning sighting of furbearers.

Four beavers, 6 lynx, and 13 marten were sealed during the reporting period. For the second year in a row, no otters or wolverines were taken.

Comments were made to the Habitat Division and the U.S. Forest Service regarding furbearer habitat concerns. Logging of old-growth spruce/hemlock forest continues to be of special importance to marten and other fur species.

SEGMENT PERIOD PROJECT COSTS:

	Personnel	Operating	Total
Planned	19.6	2.5	22.1
Actual	24.0	0.9	24.9
Difference	-4.4	1.6	-2.8

Actual personnel costs are estimated. They were higher than planned, in part, because the illness of a Wildlife Biologist III required us to fill in for him by temporarily upgrading a WB I and extending his normal working season. Additional work was done by Juneau area staff reviewing the impact of mine development on furbearers.

SUBMITTED BY:

David M. Johnson
Regional Management Coordinator

PROJECT TITLE: Southcentral Alaska Furbearer Management

PROJECT LOCATION: Unit 6 (10,150 mi^2)
Prince William Sound and north Gulf Coast

Units 7 and 15 (8,400 mi^2)
Kenai Peninsual

Units 9 and 10 (36,250 mi^2)
Alaska Peninsula and Unimak Island

Unit 11 (12,800 mi^2)
Wrangell Mountains

Unit 13 (23,400 mi^2)
Nelchina Basin

Unit 14 (6,600 mi^2)
Upper Cook Inlet

Unit 16 (12,300 mi^2)
West side of Cook Inlet

Unit 17 (18,800 mi^2)
Northern Bristol Bay

WORK ACCOMPLISHED DURING THE PROJECT SEGMENT PERIOD:

Unit 6

Sixteen pelts were sealed in the Cordova office: 13 beavers, 2 land otters, and 1 wolverine. Seventeen beavers were harvested because of nuisance-related incidents; however, only two of these were sealed. Sealing data collected for Unit 6 during the 1989-1990 trapping season were as follows: 20 beavers, 10% and 90% from Unit 6A and 6C, respectively (55% kits); 14 land otters, 64%, 21%, and 14% from Units 6D, 6C, and 6A; and 8 wolverines, 50%, 25%, 13%, and 12% from Units 6C, 6D, 6A, and 6B; (75% males, 25% females).

An Emergency Order was issued closing the land otter, mink, and weasel trapping seasons in portions of Unit 6D (Prince William Sound) to prevent trapper influence on Exxon Valdez oil spill impact assessment studies.

Trapper questionnaires were distributed in June to 36 trappers. The response rate was less than 30%.

Units 7 and 15

Sealed furbearers from the Kenai Peninsula were as follows:

Unit	Marten	Beaver	Land Otter	Wolverine	Lynx
7	22	70	12	8	0
15	0	30	15	13	2
Total	22	100	27	21	2

Mink, weasels, muskrats, red foxes, and coyotes are also harvested on the Kenai Peninsula. However, sealing is not required for these species, and only incidental data were obtained.

Other furbearer management activities included attending advisory committee meetings, controlling nuisance beavers and other occasional species, providing trapper education workshops, and cooperating with other agencies, especially the USFWS. No questionnaire information is available for this reporting period. Trapping activity remained relatively low on the Kenai Peninsula, partially because of a 4-day trap check requirement on the Kenai National Wildlife Refuge.

Unit 8

Beaver and river otter pelts were sealed by appointed sealers and ADF&G staff. Twenty-four individual trappers submitted pelts for sealing, 21 trappers harvested otters, and 15 trappers harvested beavers; 95 otters (49 males, 39 females, 7 unknowns) and 76 beavers were sealed. Highest individual catches were 26 beavers and 17 otters. The average catch was 4.5 otters/trapper and 5.1 beavers/trapper. Questionnaires were mailed to 24 trappers who had previously trapped in Unit 8; 16 were returned. Eleven respondents reported trapping.

Units 9 and 10

Furbearer harvest data are derived from furbearer sealing certificates and a combination of fur trapper export and dealer acquisition reports. The preliminary harvest for Unit 9 was as follows: 262 beavers, 80 otters, 12 lynx, 63 wolverines; and only 1 otter in Unit 10.

Thirteen useful questionnaires were returned. Trappers reported that most species were relatively stable except for a slight increase in beaver and decreases in red fox, lynx, and mink populations. No field work on track trend lines in Unit 9 was reported for this period, but some planning was done. No population surveys were conducted, because the incumbent area biologist was transferred.

Units 11 and 13

During the reporting period 5 trappers sealed 12 wolverines (7 males, 5 females) in Unit 11, and 19 trappers sealed 24 wolverines (9 males, 12 females, 3 unknowns) in Unit 13. Sealing data for wolverines from both units indicated the number trapped

has declined appreciably. In Unit 11 the average annual wolverine harvest prior to 1984 was 27, but it has averaged only 14 since. In Unit 13 between 1971 and 1982 the average annual take was 81, compared with 31 between 1983 and 1989. The current harvests in both units are among the lowest ever reported. Overall success rates for wolverine trappers remained low. All wolverines taken in Unit 11 were trapped; whereas, in Unit 13, 75% (18) were trapped and 25% (6) were shot. No distinct trend in harvest chronology was apparent in either unit.

Four otters (1 male, 3 females) were sealed by 1 trapper in Unit 11, and 5 otters (4 males and 1 female) were sealed from Unit 13 by 3 trappers. Otter harvests in Unit 11 were low; they have changed little over the past 10 years, compared with those in Unit 13 that have fluctuated between a high of 68 in 1983 to the current low of 5. The fluctuations in the harvest related more to trapper interest and price, rather than changes in the otter population. Virtually all otter trappers in both units take their animals by trapping. No trend in chronology of harvest was apparent.

Eleven beavers (9% kits) were sealed by 5 trappers in Unit 11, and 160 (16% kits) were sealed by 23 trappers in Unit 13. In Unit 11 beaver harvests have fluctuated in recent years between a high of 59 in 1985 and the current take of 11. The beaver harvests in Unit 13 for the past 2 years were down from record harvests in 1986 and 1987 (333 and 300, respectively). However, the current take is still well above the annual average of 81 beavers reported between 1972 and 1982. In both units the catch per trapper has been fairly constant, but the number of beaver trappers has fluctuated among years, probably a function of pelt price. Virtually all the beavers taken in both units are trapped or snared. Harvest chronology trends indicate most animals are taken either early in the trapping season or late in the spring. There were no lynx pelts sealed from either unit because the season has been closed for the past 3 years.

Trapper questionnaires have been utilized for 3 years as a method of determining trapping pressure, harvests, and furbearer abundance. During the reporting period questionnaires were sent to 9 trappers in Unit 11, and seven (78%) replied; two (28%) of these did not trap in 1989-90. Respondents reported having trapped an average of 17 years; their trap lines averaged 51 miles long. Snowmachines and highway vehicles were the most important methods of transportation. Appreciable increases in the lynx and wolf populations occurred, but marten numbers declined.

Fifty-three trappers from Unit 13 were sent questionnaires, and 21 (40%) responded. Of those responding, eight (38%) did not trap during the 1989-90 season. Major reasons for not trapping included low fur prices, adverse weather conditions, and a closed lynx season. Respondents reported an average of 12 years experience in the unit. Trapline lengths averaged 41 miles, and

most trappers used highway vehicles and snowmachines as transportation. Trappers reported higher coyote, wolf, red fox, and lynx numbers than last year. Marten numbers were down from those of the previous year, and numbers of other furbearers were similar.

Twenty-six aerial transects (19 in Unit 13 and 7 in Unit 11) were established in 1988 to monitor lynx abundance and population trends. Most of these transects have been surveyed during March during the past 3 years. The number of tracks and family groups observed increased in both units in 1990, indicating a growing lynx population. Incidental wolverine track sightings while conducting wolf census surveys in Unit 13 indicated that their numbers were low in the Lake Louise Flats and Alphabet Hills.

Development of field techniques to assess population status and trend of several furbearer species continued in several units as a necessary prelude to establishing measurable population objectives. Transect surveys were conducted for lynx and wolverines in Units 11 and 13 and lynx in Unit 15; aerial beaver cache surveys were conducted in Units 14, 15, and 17.

Unit 14

During the 1989-1990 trapping season 154 beavers, 24 otters, and 8 wolverines were sealed from Unit 14. No lynx were reported because the hunting and trapping seasons were closed. Harvests of other species were unknown, because only beavers, otters, lynx, wolverines, and wolves are required to be sealed.

One hundred three beavers were taken in Subunit 14A; 33 and 18 were taken in Units 14B and 14C, respectively. Of the 154 beavers taken, 27% were classified as kits (29%, 21%, and 22% in Units 14A, 14B, and 14C, respectively). The average harvest was 4.7, 3.3, and 2.6 beavers per trapper in Units 14A, 14B, and 14C, respectively.

In Units 14A and 14C the harvest of beavers has increased slightly over the past 3 seasons. The beaver harvest in Unit 14B declined sharply. Abnormally deep snow during 1989-90 was responsible for reduced trapping effort and success. Judging from the number of nuisance beaver complaints that the Department received, beaver populations were healthy and widespread in the Mat-Su Valley.

Seventeen otters were taken in Unit 14A, and four and three were taken in Units 14B and 14C, respectively. Males composed 55% of the harvest. The otter harvest in Unit 14A increased four-fold (4-17) over 1988-89, reaching levels comparable to 1986-87. The otter harvests have remained low during the past 3 years in Units 14B and 14C.

One wolverine each was taken in Units 14A and 14B, and 6 wolverines were taken in 14C. Males composed 63% of the harvest

in Unit 14. The wolverine harvests in Units 14A and 14B were low, compared with those in other years, probably because of poor trapping conditions. In Unit 14C where no wolverine have been taken since 1986, the harvest was six. Reasons for this surge are not known, but snowmachine may have provided better access to remote areas. The previous largest harvests were 14 and 6 wolverines during the winters of 1972-73 and 1981-82, respectively. In all other years, the wolverine harvest in Unit 14C fluctuated between zero and 3.

Thirty-nine trappers, with an average of 19 years of trapping experience, responded to the Department's trapper questionnaire. Of these, 29 trapped during 1989-90. Responses came primarily from people who had sealed fur in Unit 14, but also included people who had trapped in Units 16 and 13. When asked to categorize the number of animals on their trapline during 1989-90, the majority of trappers listed lynx and wolverine as "scarce;" beaver as between "common" and scarce;" and abundance of all other species as "common" or "abundant." Most trappers commented that excessive snow depths limited their trapping efforts.

No trapper questionnaire data were analyzed. At the trapper roundup trappers reported beaver to be relatively abundant but unavailable because of deep snow.

Unit 16

During the 1989-1990 trapping season 145 beavers, 20 otters and 13 wolverines were sealed from Unit 16. The hunting and trapping seasons for lynx were closed. Harvests of other furbearer species was unknown, because only beavers, otters, lynx, wolverines, and wolves are required to be sealed.

Twenty-six beavers were taken in Unit 16A, and 119 were taken in Unit 16B. Of the 145 beavers harvested, 15% were classified as kits (8% and 17% in Units 16A and 16B, respectively). The average harvest was 4.3 and 11.2 beavers per trapper in Units 16A and 16B, respectively. Beaver harvest during 1989-90 was 60% lower than that in 1988-89 (N = 370), the lowest in 5 years. Record-deep snows in Unit 16 significantly reduced trapper effectiveness in running and maintaining their traplines.

Six and 14 otters were taken in Units 16A and 16B, respectively. For those animals of known sex, males composed 60% (N = 5) and 50% (N = 4) of the harvest in Units 16A and 16B, respectively. The number of otters taken in the unit declined 57% from 1988-89.

Four and 9 wolverines were taken in Units 16A and 16B, respectively. Males composed 25% of the harvest in Unit 16A, and 67% in Unit 16B. The number of wolverines taken was only slightly fewer than those during the previous season. During both seasons about one-third of the wolverines were taken by

trappers using aircraft, who may have been less affected by deep snow.

Most trappers in Unit 16 thought excessive snow depths limited their trapping efforts. The regular presence of ash from Mount Redoubt was also mentioned as a problem. Trends in relative furbearer densities were not determined from the trapper questionnaire because of the few responses; however, relative densities were probably similar to those described for Unit 14.

Unit 17

Beaver:

Sealing records indicated that 109 trappers harvested 1,245 beavers during the reporting period (11.4 beavers/trapper). A total of 229 (18.4%) was reported from Unit 17A, 498 (40.0%) from Unit 17B, and 518 (41.6%) from Unit 17C. Virtually all trappers used snowmachines for access (99.6%). Snares were used for 64.5% of the captures and traps were used for 35.5%. Kits (hide size <53 in) composed 19.7% of the harvest.

Land Otter:

Sealing records indicated that 44 trappers harvested 116 otters during the reporting period (2.6 otters/trapper). A total of 31 (26.7%) was reported from Unit 17A, 27 (23.3%) from Unit 17B, and 58 (50.0%) from Unit 17C. Most trappers (84%) used snowmachines for access. Traps were used for 65.5% of the captures and snares for 34.5%. Males composed 57.8% of the otters harvested.

Lynx:

One lynx was taken in a trap during this reporting period in Unit 17C. A snowmachine was used for access.

Wolverine:

Sealing records indicated that 14 trappers harvested 26 wolverines during the reporting period (1.9 wolverines/trapper). One wolverine (3.9%) was reported from Unit 17A, 20 (76.9%) from Unit 17B, and five (19.2%) from Unit 17C. Most trappers (88%) used snowmachines for access. Traps were used in 73.1%, ground shooting in 19.2%, and snares in 3.9% of the captures.

PROGRESS TOWARDS MEETING PROJECT OBJECTIVES:

Unit 6

Population objectives have not yet been established for fur species; however, a planned stratified survey in FY91 of Unit 6C may allow tentative objectives to become established for beavers.

Progress toward establishing meaningful objectives for the remaining species was limited by methods, manpower, budgets, and priorities.

Units 7 and 15

Sealing data and reports from trappers suggest all furbearer populations except lynx are stable. The lynx population declined during the late 1980's and has not rebounded enough to open a season for FY91. No changes in seasons or bag limits are recommended.

Unit 8

Trapping effort and harvest remained low in 1989-90. The river otter and beaver harvests were the second- and third-lowest, respectively, in the past 6 years.

Furbearer populations were high, but objective means of assessing trends have not been applied. Trapping has not resulted in significant mortalities in any furbearer species. Red foxes and beavers were particularly abundant. River otters are potentially susceptible to over harvesting. This species should be given the highest priority when project objectives and population trend techniques are developed.

Units 9 and 10

The lack of efficient methods to monitor populations, compounded by unreliable snow conditions, has hampered progress towards developing measurable population objectives for furbearers in Units 9 and 10. Research on several species continued in other areas, but unless budgets increase it is unlikely efforts will be expanded on the Alaska Peninsula.

The trapper questionnaire, incidental observations, and sealing requirements have been adequate for management as long as trapping effort remained relatively light. If fur prices and other factors lead to an increase in harvests, more intensive management efforts may be required.

Units 11 and 13

A recommendation was made and accepted to reopen the 1990-91 lynx hunting and trapping seasons in Units 11 and 13. This decision was based on trapper reports and trend counts indicating increased lynx numbers. Aerial lynx track surveys will be conducted yearly to monitor fluctuations of the lynx cycle and to correlate their abundance with harvest data.

More information is needed on the wolverine population in Unit 13. Harvests have declined, and the harvest composition has had a higher percentage of females than males. Aerial transects should be established in an attempt to determine population

status. Research should be initiated to determine reasons why harvests have declined in most habitats except in the remote mountainous areas. Same-day-airborne harvesting of wolverines was eliminated in 1987.

Low fur prices, deep snows, and very cold temperatures reduced trapping pressure in 1989-90. Some species (e.g., red foxes and mink) received very little pressure, compared with the early 1980's. Projected fur prices for the upcoming season showed little improvement, and trapping pressure is not expected to increase appreciably. No changes in season dates or bag limits are recommended.

Unit 14

Results from harvest records and the trapper questionnaire indicate that furbearers are widespread. Furbearer harvests can be greatly affected by environmental conditions and fur prices. It would be desirable to develop management objectives for all furbearer species; however, the Department does not have the expertise, personnel, or fiscal ability to fully achieve this goal. The trapper questionnaire has been the best management tool to determine trends in furbearer abundance and distribution; responses indicated that both furbearer and prey populations were similar to or higher than those of the previous year. However, 70% of the respondents felt lynx numbers were not high enough to support a season, and 65% felt marten and wolverine populations had declined over the past 20 years. Of those who thought marten and wolverine numbers had declined, 95% favored shortening or closing seasons to increase populations. Regarding the lengthening of beaver trapping season, 70% thought beaver populations had remained about the same since the extension.

Unit 16

Results from harvest records and the trapper questionnaire indicated the public has had ample trapping opportunities. Furbearer populations can be greatly influenced in the short term by environmental conditions and by trapping pressure. Quantitative methods to determine the impact of harvests on all furbearer populations should be developed.

Unit 17

Pelts were sealed and trappers were informally interviewed during sealing. No data from trapper questionnaires were analyzed during this reporting period. No population surveys were conducted.

SEGMENT PERIOD PROJECT COSTS:

	Personnel	Operating	Total
Planned	27.3	31.1	58.4
Actual	27.3	25.4	52.7
Difference	0.0	-5.7	-5.7

Only $8.6 of the planned $17.7 for development of the wolf-wolverine census technique were used, because unfavorable weather and snow-tracking conditions prevented completion of all aerial transect surveys. An additional $1.3 of general survey funds were not used because of commitment of personnel to the Mat-Su Valley moose winter mortality project. A change in area biologists at Dillingham and oil spill activities also limited operational work in King Salmon.

SUBMITTED BY:

Kenneth W. Pitcher and John Trent
Regional Management Coordinators

PROJECT TITLE: Interior Furbearer Population And Habitat Management

PROJECT LOCATION:

Unit 12 (10,000 mi^2)
Upper Tanana and White River drainages, including the northern Alaska Range east of the Robertson River, and the Mentasta, Nutsotin, and northern Wrangell Mountains

Unit 19 (36,500 mi^2)
Drainages of the Middle Fork and upper Kuskokwim River upstream from the village of Kalskag

Unit 20 (50,400 mi^2)
Tanana Valley, Central Alaska Range, White Mountains, Tanana Hills

Unit 21 (44,000 mi^2)
Koyukuk River drainages upstream from the Dulbi River

Unit 25 (53,100 mi^2)
Eastern north slope of the Brooks Range

Units 26B and 26C (25,800 mi^2)
Upper Yukon River drainage

PROJECT OBJECTIVES:

Objectives for furbearer populations were developed during the reporting period.

Unit 12

To maintain accurate annual harvest records based on sealing documents.

To develop more specific population objectives for furbearers.

Unit 19

To determine current status and trends of all furbearers and their primary prey species, assess trapper effort and distribution, obtain estimates of harvest for furbearer species not required to be sealed, and maintain open communications with area trappers.

Beaver:

To maintain a mean pelt size >50 inches and <25% kits in the annual harvest.

To maintain a mean density of not less than 1 active colony per 2 miles of waterway, as determined during annual fall cache surveys.

Marten:

To obtain accurate estimates of annual harvests through comparisons of fur acquisition reports, fur export reports, and trapper questionnaires.

To maintain >50% males in the annual harvest and a ratio of young:adult female of not less than 2:1 in the annual harvest.

Lynx, River Otter, and Wolverine:

To maintain accurate annual harvest records based on sealing documents.

To maintain >50% males in the annual harvests of wolverines.

Muskrat, Mink, Red Fox, Coyote, Ermine, and Squirrel:

To annually estimate numbers harvested, as well as trends in the respective populations.

Units 20A, 20B, 20C, 20F, and 25C

To maintain an annual unit harvest that includes <20% kits when the harvest for that subunit exceeds 50 beavers.

To monitor annual harvests of furbearers through sealing documents, fur acquisition reports, and fur export reports.

To monitor annual furbearer population status and trends with trapper questionnaires and beaver cache surveys.

To determine the status of the lynx population in 1988-89 by examining carcasses for age and reproductive information.

To determine the accuracy of using lynx pelt measurements to monitor annual changes in recruitment.

To maintain furbearer trapping seasons during periods of peak pelt primeness.

To establish species-specific management objectives by 1992.

Unit 20E

To provide for an optimum harvest of furbearers.

To provide the greatest opportunity to participate in hunting and trapping furbearers.

To maintain viable populations of all furbearers.

Unit 21

To manage a furbearer population that will sustain furbearers at levels high enough to provide for maximum consumptive and nonconsumptive use.

Unit 24

To establish management objectives for furbearer populations in Unit 24 during FY90.

Units 25A, 25B, 25D, 26B, and 26C

To determine the relative annual abundance of lynx, marten, snowshoe hares, and beavers by 1991.

To determine annual age and sex ratios of harvested lynx and marten by 1991.

To develop accurate estimates of annual furbearer harvest by 1991.

To identify trapper use patterns by 1991.

To determine marten habitat use and dispersal by 1992.

To determine habitat use, movements, and density of lynx in relation to successional vegetation stages following wildfire.

WORK ACCOMPLISHED DURING THE PROJECT SEGMENT PERIOD:

Unit 12

Based upon sealing certificates received in the Tok area office through 13 July 1990, harvests of furbearers during the 1989-90 season were as follows: 1 land otter, 14 beavers, 13 wolverines, and 78 lynx. Harvest of all species remained comparable to the 1988-89 harvests, except for wolverines which increased. While kitten lynx composed 23% of the harvest, the total harvest of lynx did not increase significantly. For this reason, an Emergency Order will be needed to retain the 2-month lynx season during 1990-91.

Discussions with local trappers and others indicated that populations of wolverines, red foxes, and lynx increased. Lower projected market demand and prices served to reduce trapping effort for lynx. Low projected prices for muskrats, mink, red foxes, and coyotes resulted in less effort expended. Marten numbers were lower this season, probably because of increased abundance of predators whose population growth has been stimulated by increasing snowshoe hare abundance.

Unit 19

Beaver, lynx, river otter, and wolverine pelts were sealed throughout the year, and sealing documents were submitted to Statistics section personnel in Anchorage for entry into a computer database file. Over 800 marten carcasses were analyzed for sex and age ratios in the harvest. Preliminary data were analyzed.

Trapper questionnaires were mailed to 132 trappers. Responses were received from 62 trappers, and status and trends within the various furbearer populations were estimated from those responses. In addition to the data gathered from the questionnaires, data relative to abundance and species composition of small mammals were gathered through trapping transects.

Units 20A, 20B, 20C, 20F, and 25C

Pelts of 612 beavers, 301 lynx, 31 otters, and 17 wolverines harvested in this area in 1989-90 were sealed. Sealing supplies were distributed to the 12 non-Department sealers and their services coordinated. Distribution of the harvest was assessed by assigning uniform coding unit codes to sealing data.

Unit 20D

Zero otters, 4 lynx, 7 wolverines, and 18 beavers were sealed during this reporting period. Informal interviews were conducted. Trapper questionnaires were not analyzed because of inadequate time available for furbearer assessment activities. Lack of attention to furbearers precluded development of furbearer population objectives.

Unit 20E

The following furs were sealed during this reporting period: zero land otters, 3 beavers, 14 wolverines, and 39 lynx. Kittens composed 27% of the lynx harvest, and the harvest increased 56% over the 25 lynx reported taken during the 1988-89 season. This demonstrates that the lynx population increased during summer 1989, but overall abundance is still low. Wolverines increased noticeably, possibly because of increased biomass of carrion resulting from the deep-snow winter of 1988-89.

No expanded trapper questionnaires or interviews were conducted. Lack of coordinated evaluation of responses to the trapper questionnaire may hamper development of population objectives.

With the establishment of criteria for implementing a tracking harvest strategy for lynx, progress has been made on attaining this objective. Setting more specific population objectives for

the various species of furbearers may be neither feasible nor necessary in this large remote area.

Unit 21

The following animals were sealed during this reporting period: 17 otters, 279 beavers, 13 lynx, and 15 wolverines. The status of furbearers was determined by surveys conducted in conjunction with other projects. Trapper interviews were performed in the ongoing task of assessing status of furbearer populations.

Unit 24

The following animals were sealed during this reporting period: 7 otters, 281 beavers, 112 lynx and 22 wolverines. Trapper interviews provided ongoing data in the continuing process of population status assessment.

Units 25A, 25B, 25D, 26B, and 26C

Nearly all furbearers reported in sealing records were harvested in Unit 25. Only four were sealed in Unit 26, and these came from Unit 26B. The beaver harvest (122) declined 61% from that for 1988-89 (313); 44% and 52% of the beavers came from Units 25B and 25D, respectively. The lynx harvest (685) was nearly the same as last year's take (698). Unit 25B accounted for 64% of the lynx harvest and Unit 25D for 30%. Overall, kittens composed 21% of the take. Three otters were taken in the study area, which is typical. Trappers reported trapping 56 wolverines (57% males), an average harvest of wolverines. Population status was assessed by use of the new trapper questionnaire and conventional survey techniques.

PROGRESS TOWARDS MEETING PROJECT OBJECTIVES:

The original project objective stated in the FY87-92 study plan has been fulfilled. The new management objectives will be incorporated into a revised study plan. Future performance and management reports will discuss progress toward the new objectives.

Lynx population status and trend has been adequately monitored through sealing, carcass collections, and the trapper questionnaire. Data on age, reproduction, and pelt length will be examined during the next reporting period.

During the next 5 years, the furbearer program should work to better define factors limiting fur populations, particularly for marten and wolverines. Interpreting changes in harvest would be enhanced with a better understanding of changes in prey populations. Measurable indicators of low or declining populations should also be established, perhaps including sex and age ratios and track surveys. Continued support for consumptive

and nonconsumptive use of furbearers should be promoted, in light of the strong antitrapping movement.

Beaver densities that exceed our management objective and resulted in human-beaver conflicts were adequately reduced by (1) initiating a registration beaver trapping season in Unit 20, (2) issuing permits to remove problem beaver, (3) working with the Department of Transportation to clear dammed culverts, and (4) advising the public about ways to avoid beaver damage.

SEGMENT PERIOD PROJECT COSTS:

	Personnel	Operating	Total
Planned	119.8	21.5	141.3
Actual	119.8	21.5	141.3
Difference	0.0	0.0	0.0

SUBMITTED BY:

Kenton P. Taylor
Regional Management Coordinator

PROJECT TITLE: Arctic Furbearer Population Management

PROJECT LOCATION: Unit 18 (42,000 mi^2)
Yukon-Kuskokwim Delta

PROJECT OBJECTIVES:

To establish and maintain viable furbearer populations.

WORK ACCOMPLISHED DURING THE PROJECT SEGMENT PERIOD:

During the reporting period, 2,691 beavers, 15 lynx, 429 river otters, and 5 wolverines were sealed or exported. Fur buyer acquisition reports indicated that 206 arctic foxes, 25 cross foxes, 1,626 red foxes, 1 silver fox, 367 marten, 4,513 mink, 1,744 muskrats, and 1 weasel were purchased by fur buyers from local hunters and trappers.

A trapper questionnaire was sent to 200 active trappers, asking for opinions and observations regarding wolf and furbearer population status and harvests. Results of the questionnaire have not yet been evaluated; they will be reported in the next performance report.

Public notices were sent to all communities in the Unit for the second year, requesting that all wolf, wolverine, beaver, river otter, and lynx pelts taken by hunting and trapping be sealed. Pelts were sealed at our Bethel office by staff and in the villages by either appointed sealers or staff engaged in other activities. All appointed sealers residing in Unit 18 were contacted at least once to insure that sealing forms and fur acquisition reports would be correctly filled out. During the reporting period, 20 individuals served as appointed sealers.

PROGRESS TOWARDS MEETING PROJECT OBJECTIVES:

Fur prices remained low during the reporting period, and the reported harvest of all furbearers declined from those of previous years, particularly for the more common species such as beavers and red foxes. Many pelts were not sold and are either being held to await more favorable prices or were tanned for local sale or domestic use. Trapping of red foxes virtually stopped after January 1990 because of very low demand and poor prices. Beaver harvests declined by approximately 50%, compared with the high reported for 1987-88 and by 11% compared with the 1988-89 harvest. Because beavers have remained abundant, we believe this decline in harvest was due to lower prices, rather than to declining populations.

Familiarity with the sealing requirement appeared to increase this year as a result of public notices; however, improvement ir

compliance was not documented. Nevertheless, we believe there were less pelts shipped this year without being sealed, particularly for beavers and otters.

PROJECT LOCATION: Unit 22 (23,000 mi^2)
Seward Peninsula and that portion of the Nulato Hills draining west into Norton Sound

PROJECT OBJECTIVES:

To establish and maintain viable numbers of furbearers.

WORK ACCOMPLISHED DURING THE PROJECT SEGMENT PERIOD:

Beaver

Eighteen beavers (2 males, 2 females, 14 unknowns) were reportedly harvested. Eleven were taken from Unit 22A, and the remainder came from Unit 22B. All were harvested during the month of November by hunter/trappers on snowmachines. A breakdown by harvest method follows: ground-shooting, 1; trapping, 8; snaring, 9.

Lynx

Three lynx (1 male, 1 female, 1 unknown) were harvested from Unit 22B during April. Two were ground-shot and the remaining animal was trapped. An aircraft was used in the hunting of 2 lynx, and the remaining lynx was harvested using a snowmachine as transportation.

Otter

A female otter was harvested during December in Unit 22A. This lone animal was ground-shot by a hunter on a snowmachine.

Wolverine

Twenty-one wolverines (9 males, 6 females, 6 unknowns) were harvested. A breakdown by unit follows: 22A, 9; 22B, 3; 22C, 2; 22D, 7. The number taken each month is as follows: September, 1; November, 6; January, 3; February, 4; March, 5; April, 2. Five wolverines were ground-shot, 12 were trapped, and four were snared.

PROGRESS TOWARDS MEETING PROJECT OBJECTIVES:

The magnitude of the unreported harvest of some furbearers each year is substantial. Efforts to inform the public of the importance of wildlife conservation and the need for regulations

are starting to show results in some communities, based on the increasing number of individuals purchasing licenses. Additional contact with local residents, primarily within the villages, needs to occur if more complete compliance with current regulations is to become a reality. Because of inclement weather, beaver cache surveys were not conducted during the reporting period.

PROJECT LOCATION: Unit 23 (43,000 mi^2)
Kotzebue Sound/Western Brooks Range

PROJECT OBJECTIVES:

To establish and maintain viable furbearer populations.

To minimize adverse conflicts between furbearers and the public.

To establish population management goals in consultation with the public, interested local organizations, and other agencies.

WORK ACCOMPLISHED DURING THE PROJECT SEGMENT PERIOD:

A beaver cache survey was conducted in a portion of the Selawik River drainage on 11 October 1989. During the survey, 116 active caches were counted, yielding a density of 0.85 active caches/mi^2. A Trapper Questionnaire sent to 200 local trappers and hunters yielded 43 responses. The following indices of abundance and population trend were calculated from the responses, according to procedures outlined by Brand and Keith (1979):

Species	Index of Abundance	Index of Population Trend
Beaver	57	67
Lynx	0	40
Marten	30	47
Mink	38	46
Muskrat	32	25
River Otter	48	54
Red Fox	46	47
Arctic Fox	22	42
Wolverine	36	50
Voles, lemmings	36	33
Ptarmigan	81	63
Hares	4	43

$$\text{Index of abundance/trend} = 100(R_i - n)/2n$$

where R_i = numerical value assigned to the i'th response (R_i=1 when population abundance reported to be

low or trend decreasing, R_i=2 when population abundance reported to be medium or trend stable, R_i=3 when population abundance reported to be high or trend increasing). The population is reported to be abundant or trend increasing if the index is greater than 50, medium or stable when the index is greater than 20 but less than 50, and low of decreasing when the index is less than 20.

The reported harvest was 57 beavers; 24 (43%) were shot, 32 (57%) were trapped, and 1 method was unknown. One was taken from the Selawik River drainage, and 56 were taken from the Kobuk River drainage. Thirty-three were taken by trappers using aircraft, and 23 were taken by individuals using boats.

Only 5 river otters and no lynx were reported harvested. Four otters were trapped, and 1 was shot. Three were taken by trappers using aircraft, and two by trappers using snowmachines.

A total of 17 wolverines were harvested. Three were shot, eight were trapped, and one was snared. Two and nine were taken by trappers using aircraft and snowmachines, respectively.

PROGRESS TOWARDS MEETING PROJECT OBJECTIVES:

Lynx densities remained low during 1989-90. Once hare populations recover, lynx populations will increase as well. The feasibility of establishing one or more trend count areas will be evaluated during the next segment period.

Wolverines appear to be moderately abundant and may have increased slightly during 1989-90; however, densities within a 50-mile radius of Kotzebue remained very low because of heavy hunting pressure. Several local hunters and trappers have recommended that seasons be closed no later than 31 March. Because wolverines are more susceptible to harvest during this period and pelts are past prime condition, we recommend this regulatory change be seriously considered. As is the case with lynx, a survey technique for evaluating the population status of wolverines needs to be developed. Many local residents do not understand the need for separate furbearer hunting and trapping regulations. To simplify regulations, we should consider proposing that hunting and trapping seasons and bag limits for furbearers be made consistent.

LITERATURE CITED:

Brand, C. J. and L. B. Keith. 1979. Lynx demography during a snowshoe hare decline in Alberta. J. Wildl. Manage. 43:827-849.

PROJECT LOCATION: Unit 26A (53,000 Mi^2)
Western North Slope

PROJECT OBJECTIVES:

To establish and maintain viable furbearer populations.

To conduct an in-depth review of information collected in the past to obtain population trend information.

WORK ACCOMPLISHED DURING THE PROJECT SEGMENT PERIOD:

Arctic Fox

Arctic foxes were reportedly abundant in Unit 26A, particularly in the Prudhoe Bay area during the reporting period. No harvest data are available for arctic foxes; however, we believe that few foxes were harvested because of depressed fur prices.

Red Fox

No population status information are available for red foxes. None were reported harvested during the segment period.

Lynx

Lynx densities were reported to be very low during the reporting period. None were reported harvested.

Wolverine

Magoun (1984) estimated a minimum population of 821 wolverines. A more recent estimate of population status or size is not available. Seven wolverines (7 females, 2 males, 2 unknowns) were sealed during the reporting period. Two wolverines were ground-shot, and five were trapped. Snow machines were used as transportation. Three wolverines were taken during December, two during February, and two in March. Many more wolverines were harvested and not reported; however, reliable data for the unreported harvest are not available.

River Otter

Although river otters occur in Unit 26A, their densities are reported to be very low. One river otter of unknown sex was shot near Wainwright by a hunter using a snowmachine as transportation.

PROGRESS TOWARD MEETING PROJECT OBJECTIVES:

It is difficult to determine whether current harvest levels are within sustained-yield limits, because little population and harvest information are available. Additional efforts are needed to assess furbearer population status and monitor the harvest. To achieve these objectives, we should consider either hiring Department representatives in each village to collect harvest information or an assistant area biologist to collect population status and harvest information.

LITERATURE CITED

Magoun, A. J. 1984. Population characteristics, ecology, and management of wolverines in northwestern Alaska. Ph.D dissertation, Univ. Alaska, Fairbanks. 197pp.

SEGMENT PERIOD PROJECT COSTS:

	Personnel	Operating	Total
Planned	39.3	16.5	55.8
Actual	39.3	5.6	44.9
Difference	0.0	-10.9	-10.9

Declining fur harvests during the reporting period, particularly in Unit 18, resulted in less payments made to appointed fur sealers. In addition, beaver cache surveys planned for Unit 18 and 22 and furbearer track surveys planned for Unit 23 were not conducted because of staffing shortages and weather problems.

SUBMITTED BY:

Steve Machida
Regional Management Coordinator

Federal Aid Project
funded by your purchase of
hunting equipment