Furbearer Management Report and Plan, Game Management Units 7 and 15:

Report Period 1 July 2012–30 June 2017, and Plan Period 1 July 2017–30 June 2022

Jason Herreman



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Species management reports and plans provide information about species that are hunted or trapped and management actions, goals, recommendations for those species, and plans for data collection. Detailed information is prepared for each species every 5 years by the area management biologist for game management units in their areas, who also develops a plan for data collection and species management for the next 5 years. This type of report is not produced for species that are not managed for hunting or trapping or for areas where there is no current or anticipated activity. Unit reports are reviewed and approved for publication by regional management coordinators and are available to the public via the Alaska Department of Fish and Game's public website.

This species management report and plan was reviewed and approved for publication by Cynthia Wardlow, Regional Supervisor for the Division of Wildlife Conservation.

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Purpose of this Report

This report provides a record of survey and inventory management activities for furbearers in Units 7 and 15 for the previous 5 regulatory years and plans for survey and inventory management activities in the 5 years following the end of that period. A regulatory year (RY) runs from 1 July through 30 June (e.g., RY16 = 1 July 2016–30 June 2017). This report is produced primarily to provide agency staff with data and analysis to help guide and record its own efforts, but is also provided to the public to inform them of wildlife management activities. In 2016 the Alaska Department of Fish and Game's Division of Wildlife Conservation launched this new type of 5-year report to more efficiently report on trends and describe potential changes in data collection activities over the next 5 years. It replaces the furbearer management reports of survey and inventory activities that were previously produced every 3 years.

I. RY12–RY16 Management Report

Management Area

Units 7 and 15 combined make up an area of approximately 8,397 mi², which encompasses the Kenai Peninsula. The Kenai Peninsula has 3 major population centers including Seward, Kenai/Soldotna, and Homer, as well as numerous smaller towns interspersed throughout the Peninsula. The U.S. Fish and Wildlife Service is the largest land manager on the peninsula.

Unit 7 is approximately 3,520 mi² in area and consists of the eastern portion of the Kenai Peninsula bounded by the western edge of the Kenai Mountains, the Russian River, and the Harding Ice Field on the west, and the western edge of the Sargent Ice Field and eastern edge of Spencer Glacier on the east (Fig. 1). The landscape of Unit 7 consists of mountainous terrain interspersed with river and creek drainages, a few large lakes, and ice fields. Riparian areas and hillsides are densely forested until reaching the alpine zone. Approximately 78% of Unit 7 is comprised of federally managed lands; 50% U.S. Forest Service, Chugach National Forest; 22% National Park Service, Kenai Fjords National Park; and 5% U.S. Fish and Wildlife Service, Kenai National Wildlife Refuge.

Unit 15 incorporates the western portion of the Kenai Peninsula and is divided into 3 administrative units: 15A (1,314 mi²), 15B (1,121 mi²), and 15C (2,441 mi²). Each unit is significantly different in its topography, flora, and ecological history. The most northern is Unit 15A, which is separated from Unit 15B by the Kenai River and Skilak Lake. The most southerly is Unit 15C, separated from Unit 15B by the Tustumena Glacier, Tustumena Lake, and the Kasilof River (Fig. 2).

Unit 15A is relatively flat with many small lakes leading up to the foothills of the Kenai Mountains to the east. The dominant flora is a mixed spruce and hardwood climax community. The Kenai National Wildlife Refuge is the largest landholder in Unit 15A. No significant habitat disturbance has occurred in Unit 15A since the 1969 burn that encompassed approximately 85,306 acres.

The Kenai National Wildlife Refuge is also the largest landholder in 15B. The western portion of Unit 15B is similar to the topography and flora in Unit 15A. Unit 15B however, becomes more

mountainous further east, and transitions into an alpine ecosystem. Forests within Unit 15B succumbed to widespread spruce bark beetle (*Dendroctonus rufipennis*) infestations that began in the 1990s. Unlike Unit 15A, Unit 15B recently experienced significant habitat turnover from the 2014 Funny River fire that burned approximately 196,610 acres, the majority of which was in Unit 15B. This fire burned in a mosaic pattern and should provide good wildlife habitat in the near future.

Unit 15C is significantly different from both Units 15A and 15B. Refuge lands make up only a small portion of Unit 15C, in the northeast corner. The rest of Unit 15C is a mix of state, private, and municipal land ownership. The portion of 15C north of Kachemak Bay and the Fox River peaks in the Caribou Hills and the Ninilchik Domes sloping down to the lowlands. Very few small lakes are present but numerous riparian areas exist draining from the highlands. Dominant vegetation is a mosaic consisting of spruce, willow, *Calamagrostis canadensis* (particularly in salvage logged areas), alder, and some hardwood stands. The northern portion of 15C has seen fairly consistent habitat disturbance over the past two decades in the form of wildfires, beetle kill, logging, and human development. The portion of 15C south of Kachemak Bay and the Fox River consists of a very different ecotype compared to the northern portion of 15C as it is comprised of coastal temperate rain forest and subalpine habitat.



Figure 1. Map of Unit 7 boundaries, with indicators of controlled use areas (numbered circles) as found in the Alaska Hunting Regulations, administrative subunits, and federal lands.



Figure 2. Map of Unit 15, Alaska boundaries, with indicators of controlled use areas (numbered circles) as found in the Alaska Hunting Regulations, administrative subunits, and federal lands.

Summary of Status, Trend, Management Activities, and History of Furbearer in Units 7 and 15

Beavers (*Castor canadensis*), coyotes (*Canis latrans*), least weasels (*Mustela nivalis*), lynx (*Lynx canadensis*), marten (*Martes americana*), mink (*Neovison vison*), muskrats (*Ondatra zibethicus*), red fox (*Vulpes vulpes*), river otters (*Lontra canadensis*), ermine (*Mustela erminea*), wolves (*Canis lupus*), red squirrels (*Tamiasciurus hudsonicus*) marmots (*Marmota caligata*), and wolverines (*Gulo gulo*) are found on the Kenai Peninsula at varying densities, depending upon habitat quality or prey abundance. Furbearers are harvested under both hunting and trapping seasons and regulations.

Unit 15C supports small remnant populations of red fox with occasional observations reported from other areas of the Kenai Peninsula, however of the 3 canid species, red fox are uncommon. Wolves recolonized the Kenai Peninsula in the 1960s after a 50-year absence (Peterson et al. 1984). Wolf management information can be found in the Wolf Management Report and Plan, Game Management Units 7 and 15 for this report period (Herreman 2018). Wolves and coyotes are currently distributed throughout the Kenai Peninsula. Coyotes were established on the Kenai Peninsula around 1930 (ADF&G 1976), and population abundance has fluctuated since that time. No surveys are conducted for coyotes, and sealing is not required for this species. Wildlife conflict reports from homeowners, reports from trappers, and requests for depredation permits suggest that the number of coyotes living near human populated areas remains significant.

Marten are moderately abundant in Unit 7, but are rare in Unit 15 except the portion of Unit 15B between the Kenai and Skilak rivers. More recently, marten have been increasing in abundance in Unit 15A. It is well-documented that marten are uncommon on the western side of the Kenai Peninsula (Osgood 1901, Allen 1902). Habitat and/or prey availability, or some other regional limiting factor or factors likely influence their distribution. The spread of marten in Unit 15A as the forest matured is an indication that habitat might be a limiting factor. Marten harvest in western Unit 15A increased in the late 2000's and has fluctuated since then.

Beaver are common in suitable habitat on the Kenai Peninsula. However, population densities and trends have not been measured and are poorly understood on the Peninsula. Beaver have historically been overharvested in some portions of the Peninsula leading to population declines and extirpation. Significant icing, flooding, and subsequent breakup events may also have a negative impact on population numbers in some of the larger river systems such as the Anchor River. The yearly harvest of beaver in Units 7 and 15 averaged more than 400 in the late 1950s and early 1960s, reaching a high of nearly 800 in 1959. However, since 1964, yearly harvest has been below 300 beavers, with an average yearly harvest of 135 beavers during this report period.

River otters are common in inland waters and sheltered coastal areas of the Kenai Peninsula. Observations and harvest information indicate that otters are present in drainages which support anadromous fish, lake systems, and sheltered coastal waters, such as the south shore of Kachemak Bay. Long-term average harvest has been stable at 45 otters per year since the 1970's. The average annual harvest during this report period was 49 animals.

Wolverines are found most commonly in the Kenai Mountains, including the southern and eastern peninsula coastal areas, Caribou Hills, and the hilly terrain that forms the headwaters of

the Deep Creek and Anchor River drainages. Much of their range is naturally protected from trapping by difficult access, and in the case of Kenai Fjords National Park, trapping closures (Golden et al. 2007). The long-term average annual harvest is 18 wolverines.

Lynx are cyclically abundant in the forest habitats of the Kenai Peninsula. Mixed deciduous and spruce forests in Units 15A and 15B historically appeared to have a higher abundance of snowshoe hares, and consequently, lynx numbers were usually higher in these areas than in spruce forests of Units 7 and 15C. This did not appear to be the case during the most recent snowshoe hare cycle peak that occurred from 2009–2010, likely due to recent fires in Unit 15C and a lack of recent fire history in Units 15A and 15B. Lynx harvest peaked during 2011–2012 at 456 total animals, which was 3 times higher than the previous recorded harvest peak during 1998–1999. More than half of these lynx were harvested in Unit 15C. Since 2014, the population has crashed, and the lynx trapping season has remained closed. It is expected that populations will have cycled high enough for the season to be opened again in 2019 or 2020.

Mink, ermine, and squirrels are common throughout Units 7 and 15. Least weasels are uncommon, only recently being documented on the peninsula (McDonough and Olson 2009). Their abundance and distribution are currently unknown. Although the pelt values for mink and weasels are generally low, they continue to be important furbearers, especially for young trappers. Muskrat distribution is limited over much of the Kenai Peninsula and marmots are limited to the alpine areas. Mink, weasel, squirrel, marmot, and muskrat harvest numbers are not currently well documented for this area.

Management Direction

EXISTING WILDLIFE MANAGEMENT PLANS

The 1976 Alaska wildlife management plan (ADF&G 1976) established the Cook Inlet Furbearer Management Plan, which included GMUs 7, 14, and 15. However, it contains limited information on furbearer management. The primary goal of this plan was to provide the greatest opportunity possible to participate in hunting and trapping furbearers while providing for optimum harvest.

Recent management objectives, harvest strategies, and subsequent changes have resulted from public comment, staff recommendations, and Board of Game actions, and have been reported in the division's previous species management reports. The plan portion of this report contains the current management plan for furbearers in Units 7 and 15.

GOALS

The management goal is to provide optimum sustainable harvests and maximum opportunities to participate in the hunting and trapping of furbearers (ADF&G 1976).

CODIFIED OBJECTIVES

Amounts Reasonably Necessary for Subsistence Uses

The Alaska Board of Game has issued a positive Customary and Traditional Use finding under

5 AAC 99.025(13) for furbearers throughout the state with 90 percent of the harvestable portion specifically allocated for subsistence use.

Intensive Management

Not applicable.

MANAGEMENT OBJECTIVES

- Allow for the sustainable harvests of all furbearer species
- Monitor the harvest through sealing and trapper questionnaires

MANAGEMENT ACTIVITIES

1. Population Status and Trend

ACTIVITY 1.1. Record observations of furbearers seen incidentally during other survey work and anecdotal reports from the public.

Data Needs

Incidental observations are insufficient for estimating the population or detecting changes that would trigger management action. Statistical estimates of furbearers derived from a sample-based estimator including a measure of the precision are needed to detect change in the population.

Methods

GPS locations and characteristics are recorded for any furbearers observed during aerial survey flights directed at other species.

Results and Discussion

Incidental records and anecdotal reports from trappers and outdoor enthusiasts provide a very limited view of furbearer abundance and must be used with caution. Reports can often be contradictory or skewed by the individual's perspective, but when there is a large enough sample size, these reports can provide some indications as to what the population is doing. Tracking depredation events for lynx and other furbearers on domestic animals helps indicate if these animals are present on the landscape.

Recommendations for Activity 1.1.

Continue to actively seek information from trappers and others that observe furbearers create a database to maintain incidental observations.

2. Mortality-Harvest Monitoring and Regulations

ACTIVITY 2.1. Monitor harvest through sealing records.

Data Needs

Harvest must be assessed to understand the potential impact of furbearer harvest.

Methods

Harvest data is collected when sealing hides of beaver, marten, otter, wolverine, and lynx taken by trappers and hunters and by trapper questionnaire surveys for other species. Results from trapper questionnaires can be found in the department's annual Alaska Trapper Report, which can be found online at www.wildlifepublications.adfg.alaska.gov searching "Specific Publication Type" for Trapper Survey Report. When hides are sealed, the location of take, the date of harvest, the method of take, the transportation mode, and the sex are recorded. Hides are measured for lynx, otter, and beaver. Sealing must occur by an authorized ADF&G representative or a state appointed sealer within 30 days of the close of the season. These data are entered into ADF&G's Wildlife Information Network database (WinfoNet). Harvest data were summarized by regulatory year.

Hunting Season and Bag Limit

Regulatory year	Species	Season	Bag Limit
RY12-RY16	Beaver	No open season	_
RY12-RY16	Coyote	No closed season	No limit
RY12-RY16	Fox, Red	No open season	_
RY12-RY16	Lynx	1 Jan–15 Feb ¹	2 lynx
RY12-RY16	Squirrel	No closed season	No limit
RY12-RY16	Wolverine	1 Sep–1 Mar	1 wolverine

¹ RY12 and RY13 Season: 10 Nov–31 Jan, RY14 no open season.

Regulatory year	Species	Season	Bag Limit
RY12-RY16	Beaver	10 Nov-30 Apr	20 beavers
RY12-RY16	Coyote	15 Oct–31 Mar ¹	No limit
RY12-RY16	Fox, red	10 Nov–28/29 Feb	1 red fox
RY12-RY16	Lynx	1 Jan–15 Feb ²	No limit
RY12-RY16	Marten	10 Nov–31 Jan	No limit
RY12-RY16	Mink	10 Nov–31 Jan	No limit
RY12-RY16	Muskrat	10 Nov–15 May	No limit
RY12-RY16	River Otter	10 Nov–28/29 Feb	No limit
RY12-RY16	Squirrel and Marmot	No closed season	No limit
RY12–RY16	Wolverine	10 Nov–28/29 Feb	No limit

Trapping Seasons and Bag Limits.

¹ RY12 Season: 10 Nov–31 Mar.

² RY13 Season shortened to 1 Jan–31 Jan, RY 14–RY16 trapping season closed.

Results and Discussion

Harvest by Hunters-Trappers

The annual variations in the furbearer harvest reflect effort, trapping conditions, and access. Only beaver, lynx, marten, otter, wolf, and wolverine are required to be sealed. The beaver harvest averaged 108 animals over the report period (Table 1). This is down from the long-term average of 135 beaver per year. Marten harvest averaged 92 animals per year over the report period, which is very close to the long-term average of 90 marten. Most marten harvest occurred in Unit 7 (Table 1). The mean 5-year percentage of females in the marten harvest was 39%, similar to the long-term average of 37%. The harvest of river otters averaged 48 animals over the 5-year reporting period (Table 1), which is only slightly higher than the long-term average of 45. The mean 5-year percentage of females in the river otter harvest was 40% compared to the long-term average of 39%. Wolverine harvest averaged 14 animals over the 5-year reporting periods (Table 1), slightly lower than the long-term average of 18 wolverine per year. The mean 5-year percentage of females in the wolverine harvest was 36%, which is lower than the long-term average of 38%. Overall, harvest levels do not raise concerns when compared to historic harvest levels.

Hunter Residency and Success

All reported harvest was taken by Alaska residents, and 83% of harvest was taken by Kenai Peninsula residents. The remaining 17% of the harvest was taken by Alaskan residents from the greater Anchorage area.

Harvest Chronology

Interpretation of the harvest chronology can be misleading due to variations in weather and access. Most of Unit 15 is within the Kenai National Wildlife Refuge and restrictions (related to snow depth) affect when trappers can access the area by snowmachine. Also, periodic freeze/thaw cycles on the Kenai Peninsula affect effort throughout the winter. The detailed analyses required to obtain meaningful information concerning harvest chronology are beyond the scope of this report. Therefore, the data are provided without interpretation (Table 2).

R	egulatory		Game Ma	nagement Uni	its	_	
Species	year	7	15A	15B	15C	15Z ^a	Total
Beaver							
	2012	17	50	19	25	0	111
	2013	23	52	7	33	0	115
	2014	37	52	21	19	0	129
	2015	29	45	3	31	0	108
	2016	32	27	8	8	0	75
Lynx							
-	2012	24	58	101	217	4	404
	2013	12	62	31	56	0	161
	2014 ^b	2	1	3	1	0	7
	2015 ^c	0	7	2	1	0	10
	2016 ^c	0	5	1	3	0	9
Marten							
	2012	90	38	0	0	0	128
	2013	84	50	0	2	0	136
	2014	39	8	0	0	0	47
	2015	86	20	0	0	0	106
	2016	42	3	0	0	0	45
River Otter							
	2012	6	6	0	28	0	40
	2013	15	15	2	34	0	66
	2014	11	18	4	21	0	54
	2015	9	19	7	24	0	59
	2016	3	6	1	16	0	26
Wolverine							
	2012	13	0	1	9	0	23
	2013	6	0	2	8	0	16
	2014	1	0	1	3	0	5
	2015	6	1	0	6	0	13
	2016	4	1	1	5	0	11

Table 1. Annual furbearer harvest on the Kenai Peninsula, Alaska, regulatory years 2012-2016.

^a 15Z represents an unknown location within Unit 15. ^b Hunting and trapping season closed.

^c Trapping season closed.

	Regulatory				Month				Other/	
Species	year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	unknown	Total
Beaver	•							•		
	2012	0	33	17	18	12	10	17	4	111
	2013	1	31	11	16	23	3	25	5	115
	2014	0	33	38	22	9	7	16	4	129
	2015	15	25	13	17	10	17	7	0	104
	2016	10	20	6	11	6	2	15	5	75
Lynx										
	2012	0	18	10	224	145	0	1	6	404
	2013	0	17	24	105	14	1	0	0	161
	2014 ^a	1	3	1	1	0	0	0	1	7
	2015 ^b	1	0	2	3	4	0	0	0	10
	2016 ^b	0	0	1	3	4	0	0	1	9
Marten										
	2012	0	26	47	55	0	0	0	0	128
	2013	0	48	53	33	2	0	0	0	136
	2014	0	14	16	13	0	0	0	4	47
	2015	0	15	73	18	0	0	0	0	106
	2016	0	11	17	17	0	0	0	0	45
River Otter	r									
	2012	0	10	16	11	2	0	0	1	40
	2013	0	18	22	21	5	0	0	0	66
	2014	0	22	10	11	10	0	0	1	54
	2015	0	11	31	6	7	0	0	2	57
	2016	0	4	10	7	5	0	0	0	26
Wolverine										
	2012	0	0	12	4	6	1	0	0	23
	2013	1	2	5	4	4	0	0	0	16
	2014	0	0	3	1	0	0	0	1	5
	2015	0	2	4	4	3	0	0	0	13
	2016	0	0	3	5	2	0	0	1	11

Table 2. Chronology of furbearer harvest on the Kenai Peninsula, Alaska, regulatory years 2012-2016.

^a Hunting and Trapping season closed.
^b Trapping season closed.

Transport Methods

Generally, most trappers in Units 7 and 15 use a highway vehicle to access traplines and then use a snowmachine or snowshoes/skis as they travel along their traplines.

Other Mortality

No known significant human caused mortality exists for furbearer species outside of hunting and trapping.

Alaska Board of Game Actions and Emergency Orders

In 2013 the Board of Game opened the Skilak Loop area to wolf, coyote, and lynx hunting with one-half mile setbacks from Kelly and Peterson Lakes, and increased the season length for wolves from 10 November–31 March to 15 October–31 March, with the provision that snares or steel traps smaller than 3/32" in diameter cannot be used from 15 October–9 November. During 2015, the Board increased the season length for beavers from 10 November–30 April to 15 October 15–30 April, with the requirement that traps be submerged from 1 April–30 April.

Recommendations for Activity 2.1.

- Continue to seal beaver, lynx, marten, otter, wolf, and wolverine, and add red fox as a required species for sealing.
- Develop a database to manage beaver harvest by drainage.

3. Habitat Assessment-Enhancement

The Department has not engaged in habitat assessment or enhancement for furbearers during the reporting period

NONREGULATORY MANAGEMENT PROBLEMS OR NEEDS

No nonregulatory management problems or needs have been identified at this time.

Data Recording and Archiving

- Original copies of sealing forms are sent to the Anchorage area office where they are scanned and entered into the WinfoNet database.
- Paper duplicates of sealing forms are stored in filing cabinets at the local Soldotna and Homer offices.

Agreements

No specific management agreements exist for furbearer species.

Permitting

No specific permits exist for furbearer species.

Conclusions and Management Recommendations

Trapping effort varies substantially year to year based on snow conditions, fur prices, and other factors. A louse infestation currently affects wolves and coyotes on the Kenai and can greatly decrease the quality of the fur, which can further reduce trapping effort.

Lynx management on the Kenai Peninsula has followed the recommendations of Brand and Keith (1979) and the principles set forth in Golden 1999. Their study indicated that during a lynx population decline in Alberta trapping mortality was additive to natural mortality. Using computer modeling they showed that more lynx would be produced, and greater long-term harvest would be achieved when trapping was curtailed for 3–4 years, starting with the second year after the lynx harvest peak. This harvest strategy is in place on the Kenai Peninsula. Lynx trapping was closed in Units 7 and 15 from 2014–2016 and will likely reopen in 2019 or 2020. Hunting has remained open, but the limited harvest suggests impacts to the population from hunting are minimal. Lynx harvest peaked in 2011, and as such, we are moving into a closure period.

Because of their ecology and behavior, beaver should be managed by drainage to reduce the chance of overharvest and extirpation from local areas. Dispersal distances by beaver are minimal, usually less than 16 km by air (Jenkins and Busher 1979), with an average distance of 8.5 km (Leege 1968). Dispersal normally occurs at 2 years of age which is also the age of earliest reproduction. Swenson et al. 1983 reported ovulation in 25% of females 2 years old with full reproductive potential being reached at >5 with 92% of females ovulating. Home range size varies from 0.8 to 2.2 km of stream (0.5 to 1.4 mi; Novak 1987). Boyce (1981) reported a nearest neighbor distance of 1.6 km (1.0 mi) for streams in Interior Alaska. Typical beaver densities are 0.4 to 0.8 beaver/km² (0.15 to 0.31 beaver/mi²), but densities may reach up to 3 beaver/km² (1.16 beaver/mi²) in good habitat (Jenkins and Busher 1979) such as can be found on some parts of the Kenai.

Department management recommendations established in 1988 (unpublished Alaska Department of Fish and Game memorandum, H. Melchior, Fairbanks, Alaska) suggest 2 indices be used for guiding beaver harvest: 1) percentage of trappers with their limits, 2) percentage of kits in the harvest with kits determined as an animal under 53 inches in length.

	% of trappers with their limit	% of kits in the harvest
Over Harvest	20 or less	25 or more
Proper Harvest	30 to 50	20 or less
Under Harvest	60 or more	15 or less

Melchior suggested this analysis be conducted by towns, which could later be lumped into larger groups. The appropriate analysis level under our current sealing system for the Kenai would be to

analyze the data by Game Management Unit for a coarse overview, followed by a breakdown by UCU (Uniform Coding Unit) and drainage. Beaver harvest for the Kenai Peninsula should be analyzed using this method to determine if overharvest may have occurred and regulations adjusted accordingly.

Much like beaver, river otter have the potential for overharvest by drainage in areas not directly connected to the marine environment. The department should establish internal harvest guidelines to help prevent overharvest and extirpation of otters from drainages and bays.

II. Project Review and RY17–RY21 Plan

Review of Management Direction

MANAGEMENT DIRECTION

The existing management direction and goals appropriately direct management of furbearers in Units 7 and 15. The management direction in these units ensures that furbearers will persist as part of the natural ecosystem and ensures continued hunting on applicable species, trapping, and viewing opportunities. There is no indication that long-term sustainability of the furbearer populations or that goals for human uses cannot be met; therefore the management direction should continue to be that furbearers will be managed in a manner that complements the statewide furbearer management goals. There are no area-specific issues in Units 7 or 15 that require a departure from statewide goals for furbearer management.

GOALS

The management goal is to provide optimum sustainable harvests and maximum opportunities to participate in the hunting and trapping of furbearers.

CODIFIED OBJECTIVES

Amounts Reasonably Necessary for Subsistence Uses

No change is expected.

Intensive Management

No change is expected.

MANAGEMENT OBJECTIVES

No change will occur in management objectives.

- Allow for the sustainable harvests of all furbearer species
- Monitor the harvest through sealing and trapper questionnaires

REVIEW OF MANAGEMENT ACTIVITIES

1. Population Status and Trend

All RY12–RY16 management activities will continue for RY17–RY21 with changes to needs and methods as described below.

ACTIVITY 1.1. Record observations of furbearers seen incidentally during other survey work and anecdotal reports from the public.

Data Needs

No change from RY12-RY16 report period.

Methods

GPS locations, group size (if applicable) and characteristics will be recorded during aerial survey flights. Anecdotal reports will be recorded to the maximum level of detail available. Reports will be recorded in a central database saved on the Homer office sever (O:\DWC\ADF&G-Homer\Files\Species Data\furbearer\anecdotal reports.

2. Mortality-Harvest Monitoring

ACTIVITY 2.1. Monitor harvest through sealing records.

Data Needs

No change from RY12–RY16 report period.

Methods

Modify; beaver harvest will be analyzed for 1) percentage of trappers with their limits, 2) percentage of kits in the harvest in addition to current methods and we will work on establishing clear harvest guidelines for river otters and other furbearer species that currently lack a clear metric.

3. Habitat Assessment-Enhancement

Data Needs

No change from RY12-RY16 report period.

Methods

The Department has not engaged in habitat assessment or enhancement for furbearers during the reporting period.

NONREGULATORY MANAGEMENT PROBLEMS OR NEEDS

Data Recording and Archiving

- Original copies of sealing forms are sent to the Anchorage area office where they are scanned and entered into the WinfoNet data base.
- Paper duplicates of sealing forms are stored in filing cabinets at the local Soldotna and Homer offices.

Agreements

There are no planned furbearer specific agreements for Units 7 or 15 during RY17–RY21.

Permitting

The department does not expect to seek or issue any furbearer specific permits in Units 7 or 15 during RY17–RY21.

References Cited

- Alaska Department of Fish and Game. 1976. Alaska wildlife management plans: A public proposal for the management of Alaska's wildlife: Southcentral Alaska. Draft proposal subsequently approved by the Alaska Board of Game. Division of Game, Federal Aid in Wildlife Restoration Project W-17-R, Juneau.
- Allen, J. A. 1902. List of mammals collected in Alaska by the Andrew J. Stone Expedition of 1901. Bulletin of the American Museum of Natural History 16(18): 215–230.
- Boyce, M. S. 1981. Habitat ecology of an unexploited population of beavers in Interior Alaska. Pages 155–186 [*In*] J. A. Chapman and D. Pursey, editors. Proceedings of the Worldwide Furbearer Conference, Frostburg, Maryland.
- Brand, C., and L. Keith. 1979. Lynx demography during a snowshoe hare decline in Alberta. Journal of Wildlife Management 43(4): 827–849.
- Golden, H. N. 1999. An expert-system model for lynx management in Alaska. Pages 205–231 [*In*] G. Proulx, editor. Mammal trapping. Alpha Wildlife Research and Management Ltd., Sherwood Park, Alberta, Canada.
- Golden, H. N., A. M. Christ, and E. K. Solomon. 2007. Spatiotemporal analysis of wolverine *Gulo gulo* harvest in Alaska. Wildlife Biology 13(2):68–75. https://doi.org/10.2981/0909-6396(2007)13[68:SAOWGG]2.0.CO;2
- Herreman, J. 2018. Wolf management report and plan, Game Management Units 7 and 15: Report period 1 July 2010–30 June 2015, and plan period 1 July 2015–30 June 2020. Alaska Department of Fish and Game, Species Management Report and Plan ADF&G/DWC/SMR&P-2018-14, Juneau.

Jenkins, S. H., and P. E. Busher. 1979. Castor Canadensis. Mammalian Species 120:1-8.

- Leege, T. A. 1968. Natural movements of beavers in Southeastern Idaho. The Journal of Wildlife Management 32(4):973–976.
- McDonough, T. J., and L. E. Olson. 2009. First record of a least weasel, *Mustela nivalis*, on the Kenai Peninsula, Alaska. Northwestern Naturalist 90(3):256–258. https://doi.org/10.1898/nwn09-02.1
- Novak, M. 1987. Beaver. Pages 283–312 [*In*] M. N. Novak, J. A. Baker, M. E. Obbard, and B. Malloch, editors. Wild Furbearer Management and Conservation in North America. Ministry of Natural Resources, Ontario, Canada.
- Osgood, W. H. 1901. Natural history of the Cook Inlet Region, Alaska [*In*] W. H. Osgood, editor. Natural History of the Queen Charlotte Islands, British Columbia Natural History of the Cook Inlet Region, Alaska. North American Fauna 21:51–81.
- Peterson, R. O., J. D. Woolington, and T. N. Bailey. 1984. Wolves of the Kenai Peninsula, Alaska. Wildlife Monographs 88:3–52.
- Swenson, J. E., S. J. Knapp, P. R. Martin, and T. C. Hinz. 1983. Reliability of aerial cache surveys to monitor beaver population trends on prairie rivers in Montana. Journal of Wildlife Management 47(3):697–703.

