Species Management Report and Plan ADF&G/DWC/SMR&P–2019–11

Furbearer Management Report and Plan, Game Management Unit 1C:

Report Period 1 July 2012–30 June 2017, and

Plan Period 1 July 2017–30 June 2022

Roy T. Churchwell

2019

Alaska Department of Fish and Game Division of Wildlife Conservation

Species Management Report and Plan ADF&G/DWC/SMR&P-2019-11

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This funding provided support for Federal Aid in Wildlife Restoration Furbearer Survey and Inventory Project 7.0.

Hunters are important founders of the modern wildlife conservation movement. They, along with trappers and sport shooters, provided funding for this publication through payment of federal taxes on firearms, ammunition, and archery equipment, and through state hunting license and tag fees.

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 Stephen Bethune, Acting Management Coordinator for the Division of Wildlife Conservation.

Species management reports and plans are available via the Alaska Department of Fish and Game's public website (www.adfg.alaska.gov) or by contacting Alaska Department of Fish and Game's Division of Wildlife Conservation, PO Box 115526, Juneau, AK 99811-5526; phone: (907) 465-4190; email: dfg.dwc.publications@alaska.gov. The report may also be accessed through most libraries, via interlibrary loan from the Alaska State Library or the Alaska Resources Library and Information Services (www.arlis.org).

This document, published in PDF format only, should be cited as:

Churchwell, R.T. 2019. Furbearer management report and plan, Game Management Unit 1C: Report period 1 July 2012–30 June 2017, and plan period 1 July 2017–30 June 2022. Alaska Department of Fish and Game, Species Management Report and Plan ADF&G/DWC/SMR&P-2019-11, Juneau.

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Purpose of this Report

This report provides a record of survey and inventory management activities for furbearers in Unit 1C 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) begins 1 July and ends 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 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. RY 2012–RY 2016 Management Report

Management Area

Game Management Unit 1C includes the mainland from Cape Fanshaw north to the latitude of Eldred Rock on both the east and west side of Lynn Canal and out to the Pacific Ocean at Cape Fairweather (Figure 1). Some of the larger islands in the Unit include Douglas, Shelter, Lincoln, and Sullivan Islands. Other significant landmarks are Port Houghton, Hobart Bay, Endicott Arm, Tracy Arm, Snettisham, Taku River, Berners Bay, most of the Chilkat Range, and most of Glacier Bay National Park. Communities include Juneau which is the largest city in Southeast Alaska with approximately 32,000 people. Douglas, Auke Bay and Gustavus have a few hundred people each. The unit is over 13,000 mi^2 and 200 miles from north to south. The economy of the region is based on tourism, fishing, and mining. Most of the residents in this unit are not subsistence qualified as Juneau is in a nonsubsistence area. Most of the subunit is managed by the Tongass National Forest including the Endicott River Wilderness (98,700 acres) and Tracy Arm-Fords Terror Wilderness (653,200 acres) that were designated as a provision of the Alaska National Interest Lands Conservation Act (ANILCA) legislation in 1980. The other large land management unit, Glacier Bay National Park, was established in 1925. Most of its 3.3 million acres, is contained in Unit 1C.

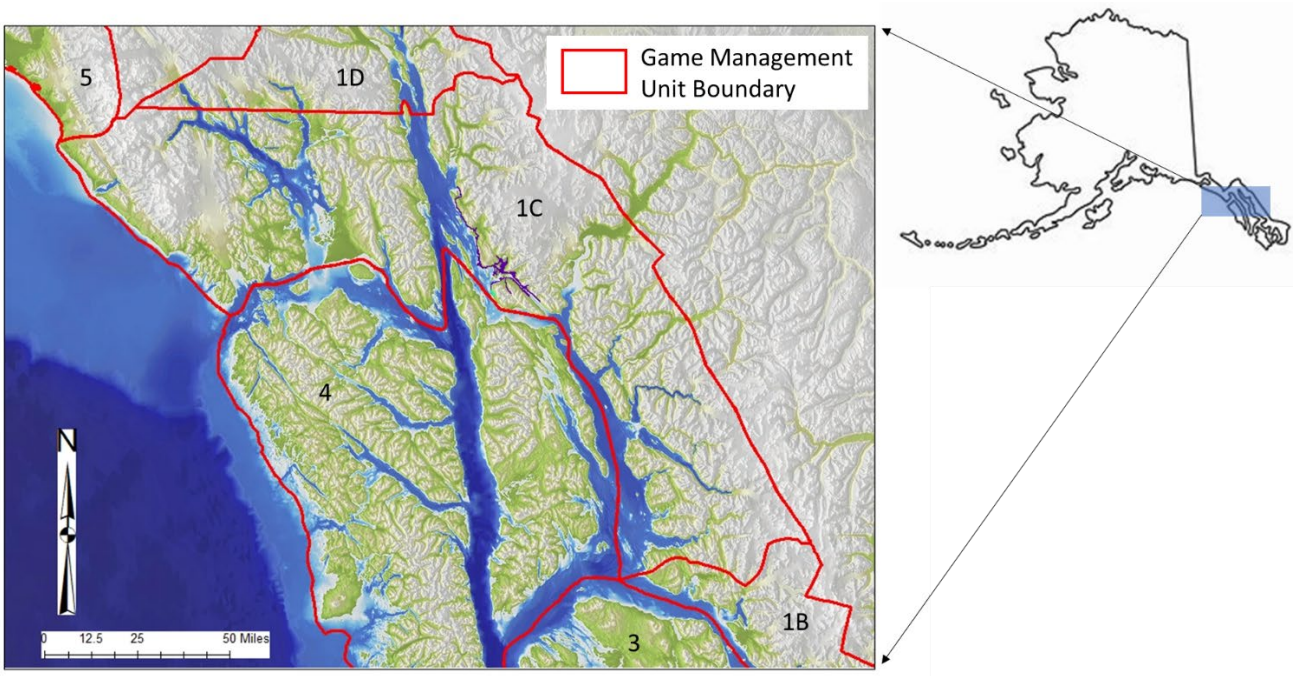

Figure 1. Map showing Game Management Unit boundaries for Unit 1C, Southeast Alaska.

Summary of Status, Trend, Management Activities, and History of Furbearers in Unit 1C

Marten (*Martes americana*), river otter (*Lutra canadensis*), and beaver (*Castor canadensis*) make up the majority of Unit 1C furbearer harvest. These species have a sealing requirement. There is also sealing requirements for wolverine (*Gulo gulo*), fisher (*Martes pennant*), and lynx (*Lynx canadensis*); all of which are trapped to a lesser degree (there were no lynx captured during this reporting period). Other species that are harvested, but do not require sealing include mink (*Mustela vison*), weasel or ermine (*Mustela erminea*), coyote (*Canis latrans*), fox (Vulpes vulpes), and red squirrel (*Tamiasciurus hudsonicus*). Mink, weasels, and coyotes are trapped regularly. Fox are very rare in the unit. Red squirrels are trapped incidentally while trying to capture other species like marten. Historically muskrats were present in Unit 1C on the Taku River (MacDonald and Cook 2009), but to our knowledge are no longer observed. Wolves (*Canis lupus*) are both hunted and trapped, but they are discussed in a separate management report.

Marten are common throughout Unit 1C mainland drainages but are not found on most islands. The exception is Douglas Island where marten sign is seen on occasion.

River otters are common along the mainland coast and most large islands in the unit. Although little is known about otter populations, they are thought to be most abundant in sheltered waters of bays and inlets (Scott 2013).

Beavers exist at moderate levels in most drainages along the coastal mainland where habitat is suitable, as well as on some of the larger islands. Natural or human-caused disturbance affecting

beaver habitat is limited in this unit. Berners Bay, Taku River, Herbert/Eagle River system, Cowee Creek, St. James Bay, Shelter Island, and Lincoln Island account for most of the harvest. Few beavers have been documented on Douglas Island. Although the beaver harvest varies annually, anecdotal observations suggest this variation is related more to trapper effort than to beaver abundance.

Wolverines occur in small numbers, but they appear to be widely distributed. Sealing information provides some insight into population status and distribution. Although wolverines are one of the least common species in the unit, the high pelt price encourages trappers to target them. Most wolverines are captured in Berners Bay or on the west side of Lynn Canal, however, wolverines can be found in drainages crossed by the Juneau road system too. Wolverines were studied in the Berners Bay area from 2006 through 2011 in preparation for the Juneau Access Improvements Project (Lewis et al. 2012). Researchers captured 15 wolverines and collared 12 (6 males, 6 females). Males had a median home range of 521 km^2 and females a median home range of 71 km^2. Habitat use included shrub and open areas on valley sides with moderate slopes throughout Berners Bay. Wolverine diets were made up of deer (*Odocoileus hemionus sitkensis*), mountain goats (*Oreamnos americanus*), moose (*Alces alces*), grouse (*Dendragapus fuliginosus*), ptarmigan (*Lagopus* spp.), marmots (*Marmota caligata*), beavers (*Castor canadensis*), and porcupine (*Erethizon dorsatum*) in the order of amounts most commonly found in the diet. There was no evidence of wolverines using marine food resources like salmon.

The first fisher ever documented in the Juneau area was captured in 1996. It appears a small population may now be establishing in the area. At the 2012 the Board of Game meeting, the board adopted a proposal that allowed for the harvest of fisher and since then a few have been trapped each year. A graduate student from the University of Idaho is currently conducting research on fisher in Unit 1C using the Juneau road system. She has had several detections north of town using trail cameras. Her thesis is expected to be finished by the end of 2019.

Coyotes, although once scarce to nonexistent in this unit, are now common near Gustavus and in the foothills of the Chilkat Mountains. Residents of Gustavus routinely hear coyotes, and trappers have begun to catch them in areas where there were few to none just a decade ago. Along the Juneau road system, sightings have increased, most notably near the Mendenhall Glacier Visitor Center, in the Lena Point area and on Thane Road during this report period.

Little information exists about mink because trappers are not required to seal them. However, often when sealing other furs, trappers also report success trapping mink which suggests that mink are abundant in most areas. Most trappers tell us they do not target mink because of the effort required to handle the pelts and the relatively low price they bring.

Lynx and fox are very rare in Unit 1C. Lynx may occur when snowshoe hare populations are crashing in Canada and the lynx are dispersing from the interior. Hare populations in Canada were not near their peak during the time of this report (2012–2016; Environment Yukon 2019). Fox were introduced to at least 180 islands in Southeast Alaska between 1750 and 1930 (Paul 2009), but these populations have dwindled, and most have gone extinct. The release locations were not well documented at the time. Currently, foxes are very rare in the unit.

Management Direction

EXISTING WILDLIFE MANAGEMENT PLANS

Greater Alaska Furbearer Management Plan in 1976 Species Management Plan (ADF&G 1976).

GOALS

To provide:

1. An optimum harvest of furbearers.
2. The greatest opportunity to participate in hunting and trapping furbearers.

CODIFIED OBJECTIVES

Amounts Reasonably Necessary for Subsistence Uses

The Alaska Board of Game has made a positive subsistence finding for furbearers in all units, including Unit 1C, with a harvestable surplus to be 90% of the harvestable portion (5 AAC 99.025(13).

Intensive Management

Not applicable.

MANAGEMENT OBJECTIVES

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

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 would be needed to detect change in the population.

Methods

GPS locations and characteristics are recorded for any furbearers observed during other field work. Most observations occur during spring deer pellet, mortality and body condition surveys. Anecdotal reports are recorded to the maximum level of detail available.

Results and Discussion

None.

Recommendations for Activity 1.1

Continue to actively seek information from trappers and others that observe furbearers.

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

We collected harvest data by sealing hides of beaver, marten, otter, lynx, and wolverine taken by trappers. We recorded location and date of harvest, method of take, transportation mode, sex, and in the case of otters and beavers, hides are measured. Sealing must occur by ADF&G 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 (RY), which begins 1 July and ends June 30 (e.g., RY15 = 1 July 2015–30 June 2016).

Season and Bag Limit

RY12–RY16

Species	Season	Bag Limit
Beaver	Nov. 10–Apr. 30	No Limit
Coyote[a]	Nov. 10–Apr. 30	No Limit
Fisher[b]	Dec. 1–Feb. 15	1
Red Fox	Dec. 1–Feb. 15	No Limit
Lynx	Dec. 1–Feb. 15	No Limit
Marten	Dec. 1–Feb. 15	No Limit
Mink	Dec. 1–Feb. 15	No Limit
Weasel	Dec. 1–Feb. 15	No Limit
River Otter	Dec. 1–Feb. 15	No Limit
Squirrel	No Closed Season	No Limit
Wolverine[c]	Nov. 10–Feb. 28	No Limit

[a] Season extended from Dec. 1–Feb 15 after Board of Game 2012.
[b] Season initiated after Board of Game 2012.
[c] Season extended from Nov. 10–Feb. 15 after Board of Game 2015.

Results and Discussion

Harvest by Trappers

Fish and Game's annual Alaska Trapper Report (ADF&G 2013a, 2013b; Parr 2015, 2016, 2018) summarized crude measures of abundance and trend based on trapper observations between 2012 and 2014. After that, the report summarizes these data by region, which is less useful for reporting here. However, 2012–2014 abundant species included mink and squirrels; common species included beaver, coyote, weasel, marten, and otters; and scarce species included lynx, red fox, and wolverine. Grouse, hares, and ptarmigan were scarce, while mice and rodents were common. These trapper questionnaires also report some catch of non-sealed species for 2012 through 2016 including 0–1 coyotes, 6–42 weasels, 13–49 mink, 0 red fox, and 0–19 squirrels annually. Fur prices during 2012 through 2016 for the 4 most important species were $10.04 to $32.56 for beaver, $46.51 to $143.81 for marten, $20.00 to $100.75 for otter, and $208.90 to $271.35 for wolverine (Table 1).

Table 1. Average (U.S.) fur prices for beaver, marten, otter, and wolverine from RY 2012–2016 published by the North American Fur Auction and Fur Harvesters Auction, Inc. (Parr 2017).

Year	Beaver	Marten	Otter	Wolverine
2012	32.56	143.81	100.75	271.35
2013	18.71	76.94	53.95	224.90
2014	13.30	54.12	38.65	217.41
2015	10.04	46.51	20.00	208.90
2016	10.71	83.32	28.79	242.19

American Marten

The number of marten harvested ranged from 118 to 295 (Table 2) with the highest harvest in RY15 preceded by the lowest harvest in RY14. The total harvests over the remaining 3 years (RY12, RY13, and RY16) are close to the average harvest of 192 animals over the 5-year period. The lowest harvest coincides with a year when a higher percentage of the harvest occurred in January suggesting that marten populations may have been lower that year. However, with high harvest the next year it appears the population recovered. Over the previous 15 years RY 1997 - 2011 there were an average of 178 marten harvested each year (range = 67-419; Scott 2013) indicating that the current harvest is similar to the previous 15 years.

Table 2. Harvest and method of take for marten sealed in Unit 1C, Southeast Alaska, RY12–RY16.

				Method of Take %			
Regulatory Year	Total Harvest	Successful Participants	Percent Males	Shot	Trapped	Snared	Unknown
RY12	173	19	71	0	100	0	0
RY13	204	15	62	0	100	0	0
RY14	118	19	62	0	100	0	0
RY15	295	16	67	0	100	0	0
RY16	169	16	58	1	99	0	0

Otter

The number of otters harvested ranged from 8 to 50 (Table 3) with an annual average of 28 animals. The number of animals captured seems to vary from year to year without any discernable pattern.

Table 3. Harvest and method of take for river otter sealed in Unit 1C, RY12–RY16.

Regulatory Year	Total Harvest	Successful Participants	Percent Males	Percent Juvenile[a]	Method of Take %			
					Shot	Trapped	Snared	Unknown
RY12	13	7	46	64	0	85	0	15
RY13	50	14	67	33	32	68	0	0
RY14	23	8	57	25	13	87	0	0
RY15	44	13	73	23	18	68	11	2
RY16	8	6	63	33	37	63	0	0

[a] Juvenile otter measure (length) <42".

BEAVER

The number of beavers harvested ranged from 12 to 55 (Table 4) with an annual average of 36 animals. The number of animals captured seems to vary from year to year without any trends. The highest harvest was followed by the lowest harvest, which occurred at the end of this reporting period.

Table 4. Harvest and method of take for beaver sealed in Unit 1C, RY12–RY16.

Regulatory Year	Total Harvest	Successful Participants	Percent Juvenile[a]	Method of Take %			
				Shot	Trapped	Snared	Unknown
RY12	44	5	32	0	100	0	0
RY13	24	3	17	0	100	0	0
RY14	44	8	27	0	100	0	0
RY15	55	8	22	0	64	36	0
RY16	12	6	8	0	100	0	0

[a] Juvenile beavers measure (length + width) ≤ 52".

WOLVERINE

The number of wolverines harvested ranged from 4–7 (Table 5) with an annual average of 6 animals. The number of animals captured did not change much from year to year, and due to their high fur value, trappers try to catch as many wolverines as possible.

Table 5. Harvest and method of take for wolverine sealed in Unit 1C, Southeast Alaska, RY12–RY16.

Regulatory Year	Total Harvest	Successful Participants	Percent males	Method of Take %			
				Shot	Trapped	Snared	Unknown
RY12	7	6	43	0	100	0	0
RY13	6	4	67	0	83	17	0
RY14	6	4	83	0	100	0	0
RY15	4	3	25	0	100	0	0
RY16	7	4	86	0	86	14	0

FISHER

Fisher harvest was first allowed after the 2012 Board of Game meeting during RY13. The number of fishers harvested ranged from 0 to 6 (Table 6) with an annual average of 3 animals. The number of animals captured seems to vary from year to year without any discernable pattern, however this species is still relatively rare in the unit.

Table 6. Harvest and method of take for fisher sealed in Unit 1C, Southeast Alaska, RY12–RY16.

Regulatory Year	Total Harvest	Successful Participants	Percent Males	Method of Take %			
				Shot	Trapped	Snared	Unknown
RY12	0	0	0	0	0	0	0
RY13[a]	2	2	50	0	100	0	0
RY14	6	6	50	0	100	0	0
RY15	2	2	50	0	100	0	0
RY16	0	0	0	0	0	0	0

[a] First year of legal harvest.

LYNX

There were no lynx harvested or sealed during this reporting period.

Harvest Chronology

The bulk of the harvest occurred from December to February (Table 7) with December being the highest month for harvesting marten, river otter, wolverine and fisher. Beaver harvest was distributed over a larger period than the other species with harvest occurring December through April.

Table 7. Unit 1C Alaska marten, river otter, beaver, wolverine, and fisher harvest chronology (%), RY12–RY16.

Regulatory Year	Month							
	Nov	Dec	Jan	Feb	Mar	Apr	May	*n*
Marten								
RY12	0	57	34	9	0	0	0	173
RY13	0	72	26	2	0	0	0	204
RY14	1	55	36	8	0	0	0	118
RY15	0	66	26	8	0	0	0	295
RY16	0	64	33	3	0	0	0	169
River Otter								
RY12	0	36	46	8	0	8	0	13
RY13	0	66	24	8	0	2	0	50
RY14	0	17	57	22	0	4	0	23
RY15	0	32	59	9	0	0	0	44
RY16	0	75	25	0	0	0	0	8
Beaver								
RY12	2	0	36	26	36	0	0	44
RY13	0	0	0	0	0	100	0	24
RY14	7	27	14	0	0	52	0	44
RY15	5	18	13	11	20	33	0	55
RY16	0	8	0	17	8	67	0	12
Wolverine								
RY12	0	29	57	14	0	0	0	7
RY13	0	17	33	50	0	0	0	6
RY14	0	0	50	50	0	0	0	6
RY15	0	0	50	50	0	0	0	4
RY16	0	0	57	43	0	0	0	7
Fisher								
RY12	0	0	0	0	0	0	0	0
RY13	0	50	50	0	0	0	0	2
RY14	0	83	0	17	0	0	0	6
RY15	0	50	0	50	0	0	0	2
RY16	0	0	0	0	0	0	0	0

Table 8. Unit 1C Alaska marten, river otter, beaver, wolverine, and fisher harvest by transport method (%), RY12–RY16.

Regulatory Year	Percent of Harvest							
	Airplane	Foot	Boat	3 or 4-wheeler	Snow-machine	Highway Vehicle	Unknown	*n*
Marten								
RY12	2	13	54	1	1	30	0	173
RY13	0	12	67	13	0	8	0	204
RY14	0	25	51	0	0	24	0	118
RY15	0	6	70	2	0	21	0	295
RY16	0	30	53	0	0	17	0	169
River Otter								
RY12	0	8	46	0	0	46	0	13
RY13	0	10	78	2	0	10	0	50
RY14	0	0	70	0	0	30	0	23
RY15	0	0	68	0	0	32	0	44
RY16	0	0	87	0	0	13	0	8
Beaver								
RY12	0	0	45	0	0	55	0	44
RY13	0	0	100	0	0	0	0	24
RY14	9	0	35	0	0	56	0	44
RY15	0	0	42	0	0	58	0	55
RY16	0	8	75	0	0	17	0	12
Wolverine								
RY12	0	29	42	0	0	29	0	7
RY13	17	0	83	0	0	0	0	6
RY14	0	17	83	0	0	0	0	6
RY15	0	0	75	25	0	0	0	4
RY16	0	0	86	0	0	14	0	7
Fisher								
RY12	0	0	0	0	0	0	0	0
RY13	0	0	100	0	0	0	0	2
RY14	0	0	50	0	0	50	0	6
RY15	0	0	100	0	0	0	0	2
RY16	0	0	0	0	0	0	0	0

Transport Methods

Trappers in Unit 1C used a boat in the greatest percentage as their transport method (Table 8) for all species. The next most important method of transport was highway vehicle. Marten and wolverine were also trapped by foot.

Other Mortality

Nuisance beaver harvest started to increase over the period of this report. Between 2008 and 2012, nuisance beaver catch was 1 or less. Starting in 2013 when 2 were captured, numbers climbed to a peak of 12 during this reporting period. The average for the reporting period was 6 beaver.

Several road-killed otters were reported on the Juneau road system including 3 in RY12, 2 in RY13, and 1 in RY14.

Alaska Board of Game Actions and Emergency Orders

There were 4 Board of Game actions during the reporting period. During the 2013 meeting the coyote season was extended from Dec 1–Feb 15 and from Nov 10–Apr 30. Also, a season on fisher was initiated starting Dec 1–Feb 15 with a limit of 1 fisher. Then, during the 2015 Board of Game meeting shooting of beaver with a firearm during the trapping season was legalized. The wolverine season was also extended from Nov 10–Feb 15 to Nov 10–Feb 28.

No emergency orders were issued during this reporting period.

Recommendations for Activity 2.1

Continue.

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

Data Recording and Archiving

Sealing data are archived on Winfonet including scans of the original data sheets back to 1994 for most species. Hard copies from earlier dates are on file in the Douglas office.

Agreements

None.

Permitting

None.

Conclusions and Management Recommendations

It is impractical to set harvest and population objectives for furbearers without any data on population levels. Quantifiable management objectives need to be established for beavers, river otters and marten. Harvest information is available for all these species from sealing records, and application of existing and emerging methodologies may provide opportunities to monitor population trends.

The general approach for furbearer management is to expect population levels to self-regulate trapper effort and harvest. This approach has been successful and populations though cyclical at times, harvests of furbearers appear to be within sustainable limits. No changes in seasons or bag limits are recommended.

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 Unit 1C. The management direction for Unit 1C ensures that furbearers will persist as part of the natural ecosystem and ensures continued trapping (on applicable species) and viewing opportunities. There is no indication that the long-term sustainability of the furbearer populations or that statewide goals (ADF&G 1976) for human uses cannot be met; therefore, the Unit 1C 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 Unit 1C that require a departure from statewide goals for furbearer management, and furbearers are not currently managed at a subunit scale.

GOALS

To provide:

1. An optimum harvest of furbearers.
2. The greatest opportunity to participate in hunting and trapping furbearers.

CODIFIED OBJECTIVES

Amounts Reasonably Necessary for Subsistence Uses

The Alaska Board of Game has made a positive subsistence finding for furbearers in all units, including Unit 4, with a harvestable surplus to be 90% of the harvestable portion (5 AAC 99.025(13).

Intensive Management

Not applicable.

MANAGEMENT OBJECTIVES

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

REVIEW OF 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 would be needed to detect change in the population.

Methods

GPS locations and characteristics are recorded for any furbearers observed during other field work. Most observations occur during spring deer pellet, mortality and body condition surveys. Anecdotal reports are recorded to the maximum level of detail available.

2. Mortality-Harvest Monitoring

ACTIVITY 2.1

Monitor harvest through sealing records.

Data Needs

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

Methods

We will collect harvest data by sealing hides of beaver, marten, fisher, wolverine, and otter taken by trappers. We will record location and date of harvest, method of take, transportation mode, sex, and in the case otters and beavers, hides are measured. Sealing must occur by ADF&G 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 will be summarized

by regulatory year (RY), which begins 1 July and ends June 30 (e.g., RY15 = 1 July 2015–30 June 2016).

3. Habitat Assessment-Enhancement

The Department has no plans to engage in habitat assessment or enhancement for furbearers during the reporting period.

NONREGULATORY MANAGEMENT PROBLEMS OR NEEDS

Data Recording and Archiving

Data collected during surveys will be recorded on datasheets and transcribed into the furbearer observations spreadsheet located on the Sitka server.

Species wildlife management reports and plans and the management operational plan for furbearer in Unit 1C will be stored online at http://www.adfg.alaska.gov/index.cfm?adfg=librarypublications.wildlifemanagement. Memos, data forms, and additional hard copies will be stored in the Juneau/Douglas area biologist files in Douglas.

Agreements

None.

Permitting

None.

References Cited

Alaska Department of Fish and Game (ADF&G). 1976. Greater Alaska furbearer management plan. Pages 92–104 in Alaska wildlife management plans: A public proposal for the management of Alaska's wildlife: Southeastern Alaska. Draft proposal subsequently approved by the Alaska Board of Game. Division of Game, Federal Aid in Wildlife Restoration Project W-17-R, Juneau.

Alaska Department of Fish and Game (ADF&G). 2013. Trapper Questionnaire Statewide Annual Report, 1 July 2011–30 June 2012. Alaska Department of Fish and Game, Juneau, Alaska. Wildlife Management Report ADF&G/DWC/WMR-2013-4.

Alaska Department of Fish and Game (ADF&G). 2013. Trapper Questionnaire Statewide Annual Report, 1 July 2012–30 June 2013. Alaska Department of Fish and Game, Juneau, Alaska. Wildlife Management Report ADF&G/DWC/WMR-2013-5.

Environment Yukon. 2019. Yukon State of the Environment: Reporting on environmental indicators–2018. https://yukon.ca/sites/yukon.ca/files/env/env-yukon-state-environment-report-2018.pdf (Accessed February 2019).

Lewis, S.B., R. W. Flynn, L. R. Beier, D. P. Gregovich, and N. L. Barten. 2012. Spatial use, habitat selection, and diets of wolverines along he proposed Juneau Access Improvements road corridor, Southeast Alaska. Alaska Department of Fish and Game, Final Wildlife Research Report ADF&G/DWC/WRR-2012-05, Juneau.

MacDonald, S. O., and J. A. Cook. 2009. Recent Mammals of Alaska. University of Alaska Press, Fairbanks, Alaska.

Parr, B. L. 2016. 2015 Alaska trapper report: 1 July 2015–30 June 2016. Alaska Department of Fish and Game, Division of Wildlife Conservation, Wildlife Management Report ADF&G/DWC/WMR-2016-1, Juneau.

Parr, B. L. 2017. 2016 Alaska trapper report: 1 July 2016–30 June 2017. Alaska Department of Fish and Game, Division of Wildlife Conservation, Wildlife Management Report ADF&G/DWC/WMR-2017-3, Juneau.

Parr, B. L. 2018. 2013 Alaska trapper report: 1 July 2013–30 June 2014. Alaska Department of Fish and Game, Wildlife Management Report ADF&G/DWC/WMR-2018-1, Juneau.

Paul, T. W. 2009. Game transplants in Alaska. Alaska Department of Fish and Game, Division of Wildlife Conservation, Technical Bulletin No. 4, 2nd edition, Juneau.

Scott, R. 2013. Unit 1C furbearer management report. Pages 30–38 [*In*] P. Harper and L. A. McCarthy, editors. 2013. Furbearer management report of survey-inventory activities 1 July 2009-30 June 2012. Alaska Department of Fish and Game, Species Management Report ADF&G/DWC/SMR-2013-5, Juneau.


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