Species Management Report and Plan ADF&G/DWC/SMR&P–2025–2

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

Report Period 1 July 2017–30 June 2022, and

Plan Period 1 July 2022–30 June 2027

Ross Dorendorf

2025

Alaska Department of Fish and Game Division of Wildlife Conservation

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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 Roy Churchwell, Management Coordinator for Region I 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). To subscribe to email announcements regarding new technical publications from the Alaska Department of Fish and Game, Division of Wildlife Conservation please use the following link: http://list.state.ak.us/mailman/listinfo/adfgwildlifereport.

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Cover Photo: Beaver in winter gnawing on branch, April 1983. ©1983 ADF&G. Photo by John Hyde.

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Purpose of this Report

This report provides a record of survey and inventory management activities for furbearers in Game Management Unit 1A for the 5 regulatory years 2017–2021 and plans for survey and inventory management activities in the next 5 regulatory years, 2022–2026. A regulatory year (RY) begins 1 July and ends 30 June (e.g., RY17 = 1 July 2017–30 June 2018). This report is produced primarily to provide agency staff with data and analysis to help guide and record agency efforts but is also provided to the public to inform it of wildlife management activities. In 2016 the Alaska Department of Fish and Game's (ADF&G, the department) Division of Wildlife Conservation (DWC) launched this 5-year report to report more efficiently on trends and to describe potential changes in data collection activities over the next 5 years. It replaces the furbearer management report of survey and inventory activities that was previously produced every 3 years.

I. RY17–RY21 Management Report

Management Area

Unit 1A encompasses 5,252 mi^2 (13,603 km^2) of the southern mainland and adjacent islands south of Lemesurier Point, including all drainages into Behm Canal and excluding all drainages into Ernest Sound. This unit is bounded to the east and south by the Canadian border and to the west by Clarence Straight. Larger islands included in this unit are Revillagigedo, Annette, and Gravina islands (Fig. 1). The Ketchikan Gateway Borough has an estimated population of 13,741 residents (U.S. Census Bureau 2022). Smaller outlying communities include Metlakatla (estimated population of 1,375 residents), Hyder (estimated population of 87 residents), and Meyers Chuck (estimated population of 25 residents). Mean temperatures range from a low of 39°F (4°C) to a high of 51°F (11°C), with 141 inches (358 cm) of rain annually (U.S. Climate Data 2023). The dominant habitat type in Unit 1A below ~2,000 ft (~600 m) elevation is temperate rain forest consisting of Sitka spruce (*Picea sitchensis*), western hemlock (*Tsuga heterophylla*), red cedar (*Thuja plicata)*, and Alaska yellow cedar (*Chamaecyparis nootkatensis*). Other lower-elevation habitats include muskegs, stands of red alder (*Alnus rubra*), and black cottonwood (*Populus balsamifera trichocarpa*) along major rivers and riparian areas. Old-growth forests are interspersed with a patchwork of even-aged forest stands at different successional stages resulting from extensive clearcut logging and a few natural windthrow events. Mainland areas above ~2,000 ft (~600 m) elevation are predominately rock, ice, and open alpine.

Most land in Unit 1A is administered by the U.S. Forest Service, including the 2.3-million-acre Misty Fjords National Monument. This monument is the largest wilderness area in Alaska's national forests and the second largest in the nation. Inside Unit 1A, but not included in the Misty Fiords Monument, there are state lands, Alaska Mental Health Trust lands, private lands, several Alaska Native corporation inholdings, and federal Indian reservation lands, including Annette Island, its surrounding marine waters, and one large private mining parcel.

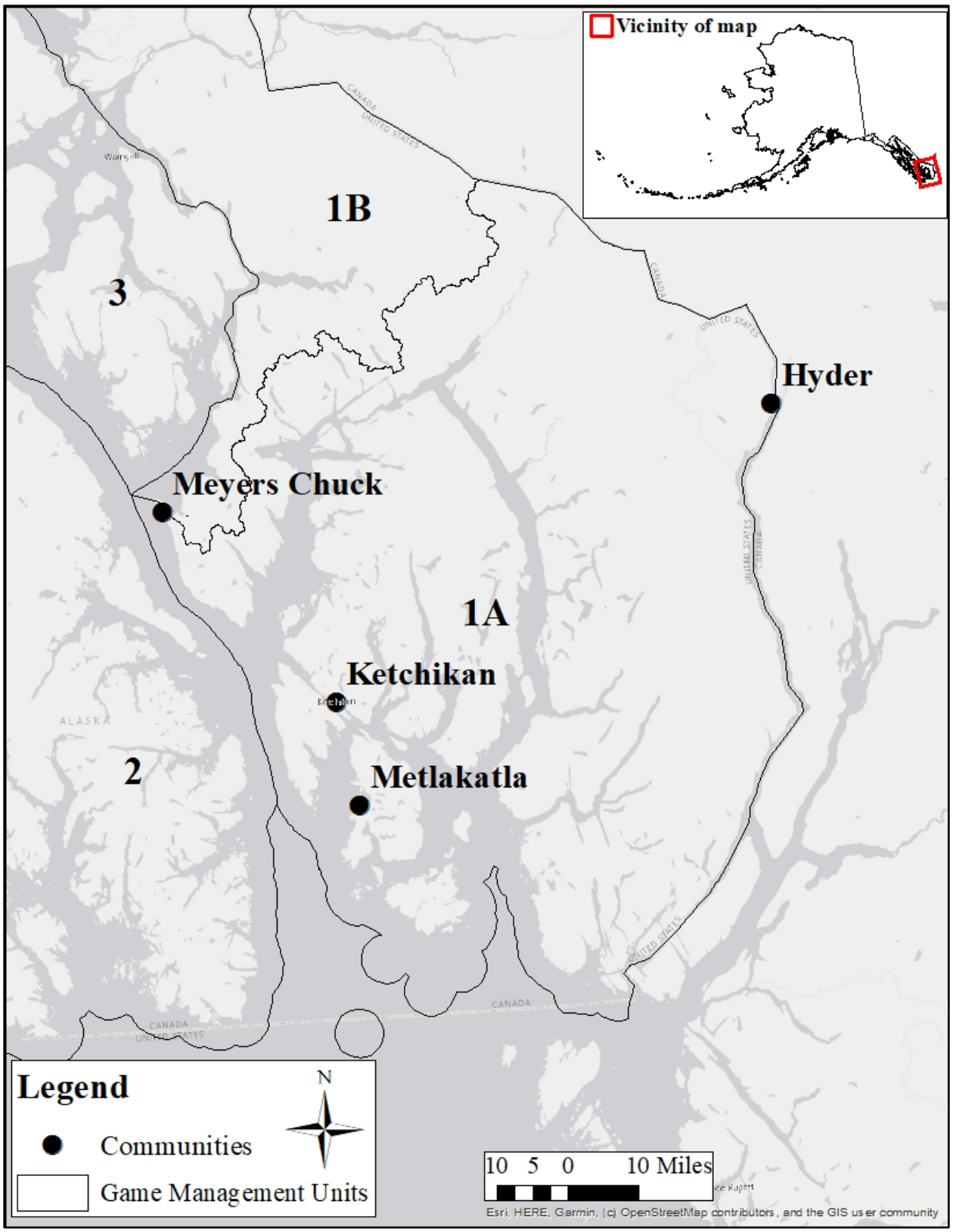

Figure 1. Map of Game Management Unit 1A boundaries, Southeast Alaska, regulatory years 2017–2021.

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

Multiple social and external factors influence trapping effort. Social factors include human conflict, difficulty accessing land, and low trapper recruitment (Siemer et al. 1994, Gese 2001, Zwick et al. 2002). Furbearer abundance, fur prices, fuel prices, and weather conditions are external factors that influence trapping efforts annually (Gosselink et al. 2003, Yom-Tov et al. 2007, DeVink et al. 2011, Parr 2017). These factors, along with life history traits, difficulty of catch, density and distribution of the species, among other factors, influence trapping effort and success. Many communities have individual trappers that put forth much greater effort and catch more animals than most other trappers combined from the same community (Dorendorf et al. 2016). When these trappers do not participate in trapping, the total catch may drop significantly.

American martens (*Martes americana*; hereafter referred to as marten) are the most sought-after species for trapping in Southeast Alaska. Martens are abundant and easy to trap. Their pelts are easy to process and are valuable in the fur market. Marten research in southern Southeast Alaska has demonstrated the importance of old-growth stands for foraging, travel corridors, and shelter (Schumacher 1999). Martens also preferred larger-diameter timber for dens and resting sites (Hauptman 1979, Simon 1980, Hargis and McCullough 1984, Schumacher 1999, Flynn and Schumacher 2016). Conversations with trappers validate the preference of martens for old-growth stands and their avoidance of clearcuts. Logging in Unit 1A continues to remove unevenly aged old-growth habitat required by martens. As a result, we believe the area's capacity to support current marten populations will decline over time.

Southeast Alaska provides excellent habitat for river otters (*Lutra canadensis*) and a variety of forage that supports plentiful river otter harvest (Larsen 1984). Because river otter pelt preparation is time-consuming, prices must be high to influence harvest levels substantially. Current fur prices are low, which is reflected in trapper harvest.

For this reporting period, beaver (*Castor canadensis*) prices were low, likely contributing to low harvests. Beavers are relatively easy to trap, but the amount of work needed to prepare a pelt and low fur prices contribute to minimal harvest trends. Beavers are commonly trapped for use as bait for trapping martens, wolves, and other carnivores, which helps maintain a steady, albeit low, harvest independent of fur prices.

An ample opportunity exists to trap mink (*Mustela vison*) in Unit 1A, with an expanse of suitable coastline and riverine habitat. Mink ranked as the second to fourth most important species annually for trapping in Southeast Alaska during the reporting period (Spivey 2019, 2020; Bogle 2021a, b, 2022). Trappers that trap regardless of fur prices continue to trap mink, while those who wait for higher prices do not. Trappers reported mink as “common” or “abundant” during the reporting period (Spivey 2019, 2020; Bogle 2021a, b, 2022).

Wolverines (*Gulo gulo*) inhabit only the mainland portion of Unit 1A, and few are typically taken annually. Because of the low density and difficult access to wolverines in the unit, trappers do not generally target them but will occasionally harvest them incidentally while trapping for other species. Since all wolverine harvest in Unit 1A comes from the mainland, catch is limited to trappers willing to travel by boat or airplane. Distance and willingness to pay associated gas

prices are limiting factors. This, in combination with wolverines naturally residing at low densities, accounts for trappers describing their abundance as "scarce" in the trapper questionnaire (Spivey 2019, 2020; Bogle 2021a, b, 2022).

Short-tailed weasel (*Mustela erminea*, hereafter referred to as ermine) populations fluctuate annually primarily due to variations in prey availability (Erlinge 1983, Sittler 1995). Harvest is limited to incidental take while targeting other furbearers, primarily martens. Ermine typically live close to bodies of water in riparian habitat and are distributed throughout Unit 1A (MacDonald and Cook 2008). Trappers reported ermine as "scarce" or "common" during RY17–RY21 (Spivey 2019, 2020; Bogle 2021a, b, 2022).

Similar to ermine, red squirrels (*Tamiasciurus hudsonicus*) are rarely targeted by trappers and are caught incidentally in marten sets. Red foxes (*Vulpes vulpes*) and lynx (*Lynx canadensis*) are rare, and coyotes (*Canis latrans*) are absent in Unit 1A. Few muskrats (*Ondatra zibethicus*) inhabit Unit 1A, and harvest is typically low and incidental to beaver trapping.

Management Direction

Existing Wildlife Management Plans

The department's current wildlife management plan is the Greater Alaska Furbearer Management Plan (ADF&G 1976).

Goals

To provide the following:

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 (BOG, the board) has made a positive subsistence finding for furbearers in all units, including Unit 1A, with a harvestable surplus to be 90% of the harvestable portion (5 AAC 99.025[13]).

Intensive Management

Not applicable.

MANAGEMENT OBJECTIVES

- Regulate seasons and bag limits to maintain viewable and harvestable populations of beavers, lynx, marmots, martens, mink, muskrats, river otters, ermine, squirrels, and wolverines.

- Seal harvested beaver, lynx, marten, river otter, and wolverine pelts as they are presented for sealing.

- Contact reliable observers for general information about the status and trends of furbearer populations, including with the use of the annual trapper questionnaire.

MANAGEMENT ACTIVITIES

1. Population Status and Trend

ACTIVITY 1.1. Contact reliable sources for information on furbearer distribution and abundance and record location information during other survey efforts.

Data Needs

Observations from reliable members of the public provide insight into local trends in abundance. For example, fur trappers who have been trapping in the same area for many years can provide valuable insight. Incidental sightings of furbearers while conducting surveys or traveling to work locations help with presence-absence information on all species of furbearers.

Methods

Observations from the public are incorporated into furbearer management reports. Members of the public contact our area office via phone, e-mail, or in-person to provide details on their observations. Agency sightings are recorded and reported when considered significant. The annual trapper questionnaire provides valuable information on harvest, trapping methods, and other information on trapping in the region.

Results and Discussion

Unit 1A trappers reported a few noticeable trends from RY17 to RY21. Revilla Island trappers reported low marten abundance on their traplines in RY21. This is likely due to natural fluctuations in the marten population in relation to their main prey, long-tailed voles (*Microtus longicaudus*). This finding also contrasts with mainland trappers who, during RY21, reported good numbers of martens. One person sent pictures and video of a red fox near Hyder.

Recommendations for Activity 1.1

Actively continue to seek information from trappers and others who observe furbearers. Continue recording locations of furbearer sightings.

2. Mortality-Harvest Monitoring and Regulations

ACTIVITY 2.1. Monitor harvest through sealing beavers, fisher, lynx, martens, river otters, and wolverines.

Data Needs

Harvest must be assessed to understand the impacts of harvest and to determine trends in abundance.

Methods

ADF&G collected harvest data by sealing hides of beavers, lynx, martens, river otters, and wolverines taken by trappers and hunters. The department recorded the location and date of harvest, method of take, mode of transportation, and sex of animals caught. Hides were measured in the case of lynx, river otter, and beaver. Sealing was required and carried out by department staff or a state-appointed sealer within 30 days of the close of the season. These data were entered into the department's Wildlife Information Network (WinfoNet) database.

Hunting Season and Bag Limit

Species	Season	Bag limit
Beaver	No open season	–
Coyote	1 Sep–30 Apr	2 coyotes
Squirrel and marmot	No closed season	No limit
Lynx	No open season	–
Red fox	No open season	–
Wolverine	1 Sep–15 Feb	1 wolverine

Trapping Season and Bag Limit

Species	Season	Bag limit
Beaver[a]	10 Nov–30 Apr; 10 Nov–15 May	No limit
Coyote	1 Nov–30 Apr	No limit
Lynx	1 Dec–15 Feb	No limit
Marten	1 Dec–15 Feb	No limit
Mink and ermine	1 Dec–15 Feb	No limit
Muskrat	1 Dec–15 Feb	No limit
Red fox	1 Dec–15 Feb	No limit
River otter	1 Dec–15 Feb	No limit
Squirrel and marmot	No closed season	No limit
Wolverine	10 Nov–28 Feb	No limit

[a] Beaver season extended to end 15 May at the 2019 Board of Game meeting.

Results and Discussion

Harvest by Hunters-Trappers

AMERICAN MARTEN

Harvest averaged 225 (range = 132–296) martens from RY17 to RY21 (Table 1). This is a slight decrease compared to the average from RY12 to RY16 of 298 (range = 260–475) martens. All martens were trapped or snared from RY17 to RY21. The high harvest in RY20 coincides with the lowest fur prices, which typically decreases trapping effort. Marten pelt values averaged $41.20 (range = $20.69–$69.47) during RY17–RY21 (Table 2). This was lower than the average during RY12–RY16 of $67.35 (range = $34.47–$123.70; Table 2). The number of successful trappers was steady, averaging 13 (range = 11–14); however, catch changed considerably from RY19 to RY20, which may indicate a change in trapping effort or the population. It is difficult to discern changes in the population without a measure of catch per unit effort. Respondents to the trapper questionnaire described martens as "common" from RY17 to RY21 (Spivey 2019, 2020; Bogle 2021a, b, 2022).

Table 1. Harvest and method of take for martens sealed in Unit 1A, Alaska, regulatory years 2017–2021.

Regulatory year	Total harvest	Successful participants	Percent male[a]	Percent female[a]	Method of take			
					Shot	Trapped	Snared	Unknown
2017	248	14	67	31	0	232	16	0
2018	263	13	62	30	0	263	0	0
2019	132	14	65	35	0	108	24	0
2020	296	13	52	47	0	270	26	0
2021	185	11	65	34	0	185	0	0

[a] Percentages do not add up to 100% because sex data were missing from some animals.

RIVER OTTER

Harvest averaged 41 (range = 34–51) otters during RY17–RY21 (Table 3). This is comparable to the RY12–RY16 average of 43 (range = 19–77) otters. Trappers primarily used traps to harvest otters, while only a few were shot. From conversations with trappers, shooting otters allows the trapper to select larger otters, while other trappers shoot otters opportunistically. Some trappers mentioned taking hunting trips to target and hunt otters with a firearm specifically.

The average price of river otters decreased from $56.62 (range = $21.05–$86.17) during RY12–RY16 compared to $22.23 (range = $15.85–$28.68) during RY17–RY21 (Table 2). Harvest and the number of successful trappers remained steady from RY17 to RY21. With prices low, active trappers are likely those who trap regardless of the fur market for the variety of benefits received from trapping (Dorendorf 2016). Trappers described river otters as "common" or "abundant" from RY17 to RY21 (Spivey 2019, 2020; Bogle 2021a, b, 2022).

Table 2. Average furbearer prices in U.S. dollars for regulatory years 2012–2021 based on Fur Harvesters of America auctions.

Species	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Beaver	20.76	24.96	16.63	13.15	9.40	10.83	12.91	13.52	13.21	10.17
Ermine[a]	4.50	3.80	4.74	4.74	2.72	3.27	2.61	1.30	1.70	2.05
Fisher	83.47	121.60	78.35	67.83	30.37	43.84	32.16	–	–	24.87
Marten	74.48	123.70	57.33	46.77	34.47	69.47	44.09	–	20.69	30.54
Mink	21.72	24.07	9.83	8.75	7.33	10.76	9.07	–	–	5.69
Muskrat	9.05	12.15	10.15	4.25	2.07	3.17	3.73	2.90	2.54	5.07
Squirrel[b]	1.03	0.94	0.66	0.38	0.70	0.81	0.53	0.80	0.32	1.72
River otter	83.80	86.17	50.34	41.72	21.05	28.68	22.15	–	15.85	–
Wolf	198.46	260.45	190.98	108.50	169.04	144.51	168.54	120.47	111.73	264.50
Wolverine	266.74	260.60	259.23	230.43	218.36	255.75	291.95	195.66	239.05	346.56

Source: Fur Harvesters Auction Incorporated (2021).
Note: Prices are averages from data published by Fur Harvesters Auction Incorporated during their January–July auction in each regulatory year (Fur Harvesters Auction Incorporated 2021).
Note: En dashes indicate data was not available from Fur Harvesters Auction Incorporated because furs were mainly unsold.
[a] Short-tailed weasel (*Mustela erminea*) and least weasel (*M. nivalis*).
[b] North American *Sciuridae* spp. (Baker et al. 2003).

Table 3. Harvest and method of take for river otters sealed in Unit 1A, Alaska, regulatory years 2017–2021.

Regulatory year	Total harvest	Successful participants	Percent male[a]	Percent female[a]	Percent juvenile[b]	Percent adult[b]	Method of take			
							Shot	Trapped	Snared	Unknown
2017	44	10	45	39	57	36	0	44	0	0
2018	43	11	72	26	42	53	3	32	0	8
2019	34	9	59	41	50	50	5	17	0	12
2020	35	9	40	17	60	34	9	25	1	0
2021	51	10	67	33	45	26	2	31	0	18

[a] Percentages do not add up to 100% because sex data were missing from some animals.
[b] Juvenile river otters measure <42" in length, and adult river otters measure ≥42" in length. Percentages do not add up to 100% because age data were missing from some animals.

BEAVER

Harvest averaged 37 (range = 19–58) beavers during RY17–RY21 (Table 4). This is less than the RY12–RY16 average of 47 (range = 37–65) beavers. Beavers are difficult to sex; therefore, minimal information is available on sex ratios in the harvest. Trappers only used traps and snares to take beavers during RY17–RY21. During the reporting period, 34% of harvest were kits, and 66% were adults (Table 4; Payne 1979). Beavers are typically easier to harvest with traps, given their nocturnal activity patterns; thus, few are shot. The average price of fur for beavers during RY17–RY21 was $12.13 (range = $10.17–$13.52; Table 2), which is less than the RY12–RY16 average of $16.98 (range = $9.40–$24.96; Table 2). Trappers described beavers as “scarce” from RY17 to RY21 (Spivey 2019, 2020; Bogle 2021a, b, 2022); however, the population of beavers in Unit 1A appears stable as the number of beavers trapped was similar among years (Table 4).

Table 4. Harvest and method of take for beavers sealed in Unit 1A, Alaska, regulatory years 2017–2021.

Regulatory year	Total harvest	Successful participants	Percent kits[a]	Percent adults[a]	Method of take			
					Shot	Trapped	Snared	Unknown
2017	29	7	23	77	0	23	6	0
2018	47	12	33	67	0	46	1	0
2019	58	9	41	59	0	58	0	0
2020	19	9	42	58	0	17	2	0
2021	33	9	30	70	0	33	0	0

[a] Beavers measuring <52" (combined length and width) are kits, and beavers measuring ≥52" (combined length and width) are adults. Percentages do not add up to 100% because age data were missing from some animals.

WOLVERINE

Trappers harvested an average of 2 (range = 0–4) wolverines annually from RY17 to RY21, which was similar to the RY12–RY16 average of 2.5 (range = 0–7) wolverines (Table 5). Trappers only used traps to harvest wolverines from RY17 to RY21. Fur prices for wolverines remained steady and high, averaging $265.79 (range = $195.66–$346.56) during RY17–RY21 compared to the RY12–RY16 average of $247.07 (range = $218.36–$266.74; Table 2). Wolverines reside on the mainland and are more difficult to access than other furbearers available to the majority of Unit 1A residents on Revillagigedo Island. Because of this limited accessibility and their low abundance, few wolverines are harvested annually. Trappers reported wolverines as "scarce" throughout the reporting period (Spivey 2019, 2020; Bogle 2021a, b, 2022).

Table 5. Harvest and method of take for wolverine sealed in Unit 1A, Alaska, regulatory years 2017–2021.

Regulatory year	Total harvest	Successful participants	Percent males	Percent female	Percent unknown	Method of take			
						Shot	Trapped	Snared	Unknown
2017	2	2	50	50	0	0	2	0	0
2018	1	1	0	100	0	0	1	0	0
2019	0	0	0	0	0	0	0	0	0
2020	3	2	100	0	0	0	3	0	0
2021	4	2	100	0	0	0	4	0	0

FISHER

Trappers did not report harvesting fisher in Unit 1A from RY17 to RY21.

LYNX

Trappers did not report harvesting lynx in Unit 1A from RY17 to RY21.

OTHER SPECIES

There are no harvest data for coyotes, marmots, mink, muskrats, red foxes, red squirrels, or ermine because sealing is not required. Based on conversations with trappers and the limited data we received from the trapper questionnaire, no coyotes or red foxes were captured in Unit 1A during RY17–RY21. Squirrels and ermine were caught as bycatch while targeting martens. A

few muskrats were taken. Mink pelt prices have remained low. Mink pelt prices averaged $8.51 (range = $5.69–$10.76) from RY17 to RY21, which was lower than the average price of $12.15 (range = $5.69–$21.72) over the past 10 years (Table 2). Fur prices for ermine decreased during RY17–RY21, averaging just $2.19 (range = $1.30–$3.27). Trappers described ermine as switching between "scarce" or "common" each year during RY17–RY21 (Spivey 2019, 2020; Bogle 2021a, b, 2022). Fur prices for red squirrels remain low at an average of $0.84. Trappers reported squirrels as "common" each year during RY17–RY21, except when they were reported as "abundant" in RY19 (Spivey 2019, 2020; Bogle 2021a, b, 2022). Conversations with trappers did not yield concerns over the abundance of these species.

Hunter Residency and Success

Most harvest came from local residents (98%). Alaska residents from other areas of the state made up 2% of harvest, and nonresidents did not harvest furbearers in Unit 1A from RY17 to RY21. Trapping pressure from other Alaska residents mainly comes from neighboring Unit 2, which is only a short boat ride for some residents of that unit.

Harvest Chronology

Marten harvest steadily declined throughout the season (1 December–15 February; Table 6). The harvest was lower in February because the season ends on 15 February, allowing for only half a month of harvest instead of an entire month. Trappers harvested most river otters and wolverines in January and February. Wolverines are typically harvested when they are specifically targeted and occasionally when trappers pursue other species, such as martens and wolves on the mainland in Unit 1A. Beaver harvest occurred throughout the season. A long season (10 November–30 April in RY17–RY19 compared to 10–15 November in RY20–RY21) may allow trappers to take beavers when fur is prime and when nuisance issues arise (Table 6).

Transport Methods

Beavers, martens, and river otters were trapped mainly by using a boat (Table 7). The limited road system contributes to the popularity of boats as a means to get away from the concentration of trappers that use the road system. Beavers are commonly trapped in body-gripping traps, which are heavy and can be transported most easily with the aid of a vehicle or boat (Parr 2017). All trappers accessed wolverine habitat by boat, which is more economical than using a plane to access the mainland in Unit 1A.

Alaska Board of Game Actions and Emergency Orders

In 2019, the board lengthened the beaver season in Southeast Alaska from 10 November–30 April to 10 November–15 May. No emergency orders were issued during RY17–RY21.

Recommendations for Activity 2.1

Continue sealing beavers, fisher, lynx, martens, river otters, and wolverines for critical information on harvest, furbearer demographics, and harvest locations. This enables biologists to determine trends in abundance for these species. We will continue to rely on the public for trends in abundance of other furbearers, along with information they provide in the annual trapper questionnaire.

Table 6. Unit 1A beaver, marten, river otter, and wolverine harvest chronology percentages by month, Alaska, regulatory years 2017–2021.

Species	Regulatory year	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Unknown	*n*[a]
Beaver	2017	0	0	35	3	0	17	28	17	0	0	29
	2018	0	0	0	41	26	4	6	23	0	0	47
	2019	0	0	16	10	7	5	7	36	19	0	58
	2020	0	0	42	16	0	5	0	11	26	0	19
	2021	3	0	3	3	12	31	12	33	3	0	33
Marten	2017	0	0	0	56	37	4	0	0	0	3	248
	2018	0	0	0	48	35	17	0	0	0	0	263
	2019	0	0	0	46	49	5	0	0	0	0	132
	2020	0	0	0	51	35	14	0	0	0	0	296
	2021	0	0	0	60	37	3	0	0	0	0	185
River otter	2017	0	0	0	18	59	23	0	0	0	0	44
	2018	0	0	0	16	42	42	0	0	0	0	43
	2019	0	0	6	24	41	29	0	0	0	0	34
	2020	0	0	0	31	63	6	0	0	0	0	35
	2021	0	0	0	12	39	39	0	0	0	10	51
Wolverine	2017	0	0	0	0	50	50	0	0	0	0	2
	2018	0	0	0	0	100	0	0	0	0	0	1
	2019	0	0	0	0	0	0	0	0	0	0	0
	2020	0	0	0	0	67	33	0	0	0	0	3
	2021	0	0	0	0	25	75	0	0	0	0	4

Note: Furbearers caught outside normal seasons were captured under nuisance animal permits furnished by the Alaska Department of Fish and Game.

[a] Total number of furbearers trapped during the regulatory year.

3. Habitat Assessment-Enhancement

No habitat assessment or enhancement activities for furbearers occurred in Unit 1A during RY17–RY21.

NONREGULATORY MANAGEMENT PROBLEMS OR NEEDS

Data Recording and Archiving

- Data sheets are scanned and stored on the WinfoNet server.
- Original datasheets are stored in file folders located in the Ketchikan Area Office for up to 3 years.
- Historical survey notes and data sheets are digitized and scanned for permanent storage on the file server.
- Wildlife management reports and plans and the management operational plan for furbearers in Unit 1A will be stored online at http://www.adfg.alaska.gov/index.cfm?adfg=librarypublications.wildlifemanagement.
- Memos, data forms, and additional documents will be stored digitally in the Region I shared drive.

Table 7. Unit 1A beaver, river otter, marten, and wolverine harvest percent by transportation method, Alaska, regulatory years 2017–2021.

Species	Regulatory year	Airplane	Horse/dog team	Boat	4-wheeler	Snowmachine	ORV[a]	Highway vehicle	Ski/foot/ snowshoe	Unknown	*n*[b]
Beaver	2017	0	0	7	3	0	0	90	0	0	29
	2018	11	0	74	4	0	0	2	9	0	47
	2019	0	0	59	0	0	0	26	16	0	58
	2020	0	0	26	0	0	0	74	0	0	19
	2021	0	0	70	0	0	0	30	0	0	33
Marten	2017	0	0	91	0	0	0	6	0	3	248
	2018	0	0	94	0	0	0	0	6	0	263
	2019	0	0	70	0	0	0	4	8	18	132
	2020	0	0	78	0	0	0	2	12	9	296
	2021	0	0	92	0	0	0	0	8	0	185
River otter	2017	0	0	43	0	0	2	55	0	0	44
	2018	0	0	58	0	0	0	19	5	19	43
	2019	0	0	53	0	0	0	3	9	35	34
	2020	0	0	91	0	0	0	6	3	0	35
	2021	0	0	59	0	0	0	0	6	35	51
Wolverine	2017	0	0	100	0	0	0	0	0	0	2
	2018	0	0	100	0	0	0	0	0	0	1
	2019	0	0	0	0	0	0	0	0	0	0
	2020	0	0	100	0	0	0	0	0	0	3
	2021	0	0	100	0	0	0	0	0	0	4

[a] ORV refers to off-road vehicle.

[b] Total number of furbearers trapped during the regulatory year.

Agreements

There were no agreements for furbearers in Unit 1A during RY17–RY21.

Permitting

Permits to remove nuisance beavers were issued in RY19, RY20, and RY21.

Conclusions and Management Recommendations

Quantifiable management objectives must be established for beavers, martens, river otters, and wolverines. 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.

Increasing the response rate to the trapper questionnaire would aid management with a representative sample size, which would allow the use of the data as trend information in furbearer populations for species that are sealed and those that are not. During RY17–RY21, the questionnaire received a response rate of 7.5% to 15.3%. Typically, a minimally acceptable response rate to generalize results to a group of people is 30%, and even then, a nonresponse bias test is crucial to see if bias exists (Mitra and Lankford 1999). Other researchers suggest response rates of 50% and above to avoid bias (Dolson and Machlis 1991, Salant and Dillman 1994, Babbie 2003). The information managers receive from the trapper questionnaire could significantly improve if response rates increase.

Harvests of furbearers appear to be within sustainable limits, and no changes in seasons or bag limits are recommended.

II. Project Review and RY22–RY26 Plan

Review of Management Direction

MANAGEMENT DIRECTION

The existing management direction and goals appropriately direct the management of furbearers in Unit 1A. The management direction for Unit 1A ensures that furbearers will persist as part of the natural ecosystem and ensures continued hunting, trapping, and viewing opportunities of applicable species. There is no indication that the long-term sustainability of furbearer populations or statewide goals for human uses cannot be met; therefore, Unit 1A furbearers will be managed in a manner that complements the statewide furbearer management goals.

GOALS

To provide the following:

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

BOG has made a positive subsistence finding for furbearers in all units, including Unit 1A, with a harvestable surplus to be 90% of the harvestable portion (5 AAC 99.025[13]).

Intensive Management

Not applicable.

MANAGEMENT OBJECTIVES

- Regulate seasons and bag limits to maintain viewable and harvestable populations of beavers, lynx, marmots, martens, mink, muskrats, river otters, ermine, squirrels, and wolverines.

- Seal harvested beaver, fisher, lynx, marten, river otter, and wolverine pelts as they are presented for sealing.

- Contact reliable observers for general information about the status and trends of furbearer populations, including the use of the annual trapper questionnaire.

REVIEW OF MANAGEMENT ACTIVITIES

1. Population Status and Trend

ACTIVITY 1.1. Contact reputable members of the public for insights into local trends in furbearer abundance. Record incidental sightings of furbearers for presence-absence data.

Data Needs

Observations from reliable members of the public provide insight into local trends in abundance. For example, fur trappers that have been trapping in the same area for many years can provide valuable insight into abundance trends. Incidental sightings of furbearers while conducting surveys or traveling to work locations help with presence-absence information on all species of furbearers.

Methods

Observations from the public are incorporated into furbearer reports. Members of the public contact our area office via phone, e-mail, or in-person to provide details on their observations.

Agency sightings are reported and recorded when considered significant. The annual trapper questionnaire provides valuable information on harvest, trapping methods, and other regional trapping information.

2. Mortality-Harvest Monitoring

ACTIVITY 2.1. Collect harvest data from furbearers in Unit 1A.

Data Needs

Harvest must be assessed to understand the impacts of harvest and trends in abundance.

Methods

Harvest data will be collected by sealing the hides of beavers, lynx, martens, river otters, and wolverines taken by trappers and hunters. ADF&G records the location and date of harvest, method of take, mode of transportation, and sex of animals caught. Hides are measured in the case of lynx, river otters, and beavers. Sealing must be carried out by department staff or a state-appointed sealer within 30 days of the close of the season. These data are entered into ADF&G's WinfoNet database.

3. Habitat Assessment-Enhancement

No habitat assessment or enhancement activities for furbearers are planned in Unit 1A during RY22–RY26.

NONREGULATORY MANAGEMENT PROBLEMS OR NEEDS

Data Recording and Archiving

- Data sheets are scanned and stored on the WinfoNet server.
- Original datasheets are stored in file folders located in the Ketchikan Area Office for up to 3 years.
- Historical survey notes and data sheets are digitized and scanned for permanent storage on the file server.
- Wildlife management reports and plans and the management operational plan for furbearers in Unit 1A will be stored online at http://www.adfg.alaska.gov/index.cfm?adfg=librarypublications.wildlifemanagement.
- Memos, data forms, and additional documents will be stored digitally in the Region I shared drive.

Agreements

No agreements are anticipated for furbearers in Unit 1A during RY22–RY26.

Permitting

ADF&G will continue to issue nuisance beaver permits during RY22–RY26.

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