Species Management Report and Plan ADF&G/DWC/SMR&P–2025–17

Furbearer Management Report and Plan, Game Management Unit 8:

Report Period 1 July 2017–30 June 2022, and

Plan Period 1 July 2022–30 June 2027

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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 Jeff Selinger, 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). 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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Contents

Purpose of this Report 1
I. RY17–RY21 Management Report 1
Management Area 1
Summary of Status, Trend, Management Activities, and History of Furbearers in Unit 8 3
Management Direction 4
  Existing Wildlife Management Plans 4
  Goals 4
  Codified Objectives 4
    Amounts Reasonably Necessary for Subsistence Uses 4
    Intensive Management 4
  Management Objectives 4
  Management Activities 4
    1. Population Status and Trend 4
    2. Mortality-Harvest Monitoring and Regulations 5
    3. Habitat Assessment-Enhancement 7
  Nonregulatory Management Problems or Needs 14
    Data Recording and Archiving 14
    Agreements 14
    Permitting 14
Conclusions and Management Recommendations 14
II. Project Review and RY22–RY26 Plan 15
Review of Management Direction 15
  Management Direction 15
  Goals 15
  Codified Objectives 15
    Amounts Reasonably Necessary for Subsistence Uses 15
    Intensive Management 15
  Management Objectives 15
  Review of Management Activities 15
    1. Population Status and Trend 15
    2. Mortality-Harvest Monitoring 16
    3. Habitat Assessment-Enhancement 16
  Nonregulatory Management Problems or Needs 16
    Data Recording and Archiving 16
    Agreements 16
    Permitting 16
Acknowledgments 16
References Cited 17

List of Figures

Figure 1. A map showing Game Management Unit 8, Kodiak Archipelago. 2

Figure 2. Beaver and river otter harvest, regulatory years 2007–2021, Unit 8, Kodiak Archipelago. 7

List of Tables

Table 1. River otter harvest, regulatory years 2007–2021, Unit 8, Kodiak Archipelago. 8

Table 2. Beaver harvest, regulatory years 2007–2021, Unit 8, Kodiak Archipelago. 8

Table 3. Trapping results from ADF&G trapper questionnaire, regulatory years 2007–2021, Unit 8, Kodiak Archipelago. 9

Table 4. River otter harvest chronology by month, regulatory years 2002–2021, Unit 8, Kodiak Archipelago. 10

Table 5. Beaver harvest chronology by month, regulatory years 2002–2021, Unit 8, Kodiak Archipelago. 11

Table 6. River otter harvest by transport method, regulatory years 2002–2021, Unit 8, Kodiak Archipelago. 12

Table 7. Beaver harvest by transport method, regulatory years 2002–2021, Unit 8, Kodiak Archipelago. 13

Purpose of this Report

This report provides a record of survey and inventory management activities for furbearers in Unit 8 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., RY20 = 1 July 2020–30 June 2021). 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 2 years.

I. RY17–RY21 Management Report

Management Area

Unit 8 (5,097 mi^2, Fig. 1) is located in the Kodiak Archipelago in the Gulf of Alaska. It comprises all islands southeast of the centerline of Shelikof Strait, including Kodiak, Afognak, Whale, Raspberry, Shuyak, Spruce, Marmot, Sitkalidak, Amook, Uganik, and Chirikof islands, the Trinity, Semidi, and Barren islands, and other adjacent islands and all seaward waters and lands within 3 miles of these coastlines. The archipelago is approximately 177 miles long and 50 miles wide consisting of a rugged, fjord-carved landscape with elevations ranging from sea level to approximately 4,500 feet. The archipelago has a wet maritime climate with little seasonal temperature variation and abundant precipitation. Vegetation composition varies throughout the archipelago and is highly influenced by past glaciation.

There are 3 primary ecological regions comprising the archipelago: the Sitka spruce region, the central ecological region, and the southern ecological region (Fleming and Spencer 2006). The Sitka spruce region encompasses northeastern Kodiak Island and includes Afognak and Shuyak islands. The lower elevations in this region are comprised primarily of Sitka spruce (*Picea stichensis*) with a dominant understory consisting of salmonberry (*Rubus spectabilis*), devil's club (*Echinopanax horridum*), cow parsnip (*Heracleum lanatum*), ferns (*Athrium* spp.) and high-bush blueberry (*Vaccinium ovalifolium*) with dispersed pockets of elderberry (*Sambucus racemosa*). Other plant communities in this region include forb-grass meadows containing willow (*Salix* spp.), birch (*Betula kenaica*), and alder (*Alnus crispa sinuata*). Much of Kodiak Island is classified as the central ecological region and is dominated by rugged, mountainous topography with steep ravines, deep valleys, and fast-moving glacial streams and rivers. Bands of deciduous forests comprised of willow, birch, cottonwood, and alder can be found in lowland areas along rivers and streams. Similar to the Sitka spruce region, salmonberry, ferns, cow parsnip, blueberry, and fireweed (*Epilobium angustifolium*) along with various grass and forb assemblages cover much of the landscape. At the higher elevations, plant communities include alpine forb meadows and alpine tundra. Alpine forb meadows consist of sedges (*Carex* spp.), lupine (*Lupinus nootkatensis*), and Indian paintbrush (*Caltilleja unalalaschensis*), while the alpine tundra is comprised of crowberry (*Empetrum nigrum*), partridgefoot (*Luetkea pectinata*), alpine blueberry (*Vaccinium uliginosum*), various lichens (*Cladina* spp., *Cetraria* spp.) and

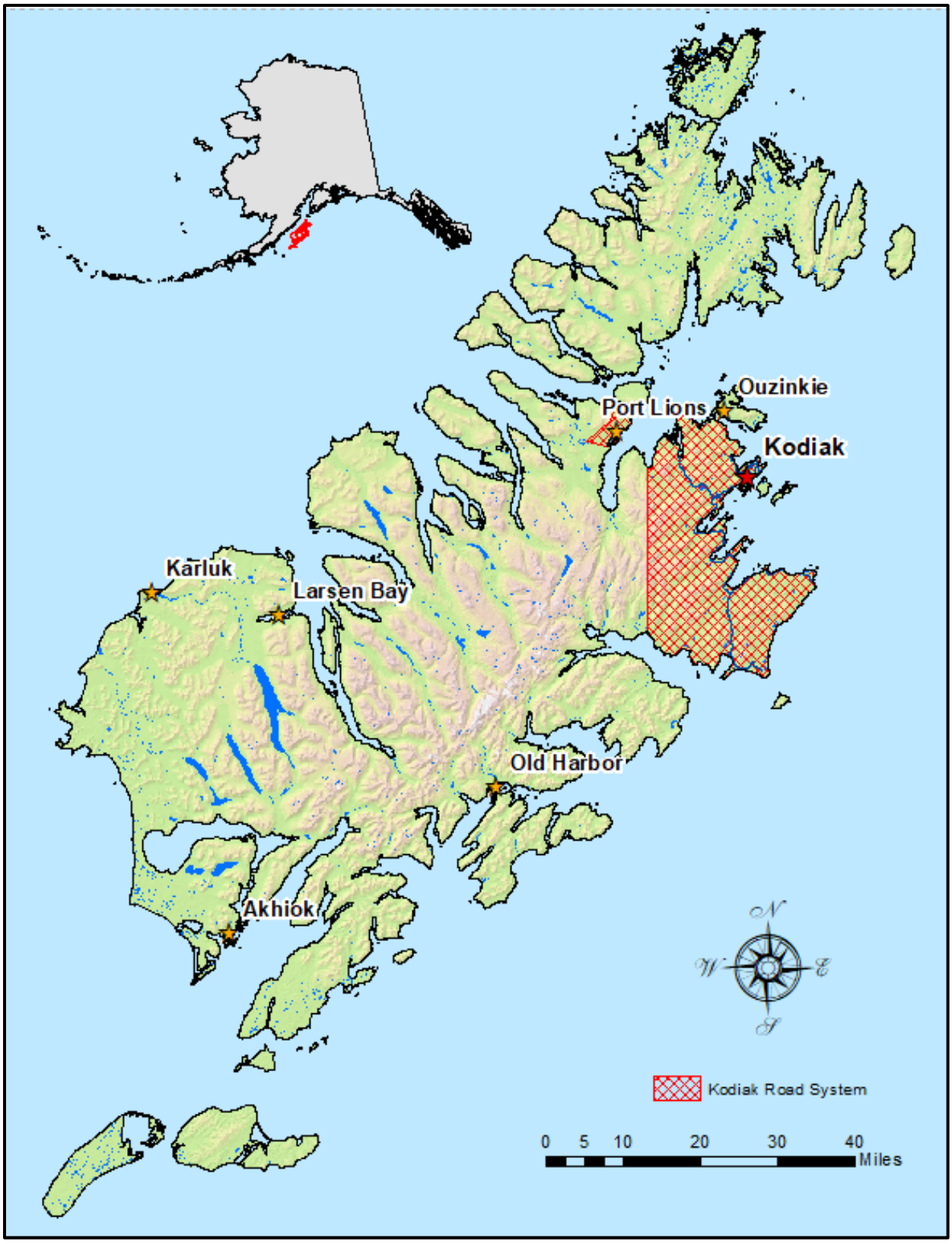

Figure 1. A map showing Game Management Unit 8, Kodiak Archipelago.

dwarf shrubs. The southern ecological region encompasses the glacial refugium and subarctic heath lands (Fleming and Spencer 2006) and consists of crowberry, dwarf willow (*Salix* spp.), fireweed, blueberry, cranberry (*Vaccinium vitis-idaea*), goldenrod (*Solidago lepida*), Labrador tea (*Ledum palustre*), kinnikikinnik (*Arctostaphyos uva-ursi*) and various forbs and mosses (Fleming and Spencer 2006).

The Kodiak Road System Management Area is contained within Unit 8 and only includes portions of the main island comprising that portion of Kodiak Island north of a line from the head of Settlers Cove (including Peregrebni Point) to Crescent Lake (57°52′N, 152°08′W) and east of a line from the outlet of Crescent Lake to Mount Ellison Peak and from Mount Ellison Peak to Pokati Point at Whale Passage, and that portion of Kodiak Island east of a line from the mouth of Saltery Creek to the mouth of Elbow Creek and adjacent small islands in Chiniak Bay.

Summary of Status, Trend, Management Activities, and History of Furbearers in Unit 8

Archeological evidence indicates the only furbearers indigenous to the Kodiak Archipelago are red foxes (*Vulpes vulpes*), river otters (*Lontra canadensis*), and short-tailed weasel (*Mustela erminae*; Rausch 1969). However, evidence suggests ground squirrels (*Spermophilus parryii*) may have been translocated to the archipelago from the Alaska Peninsula by indigenous peoples more than 4,000 years ago (Clark 2010). There is also evidence Native traders brought furbearer carcasses and parts onto the island, resulting in the skeletal remains of those species being deposited in middens. Wildlife management agencies introduced beavers (*Castor canadensis*) and muskrats (*Ondatra zibethicus*) in 1925 and 1929, respectively. Mink, marten (*Martes americana*), and red squirrels (*Sciurus vulgaris*) were introduced in 1952 (Burris and McKnight 1973). Healthy populations of all these furbearers, except mink, now reside in the unit. Raccoons (*Procyon lotor*) were illegally introduced at various times, and sightings were common in the Uyak Bay area until the 1980s. Captive red, blue and Arctic (*Vulpes* spp.) foxes escaped or were released from widespread fox farms in the early 1900s. Introduced foxes did occur on Chirikof Island until 2016 when the U.S. Fish and Wildlife Service successfully eradicated them from the island.

Red foxes, river otters, beavers, and weasels (ermine) are the most abundant furbearers on the archipelago. Marten occur only on Afognak Island. Trappers most commonly pursue red foxes, river otters, and beavers although some ermine trapping does occur. Furbearer populations and trapping pressure have been relatively stable during the past decade. In 2015, the Alaska Board of Game adopted a hunting and trapping season for Arctic fox. The hunting season dates extend from 1 September–15 February with a 2-fox bag limit, and the trapping season dates extend from 10 November to 31 March with no bag limit.

Recreational trappers conduct most of the trapping in Unit 8. Trapping effort for most species except river otter, beaver, and fox is typically affected more by weather than by fluctuations in the fur market. Conversations with local trappers revealed the majority of river otter, beaver, and fox pelts are exported for sale, while most other species are kept on the island for personal use or to sell locally.

Management Direction

Existing Wildlife Management Plans

None.

Goals

ADF&G's goal is to develop measurable objectives for highly targeted furbearer species and collect harvest data on furbearers, particularly fox, river otters, and beavers through the mandatory sealing program and statewide trapper questionnaire.

Codified Objectives

Amounts Reasonably Necessary for Subsistence Uses

The Board of Game has made a positive subsistence finding for furbearers in all units, including Unit 8, with a harvestable surplus to be 90% of the harvestable portion (5 AAC 99.025(13).

Intensive Management

Not applicable.

Management Objectives

Maintain all furbearer populations to allow for consistent, sustainable harvest.

Management Activities

1. Population Status and Trend

Activity 1.1. Monitor furbearer populations.

ADF&G staff have no objective estimates of furbearer populations for Unit 8. Trappers reported most furbearer populations appeared to be stable during RY17–RY21, except along portions of the Kodiak road system where fox populations regularly fluctuate. Fluctuations in fox abundance are likely related to fluctuations in prey abundance and trapping pressure on the road system. Trappers and hunters continue to report observing mink on the Kodiak road system; however, these reports have remained relatively consistent and seem to suggest the mink population has not noticeably increased during RY17–RY21.

Data Needs

Reliable survey methods are needed to determine the current population status and assess fluctuations in population trends and demographics. However, because trapping effort islandwide is minimal and very little trapping occurs outside of the road system, monitoring methods should primarily be focused on the Kodiak road system where most trapping occurs.

Methods

None.

Results and Discussion

No activity was conducted to monitor furbearers using camera surveys or other enumeration methods during RY17–RY21. Due to the limited number of trappers and trapping effort throughout the archipelago, no resources were allocated toward this effort. The impact of trappers on the furbearer populations throughout the archipelago is likely to be minimal.

Recommendations for Activity 1.1

Discontinue. The design and implementation of a reliable technique to determine furbearer population status, and fluctuations in abundance would be useful. However, given the limited number of trappers and trapping effort throughout Kodiak, this effort has limited priority. Yet, if trapping effort increases, additional efforts to monitor furbearers (e.g., camera surveys) should be considered.

2. Mortality-Harvest Monitoring and Regulations

ACTIVITY 2.1. Harvest monitoring and sealing.

Data Needs

Fox trapping and hunting along the Kodiak road system appears to fluctuate in popularity. The use of automated predator calls has become more prevalent in recent years, potentially resulting in an increase in fox harvest. Obtaining reliable information on hunter and trapper effort, methods, and success would be valuable to assess annual fluctuations in popularity.

Methods

ADF&G staff monitored beaver and river otter harvests through an annual mandatory sealing program. We distributed a statewide trapper questionnaire invitation each year to people who purchased a license authorizing them to trap that year. The trappers' responses and fur sealing summaries were compiled into the annual Alaska Trapper Report for the use of managers, trappers and the public. We also recorded the number of furs exported from the state. The Alaska Trapper Report, including all previous reports, can be found on our website: https://www.adfg.alaska.gov/index.cfm?adfg=trapping.reports.

Seasons and Bag Limits

For RY17–RY21

Species	Regulation type	Season	Bag Limit
River otter, marten, and weasel	Trapping	10 November–31 January	No limit
Beaver	Trapping	10 November–30 April	30
Red fox	Trapping	10 November–31 March	No limit
Red fox	Hunting	1 September–15 February	2
Muskrat	Trapping	10 November–10 June	No limit
Squirrels	Trapping/hunting	All year	No limit

Results and Discussion

Harvest by Hunters-Trappers

River otter harvests decreased considerably during the RY17–RY21 reporting period, from an average annual harvest of 202 during the previous 5 years (RY12–RY16) to 78 during RY17–RY21 (Fig. 2, Table 1). The number of successful otter trappers decreased appreciably from an average of 31 during RY12–RY16 to 17 during RY17–RY21. The average take per trapper increased from an average of 6.3 otters per trapper during RY12–RY16 to an average of 4.5 during RY17–RY21.

Beaver harvest decreased during the RY17–RY21 period, from an average annual harvest of 67 during RY12–RY16 to 58 during RY17–RY21 (Fig. 2, Table 2). The number of successful trappers greatly decreased during RY17–RY21. There was an average of 17 successful trappers annually in RY12–RY16, but that went down to an average of 12 successful trappers annually during RY17–RY21. The average take per trapper went from an average of 4.0 beavers per trapper during RY12–RY16 to an average 4.8 beavers per trapper during RY17–RY21.

Red foxes are the most commonly pursued furbearer in Unit 8 but current methods of monitoring harvest may underestimate take. Sealing is not currently required for red fox. The average annual harvest by trappers and hunters is estimated at 100–300. Some harvested fox are home-tanned or dried for personal use and we suspect hides are often shipped without fur export permits.

Although we have no objective measure, conversations with local trappers suggest there was very little trapping effort or take of muskrat or squirrels during RY17–RY21, except for occasional annual spikes in harvest, presumably due to a limited number of trappers concentrating efforts on a particular species. For example, during RY17 and RY20, we observed a spike in muskrat and squirrel harvest, respectively, during those regulatory years with no appreciable difference in the number of trappers. Harvests of marten, mink, and weasels were also negligible (Table 3) except for a temporary spike in weasel harvest during RY18.

Harvest Chronology

November is commonly the most active month for fur trappers in Unit 8, although the harvest chronology for river otters and beavers varies annually (Tables 4 and 5).

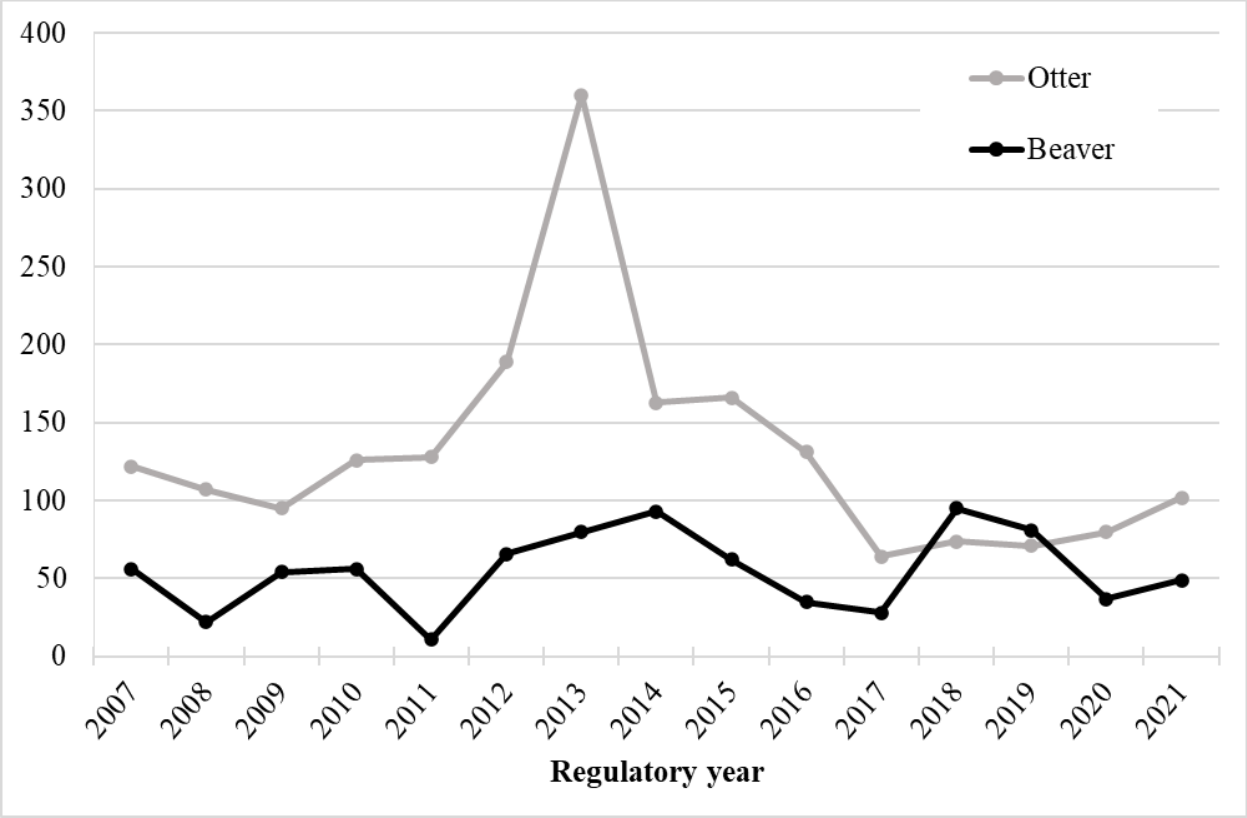

Figure 2. Beaver and river otter harvest, regulatory years 2007–2021, Unit 8, Kodiak Archipelago.

Transport Methods

Boats and highway vehicles were the most common modes of transportation for otter and beaver trappers during RY17–RY21 (Tables 6 and 7), but methods are variable with many trappers using aircraft and 4-wheelers in some years.

Recommendations for Activity 2.1

Continue to monitor beaver and river otter harvests through an annual mandatory sealing program. Modify the trapper questionnaire to allow for the collection of unit-specific information regarding trapping effort, trapping method, and trapping success.

3. Habitat Assessment-Enhancement

There were no habitat assessment or enhancement activities for Unit 8 furbearer management during RY17–RY21. Logging on Afognak Island has been the only major land-use activity altering furbearer habitat throughout the archipelago. Clearcut logging of old-growth timber has been detrimental to marten populations in Southeast Alaska (Young 1990), but there have been no studies of the effects of logging on furbearers in Unit 8.

Table 1. River otter harvest, regulatory years 2007–2021, Unit 8, Kodiak Archipelago.

Regulatory year	Male		Female		Unknown number	Total number	Successful trappers
	Number	Percent	Number	Percent			
2007	52	44.4	65	55.6	5	122	21
2008	56	52.8	50	47.2	2	108	18
2009	58	63.7	33	36.3	4	95	20
2010	68	54.8	56	45.2	2	126	26
2011	57	63.3	33	36.7	39	129	26
2012	65	39.2	101	60.8	22	188	26
2013	148	41.8	206	58.2	6	360	38
2014	58	40.3	86	59.7	19	163	32
2015	81	50.3	80	49.7	5	166	32
2016	62	49.2	64	50.8	5	131	29
2017	36	57.1	27	42.9	1	64	17
2018	35	47.9	38	52.1	1	74	18
2019	43	61.4	27	38.6	1	71	16
2020	49	62.8	29	37.2	2	80	19
2021	15	60.0	10	40.0	77	102	17

Table 2. Beaver harvest, regulatory years 2007–2021, Unit 8, Kodiak Archipelago.

Regulatory year	Juveniles		Adults		Unknown number	Total number	Successful trappers
	Number	Percent	Number	Percent			
2007	15	28.8	37	71.2	4	56	15
2008	4	21.1	15	78.9	3	22	7
2009	19	37.3	32	62.7	3	54	13
2010	17	30.9	38	69.1	1	56	10
2011	2	20.0	8	80.0	1	11	8
2012	29	44.6	36	55.4	1	66	13
2013	20	25.0	60	75.0	0	80	20
2014	19	21.1	71	78.9	3	93	20
2015	22	37.9	36	62.1	4	62	20
2016	5	16.7	25	83.3	5	35	11
2017	9	33.3	18	66.7	1	28	9
2018	23	24.2	72	75.8	0	95	15
2019	20	24.7	61	75.3	0	81	13
2020	15	41.7	21	58.3	1	37	11
2021	15	31.9	32	68.1	2	49	13

Table 3. Trapping results from ADF&G trapper questionnaire, regulatory years 2007–2021, Unit 8, Kodiak Archipelago.

Regulatory year	N[a]	Arctic fox	Beaver	Coyote	Ermine	Lynx	Marten	Mink	Muskrat	Otter	Red fox	Squirrel	Wolf	Wolverine
2007	–	0	52	0	18	0	7	0	35	72	226	10	0	0
2008	–	0	10	0	31	0	14	0	3	41	173	0	0	0
2009	–	–	–	–	–	–	–	–	–	–	–	–	–	–
2010	7	0	20	0	5	0	10	0	0	35	104	0	0	0
2011	7	12	6	0	0	0	0	0	0	50	41	0	0	0
2012	14	0	28	0	26	0	7	0	10	88	164	0	0	0
2013	7	0	27	0	0	0	2	0	0	119	64	0	0	0
2014	–	–	–	–	–	–	–	–	–	–	–	–	–	–
2015	7	0	46	0	11	0	1	0	1	415	133	0	0	0
2016	9	0	10	1	2	0	46	0	0	68	56	0	0	0
2017	6	0	8	0	4	0	0	2	73	31	27	0	0	0
2018	10	0	30	0	44	0	11	1	0	35	53	0	0	0
2019	7	0	4	0	17	0	0	2	0	16	19	0	0	0
2020	10	0	13	0	11	0	0	2	0	20	27	75	0	0
2021	1	0	1	0	0	0	0	0	0	0	5	0	0	0

Note: An en dash (–) indicates no data were collected.
[a] Indicates the number of trapper questionnaire respondents.

Table 4. River otter harvest chronology by month, regulatory years 2002–2021, Unit 8, Kodiak Archipelago.

	November		December		January			
Regulatory year	No.	Percent	No.	Percent	No.	Percent	Unknown No.	Total No.
2002	23	21.1	73	67.0	13	11.9	1	110
2003	54	24.2	101	45.3	68	30.5	12	235
2004	85	26.9	81	25.6	150	47.5	10	326
2005	44	18.9	168	72.1	21	9.0	0	233
2006	45	31.3	85	59.0	14	9.7	8	152
2007	43	35.2	56	45.9	23	18.9	0	122
2008	33	34.0	32	33.0	32	33.0	10	107
2009	20	21.1	68	71.6	7	7.4	0	95
2010	44	35.8	63	51.2	16	13.0	3	126
2011	23	18.9	86	70.5	13	10.7	6	128
2012	55	30.9	70	39.3	53	29.8	11	189
2013	130	36.1	86	23.9	144	40.0	0	360
2014	57	35.0	85	52.1	21	12.9	0	163
2015	42	25.0	81	48.2	45	26.8	0	168
2016	48	36.9	56	43.1	26	20.0	1	131
2017	20	31.7	15	23.8	28	44.4	1	64
2018	24	32.4	16	21.6	34	45.9	0	74
2019	17	24.6	32	46.4	20	29.0	2	71
2020	29	36.3	37	46.3	14	17.5	0	80
2021	50	49.0	28	27.5	24	23.5	0	102

Table 5. Beaver harvest chronology by month, regulatory years 2002–2021, Unit 8, Kodiak Archipelago.

Regulatory year	November		December		January		February		March		April		May		Unk.	Total
	No.	Percent	No.	Percent	No.	Percent	No.	Percent	No.	Percent	No.	Percent	No.	Percent	No.	No.
2002	24	33.8	8	11.3	8	11.3	4	5.6	4	5.6	23	32.4	0	0.0	0	71
2003	17	25.4	34	50.7	8	11.9	0	0.0	3	4.5	5	7.5	0	0.0	0	67
2004	16	41.0	6	15.4	7	17.9	1	2.6	3	7.7	6	15.4	0	0.0	18	57
2005	4	13.8	17	58.6	1	3.4	6	20.7	0	0.0	1	3.4	0	0.0	1	30
2006	14	42.4	5	15.2	2	6.1	2	6.1	0	0.0	10	30.3	0	0.0	0	33
2007	23	47.9	7	14.6	4	8.3	1	2.1	7	14.6	6	12.5	0	0.0	1	49
2008	7	35.0	5	25.0	5	25.0	0	0.0	2	10.0	1	5.0	0	0.0	2	22
2009	14	25.9	25	46.3	10	18.5	0	0.0	0	0.0	5	9.3	0	0.0	0	54
2010	29	51.8	9	16.1	9	16.1	1	1.8	4	7.1	4	7.1	0	0.0	0	56
2011	3	27.3	2	18.2	3	27.3	0	0.0	0	0.0	3	27.3	0	0.0	0	11
2012	39	60.0	3	4.6	15	23.1	0	0.0	0	0.0	8	12.3	0	0.0	1	66
2013	25	31.6	27	34.2	15	19.0	3	3.8	6	7.6	3	3.8	0	0.0	0	79
2014	39	41.9	37	39.8	11	11.8	3	3.2	3	3.2	0	0.0	0	0.0	0	93
2015	21	34.4	23	37.7	10	16.4	6	9.8	1	1.6	0	0.0	0	0.0	1	62
2016	19	54.3	0	0.0	9	25.7	0	0.0	0	0.0	7	20.0	0	0.0	0	35
2017	9	32.1	11	39.3	2	7.1	1	3.6	0	0.0	5	17.9	0	0.0	0	28
2018	5	5.3	14	14.7	0	0.0	5	5.3	13	13.7	55	57.9	3	3.2	0	95
2019	18	22.2	39	48.1	0	0.0	0	0.0	0	0.0	24	29.6	0	0.0	0	81
2020	11	29.7	3	8.1	0	0.0	4	10.8	0	0.0	19	51.4	0	0.0	0	37
2021	4	8.2	3	6.1	0	0.0	11	22.4	18	36.7	13	26.5	0	0.0	0	49

Table 6. River otter harvest by transport method, regulatory years 2002–2021, Unit 8, Kodiak Archipelago.

Regulatory year	Airplane		Boat		ATV[a]		Snowmachine		ORV[b]		Hwy. vehicle		Foot		Unk.	
	No.	Percent	No.	Percent	No.	Percent	No.	Percent	No.	Percent	No.	Percent	No.	Percent	No.	*n*
2002	17	15.6	15	13.8	12	11.0	0	0.0	0	0.0	65	59.6	0	0.0	1	110
2003	23	10.7	147	68.7	9	4.2	0	0.0	0	0.0	35	16.4	0	0.0	19	233
2004	13	4.6	221	78.1	29	10.2	0	0.0	0	0.0	20	7.1	0	0.0	42	325
2005	28	12.7	176	79.6	12	5.4	0	0.0	0	0.0	5	2.3	0	0.0	14	235
2006	27	20.1	79	59.0	18	13.4	0	0.0	2	1.5	6	4.5	2	1.5	18	152
2007	5	4.3	60	51.3	11	9.4	4	3.4	0	0.0	37	31.6	0	0.0	6	123
2008	3	3.8	70	87.5	0	0.0	0	0.0	0	0.0	2	2.5	5	6.3	27	107
2009	3	3.4	55	63.2	0	0.0	1	1.1	0	0.0	11	12.6	17	19.5	8	95
2010	11	9.6	59	51.3	6	5.2	0	0.0	1	0.9	37	32.2	1	0.9	10	125
2011	4	3.5	80	70.2	1	0.9	0	0.0	0	0.0	28	24.6	1	0.9	14	128
2012	8	4.3	117	62.6	9	4.8	0	0.0	0	0.0	47	25.1	6	3.2	2	189
2013	22	6.1	281	78.1	14	3.9	0	0.0	0	0.0	32	8.9	11	3.1	0	360
2014	10	6.3	98	61.3	15	9.4	0	0.0	3	1.9	26	16.3	8	5.0	2	162
2015	15	8.9	93	55.4	14	8.3	0	0.0	14	8.3	20	11.9	12	7.1	2	170
2016	24	18.6	73	56.6	8	6.2	0	0.0	0	0.0	17	13.2	7	5.4	0	129
2017	11	26.8	9	22.0	1	2.4	0	0.0	0	0.0	19	46.3	1	2.4	23	64
2018	3	4.1	53	71.6	8	10.8	0	0.0	0	0.0	5	6.8	5	6.8	0	74
2019	18	28.1	25	39.1	9	14.1	0	0.0	0	0.0	12	18.8	0	0.0	7	71
2020	8	10.3	55	70.5	0	0.0	0	0.0	0	0.0	14	17.9	1	1.3	2	80
2021	1	1.0	69	68.3	0	0.0	0	0.0	0	0.0	14	13.9	17	16.8	1	102

[a] ATV stands for all-terrain vehicle.
[b] ORV stands for off-road vehicle.

Table 7. Beaver harvest by transport method, regulatory years 2002–2021, Unit 8, Kodiak Archipelago.

Regulatory year	Airplane		Boat		ATV[a]		Snowmachine		ORV[b]		Hwy. vehicle		Foot		Unk.	
	No.	Percent	No.	Percent	No.	Percent	No.	Percent	No.	Percent	No.	Percent	No.	Percent	No.	*n*
2002	25	36.8	8	11.8	29	42.6	0	0.0	0	0.0	6	8.8	0	0.0	3	71
2003	9	13.6	7	10.6	34	51.5	0	0.0	0	0.0	16	24.2	0	0.0	1	67
2004	8	14.0	10	17.5	34	59.6	0	0.0	0	0.0	5	8.8	0	0.0	0	57
2005	2	6.9	2	6.9	17	58.6	0	0.0	0	0.0	8	27.6	0	0.0	1	30
2006	0	0.0	9	34.6	12	46.2	0	0.0	0	0.0	5	19.2	0	0.0	6	32
2007	8	17.4	7	15.2	12	26.1	0	0.0	0	0.0	17	37.0	2	4.3	10	56
2008	0	0.0	0	0.0	10	45.5	0	0.0	0	0.0	3	13.6	9	40.9	0	22
2009	2	3.7	2	3.7	7	13.0	0	0.0	0	0.0	41	75.9	2	3.7	0	54
2010	0	0.0	11	32.4	6	17.6	0	0.0	6	17.6	10	29.4	1	2.9	6	40
2011	0	0.0	2	25.0	0	0.0	0	0.0	1	12.5	5	62.5	0	0.0	3	11
2012	3	4.5	10	15.2	22	33.3	0	0.0	0	0.0	31	47.0	0	0.0	0	66
2013	0	0.0	12	15.4	19	24.4	0	0.0	0	0.0	37	47.4	10	12.8	2	80
2014	37	39.8	14	15.1	5	5.4	0	0.0	8	8.6	25	26.9	4	4.3	0	93
2015	2	3.2	21	33.9	25	40.3	0	0.0	0	0.0	14	22.6	0	0.0	0	62
2016	2	6.5	15	48.4	12	38.7	0	0.0	0	0.0	2	6.5	0	0.0	4	35
2017	1	3.8	13	50.0	8	30.8	0	0.0	0	0.0	4	15.4	0	0.0	2	28
2018	5	5.3	33	34.7	7	7.4	0	0.0	0	0.0	34	35.8	16	16.8	0	95
2019	2	2.5	35	43.8	14	17.5	14	17.5	0	0.0	12	15.0	3	3.8	1	81
2020	2	5.4	29	78.4	0	0.0	0	0.0	0	0.0	4	10.8	2	5.4	0	37
2021	2	4.1	31	63.3	8	16.3	0	0.0	0	0.0	1	2.0	7	14.3	0	49

[a] ATV stands for all-terrain vehicle.
[b] ORV stands for off-road vehicle.

NONREGULATORY MANAGEMENT PROBLEMS OR NEEDS

Beavers occasionally cause flooding of roads, trails, and private land by plugging culverts. Between 1 and 5 nuisance beavers were removed adjacent to roads in northeastern Kodiak Island annually by trapping and shooting during RY17–RY21. The Kodiak Island Borough is occasionally issued a beaver depredation permit to allow control of nuisance beavers along the roadway or near the water catchment system.

Conflicts between trappers and other recreational users occur where trappers make sets near beaches, roadsides, or popular, widely used trails. Deer (*Odocoileus hemionus*), bear (*Ursus arctos*) and eagles (*Haliaeetus leucocephalus*) have been reportedly caught in fox snares and deer are occasionally reported dead or injured in snares. Domestic dogs and cats are also occasionally caught in snare sets, prompting articles and letters to the local newspaper and ADF&G office. Typically, inexperienced trappers appear to be responsible for the snared bear, deer, and pets, and better trapper education could help alleviate the problem.

Data Recording and Archiving

Furbearer harvest data is electronically archived on the DWC Wildlife Information Network (WinfoNet) internal database.

Agreements

Currently there are no agreements with other agencies pertaining to furbearer management.

Permitting

No permits were needed to conduct furbearer management activities in Unit 8 during RY17–RY21.

Conclusions and Management Recommendations

Furbearer harvest for most species remains low with highly variable annual harvest for more valuable species. Fluctuations in annual harvest vary due to oscillations in fur prices as well as local weather conditions and fur quality. Trapper participation remained relatively constant in RY17–RY21 with fewer than 25 beaver trappers and fewer than 35 otter trappers active in most years. Although no robust methods to obtain information on furbearer abundance currently exist for Unit 8, harvest of furbearers islandwide is likely below sustainable yield due to reduced access and lack of harvest on vast areas of public land (i.e., the Kodiak National Wildlife Refuge), which comprises most of the island. Given the challenges and logistical constraints of obtaining reliable unitwide population information for most species and the low participation and distribution of trappers within the unit, there is little need to intensify management or develop specific management objectives. However, it is important to continue to explore ways to objectively ascertain furbearer population trends when feasible, particularly in highly accessible areas, such as the Kodiak road system.

II. Project Review and RY22–RY26 Plan

Review of Management Direction

MANAGEMENT DIRECTION

- Continue providing furbearer harvest opportunities unitwide that do not negatively impact overall population status.
- Reduce harvest limits as necessary in highly accessible areas to minimize local population sinks.

GOALS

The furbearer management goal for Unit 8 is to maintain a healthy, viable population providing sufficient sport and subsistence harvest opportunities for residents and nonresidents of Alaska.

CODIFIED OBJECTIVES

Amounts Reasonably Necessary for Subsistence Uses

The Board of Game has made a positive subsistence finding for furbearers in all units, including Unit 8, with a harvestable surplus to be 90% of the harvestable portion (5 AAC 99.025(13).

Intensive Management

Not applicable.

MANAGEMENT OBJECTIVES

Maintain all furbearer populations to allow for consistent, sustainable harvest.

REVIEW OF MANAGEMENT ACTIVITIES

1. Population Status and Trend

ACTIVITY 1.1. Monitor furbearer populations.

Data Needs

Reliable methods are needed to determine the current population status and assess fluctuations in population trends. However, because trapping effort islandwide is minimal and very little trapping occurs outside of the road system, monitoring methods should primarily be focused on the Kodiak road system, where most trapping occurs.

Methods

No methods are currently being employed; however, the implementation of a camera survey along the Kodiak road system to assess fox abundance and distribution has previously been considered.

2. Mortality-Harvest Monitoring

ACTIVITY 2.1. Harvest Monitoring and Sealing.

Data Needs

Obtaining unit-specific information regarding trapping effort, trapping method, and trapping success would be valuable, particularly for highly targeted species such as fox and river otter. In addition, acquiring similar information specific to the Kodiak road system would also be useful and allow biologists to address area-specific fluctuations in trapping effort and success.

Methods

Although current methods provide valuable information statewide, obtaining unit- or area-specific information using the trapping questionnaire would be useful.

3. Habitat Assessment-Enhancement

No activities for furbearer habitat assessment or enhancement are expected in Unit 8 furbearer management.

NONREGULATORY MANAGEMENT PROBLEMS OR NEEDS

Data Recording and Archiving

Furbearer harvest data is electronically archived on DWC's WinfoNet internal database.

Agreements

Currently there are no agreements with other agencies pertaining to furbearer management.

Permitting

No permits are expected in RY22–RY26.

Acknowledgments

Several guides, trappers, transporters, and hunters regularly provide information to ADF&G staff on furbearer observations, including local furbearer trends, harvest information, and furbearer distribution. The observations contributed by these individuals have been extremely helpful when identifying issues or areas of concern (i.e., the expansion of invasive mink).

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