

Species Management Report and Plan ADF&G/DWC/SMR&P-2017-6

Wolf Management Report and Plan, Game Management Unit 1B:

REPORT PERIOD 1 July 2010–30 June 2015, and

PLAN PERIOD 1 July 2015–30 June 2020

Richard E. Lowell



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Wolf Management Report and Plan, Game Management Unit 1B:

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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 Thomas V. Schumacher, Management Coordinator for the Division of Wildlife Conservation, Douglas.

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Purpose of this Report

This report provides a record of survey and inventory management activities for wolves in Unit 1B for the previous 5 regulatory years (RY) and plans for survey and inventory management activities in the 5 years following the end of that period. A regulatory year begins 1 July and ends 30 June (e.g., RY10 = 1 July 2010–30 June 2011). 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 wolf (*Canis lupus*) management reports of survey and inventory activities that were previously produced every 3 years.

I. RY10–RY14 Management Report

Management Area

Game Management Unit 1B consists of approximately 3,000 mi² on the central Southeast Alaska mainland, extending from Cape Fanshaw south to Lemesurier Point and northeast of those points to the Canadian Border (Fig. 1). There are no major communities in Unit 1B, however small settlements exist at Point Agassiz near Thomas Bay, on Farm Island in the Stikine Delta, and at Meyer's Chuck on the Cleveland Peninsula.

The Stikine River is a transboundary mainland river system that originates in Spatsizi Plateau of British Columbia and transects the Coast Range before flowing into Sumner Strait near Wrangell, Alaska. About 30 miles of the river lie within the boundaries of Alaska where it flows through a steep valley 2–3 km wide. The Stikine Delta is the largest intertidal wetland in Southeast Alaska and consists of 200 km² (77 mi²) of marsh and tidal flats (Craighead et al. 1984).

Most land area in Unit 1B is within the Tongass National Forest and under federal ownership, with smaller parcels under tribal, state, and private ownership. Elevation within Unit 1B ranges from sea level to 9,078 ft. Predominant vegetative communities occurring at low to moderate elevations (<1,500 ft) include Sitka spruce (*Picea sitchensis*) western hemlock (*Tsuga heterophylla*) coniferous forest, mixed-conifer muskeg and deciduous riparian forests. Mountain hemlock (*T. mertensiana*) dominated forest comprises a subalpine, timberline band occupying elevations between 1,500 and 2,500 ft. In addition to wolves, big game species present and widely distributed throughout Unit 1B include moose (*Alces alces*), mountain goats (*Oreamnos americanus*), deer (*Odocoileus hemionus*), black bears (*Ursus americanus*), and brown bears (*U. arctos*).

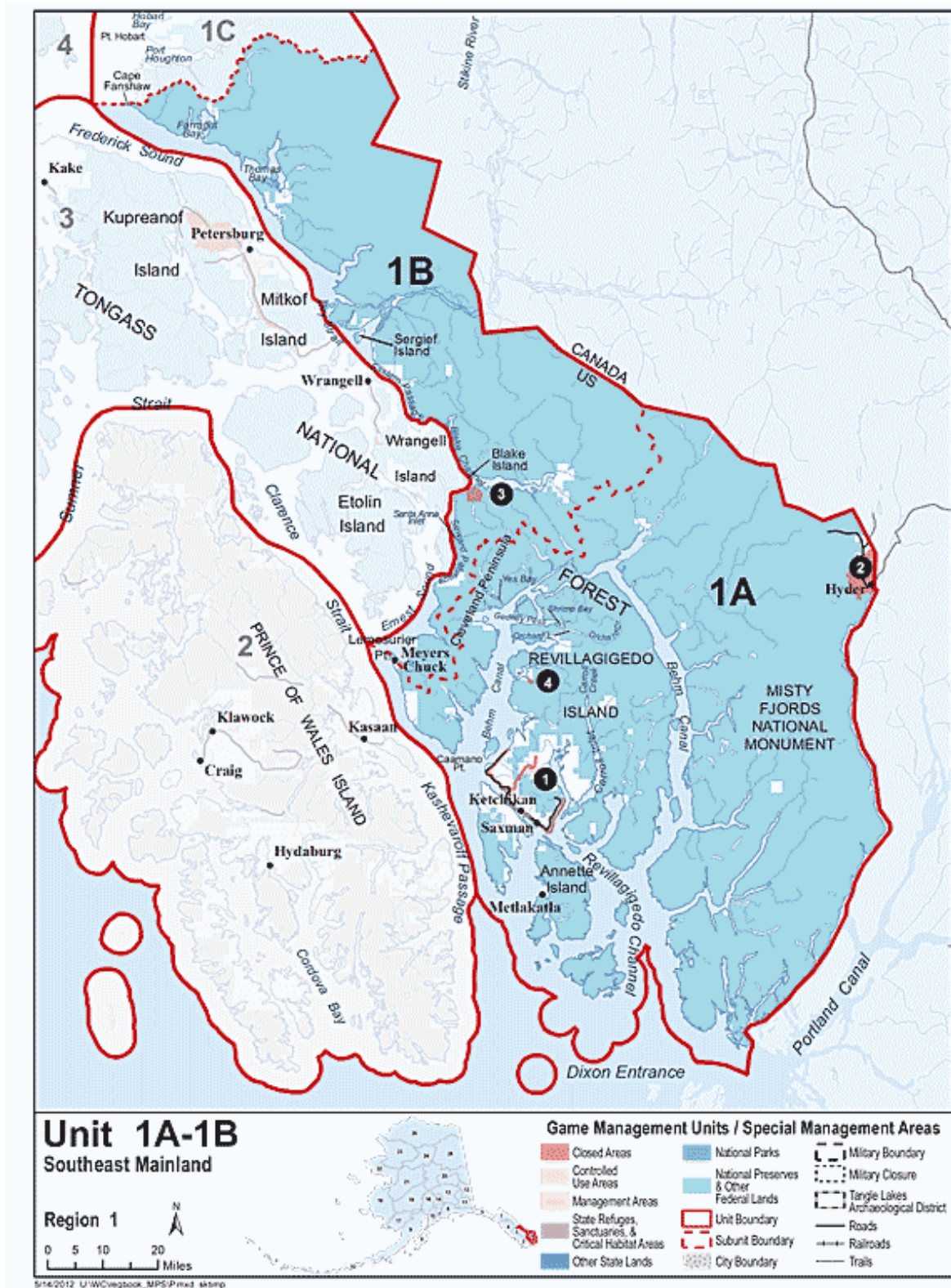


Figure 1. Map of Unit 1B, Southeast Alaska.

Summary of Status, Trend, Management Activities, and History of Wolves in Unit 1B

Wolves inhabit the mainland of Unit 1B, where they immigrated following postglacial immigration and establishment of Sitka black-tailed deer populations. Deer are the primary food source for wolves in Southeast Alaska; however, on the Unit 1B mainland, deer typically occur in small isolated pockets and at relatively low density. Moose and mountain goats are probably the most important prey for wolves in portions of the mainland where deer are absent or occur in low numbers. Salmon and beaver likely also supplement Unit 1B wolf diets. Because of the relatively short water crossing involved, population interchange between wolves on portions of the Unit 1B mainland and the adjacent Unit 3 islands probably occurs on a regular basis.

In an effort to reduce wolf populations and increase deer numbers, government wolf control programs and bounties were implemented until the 1970s. Today a few recreational trappers and opportunistic hunters harvest wolves in the subunit, but the annual take is relatively low compared to the adjacent Unit 3 islands. Wolf densities are believed to be higher in Unit 1B than in interior regions of Alaska, but due to dense forest cover, they cannot be surveyed using common aircraft-based methods.

In fall 2002, due to concerns about early and late season pelt quality and harvesting wolves during the denning period, the Alaska Board of Game (BOG) shortened the Region I (Southeast Alaska) wolf season by closing the months of August and April to wolf hunting. In a similar action, BOG also shortened the wolf trapping season by closing the month of April. We suspect these actions are primarily responsible for the reduced wolf harvest in Unit 1B during RY03 and RY04.

In fall 2004 BOG, composed of new appointees, rescinded the previous board's decision to shorten the wolf hunting season and restored the 1 August–30 April wolf hunting season throughout Region I. In separate actions, BOG restored the month of April to the wolf trapping season and eliminated the requirement that the left foreleg of any wolf taken in Units 1–5 remain naturally attached to the hide until sealed.

Most of the central Southeast Alaska wolf harvest takes place near local communities in nearby Unit 3; therefore much of Unit 1B is not hunted or trapped. Most wolves harvested in the unit are taken in the vicinity of Thomas Bay, Farragut Bay, and Bradfield Canal.

Management Direction

EXISTING WILDLIFE MANAGEMENT PLANS

The department has yet to develop a management plan for Unit 1B wolves.

GOAL

Maintain a sustainable wolf population in all areas of historic range.

CODIFIED OBJECTIVES

Amounts Reasonably Necessary for Subsistence Harvest

BOG has made a “positive” customary and traditional use determination for wolves in Unit 1B; however the amount of harvest necessary for subsistence has not been established. Because there is no resident subsistence hunt for wolves, the resident wolf hunting season in Unit 1B is classified as a “General hunt only.”

Intensive Management

BOG has not identified Unit 1B deer or moose populations as important for providing high levels of harvest for human consumptive uses. Therefore, no intensive management (5 AAC 92.108) population or harvest objectives have been established for deer or moose in the unit, and a wolf predation control program has not been developed.

MANAGEMENT OBJECTIVE

Maintain a sustainably harvestable wolf population in all areas of historic range.

MANAGEMENT ACTIVITIES

Wolf harvests are monitored through a mandatory pelt-sealing program. Data are collected on the number of wolves killed, sex, date of take, method of take, method of transportation used from home to the field, and when possible, an estimate of the number of wolves accompanying those killed. From RY97 to RY02 the left foreleg of each sealed wolf was collected to determine age and to opportunistically gather tissue samples for genetic analysis.

This investigation was reinitiated during the current reporting period, and the hide, hair, and tissue samples and foreleg bones from harvested wolves were collected during the sealing process. When possible, wolf carcass weights and condylobasal skull measurements were also obtained for subspecies analysis.

Observations of wolves made by Alaska Department of Fish and Game (ADF&G) and U.S. Forest Service (USFS) biologists, trappers, hunters, and other members of the public were reviewed. The annual statewide trapper questionnaire report supplied additional information, including individual trapper’s subjective assessment of the population status of wolves in Unit 1B.

1. Population Status and Trend

Sealing records provide insufficient data to make a meaningful estimate of the Unit 1B wolf population. Current estimates of the population are based on average territory and pack size from wolf research on Prince of Wales Island (Person et al. 1996). Deer typically occur in isolated pockets along the Unit 1B mainland and densities are much lower than on Prince of Wales Island. Nonetheless, Unit 1B has alternative prey items (moose and mountain goats) that are not present on Prince of Wales. Because much of Unit 1B consists of high elevation rock and ice,

wolf abundance in the unit was conservatively estimated based on the amount of habitat below 1,500 ft in elevation. With approximately 2,450 km² of habitat in elevations below 1,500 ft, Unit 1B wolf population is thought to contain approximately 85 wolves (range from 45 to 125) in 8 packs, but there is no way of verifying the estimate.

Conversations with trappers, hunters, pilots, and other biologists, along with information from trapper questionnaires, indicated the wolf population increased during the 1990s in response to increases in deer numbers. More recently, increases in moose distribution and abundance have probably contributed to relatively high wolf density in Unit 1B.

ACTIVITY 1.1. Discuss wolf sightings reported by agency biologists and members of the public.

Data Needs

No wolf research has been conducted in Unit 1B; therefore there is no information on the ecology, abundance, and population demographics of wolves in the unit.

Methods

Observations of wolves reported by ADF&G and USFS biologists, trappers, hunters, pilots, and other members of the public were reviewed. Additionally, an annual statewide trapper questionnaire was distributed to trappers, requesting their subjective assessment of the population status of wolves in Unit 1B.

Results and Discussion

Reported wolf sightings provide insights into the size and distribution of wolf packs in the unit.

Recommendations for Activity 1.1.

Continue with no changes.

2. Mortality-Harvest Monitoring and Regulations

ACTIVITY 2.1. Monitor the wolf harvest through a mandatory pelt-sealing program.

Data Needs

The reported wolf harvest probably underrepresents the actual take of wolves in the unit. An estimate of the extent of unreported human-caused mortality is needed.

Methods

Data on the number of wolves killed, sex, date of take, method of take, and method of transportation used from home to the field were collected when wolves were presented for sealing, and when possible, an estimate of the number of wolves accompanying those killed was obtained.

Recommendations for Activity 2.1.

Continue monitoring wolf harvest through the mandatory pelt sealing process with no changes to the current system. Ways to document unreported human-caused mortality or waste of trapped wolves should be evaluated.

ACTIVITY 2.2. Continue collecting biological samples from harvested wolves.

Data Needs

Wolf hair and tissue samples are needed to evaluate the genetic structure of wolf populations in the region and to assess the level of interchange between mainland and island populations. Better information regarding the spatial and seasonal variation in wolf diets across the region can also be gathered by stable isotope analysis of tissues. In addition to genetic samples, additional data are needed on wolf body weights and skull measurements to better understand the morphology and subspecies status of wolves inhabiting Southeast Alaska.

Methods

During the sealing process, we opportunistically collected hair and muscle tissue samples from harvested wolves for DNA analysis and stable isotope diet analysis. When available, the foreleg bone is also collected from harvested wolves to gain insight into the relative age structure (juvenile, subadult, adult) of wolves taken by hunters and trappers. Trappers are encouraged to present complete (unskinned) carcasses of wolves in order to obtain whole carcass weights. When skulls were available, condylobasal measurements are collected for potential use in subspecies classification.

Results and Discussion

Analyses of wolf DNA, diet analysis, and morphology are ongoing.

Recommendations for Activity 2.2.

Efforts to obtain hair, muscle tissue, and foreleg bones from wolves during the pelt sealing process should be continued, and efforts to obtain whole carcass weights and condylobasal skull measures should also be continued.

Seasons and Bag Limits

Unit and bag limit	Resident and nonresident season
<i>RY10</i>	
Unit 1B:	
TRAPPING: No limit.	1 Nov–30 Apr
HUNTING: Five wolves (General hunt only).	1 Aug–30 Apr
<i>RY11–RY14</i>	
Unit 1B remainder:	
TRAPPING: No limit.	1 Nov–30 Apr
HUNTING: Five wolves (General hunt only).	1 Aug–30 Apr

Unit and bag limit	Resident and nonresident season
Unit 1B, south of Bradfield Canal and the East Fork Bradfield River:	
TRAPPING: No limit.	1 Nov–30 Apr
HUNTING: Five wolves (General hunt only).	1 Aug–31 May

Results and Discussion

Hunter-Trapper Harvest

During the report period the Unit 1B wolf harvest averaged 12 wolves per year, ranging from a low of 6 in RY10 to a high of 21 in RY14 (Table 1). The number of successful trappers and/or hunters averaged 5 per year, and ranged from a low of 2 in RY10 to a high of 7 each in RY12 and RY13. The harvest of 21 wolves in RY14 was the highest unitwide harvest since at least 1982.

Trapping is usually the primary method of take for wolves in Unit 1B. During the report period 78% of the wolves harvested were taken with traps or snares and 22% were shot. Wolves that were shot are usually harvested by hunters incidental to hunting deer, bears, and moose.

Most Unit 1B wolves are harvested on the mainland near the communities of Petersburg, Wrangell and Meyers Chuck. During the report period wolf harvest was reported in 12 wildlife analysis areas (WAA) within Unit 1B with the largest take occurring in WAA #1605 (Thomas Bay) and WAA #1811 (Back Channel, Mainland) each with 10 wolves, followed by WAA #1601 (Farragut Bay) with 9 wolves, and WAA #1817 (Cleveland Peninsula) with 8 wolves. Harvest in the remaining 8 WAAs ranged from 1 to 5 wolves.

Harvest Chronology

Historically, most Unit 1B wolves are taken during January, December, February, and September, in descending order. During the current report period most wolves were taken during March, February, January, and November, in descending order (Table 2). Wolves harvested in August, September, and October are usually taken incidental to other hunting activities.

In RY10 BOG extended the wolf hunting season in the southern portion of Unit 1B until the end of May. The extension of the wolf hunting season was intended to aid in recovery of low deer numbers on the Cleveland Peninsula. Despite the season extension, just 1 of 60 wolves taken during the report period was harvested during May.

Table 1. Unit 1B wolf harvest, Southeast Alaska, regulatory years^a 2005–2014.

Regulatory year	Reported harvest				Method of take			Successful trappers-hunters
	M	F	Unk	Total	Trap-Snare	Shot	Unk	
2005	9	4		13	13	0		3
2006	5	7		12	10	2		7
2007	2	3		5	2	3		3
2008	3	1		4	3	1		3
2009	2	2		4	2	1	1	3
2010	3	2	1	6	6	0		2
2011	6	4		10	5	5		6
2012	6	8		14	9	5		7
2013	4	5		9	7	2		7
2014	10	9	2	21	20	1		5

^a Regulatory year begins 1 July and ends 30 June, e.g., regulatory year 2005 = 1 July 2005–30 June 2006.

Table 2. Unit 1B wolf harvest percent chronology, Southeast Alaska, regulatory years^a 2005–2014.

Regulatory year	Harvest periods												<i>n</i>
	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	
2005	0	0	0	0	0	47	23	15	15	0	0	0	13
2006	0	0	0	8	8	17	0	42	0	25	0	0	12
2007	0	0	40	0	0	0	0	40	20	0	0	0	5
2008	0	0	0	0	0	0	100	0	0	0	0	0	4
2009	0	0	0	25	0	0	0	0	25	50	0	0	4
2010	0	0	0	0	0	33	33	17	17	0	0	0	6
2011	0	0	0	0	20	0	10	10	50	10	0	0	10
2012	0	0	7	14	7	0	21	14	29	0	7	0	14
2013	0	0	0	11	11	11	22	22	22	0	0	0	9
2014	0	0	0	5	5	19	19	33	19	0	0	0	21

^a Regulatory year begins 1 July and ends 30 June, e.g., regulatory year 2005 = 1 July 2005–30 June 2006.

Transport Methods

Trappers and/or hunters using small boats typically account for most, if not all, wolves harvested in Unit 1B. Such was the case during the current report period when 58 of 60 wolves were taken by people using boats. Just 1 wolf was taken by a person using a 4-wheeler, and a second wolf was taken by a person using a highway vehicle.

Other Mortality

The reported wolf harvest probably underrepresents the actual take of wolves during the report period. Poaching is suspected to occur and it is likely that some wolves are shot and left in the field each year or otherwise go unsealed. Wolves are difficult animals to trap and kill, and it is not unreasonable to assume that some mortality also occurs as a result of wounding loss or escapes from traps. Some wolves caught in traps that are not checked regularly, particularly intertidal drowning sets, are occasionally scavenged by other animals and the hides so badly damaged that they are frequently discarded in the field with the harvest going unreported.

Alaska Board of Game Actions and Emergency Orders

In fall 2010, based on concerns about low deer numbers on the Cleveland Peninsula, BOG extended the wolf hunting season to 31 May in that portion of Unit 1B located south of Bradfield Canal and the East Fork Bradfield River. At the request of the department, the regulation change was expedited and the wolf season extension took effect on 1 May 2011. While the department had opposed previous attempts to extend the wolf hunting season to the end of May, in this instance concerns about low deer numbers on the Cleveland Peninsula prompted the department to support the wolf season extension in southern Unit 1B. It was hoped that the wolf harvest could be increased by affording the annual influx of nonresident black bear hunters the opportunity to take wolves incidental to spring bear hunting.

In March 2013, BOG authorized an experimental intensive management plan to reduce wolf predation of deer on Gravina Island in Unit 1A. Because a portion of Unit 1A is within a BOG-authorized intensive management area, the state has waived the \$30 tag requirement for nonresident wolf hunters throughout Unit 1.

No emergency orders were issued regarding Unit 1B wolf hunting or trapping during this report period.

Recommendations for Activity 2.2.

The mandatory pelt-sealing program for harvested wolves should be continued.

3. Habitat Assessment-Enhancement

No attempt has been made to enhance habitat in Unit 1B specifically for wolves. While primarily intended as a silvicultural practice, wolves likely derive some benefit from precommercial thinning of second growth stands which can temporarily enhance habitat for deer.

Clearcut logging has occurred extensively in Unit 1B, which has converted older conifer stands to early successional vegetation types that can temporarily enhance forage for moose and deer.

Pre-commercial thinning and pruning has been performed in many young second-growth stands in the unit. The resulting forage enhancement typically exists for only about 25 years after which time canopy closure again results in loss of understory vegetation.

NONREGULATORY MANAGEMENT PROBLEMS OR NEEDS

Data Recording and Archiving

Wolf sealing data are stored electronically in ADF&G's Wildlife Information Network (WinfoNet).

Hard copies of wolf sealing certificates are kept on file in the Petersburg Area Office.

Conclusions and Management Recommendations

The Unit 1B wolf harvest fluctuates annually, primarily as a result of variations in hunting and trapping effort. Most wolves harvested by hunters are taken opportunistically during hunts for other species. Trapping effort and success fluctuate annually in response to fuel prices and winter weather conditions. Wolf hides from Southeast Alaska are generally considered to be of relatively poor quality by fur buyers, so there is little financial incentive to harvest wolves. Most wolf hunting and trapping occurring in the unit is recreational and viewed by many as simply a means of controlling wolf populations to improve deer and moose populations.

The wolf harvest remains relatively low in Unit 1B. Most of the central Southeast Alaska wolf harvest takes place near communities in nearby Unit 3. Therefore much of Unit 1B is not hunted or trapped. No changes in the wolf hunting or trapping regulations for Unit 1B are recommended at this time.

II. Project Review and RY15–RY19 Plan

Review of Management Direction

MANAGEMENT DIRECTION

There are no changes in the management direction for wolves in Unit 1B.

GOAL

Maintain a sustainably harvestable wolf population in Unit 1B.

CODIFIED OBJECTIVES

Amount Reasonably Necessary for Subsistence Uses

BOG has made a “positive” customary and traditional use determination for wolves in Unit 1B; however, the amount of harvest necessary for subsistence has not been established.

Intensive Management

BOG has not identified Unit 1B deer or moose populations as important for providing high levels of harvest for human consumptive uses. Therefore, no intensive management (5 AAC 92.108) population or harvest objectives have been established for deer or moose in the unit, and a wolf predation control program has not been developed.

MANAGEMENT OBJECTIVE

Continue to maintain a sustainably harvestable wolf population in Unit 1B.

REVIEW OF MANAGEMENT ACTIVITIES

1. Population Status and Trend

ACTIVITY 1.1. Discuss and document wolf sightings reported by agency biologists and members of the public.

Data Needs

There is no information on the ecology, abundance, and population demographics for the wolves that occupy Unit 1B that informs management.

Methods

Observations of wolves made by ADF&G and USFS biologists, trappers, hunters, and other members of the public will continue to be reviewed. The annual statewide trapper questionnaire report supplied additional information, including individual trapper's subjective assessment of the population status of wolves in Unit 1B.

2. Mortality-Harvest Monitoring

ACTIVITY 2.1. Monitor the wolf harvest through a mandatory pelt-sealing program.

Data Needs

The harvest should continue to be documented to evaluate its sustainability. An estimate of the extent of unreported human-caused mortality is also needed.

Methods

Wolf harvest will continue to be monitored through a mandatory pelt-sealing program. Data will be collected on the number of wolves killed, sex, date of take, method of take, method of transportation used from home to the field, and when possible, an estimate of the number of wolves accompanying those killed.

ACTIVITY 2.2. Collect biological samples from harvested wolves.

Data Needs

Wolf hair and tissue samples are needed to evaluate the genetic structure of wolf populations in the region and to assess the level of population interchange between the mainland and the islands portions of Southeast Alaska. Better information is needed regarding the spatial and seasonal variation in wolf diets across the region. In addition to genetic samples, additional data are needed on wolf body weights and skull measurements in order to better understand the morphology and subspecies status of wolves inhabiting Southeast Alaska.

Methods

Hides, hair, and tissue samples and foreleg bones will continue to be collected from harvested wolves during the sealing process. When possible we also obtain wolf carcass weights and condylobasal skull measurements for subspecies analysis.

NONREGULATORY MANAGEMENT PROBLEMS OR NEEDS

Data Recording and Archiving

Continue to archive sealing data in WinfoNet and store paper copies of sealing forms in the Petersburg office files.

References Cited

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