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

Report Period 1 July 2015–30 June 2020, and Plan Period 1 July 2020–30 June 2025

W. Frank Robbins



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

Report Period 1 July 2015–30 June 2020, and Plan Period 1 July 2020–30 June 2025

#### PREPARED BY:

W. Frank Robbins
Area Wildlife Biologist

#### APPROVED BY:

Thomas V. Schumacher Regional Supervisor

## **PUBLISHED BY:**

Sally Kieper Technical Reports Editor

©2025 Alaska Department of Fish and Game

Alaska Department of Fish and Game Division of Wildlife Conservation PO Box 115526 Juneau, AK 99811-5526



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. These taxes and fees fund the federal Wildlife Restoration Program and the State of Alaska's Fish and Game Fund, which provided funding for the work reported on in this publication.

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 Schumacher, Regional Supervisor 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.

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

Robbins W. F. 2025. Wolf management report and plan, Game Management Unit 1B: Report period 1 July 2015–30 June 2020, and plan period 1 July 2020–30 June 2025. Alaska Department of Fish and Game, Species Management Report and Plan ADF&G/DWC/SMR&P-2025-23, Juneau.

Please contact the authors or the Division of Wildlife Conservation at (907) 465-4190 if you have questions about the content of this report.

The State of Alaska is an Affirmative Action/Equal Opportunity Employer. The Alaska Department of Fish and Game complies with Title II of the Americans with Disabilities Act of 1990. This document is available in alternative communication formats. If you need assistance, please contact the Department ADA Coordinator via fax at (907) 465-6078;TTY/Alaska Relay 7-1-1 or 1-800-770-8973.

ADF&G does not endorse or recommend any specific company or their products. Product names used in this publication are included for completeness but do not constitute product endorsement.

# **Contents**

Purpose of this Report	1
I. RY15-RY19 Management Report	1
Management Area	
Summary of Status, Trend, Management Activities, and History of Wolves in Unit 1B	3
Management Direction	4
Existing Wildlife Management Plans	4
Goals	4
Codified Objectives	
Amounts Reasonably Necessary for Subsistence Uses	4
Intensive Management	
Management Objectives	4
Management Activities	
1. Population Status and Trend	
2. Mortality-Harvest Monitoring and Regulations	
3. Habitat Assessment-Enhancement	
Nonregulatory Management Problems or Needs	
Data Recording and Archiving	
Conclusions and Management Recommendations	9
II. Project Review and RY20–RY24 Plan	9
Review of Management Direction	9
Management Direction	9
Goals	9
Codified Objectives	
Amounts Reasonably Necessary for Subsistence Uses	
Intensive Management	
Management Objectives	
Review of Management Activities	
1. Population Status and Trend	
2. Mortality-Harvest Monitoring	
3. Habitat Assessment-Enhancement	
Nonregulatory Management Problems or Needs	
Data Recording and Archiving	
Agreements	
Permitting	. 11
Pafaranaa Citad	1 1

List	of	Fig	ures
------	----	-----	------

Figure 1. Map of Game Management Unit 1B, Southeast Alaska, regulatory years 2015–2019	2
List of Tables	
Table 1. Unit 1B wolf harvest, Southeast Alaska, regulatory years 2010–2019	6
Table 2. Unit 1B wolf harvest chronology by percent, Southeast Alaska, regulatory years 2010–2019	7

# **Purpose of this Report**

This report provides a record of survey and inventory management activities for wolves (Canis lupus) in Game Management Unit 1B for the 5 regulatory years 2015–2019 and plans for survey and inventory management activities in the next 5 regulatory years, 2020–2024. A regulatory year (RY) begins 1 July and ends 30 June (e.g., RY15 = 1 July 2015–30 June 2016). 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 wolf management report of survey and inventory activities that was previously produced every 3 years.

# I. RY15-RY19 Management Report

# **Management Area**

Game Management Unit 1B consists of approximately 3,000 mi<sup>2</sup> (7,770 km<sup>2</sup>) of land area 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 Meyers Chuck on the Cleveland Peninsula.

The Stikine River is a transboundary mainland river system that originates in the Spatsizi Plateau of British Columbia and bisects the Coast Range before flowing into Sumner Strait near Wrangell, Alaska. About 30 miles (48.3 km) of the river lie within Alaska, flowing through a steep valley approximately 1–2 miles (1.2–1.9 km) wide. The area used by Stikine wolves encompasses the Stikine River drainage and the Stikine River Delta and parts of adjacent drainages. The principal use area consists of about 55 mi<sup>2</sup> (142 km<sup>2</sup>) of riparian habitat that lies entirely within the boundaries of the Stikine-LeConte Wilderness Area. The Stikine River Delta is the largest intertidal wetland in Southeast Alaska and consists of 77mi<sup>2</sup> (200 km<sup>2</sup>) 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 feet (2,767 meters). Predominant vegetative communities occurring at low-moderate elevations (<1,500 ft; 457 meters) include Sitka spruce (*Picea sitchensis*) and western hemlock (*Tsuga heterophylla*), coniferous forest, mixed-conifer muskeg, and deciduous riparian forests. Mountain hemlock (*Tsuga mertensiana*) dominated forest comprises a subalpine, timberline band between 1,500 and 2,500 feet (457 and 762 meters) elevation.

In addition to wolves, big game species present in Unit 1B include moose (Alces alces andersoni), mountain goats (Oreamnos americanus), Sitka black-tailed deer (Odocoileus hemionus sitkensis), black bears (Ursus americanus), and brown bears (U. arctos).

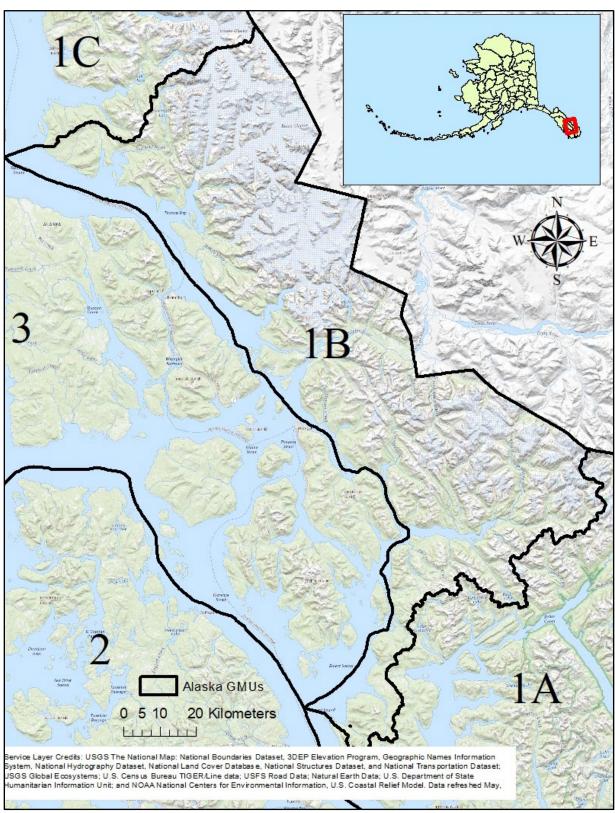


Figure 1. Map of Game Management Unit 1B, Southeast Alaska, regulatory years 2015-2019.

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

Evidence suggests that wolves colonized Unit 1B from the south following retreat of glaciers and establishment of a prey base. Sitka black-tailed 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 supplement Unit 1B wolf diets as well. 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. 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.

Much of Unit 1B is remote and difficult to access during winter; therefore, much of Unit 1B is not hunted or trapped. Most of the central Southeast Alaska wolf harvest takes place near local communities in nearby Unit 3; a few recreational trappers and opportunistic hunters harvest wolves in Unit 1B, but the annual take is relatively low compared to the adjacent Unit 3 islands. Most wolves harvested in Unit 1B are taken in the vicinity of Thomas Bay, Farragut Bay, and Bradfield Canal.

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, the board) 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. These actions are likely responsible for the reduced wolf harvest in Unit 1B during RY03 and RY04.

In fall 2004, the board, 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.

In fall 2010, based on concerns about low deer numbers on the Cleveland Peninsula, BOG extended the wolf hunting season to 31 May in the 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. With the annual influx of nonresident

black bear hunters, it was hoped that the wolf harvest could be increased by affording the opportunity to take wolves incidental to spring bear hunting.

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 addition, 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). 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 km<sup>2</sup> of habitat in elevations below 1,500 ft, the 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.

# **Management Direction**

#### EXISTING WILDLIFE MANAGEMENT PLANS

The department created a statewide wolf management plan in 1976, as part of the Alaska Wildlife Management Plans: A public proposal for the management of Alaska's wildlife: Southeastern Alaska. (ADF&G 1976).

## **GOALS**

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

#### **CODIFIED OBJECTIVES**

# Amounts 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. Because there is no resident subsistence hunt for wolves, the resident wolf hunting season in Unit 1B is classified as a general hunt.

# **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 OBJECTIVES

General management objectives are to regulate seasons and bag limits to maintain a healthy population of wolves on a unitwide basis for sustainable harvest and viewing.

#### 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

Information on wolf abundance helps evaluate whether harvest is sustainable. Reported wolf sightings provide insights into the size and distribution of wolf packs in the unit. Very little wolf research has occurred in Unit 1B; therefore, information is lacking 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 sightings indicate wolves remain well distributed throughout their historic range in Unit 1B.

*Recommendations for Activity 1.1.* 

Continue.

# 2. Mortality-Harvest Monitoring and Regulations

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

#### Data Needs

Monitoring harvest helps to ensure the harvest rate remains sustainable. The reported wolf harvest probably underrepresents the actual take of wolves in the unit.

#### 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.

Unit and bag limit	Resident and nonresident season
Unit 1B, south of Bradfield Canal and East Fork Bradfield River:	
Trapping: No limit	1 November-30 April
Hunting: 5 wolves (general hunt only)	1 August–31 May
Unit 1B remainder:	
Trapping: No limit	1 November-30 April
Hunting: 5 wolves (general hunt only)	1 August–30 April

#### Results and Discussion

# Harvest by Hunters-Trappers

During the report period the Unit 1B wolf harvest averaged 14 wolves per year, ranging from a low of 4 in RY18 to a high of 25 in RY19 (Table 1). The number of successful trappers and hunters averaged 4 per year. The harvest of 24 wolves in RY16 and 25 in 2019 were the highest recorded in the unit since at least 1982.

Trapping is usually the primary method of take for wolves in Unit 1B. During the report period 89% of the wolves harvested were taken with traps or snares and 11% were shot. Wolves that were shot were usually harvested by hunters incidental to hunting deer, bears, and moose. Most Unit 1B wolves are harvested on the mainland near the island communities of Petersburg and Wrangell in Unit 3.

Table 1. Unit 1B wolf harvest, Southeast Alaska, regulatory years 2010–2019.

Regulatory		Reporte	ed harvest		Mo	Method of take			
year	Male	Female	Unknown	Total	Trap/snare	Shot	Unknown	trappers/hunters	
2010	3	2	1	6	6	0	0	2	
2011	6	4	0	10	5	5	0	6	
2012	6	8	0	14	9	5	0	7	
2013	4	5	0	9	7	2	0	7	
2014	11	9	1	21	20	1	0	5	
2015	6	4	0	10	9	1	0	4	
2016	14	10	0	24	23	1	0	4	
2017	4	3	0	7	6	1	0	4	
2018	4	0	0	4	1	3	0	4	
2019	10	15	0	25	23	2	0	4	

## Harvest Chronology

Historically, most Unit 1B wolves are taken during January, December, February, and September, in descending order. During the RY15-RY19 report period most wolves were taken during March, April, February, and December, 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. No wolves were taken in May during the report period, and only 1 wolf taken in May has been sealed since the season extension.

Table 2. Unit 1B wolf harvest chronology by percent, Southeast Alaska, regulatory years 2010-2019.

Regulatory				]	Percent	of annu	ıal wol	f harve	st				
year	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	n
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
2015	0	0	0	0	10	10	0	20	10	50	0	0	10
2016	0	0	0	0	0	29	0	13	29	29	0	0	24
2017	0	14	0	0	0	0	0	14	29	43	0	0	7
2018	0	0	25	0	25	25	0	0	25	0	0	0	4
2019	0	0	0	8	0	0	8	32	40	12	0	0	25

# Transport Methods

Trappers and hunters using small boats typically account for most, if not all, wolves harvested in Unit 1B. Such was the case during the RY15–RY19 report period when 66 of 70 wolves were taken using boats as transportation. The only other transportation method reported was skis/snowshoes/on foot, accounting for 4 wolves.

## 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. When wolves are caught in traps that are not checked regularly, particularly intertidal drowning sets, they are occasionally scavenged by other animals. Badly damaged hides are frequently discarded in the field, with the harvest going unreported.

#### Recommendations for Activity 2.1.

Continue monitoring wolf harvest through the mandatory pelt sealing process with no changes to the current system. Identify and document incidents of unreported human-caused mortality and waste of trapped wolves, as staff time allows.

# 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 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, 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, ADF&G staff 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.

## Alaska Board of Game Actions and Emergency Orders

There were no Board of Game actions or emergency orders issued regarding Unit 1B wolf hunting or trapping during this report period.

## 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 and has converted old-growth conifer forests to early successional vegetation types that temporarily provide abundant forage for moose and deer. These enhanced forage conditions persist for 20-30 years, until regenerating evergreens form a dense single-storied canopy and shade out forage species. These poor forage conditions persist for many decades. To retain some forage production pre-commercial thinning and pruning has been performed in many second growth stands in the unit. The resulting forage enhancement typically persists for 10-20 years after which 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 reducing predation on 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. No changes in the wolf hunting or trapping regulations for Unit 1B are recommended at this time.

# II. Project Review and RY20-RY24 Plan

# **Review of Management Direction**

#### MANAGEMENT DIRECTION

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

## **GOALS**

Maintain a sustainably harvestable wolf population in Unit 1B.

#### **CODIFIED OBJECTIVES**

## Amounts Reasonably Necessary for Subsistence Uses

BOG has made a positive customary and traditional use determination for wolves in Unit 1B; however, no amount of harvest necessary for subsistence has 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.

# **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 OBJECTIVES

General management objectives are to regulate seasons and bag limits to maintain a healthy population of wolves on a unitwide basis for sustainable harvest and viewing.

## **REVIEW OF MANAGEMENT ACTIVITIES**

# 1. Population Status and Trend

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

#### Data Needs

Additional information on the ecology, abundance, and population structuring of wolves in Unit 1B would help inform 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 gives individual trappers the opportunity to share their 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.

#### 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 island 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, 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, tissue samples, and foreleg bones will continue to be collected from harvested wolves during the sealing process. When possible, ADF&G staff will also obtain wolf carcass weights and condylobasal skull measurements for subspecies analysis.

## 3. Habitat Assessment-Enhancement

No change from the RY15-RY19 reporting period. No habitat-related activities for wolves are planned for this unit.

#### 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.

Agreement	S
•	

None.

# Permitting

None.

# **References Cited**

Alaska Department of Fish and Game. 1976. Alaska wolf management plan. Pages 55–61 [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.

- Craighead, F. L., E. L. Young, and R. D. Boertje. 1984. Stikine River moose study: Wildlife evaluation of Stikine-Iskut dams. Alaska Department of Fish and Game, Division of Game, Final Report, Juneau.
- Person, D. K., M. Kirchhoff, V. Van Ballenberghe, G. C. Iverson, and E. Grossman. 1996. The Alexander Archipelago wolf: A conservation assessment. U.S. Forest Service, General Technical Report PNW-GTR-384.

