Species Management Report and Plan ADF&G/DWC/SMR&P–2023–11

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

Report Period 1 July 2015–30 June 2020, and

Plan Period 1 July 2020–30 June 2025

Carl H. Koch

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Alaska Department of Fish and Game Division of Wildlife Conservation

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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 pay 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 Richard Nelson, Management Coordinator for Region I for the Division of Wildlife Conservation.

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Cover Photo: A wolf on Prince of Wales Island. Photo by Kris Larson. ©2017 ADF&G.

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Purpose of this Report

This report provides a record of survey and inventory management activities for wolves (*Canis lupus*) in Game Management Unit 1D 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) 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 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

Unit 1D is on the northern Southeast Alaska mainland lying north of the latitude of Eldred Rock, excluding Sullivan Island and the Berners Bay drainages (Fig. 1). The land area of Unit 1D is 2,854 mi^2. The lower Chilkat Valley has a maritime climate with cool, often wet summers. Precipitation declines with distance away from salt water. Winter weather varies by location. The Haines area in the lower Chilkat Valley averages about 200 inches of snow each winter with temperatures near freezing. Moving up the valley, winter temperatures are colder and total snowfall and accumulated snowpack increase. Snowpack in the upper valley can exceed 10 feet.

The topography consists of coastal mountains surrounding deep U-shaped river valleys created by glacial action. The larger rivers are shallow and fast-flowing with wide, braided channels. The mouths of rivers often contain alluvial fans of gravel, boulders, and silt. Silt deposition and glacial rebound at the mouth of the Chilkat River have created a large flat delta with varied seral vegetation types. Forest cover on upland consists of Sitka spruce-western hemlock (*Picea sitchensis-Tsuga heterophylla*) with black cottonwood (*Populus trichocarpa*) and paper birch (*Betula papyrifera*; Hundertmark et al. 1983).

Much of the lower elevation forested habitat in the Chilkat Valley is managed by the Haines State Forest. In March 2015, the Alaska Division of Forestry (DOF) finalized plans for the Baby Brown Timber Sale (NSE-1549), which includes clearcut or partial harvest on about 1,000 acres of old-growth spruce and hemlock forest in the Porcupine and Jarvis Creek areas.

Lowlands, including river bars, support varying vegetation types ranging from willow (*Salix* spp.) and alder (*Alnus* spp.) to mature spruce-hemlock and cottonwood forest. Forest succession initiated by natural processes like glacial rebound or human activities like timber harvest can produce abundant forage for moose, but eventually result in dense, even-aged stands of evergreen forest that produce little moose forage. Consequently, those processes may result in long-term reductions in carrying capacity for moose, an important prey species for wolves.

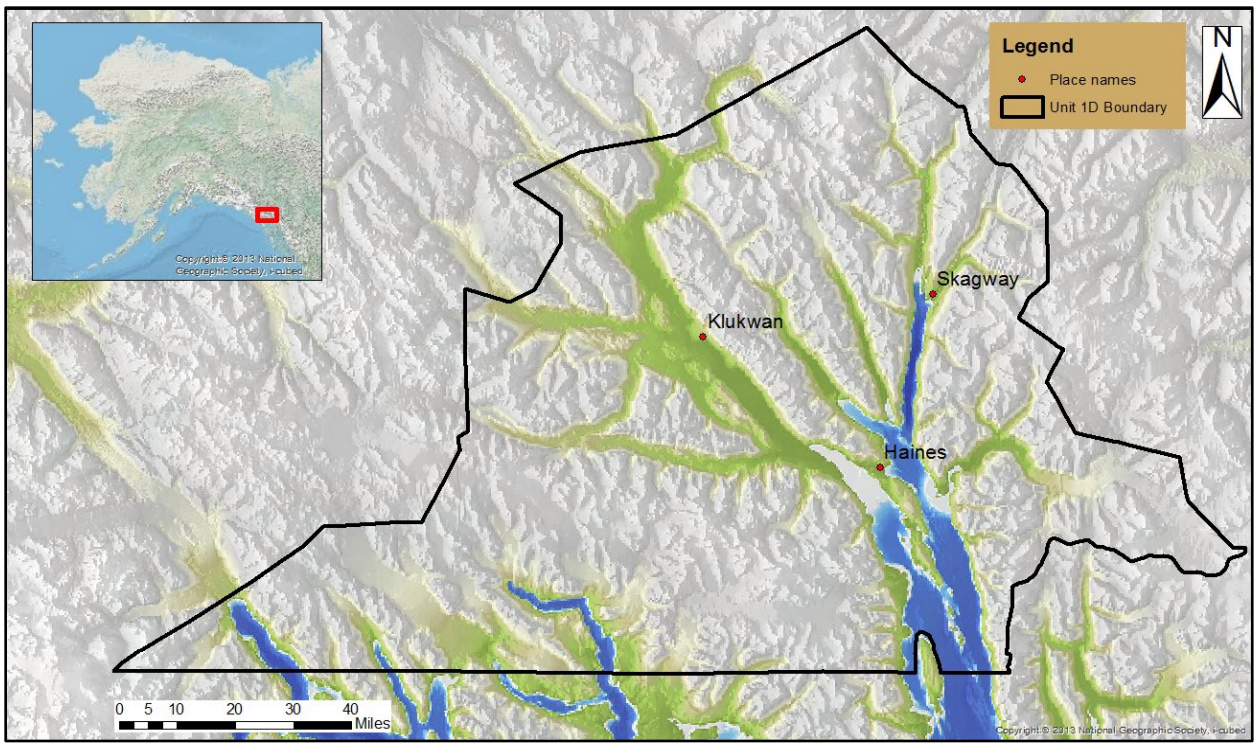

Figure 1. Map of Game Management Unit 1D with local communities, Southeast Alaska.

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

No formal studies of wolf populations have been conducted in Unit 1D. Most information about wolf abundance and distribution in the unit has come from fur sealing records, anecdotal reports, and observations recorded during aerial surveys for moose and mountain goats. Fur sealing records indicate that harvest in the unit varies widely. That is likely due to factors such as weather, trapper effort and experience, and wolf abundance.

In addition to moose, major prey items most likely include mountain goat (*Oreamnos americanus*), beaver (*Castor canadensis*), and seasonally available salmon (*Oncorhynchus* spp). An increase in the beaver population may have subsequently increased the importance of this prey item (Sell 2012).

Wolf distribution in Unit 1D is likely influenced by the distribution of moose (*Alces alces*), which occur in highest abundance in the Chilkat and Katzehin River valleys (Koch 2017). Most observations of wolves during aerial moose surveys, locations reported on fur sealing records, and anecdotal reports come from the Chilkat River Valley and the Katzehin River areas suggesting these areas support the most wolves in the unit.

Management Direction

Wolves in Unit 1D are an important part of the ecosystem and are managed for sustainable harvest and viewing through hunting and trapping regulations.

Existing Wildlife Management Plans

The management goals of the ADF&G wolf management plan are to provide for optimum harvest of wolves and provide the greatest opportunity to participate in hunting and trapping (ADF&G 1976). The population has been monitored using data collected from mandatory sealing of harvested wolves, observations during aerial surveys for moose and mountain goats, and anecdotal reports.

Periodic changes in management planning have been reported in the division's previous species management reports. The plan portion of this report (RY20–RY24) contains the current management plan for wolves in Unit 1D.

Goals

Regulate seasons and bag limits to maintain populations that support the sustainable harvest and viewing of Unit 1D wolves.

Codified Objectives

There is a positive customary and traditional use finding for both hunting and trapping of wolves in Unit 1D (5 AAC 99.025).

Amounts Reasonably Necessary for Subsistence Uses

The amount necessary for subsistence for trapping is 90% of the harvestable portion of the population (5 AAC 99.025 (L)).

Intensive Management

The Alaska Board of Game has made a negative finding regarding intensive management for both moose and wolves in Unit 1D (5 AAC 92.108).

Management Objectives

No formal population objective has been established for wolves in Unit 1D. General management objectives are to maintain populations that support sustainable harvest and viewing through regulation of hunting and trapping seasons and bag limits.

MANAGEMENT ACTIVITIES

1. Population Status and Trend

ACTIVITY 1.1. Gather information from informal interviews and observations during aerial surveys for other species.

Data Needs

No formal population estimates have been conducted in Unit 1D due to limited resources. The forested landscape limits using aerial surveys to estimate wolf abundance. However, observations during aerial surveys for moose and mountain goats in conjunction with anecdotal reports and fur sealing data (Activity 2.1 below) provide information about distribution.

Methods

DWC biologists record the GPS location and number of wolves observed during aerial surveys for other species. We conduct informal interviews when interacting with hunters and trappers.

Results and Discussion

Four wolves were observed during the moose survey conducted on 8 February 2019 in the Chilkat Valley. No moose surveys were conducted in the Katzehin River Valley during this report period, RY15–RY19.

Recommendations for Activity 1.1

Continue these activities. Although these activities do not provide formal abundance estimates, when used in conjunction with harvest information, they provide valuable supporting information that aids in understanding wolf distribution and sustainability of the population.

2. Mortality-Harvest Monitoring and Regulations

ACTIVITY 2.1. Monitor harvest through mandatory sealing records.

Data Needs

Fur sealing data is used to monitor population trends to ensure that harvest is sustainable. The location of harvest, hunter/trapper effort, gender, and pack size are valuable information needed to assess harvest trends. Trends in harvest may indicate status and trends in the wolf population.

Methods

All wolves harvested in Alaska are required to be sealed. DWC staff collected data from all wolves sealed in Unit 1D during RY15–RY19: the number of wolves in the pack, sex of the wolf, pelt color, date of kill, name of trapper or hunter, kill location, method of take, and transportation.

Season and Bag Limit

Seasons and bag limits for residents and nonresidents are identical.

	Season	Bag limit
Hunting	1 August–30 April	5 Wolves
Trapping	1 November–30 April	No limit

Results and Discussion

Harvest by Hunters-Trappers

Harvest by hunters and trappers during RY15–RY19 ranged from 2 to 10 wolves per year. A total of 32 wolves (13 males, 14 females, and 5 unknown sex) were harvested during RY15–RY19 with a mean annual harvest of 6 wolves (Table 1). This was similar to the RY10–RY14 report period. Harvest varies annually depending on weather conditions, trapping effort, hunter opportunity, and wolf distribution and abundance.

Of the 34 wolves sealed during RY15–RY19, 15% (5) were shot, 79% (27) were trapped or snared, and 6% (2) were found dead (one of natural causes and one hit by a car).

Table 1. Wolf harvest by sex, regulatory years 2005–2019, Unit 1D, Southeast Alaska.

Regulatory year	Males	Females	Unknown	Total
2005	2	0	0	2
2006	2	1	0	3
2007	0	0	0	0
2008	4	2	0	6
2009	2	5	0	7
2010	5	6	0	11
2011	0	2	0	2
2012	9	8	0	17
2013	2	3	0	5
2014	1	1	0	2
2015	2	0	0	2
2016	2	3	5	10
2017	5	5	0	10
2018	1	2	0	3
2019	3	4	0	7
Mean 2015–2019	3	3	0	6

Source: ADF&G sealing records data.

Harvest Chronology

Although harvest during RY15–RY19 was documented during each month with an open season, harvest most often occurred during the trapping season in the months of December, January, and February (Table 2). Only one wolf was harvested by a hunter outside of trapping season during RY15–RY19, in September 2019 (RY19).

Table 2. Wolf harvest chronology by month, regulatory years 2005–2019, Unit 1D, Southeast Alaska.

Regulatory year	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun
2005	0	0	1	0	0	0	0	1	0	0	0	0
2006	0	0	2	0	0	0	1	0	0	0	0	0
2007	0	0	0	0	0	0	0	0	0	0	0	0
2008	0	0	1	1	0	1	3	0	0	0	0	0
2009	0	1	0	0	0	3	1	1	1	0	0	0
2010	0	2	0	0	0	1	5	0	1	2	0	0
2011	1	0	1	0	0	0	0	0	0	0	0	0
2012	0	2	1	1	1	3	3	3	3	0	0	0
2013	0	2	0	0	1	0	2	0	0	0	0	0
2014	0	0	0	0	0	1	0	0	1	0	0	0
2015	0	0	0	0	0	0	0	1	0	1	0	0
2016	0	0	0	0	0	1	6	1	2	0	0	0
2017	0	0	0	0	2	2	4	2	0	0	0	0
2018	0	0	0	0	2	0	0	0	0	1	0	0
2019	0	0	1	0	0	6	0	0	0	0	0	0

Source: ADF&G sealing records data.

Transport Methods

Of the 32 wolves that were harvested during RY15–RY19, hunters or trappers reached 81% (26) of the wolves by boat or snowmachine, 13% (4) by the road system, 3% (1) by 3- or 4-wheeler, and 3% (1) by dogsled, skis, or snowshoes (Table 3).

Table 3. Wolf harvest transport method as a percent, regulatory years 2005–2019, Unit 1D, Southeast Alaska.

Regulatory year	Airplane	Dogsled, skis, snowshoes	Boat	3- or 4-wheeler	Snow-machine	Off-road vehicle	Highway vehicle	Unknown
2005	0	0	50	0	50	0	0	0
2006	0	0	0	0	0	0	100	0
2007	0	0	0	0	0	0	0	0
2008	0	0	0	17	33	0	50	0
2009	0	14	14	0	71	0	0	0
2010	0	9	27	0	55	0	9	0
2011	0	0	100	0	0	0	0	0
2012	0	41	35	0	24	0	0	0
2013	0	20	40	0	0	0	40	0
2014	0	100	0	0	0	0	0	0
2015	0	0	0	50	50	0	0	0
2016	0	0	17	0	50	0	25	8
2017	0	0	30	0	60	0	10	0
2018	0	33	67	0	0	0	0	0
2019	0	0	43	0	57	0	0	0

Source: ADF&G sealing records data.
Note: In some cases, annual percent values do not sum to 100 percent due to rounding.

Other Mortality

One wolf was killed by a car in May 2017 (RY16) during RY15–RY19. Another was found dead by a trapper in February 2017 (RY16).

Alaska Board of Game Actions and Emergency Orders

There were no emergency orders issued or actions taken by the Board of Game regarding wolves in Unit 1D during RY15–RY19.

Recommendations for Activity 2.1

Continue Activity 2.1 because it provides information essential to managing harvest.

3. Habitat Assessment-Enhancement

No wolf habitat studies were conducted during RY15–RY19 due to limited available resources and other regional priorities.

NONREGULATORY MANAGEMENT PROBLEMS OR NEEDS

Data Recording and Archiving

- Wolf sealing data are electronically archived in ADF&G's Wildlife Information Network (WinfoNet) database (http://winfonet.alaska.gov/index.cfm).

- Hard copies of wolf sealing forms are stored in 3-ring binders at the ADF&G office in Douglas, in the area biologist's file cabinet.

- Electronic copies of species management reports and plans, and other reports for Unit 1D wolves are stored online at Wildlife Publications, Alaska Department of Fish and Game. The species management reports and plans are also stored on the Region I server at S:\Region1Shared-DWC\Offices\Douglas\Carl Koch\Wildlife Progress Reports & Research Papers\Wolf.

Agreements

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

Permitting

No permits were needed to conduct wolf management activities in Unit 1D during RY15–RY19.

Conclusions and Management Recommendations

Dense evergreen forest cover in Unit 1D limits the effectiveness of aerial surveys to assess the wolf population, therefore no research has been done to assess the population size. Sealing records, however, along with observations during aerial surveys for moose and mountain goats, and anecdotal reports from trappers, hunters, guides, and the local wildlife trooper suggest that harvest is sustainable.

Trapping effort in the unit is low to moderate and much of the harvest occurs when wolves are opportunistically encountered while targeting other species. Thus, fluctuations in harvest are likely to continue. Years with higher harvest appear related to winter conditions; consistent and deeper snow can improve trappers' ability to detect wolves and provides snowmachine access to remote areas.

Wolves are valuable to hunters, trappers, and nonconsumptive users (e.g., wildlife viewers and photographers). The Board of Game made a negative finding regarding intensive management of wolves in Unit 1D. Therefore, ADF&G does not recommend any changes to seasons or bag limits for wolves in Unit 1D at this time.

II. Project Review and RY20–RY24 Plan

Review of Management Direction

MANAGEMENT DIRECTION

The department will continue to manage for both sustainable harvest and nonconsumptive uses of wolves in Unit 1D.

GOALS

Regulate seasons and bag limits to maintain populations that support the sustainable harvest and viewing of Unit 1D wolves.

CODIFIED OBJECTIVES

There is a positive customary and traditional use finding for both hunting and trapping in Unit 1D (5 AAC 99.025).

Amounts Reasonably Necessary for Subsistence Uses

The amount necessary for subsistence for trapping is 90% of the harvestable portion of the population (5 AAC 99.025 (L)).

Intensive Management

The Alaska Board of Game has made a negative finding regarding intensive management for both moose and wolves in Unit 1D (5 AAC 92.108).

MANAGEMENT OBJECTIVES

No formal population objectives have been established for Unit 1D wolves. General management objectives are to maintain populations that support sustainable harvest and viewing through regulation of hunting and trapping seasons and bag limits.

REVIEW OF MANAGEMENT ACTIVITIES

1. Population Status and Trend

ACTIVITY 1.1. Gather information from anecdotal reports and observations during aerial surveys for other species.

Data Needs

No formal population surveys have been conducted in Unit 1D due to limited resources. The forested landscape limits using aerial surveys to estimate wolf abundance. However, observations during aerial surveys for moose and mountain goats in conjunction with anecdotal

reports and other data (see Activity 2.1 below) provide information about distribution. In the future, it may be possible to learn more about wolf distribution and abundance by analyzing incidental observations recorded by DWC biologists (A. Crupi and S. Sell) while researching brown bears in Unit 1D (calendar years 2018–2023).

Methods

The methods are continued from RY15–RY19 with one addition. DWC biologists and technicians will continue to record the GPS location and number of wolves observed on data sheets during aerial surveys for moose and mountain goats, and conduct informal interviews when interacting with hunters and trappers. In RY20–RY24, we will also consult DWC research staff about incidental wolf observations recorded during brown bear research.

2. Mortality-Harvest Monitoring

ACTIVITY 2.1. Monitor harvest through mandatory sealing records.

Data Needs

To ensure that harvest is sustainable, fur sealing data will be used to monitor trends. The location of harvest, hunter and trapper effort, gender, and pack size are valuable information needed to assess harvest trends, which may indicate status and trends in the wolf population.

Methods

DWC staff and state-appointed sealers collect data from all wolves that are sealed. Information recorded for each wolf incudes the number of wolves in the pack, sex of the wolf, pelt color, date of kill, name of trapper or hunter, kill location, method of take, and transportation.

3. Habitat Assessment-Enhancement

We do not plan to conduct wolf habitat studies during RY20–RY24 due to limited available resources and other regional priorities.

NONREGULATORY MANAGEMENT PROBLEMS OR NEEDS

Data Recording and Archiving

- Wolf sealing data are electronically archived in the ADF&G WinfoNet database (http://winfonet.alaska.gov/index.cfm).

- Hard copies of wolf sealing forms are stored in 3-ring binders at the ADF&G office in Douglas, in the area biologist's file cabinet.

- Electronic copies of species management reports and plans, and other reports for Unit 1D wolves are stored online at Wildlife Publications, Alaska Department of Fish and Game. The species management reports and plans are also stored on the Region I server at S:\Region1Shared-DWC\Offices\Douglas\Carl Koch\Wildlife Progress Reports & Research Papers\Wolf.

Agreements

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

Permitting

No permits are expected during RY20–RY24.

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