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

Report Period 1 July 2015–30 June 2020, and

Plan Period 1 July 2020–30 June 2025

Roy Churchwell

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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 Richard L. Nelson, Management Coordinator for the Division of Wildlife Conservation.

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

Cover Photo: Gray wolf standing in the snow, Southeast Alaska. ©1990 ADF&G. Photo by John Hyde.

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Purpose of this Report

This report provides a record of survey and inventory management activities for wolves in Unit 1C for the 5 regulatory years 2015–2019 and plans for survey and inventory management activities in the following 5 regulatory years, 2020–2024. A regulatory year (RY) begins 1 July and ends 30 June (e.g., RY14 = 1 July 2014–30 June 2015). 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 more efficiently report 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 1C includes the mainland from Cape Fanshaw north to the latitude of Eldred Rock on both the east and west side of the Lynn Canal and out to the Pacific Ocean at Cape Fairweather (Fig. 1). Several islands are included in the unit, the largest being Douglas, Shelter, Lincoln, and Sullivan islands. Other landmarks include Port Houghton, Hobart Bay, Endicott Arm, Tracy Arm, Snettisham, Taku River, Berners Bay, most of the Chilkat Range, and most of Glacier Bay National Park. The largest community is Juneau, with a population of 32,000 people (United States Census Bureau 2020). Other communities include Douglas, Auke Bay, and Gustavus with a few hundred people each. The unit is over 13,000 mi^2 and 200 miles from north to south. The economy of the region is based on tourism, fishing, and mining. Most of the residents in this unit are not subsistence qualified as Juneau is in a nonsubsistence area (5 AAC 99.015(a)(2)). Most of the unit is managed by the Tongass National Forest including the Endicott River Wilderness (98,700 acres) and Tracy Arm-Fords Terror Wilderness (653,200 acres) that were designated as a provision of the Alaska National Interest Lands Conservation Act (ANILCA) legislation in 1980 (USDA n.d.). The other large land management unit is Glacier Bay National Park which was established in 1925 (U.S. Department of the Interior 2020). Most of its 3.3 million acres lie within Unit 1C.

Much of Unit 1C mainland is comprised of glaciers, but between the icefields and the coast are upland alpine areas, alder (*Alnus* spp.) covered slopes, and coniferous rainforest. Most of the low gradient streams and rivers support spawning salmon from late summer into the fall. Some mainland forests support smaller deer herds, but wolves seem to be more common in large river valleys or forelands that support moose populations. A few packs are also observed using high-elevation alpine habitats where mountain goats are available prey. Average daily high temperatures for the region are 30°F in January and 57°F in August (NOAA 2018a). Rainfall ranges from 28 to 85 inches (NOAA 2018b). Snowfall averages 94 inches and falls mostly from November through March (NOAA 2018b).

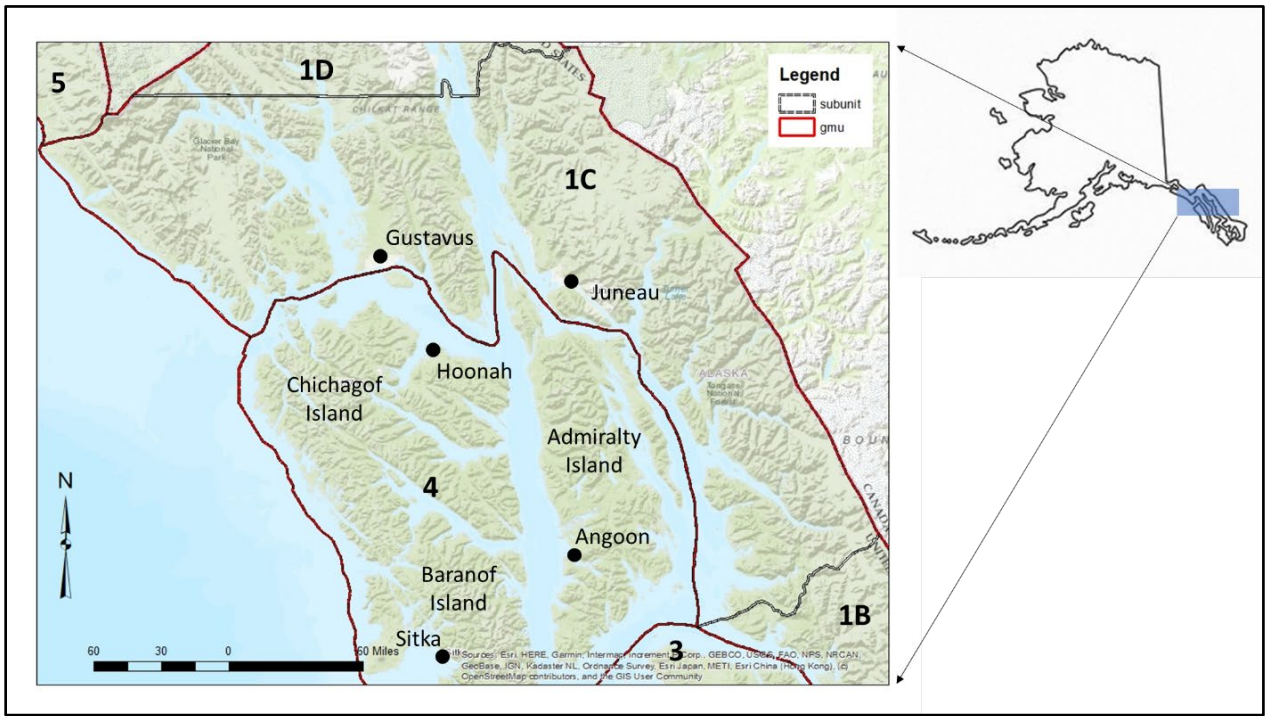

Figure 1. Map of Game Management Unit (GMU) 1, showing Unit 1C (subunit 1C) boundaries, Southeast Alaska.

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

Wolves are distributed throughout Unit 1C, but anecdotal evidence suggests they primarily inhabit major mainland river drainages such as the Taku River and Berners Bay that support moose populations. Exceptions include the Chilkat Range and the Gustavus Forelands, where wolves appear to be more uniformly distributed, probably due to the presence of moose throughout those areas. Collar data collected from 2 male wolves captured during March 2008 in Berners Bay provided the first insight into the extent that wolf packs travel on the mainland (maximum distance 95 miles). Several wolves were collared in Gustavus since 2017 indicating that pack uses the Gustavus Forelands, eastern Glacier Bay, and the southern portion of the Chilkat Peninsula. During the report period we received reports of packs in the Gustavus Forelands, Endicott River, St. James Bay, Point Couverden, Berners Bay, Nugget Creek, Taku River, Snettisham Inlet, and Endicott Arm areas. Wolves were absent from Douglas Island adjacent to Juneau for several decades but recolonized the island during the late 1990s. The presence of wolves on Douglas Island was a concern since the winter of 2001–2002 when 7 wolves, likely the entire pack, were trapped. Anecdotal information indicates that wolves recolonized Douglas Island by 2012 and wolves were photo documented in 2014. During 2015 several people reported seeing or hearing wolves, and the department estimates that 5–7 wolves have inhabited Douglas Island since 2014. The wolf population throughout Unit 1C is secure but fluctuates with prey abundance.

There were no limits on wolf hunting until 1992 when a season that excluded summer was initiated (1 August–30 April) along with a 5-wolf bag limit (Board of Game decision 1992; Robus 1994). In 2002 wolf snare cable diameter was limited to 1/32 inch and traps were required to be checked every 72 hours in the Gustavus area to help protect moose caught in a wolf snare (Board of Game decision 2002; Barton 2006). The current trapping season (1 November–30 April with no harvest limit) was regulated in 2004 (Board of Game decision 2004; Barton 2006).

Pleasant Island near Gustavus also has a small pack of 3–4 wolves. Pleasant Island is currently in GMU 4 but was proposed to be changed to GMU 1C. The first wolf was harvested on Pleasant Island in 2015, and a small pack still inhabits the island. The deer population on the island is depleted, and analysis of wolf scat indicates that the wolves on the island are utilizing marine food resources for their survival.

Management Direction

Wolves in Unit 1C will be managed to provide for sustainable human uses and to ensure that wolves remain an integral part of Southeast Alaska's ecosystems. Compatible human uses include hunting and trapping (both for personal use and commercial sale of furs), photography, viewing, listening, and scientific and educational uses (Board of Game decision 2002). The aesthetic value of being aware of or observing wolves in natural interactions with their environment is also recognized as an important human use of wolves.

Existing Wildlife Management Plans

Alaska Wolf Management Plan in 1976 Alaska Wildlife Management Plans (ADF&G 1976).

To address public concerns about the apparent extirpation of wolves from Douglas Island in 2002, the department developed the Douglas Island Management Area plan. The Board of Game adopted that plan as regulation 5 AAC 92.530 (23).

5 AAC 92.530 (23) Douglas Island Management Area:

(A) the management area consists of Douglas Island in Unit 1(C);

(B) hunting and trapping of wolves is open in the Douglas Island Management Area and, except as specified in (E) and (F) of this paragraph, the harvest cap for hunters and trappers is three wolves; hunting and trapping seasons will be closed by emergency order when five wolves have been harvested;

(C) before trapping wolves in the management area, a person must register with the department; a hunter or trapper who takes a wolf in the management area must report the harvest to the department's division of wildlife conservation (sic) office in Douglas within 48 hours of taking the wolf and present the hide for sealing within five days of taking the wolf;

(D) if the department determines that any or all of the following conditions were met during the most recent deer hunting season, deer conservation provisions will be implemented:

(i) more than 11 hunter-days were expended per deer harvested on Douglas Island during the most recent hunting season;

(ii) the average deer harvest-per-hunter-day during the three most recent hunting seasons was lower than the base average with at least 95 percent statistical confidence;

(iii) the deer population is below the base average, but is likely to increase to near the base average within two years if deer conservation provisions are implemented;

(E) the average deer-harvest-per-hunter-day during 1983–2003 will be used as a base measurement to determine if deer conservation provisions will be implemented by increasing or lifting the wolf harvest cap during the remainder of the current wolf season and the following season; if the department evaluates available information on the Douglas Island deer population and determines that recent harvest-per-hunter-day statistics do not accurately reflect the status of the deer population and that the population is not significantly below the base average, the department may decide whether or not to implement deer conservation provisions;

(F) regardless of whether conditions in (D) of this paragraph are met, if the department determines that a significant deer decline has occurred or is likely to occur, the department will increase the wolf bag limit and harvest cap as necessary to avoid a decline or rebuild the deer population; as part of this determination, the department will attempt to prevent extirpation of wolves and maintain some level of wolf protection on Douglas Island.

GOALS

No specific formal written wolf management goals have been established for this unit. Seasons and bag limits are managed to maintain a healthy population of wolves on a unitwide basis for sustainable harvest and viewing.

CODIFIED OBJECTIVES

Amounts Reasonably Necessary for Subsistence Uses

HUNTING

Unit 1C (outside the Juneau Nonsubsistence Area): There is a positive customary and traditional use determination finding for wolf in Unit 1C (outside the Juneau Nonsubsistence Area) listed in 5 AAC 99.025 (Board of Game decision 2009).

TRAPPING

Unit 1C (outside the Juneau Nonsubsistence Area): There is a positive customary and traditional use determination for wolves in Unit 1C set at 90% of the harvestable portion (Board of Game decision 2012).

Intensive Management

None.

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. The exception is Douglas Island where harvest is limited to a total harvest of ≤5 wolves per year on the island to manage for the persistence of wolves.

MANAGEMENT ACTIVITIES

1. Population Status and Trend

ACTIVITY 1.1. Monitor wolf abundance and activity using harvest information, game cameras, and public information.

Data Needs

Most data on wolf populations were gathered opportunistically from projects directed at other species and reports from the public.

Methods

Wolf populations in Unit 1C were monitored, in a general sense, by whatever means available including harvest data, anecdotal reports, aerial sightings incidental to surveys of other species, discussions with hunters and trappers, and information collected from the annual statewide trapper surveys.

Recommendations for Activity 1.1

Continue. It may be helpful to set up trail cameras on Douglas Island to help estimate wolf abundance on the island.

2. Mortality-Harvest Monitoring and Regulations

ACTIVITY 2.1. Monitor harvest through sealing records.

Data Needs

Because Unit 1C is heavily forested, the distribution and abundance of wolves cannot be monitored from aircraft. Instead, harvest data is used to ensure that wolves are sustainably managed and continue to occupy their historic range.

Methods

Wolves harvested by trappers and hunters are required to be sealed to monitor harvest levels. Harvest data is archived in ADF&G's Wildlife Information Network (WinfoNet) database and is reported by regulatory year. Information recorded for each wolf includes date of kill, name of trapper or hunter, specific location of kill, method of take and transportation, sex of the wolf, color of the pelt, and number of other wolves thought to be in the pack.

Season and Bag Limit

Units and bag limits	Resident open seasons	Nonresident open seasons
Hunting: 5 wolves	1 Aug–30 Apr	1 Aug–30 Apr
Trapping: No limit	1 Nov–30 Apr	1 Nov–30 Apr

Results and Discussion

Harvest by Hunters-Trappers

Harvest of wolves has increased in the last 5 years by almost 2-fold with an average annual harvest of 23 wolves in RY15–RY19 (range 13–31 wolves) compared to an average annual harvest of 14 wolves in RY10–RY14 (range 5–18 wolves; Table 1). The average number of animals harvested through hunting did not change much over the last 10 years, but more wolves have been trapped and snared over the same period.

Table 1. Wolf harvest and method of take, regulatory years 2010–2019, Unit 1C, Southeast Alaska.

Regulatory	Reported harvest				Method of take		
year	Male	Female	Unknown	Total	Shot	Trap	Snare
2010	11	10	0	21	5	5	11
2011	4	1	0	5	5	0	0
2012	8	7	0	15	3	3	9
2013	10	7	1	18	7	4	7
2014	6	7	0	13	4	1	8
2015	8	5	0	13	3	6	4
2016	12	9	0	21	3	3	15
2017	14	13	4	31	5	3	23
2018	10	12	0	22	4	8	10
2019	17[a]	12	0	29[a]	7	14	7

[a] Includes 1 unknown method of take.

Permit Hunts

UNIT 1C, GUSTAVUS

All trappers must register with ADF&G prior to trapping wolves. Due to the abundance of moose in the area, trappers are prohibited from using snares with a cable diameter of 1/32 inch or larger

that is set out of the water except under the terms of a registration permit which requires a break-away mechanism. Similarly, all traps/snares must be checked every 3 days.

UNIT 1C, DOUGLAS ISLAND

All trappers must register with ADF&G prior to trapping wolves. A trapper who takes a wolf in the management area must report the harvest to ADF&G Division of Wildlife Conservation in Douglas within 48 hours of taking the wolf and present the hide for sealing within 5 days.

Harvest Chronology

Most of the hunting harvest occurs in the months August–October when hunters take wolves while pursuing other animals such as deer (Table 2). Trapping harvest occurs over the remaining months with that harvest spread evenly between November and April. The chronology of harvest was not different between RY15–RY19 and RY10–RY14.

Table 2. Wolf harvest chronology by month, regulatory years 2010–2019, Unit 1C, Southeast Alaska.

Regulatory year	Harvest chronology						
	Aug–Oct	November	December	January	February	March	April
2010	4	1	1	9	1	5	0
2011	2	3	0	0	0	0	0
2012	0	2	1	3	5	4	0
2013	2	0	1	6	2	4	3
2014	2	0	0	3	0	7	1
2015	0	2	1	3	4	0	3
2016	2	1	4	3	9	2	0
2017	4	1	6	5	7	5	3
2018	4	5	5	4	3	1	0
2019	5	3	9	2	3	1	6

Transport Methods

Most wolf hunters and trappers use a boat as their transportation (Table 3). Use of a highway vehicle is the second most common method of transportation. There has also been an increase in the use of these 2 methods in RY15–RY19 compared to RY10–RY14. The other methods of transportation are used in some years, but not consistently.

Other Mortality

One wolf was hit by a bus in March of 2017 on the North Glacier Highway at around 26-mile near the Eagle River. The wolf was a young female that was reportedly accompanied by 2 other wolves.

Alaska Board of Game Actions and Emergency Orders

At the January 2018 Board of Game meeting the board reviewed a proposal to repeal the Douglas Island Management Plan (5AAC 92.530(23)). After reviewing both the proposal and public comment on the proposal the Board of Game decided to amend the plan to increase the annual take of wolves on the island from 3 to 5 wolves. No emergency orders were issued for this unit during the report period.

Table 3. Wolf harvest by transport method, regulatory years 2010–2019, Unit 1C, Southeast Alaska.

Regulatory years	Airplane	Boat	3- or 4-wheeler	Snowmachine	Off-road vehicle	Highway vehicle	Ski, foot, or snowshoe
2010	0	17	0	0	0	2	2
2011	0	4	0	0	0	1	0
2012	2	8	0	1	1	2	1
2013	0	7	4	0	0	5	2
2014	2	8	0	0	0	3	1
2015	0	8	1	0	0	4	0
2016	0	15	0	0	1	5	0
2017	1	15	0	0	0	10	5
2018	0	11	0	0	0	8	3
2019	0	24	0	0	0	2	3

Recommendations for Activity 2.1

Continue to monitor total harvest in Unit 1C.

3. Habitat Assessment-Enhancement

No habitat assessment or enhancement activities were conducted.

NONREGULATORY MANAGEMENT PROBLEMS OR NEEDS

Data Recording and Archiving

Wolf sealing data are stored electronically on ADF&G's Wildlife Information Network (WinfoNet) including sealing and harvest information. Species wildlife management reports and plans and the management operational plan for wolves are stored online at: www.wildlifepublications.adfg.alaska.gov.

Agreements

None.

Permitting

None.

Conclusions and Management Recommendations

Little fine-scale information is available for Unit 1C wolf populations. However, in the process of conducting research on moose in Berners Bay and Gustavus, and also on goats, wolverines, and brown bears in Berners Bay; we have opportunistically logged information on when, where, and how many wolves have been seen. Reports from people afield and incidental observations by ADF&G staff indicate that wolves are present throughout the unit, except on some smaller islands, and are most common in mainland valleys that support moose populations.

Although the wolf harvest increased slightly during the current report period, overall, there is little effort exerted toward taking wolves in this unit, and the harvest remains well below the level that would negatively influence the population. No changes in seasons or bag limits are recommended at this time.

II. Project Review and RY20–RY24 Plan

Review of Management Direction

Management Direction

Wolves in Unit 1C will be managed to provide for sustainable human uses and to ensure that wolves remain an integral part of Southeast Alaska's ecosystems. Compatible human uses include hunting and trapping (both for personal use and commercial sale of furs), photography, viewing, listening, and scientific and educational uses (Board of Game decision 2002). The aesthetic value of being aware of or observing wolves in natural interactions with their environment is also recognized as an important human use of wolves.

Goals

No formal wolf management goals have been established for this unit.

Codified Objectives

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Hunting

Unit 1C (outside the Juneau Nonsubsistence Area): There is a positive customary and traditional use determination finding for wolf in Unit 1C (outside the Juneau Nonsubsistence Area) listed in 5 AAC 99.025 (Board of Game decision 2009).

TRAPPING

Unit 1C (outside the Juneau Nonsubsistence Area): There is a positive customary and traditional use determination for wolves in Unit 1C set at 90% of the harvestable portion (Board of Game decision 2012).

Intensive Management

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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. The exception is Douglas Island, where harvest is limited to a total harvest of ≤5 wolves per year on the island to manage for the persistence of wolves.

REVIEW OF MANAGEMENT ACTIVITIES

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2. Mortality-Harvest Monitoring

ACTIVITY 2.1. Monitor harvest through sealing records.

Data Needs

Because Unit 1C is heavily forested, the distribution and abundance of wolves cannot be monitored from aircraft. Instead, harvest data is used to ensure that wolves are sustainably managed and continue to occupy their historic range.

Methods

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Information to be recorded for each wolf include date of kill, name of trapper or hunter, specific location of kill, method of take, transportation, sex of the wolf, color of the pelt, and number of other wolves thought to be in the pack.

3. Habitat Assessment-Enhancement

No habitat assessment or enhancement activities are planned.

NONREGULATORY MANAGEMENT PROBLEMS OR NEEDS

Data Recording and Archiving

Wolf sealing data are stored electronically on ADF&G's Wildlife Information Network (WinfoNet) including sealing and harvest information. Species management reports and plans and the management operational plan for wolves will be stored online at: www.wildlifepublications.adfg.alaska.gov.

Agreements

None.

Permitting

None.

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