

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

Report Period: 1 July 2010–30 June 2015, and

Plan Period: 1 July 2015–30 June 2020

[Stephanie Sell](#)



Wolf Management Report and Plan: Game Management Unit 1C

Report Period: 1 July 2010–30 June 2015, and

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Alaska Department of Fish and Game

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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 through state hunting license and tag fees. This funding provided support for Federal Aid in Wildlife Restoration Wolf Survey and Inventory Project 14.0.

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 five 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 five 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 Region I for the Division of Wildlife Conservation.

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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 (RY) 2010–2014 and plans for survey and inventory management activities for the following 5 regulatory years, 2015–2019. A regulatory year (RY) 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 provide information about 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 type to more efficiently report on trends and describe potential changes in future data collection activities. It replaces the wolf management report of survey and inventory activities that was previously produced every 3 years.

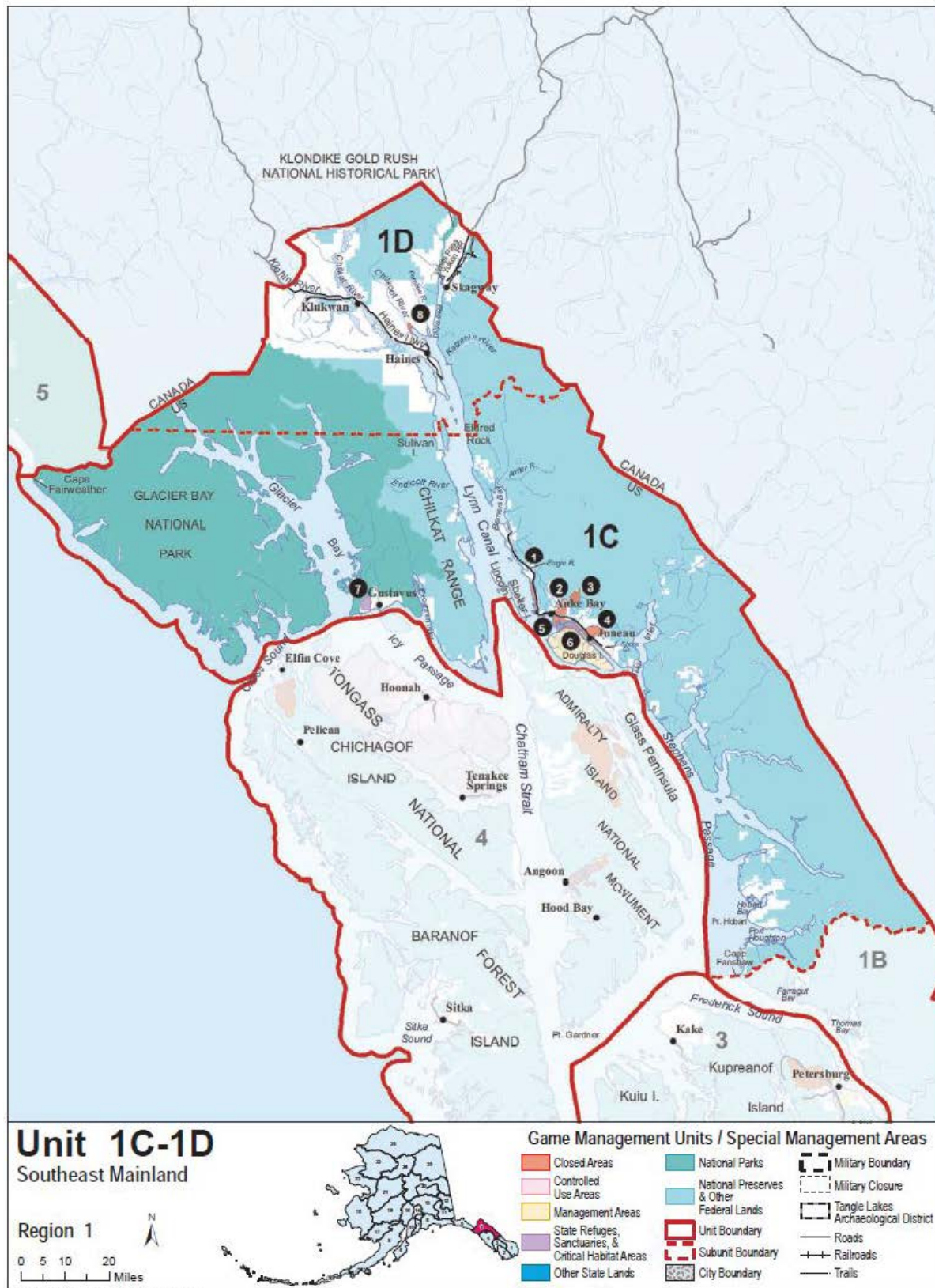
I. RY10–RY14 Management Report

Management Area

Unit 1C encompasses approximately 7,600 mi² of mainland in northern Southeast Alaska from Cape Fanshaw to the latitude of Eldred Rock and extending westward to include the Chilkat Range and Glacier Bay National Park and Preserve (Fig. 1). Maritime climate dominates most of the area with interior influences in river valleys. Habitats in Unit 1C include glaciers and the Juneau icefield, fjords, dense timber, tidelands, and estuaries. In addition to state, borough, and private land, large portions of the unit are managed by the U.S. Forest Service–Tongass National Forest, and the National Park Service–Glacier Bay National Park.

Summary of Status, Trend, Management Activities, and History of Wolf 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 wolf packs travel on the mainland (maximum distance 95 miles). A young female wolf was collared in Gustavus during 2010. That wolf eventually dispersed from the area ranging to the north around the eastern arm of Glacier Bay and then south along the western shore of Muir Inlet where it was killed by other wolves. 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 had been in question since the winter of 2001–2002 when 7 wolves, perhaps the entire pack, were trapped. Anecdotal information indicates that wolves had again recolonized Douglas Island by 2012 and wolves were photo documented in 2014. During 2015 many people reported



seeing or hearing wolves, and the department believes at least 5 wolves inhabited Douglas Island by the end of this report period. The wolf population throughout Unit 1C is secure but fluctuates with prey abundance.

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 (ADF&G 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

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) Douglas Island Management Area (Fig. 2):

(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 three 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;

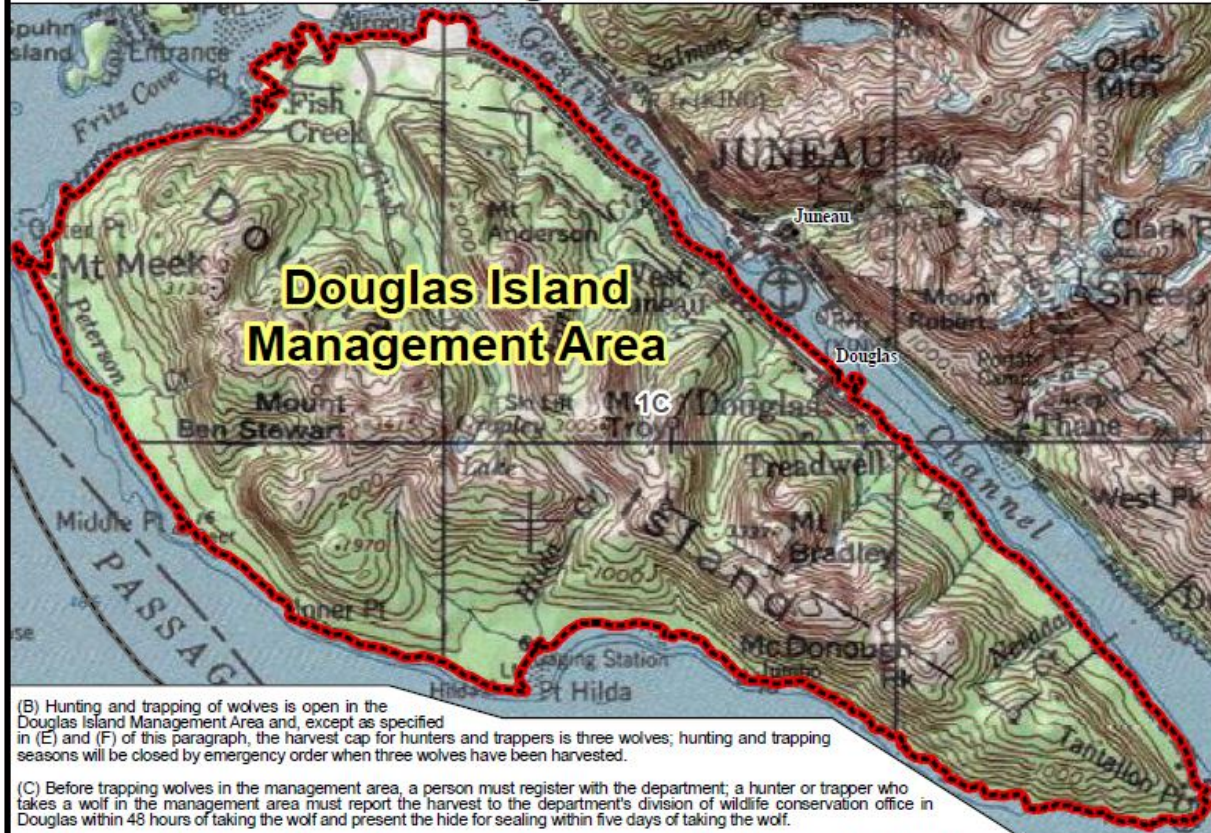
(D) if the department determines that any or all of the following conditions were met during the most recent deer hunting season, deer conservation provisions will be implemented:

(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;

Unit 1C Douglas Island Management Area



(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 three 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 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.

AREA DESCRIPTION: Unit 1C, the management area consists of Douglas Island in Unit 1C.

See above for restrictions.

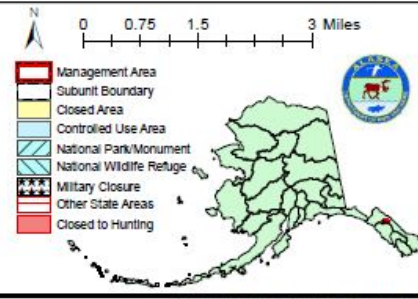


Figure 2. Map showing the Unit 1C Douglas Island Wolf Management Area, Alaska.

(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 formal wolf management goals have been established for this unit.

CODIFIED OBJECTIVES

Amounts Reasonably Necessary for Subsistence Harvest

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 2009).

Trapping

All units with a harvestable portion: 90% of the harvestable portion (Board of Game 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.

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

Monitoring abundance helps evaluate whether harvest is sustainable.

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.

Results and Discussion

In recent years wolves are being reported more frequently and observed more often on game cameras than in previous years. It is unclear whether the population of wolves in Unit 1C have increased or if the public, with the help of social media, is reporting observations more frequently. Anecdotal information should be used with caution as domestic pets are frequently reported as wolves.

Recommendations for Activity 1.1

Continue with the recommendation that more game cameras should be used to determine a more accurate estimate of wolf abundance, especially on Douglas 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 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 WinfoNet database and is reported by regulatory year. Information recorded for each wolf included 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

<u>Units and Bag Limits</u>	<u>Resident Open Seasons</u>	<u>Nonresident Open Seasons</u>
<i>Unit 1C</i>		
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

Hunter–Trapper Harvest

Hunters and trappers reported harvesting 5–21 wolves annually during RY10–RY14 (Table 1). Hunting and trapping conditions vary from year to year in Southeast Alaska, which affects harvests. During RY10–RY14, the winters were fairly mild with the exception of RY11, when the Juneau airport received 134 inches of snow. Recent winters have been lacking in snow, which potentially affected the number of trappers in the field due to the need to constantly maintain gear.

Wolves in Southeast Alaska are harvested primarily using snares or taken by firearm under authority of a trapping license or opportunistically while hunting other species (Table 2). Chronology of wolf harvest by month can be found in Table 3. Access to hunting and trapping opportunity in Southeast Alaska is largely boat based; 60% of harvested wolves in Unit 1C were taken by people hunting or trapping from boats (Table 4).

Dense forest cover throughout Southeast Alaska makes documenting abundance and trend of wolf populations difficult. Although no quantitative data are available, the trapper questionnaire statewide annual report for 1 July 2012–30 June 2013 reported trappers felt wolves were common in Unit 1C and were increasing (ADF&G 2013). Anecdotal reports and discussions with local hunters, trappers, and pilots, as well as harvest data, suggest that wolves continue to reside in all of the traditional areas. Wolves appear to be increasing on the Gustavus Forelands and within the Chilkat Range, where moose have become more abundant over the past 10–20 years.

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 requiring a break-away mechanism (Appendices A and B). 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.

Alaska Board of Game Actions and Emergency Orders

During its November 2010 meeting, the Alaska Board of Game adopted a proposal adding several Juneau area trails to those where trapping is prohibited within one-quarter mile of the trail when using snares and large killer style traps. The intent of the proposal was to protect domestic pets from being trapped. The impact to wolf harvests due to these changes will likely be low. No emergency orders were issued for this unit during the report period.

Recommendations for Activity 2.1

Continue to monitor total harvest.

Table 1. Unit 1C, Alaska wolf harvest, regulatory years^a 2010 through 2014.

Regulatory Year	Reported harvest				Method of take		
	M	F	Unk	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	7	7	0	14	5	1	8

^a A regulatory year begins 1 July and ends 30 June, e.g., regulatory year 2010 = 1 July 2010–30 June 2011.

Table 2. Unit 1C wolf, Alaska harvest chronology by month, regulatory years^a 2010 through 2014.

Regulatory Year	Harvest chronology by month						
	Aug–Oct	Nov	Dec	Jan	Feb	Mar	Apr
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
2014b	2	0	0	3	0	7	1

^a A regulatory year begins 1 July and ends 30 June, e.g., regulatory year 2010 = 1 July 2010–30 June 2011.

^b One additional wolf was illegally harvested out of season.

Table 3. Unit 1C, Alaska wolf harvest by transport method, regulatory years^a 2011 through 2014.

Regulatory Year	Harvest chronology by transport method						Ski, snowshoe, or foot
	Airplane	Boat	3- or 4- wheeler	Snowmachine	Off-road vehicle	Highway vehicle	
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

^a A regulatory year begins 1 July and ends 30 June, e.g., regulatory year 2010 = 1 July 2010–30 June 2011.

3. Habitat Assessment–Enhancement

No habitat assessment or enhancement activities were conducted.

NONREGULATORY MANAGEMENT PROBLEMS OR NEEDS

Data Recording and Archiving

- When printed hard copies of species wildlife management reports for wolves in Unit 1C will be stored in the Douglas Area Office Library. Electronic versions of these reports are typically made available via ADF&G's public website through the division's publications page: www.wildlifepublications.adfg.alaska.gov
- Wolf sealing data are stored electronically in ADF&G's Wildlife Information Network (WinfoNet).

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 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 for some smaller islands, and are most common in mainland valleys that support moose populations.

Mountain goats and moose are the most common mainland big game prey species in the unit, and the effect of wolves on these populations may be considerable. Low mainland deer densities are likely due in part to wolf predation.

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 RY15–RY19 Plan

Review of Management Direction

MANAGEMENT DIRECTION

Wolves in Unit 1C will be managed to provide for human uses and ensure the 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 (ADF&G 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

Amounts Reasonably Necessary for Subsistence Harvest

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 2009).

Trapping

All units with a harvestable portion: 90% of the harvestable portion (Board of Game 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 viewing and harvest.

MANAGEMENT ACTIVITIES

1. Population Status and Trend

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

Data Needs

Monitoring abundance helps evaluate whether harvest is sustainable.

Methods

Monitor wolf populations in Unit 1C, 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.

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 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 WinfoNet database and is reported by regulatory year (RY = 1 July through 30 June, e.g., RY14 = 1 July 2014 – 30 June 2015). Information recorded for each wolf included 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

<u>Units and Bag Limits</u>	<u>Resident Open Seasons</u>	<u>Nonresident Open Seasons</u>
<i>Unit 1C</i>		
Hunting: 5 wolves	1 Aug – 30 Apr	1 Aug – 30 Apr
Trapping: No limit	1 Nov – 30 Apr	1 Nov – 30 Apr

3. Habitat Assessment–Enhancement

No habitat assessment or enhancement activities will be conducted.

NONREGULATORY MANAGEMENT PROBLEMS OR NEEDS

Data Recording and Archiving

- When printed hard copies of species wildlife management reports for wolves in Unit 1C will be stored in the Douglas Area Office Library. Electronic versions of these reports are typically made available via ADF&G's public website through the division's publications page: www.wildlifepublications.adfg.alaska.gov
- Wolf sealing data are stored electronically in ADF&G's Wildlife Information Network (WinfoNet).

Agreements

None.

Permitting

None.

References

Schumacher, T. 2013. Trapper questionnaire statewide annual report: 1 July 2012–30 June 2013. Alaska Department of Fish and Game, Wildlife Management Report, ADF&G/DWC/WMR-2013-5, Juneau

Appendix A. Trapping conditions from Gustavus wolf snaring registration permit.

TRAPPING CONDITIONS

1. Trappers are prohibited from using a snare 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. Wolf snares must be constructed with an ADFG-style moose stop/breakaway and diverter wire.
2. All traps/snares must be checked within 3 days of setting them and within each 3 days thereafter.
3. Trappers are prohibited from using a trap or snare unless the trap or snare has been individually marked with a permanent metal tag upon which is stamped or permanently etched the trapper's name and address, or the trapper's permanent identification number, or is set within 50 yards of a sign that lists the trapper's name and address, or the trapper's permanent identification number; the trapper must use their Alaska driver's license number or state identification card number as the required permanent identification number. Trap marking information can be found on page 21 of the current Alaska Trapping Regulations.
4. Wolves taken on the Gustavus Forelands must be sealed by the person taking the fur within 30 days after the trapping season has closed. If you are unable to seal your fur in person, you must complete and sign a temporary sealing form (available at ADF&G offices or in the back of the trapping regulations book). Then another person can present your completed form and furs to ADF&G or an authorized vendor for sealing. Temporary sealing forms should be obtained prior to trapping.
5. Permittees are asked to return their completed trapping report to the ADF&G office in Douglas by May 15, 2014.

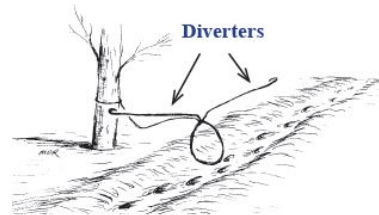
Appendix B. ADF&G breakaway wolf snares brochure.

Construction Details

The diverter wires on the snare are constructed by attaching an 11-gauge wire to the snare so that it extends 28" perpendicular to the snare loop at an angle between 10 and 20 degrees from the top of the snare (see images). The diverter wire was attached to the #9 anchor wire with a ferrule.

The breakaway portion is created by cutting the snare within the loop at 10.5" from the cable end stop and inserting a 3/32" double ferrule on 3/32" snare cable, or 1/8" double ferrule on 7/64" and 1/8" snare cables. The ferrule is then attached using the corresponding size swage tool.

Modifications to wolf snare



A Note On Loop size

Gardner's research also compared accidental moose catch rates between 60" and 72" snare loops. Assuming that both size snares are set with the bottom of the loop 18" above the terrain, the top of a 72" loop is 3"(or more) higher than the top of a 60" snare. When walking, moose carry their head about the height of a wolf snare.

The research showed a 17% catch rate for the 72" loops and a 12% catch rate for the 60" loops. Using small loops should help reduce moose capture. Even if a smaller loop size is used, however, a breakaway system and diverter should still be used.

Where To Get The Materials

All tools and materials necessary to construct these snares can be purchased locally or through mail order suppliers. These snares may also be purchased preconstructed. Check the Alaska Trapper Association website for locations.

www.alaskatrappers.org

"The Alaska Trappers Association is dedicated to ethical trapping practices. This includes using the most appropriate equipment for each situation. ATA supports the modifications for wolf snares which have been developed by ADF&G. We recommend that all Alaskan trappers consider utilizing the equipment and techniques described in this brochure."



2007



&

The Alaska Furbearer Management Council

For more information and research results :

Gardner, Craig L.
Alaska Department of Fish and Game
Research Report # 15.12
Development and Testing of Breakaway Snares(2007) Available at:
http://www.wildlife.alaska.gov/index.cfm?adfg=pubs.reports#tech_dev

Photo Credit:

Wolf: Sue Steinacher

Cover Moose: Steve DuBois

All others: Craig Gardner

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Breakaway Wolf Snares

Why You Should Use Them



Research, Development, and Effectiveness

Alaska Department of Fish and Game, 2007

The Issue

Snaring is an effective method to catch wolves and is a preferred method for Alaskan trappers. However, wildlife managers and trappers are concerned about the accidental capture of moose in wolf snares. Alaska Department of Fish and Game (ADF&G) biologists estimate that in



areas with heavy trapping pressure, wolf snares catch up to 1% of the moose annually. Most moose caught in wolf snares die either at the capture site or subsequent to release.

A New Design

Since 1993, ADF&G and private trappers have developed and tested wolf snares designed to release moose and caribou but restrain wolves. Current testing and development by ADF&G biologist Craig Gardner shows promising results.

By studying how moose encounter a wolf snare, Gardner found that incorporating two modifications to the snare resulted in fewer moose catches and fewer injuries to moose while reliably retaining wolves. Both modifications can easily be made by trappers or a commercial snare company on any wolf snare cable size between 3/32" and 1/8".

cinching down on the leg and by minimizing the breaking force for moose. It involves cutting the snare cable 'inside' the loop and inserting a double ferrule to re-connect the two cut ends. We refer to this double ferrule as the 'noose stop.' Exact placement of the ferrule is based on circumference measurements of both moose legs and wolf necks.

A wolf neck is larger than a moose leg. The snare will fully cinch down on essentially all wolf necks. Thus, the snare will function normally on wolves. However, the snare will not cinch down on moose legs because the snare lock will come into contact with the noose stop. This contact will also create an increased leverage on the ferrule as the moose struggles. This mechanical advantage causes the wire to pull out of the ferrule and the snare will fall apart, releasing the moose.

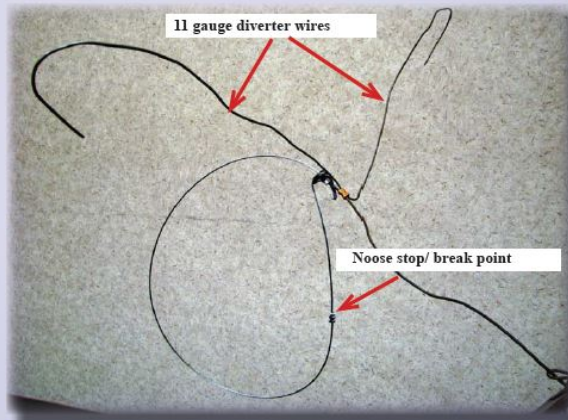
A 2-Part Solution

#1 The Diverter

The diverter is made by attaching a "diverter wire" to the snare so that it extends perpendicular to the snare loop at the top of the snare. A moose will contact the diverter wire before reaching the snare, thus pushing the snare aside and/or knocking it to the ground. This is important in preventing nose catches, which are almost always lethal to moose, even if caught in a breakaway snare.

#2 Noose Stop/ Breakaway

This reduces injury to moose by preventing the snare cable from cinching down on the leg and by minimizing the breaking force for moose. It involves cutting the



Do They Work?

Field tests of the diverters and breakaway snares were conducted at the Kenai Moose Research Center (MRC) in Southcentral Alaska using semi-tame moose and in Game Management Unit (GMU) 20A, south of Fairbanks, Alaska using wild moose.

% of moose captured in different wolf snares in GMU 20A and Kenai Moose Research Center

Snare type	# Encountered	# Caught	%
Snares without diverter	297	56	19
Snares with diverter wires	100	7	7

The diverter prevents most moose from snaring themselves.

Breakaway mechanism effectiveness

Species	# Caught	# Escaped	%
Wolves	28	1*	3.4
Moose	9	8**	89

*caught by leg

** non-escapee caught by neck

The noose stop/ breakaway releases moose that are snared by the leg, yet still retains wolves.

An additional benefit of the new design is that the breaking force increases as the snare loop becomes larger, meaning that larger wolves will have to exert more force to break free with the noose stop/breakaway system.

This is not the case for breakaway mechanisms that are dependent on the lock separating or S hooks pulling apart in which the breaking force is the same for moose and wolves.

