

Wolf Management Report and Plan, Game Management Units 21A and 21E:

Report Period 1 July 2010–30 June 2015, and

Plan Period 1 July 2015–30 June 2020

Jonathan S. Barton



2020

Wolf Management Report and Plan, Game Management Units 21A and 21E:

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Contents

Purpose of this Report.....	1
I. RY10–RY14 Management Report	1
Management Area.....	1
Summary of Status, Trend, Management Activities, and History of Wolves in Units 21A and 21E	1
Management Direction.....	3
Existing Wildlife Management Plans	3
Goals	3
Codified Objectives	3
Amounts Reasonably Necessary for Subsistence Uses	3
Intensive Management.....	3
Management Objectives.....	4
Management Activities	4
1. Population Status and Trend.....	4
2. Mortality-Harvest Monitoring and Regulations.....	7
Harvest by Hunters-Trappers.....	8
3. Habitat Assessment-Enhancement.....	9
4. Wolf Management with Public Participation and Outreach	9
Nonregulatory Management Problems or Needs.....	11
Data Recording and Archiving	11
Agreements	11
Permitting.....	11
Conclusions and Management Recommendations	11
II. Project Review and RY15–RY19 Plan	12
Review of Management Direction.....	12
Management Direction.....	12
Goals	12
Codified Objectives	12
Amounts Reasonably Necessary for Subsistence Uses	12
Intensive Management.....	12
Management Objectives.....	12
Review of Management Activities.....	13
1. Population Status and Trend.....	13
2. Mortality-Harvest Monitoring	14
3. Habitat Assessment-Enhancement.....	14
4. Wolf Management with Public Participation and Outreach	14
Nonregulatory Management Problems or Needs.....	14
Data Recording and Archiving	14
Agreements	15
Permitting.....	15
References Cited.....	15

List of Figures

Figure 1. Unit 21E, the Wolf Control Focus Area (WCFA), the Bear Control Focus Area (BCFA) and U.S. Fish and Wildlife Service lands in Alaska. 2

List of Tables

Table 1. Wolf harvest and harvest method, regulatory years 2010–2014, Units 21A and 21E, Alaska. 8

Table 2. Wolf harvest by residency, regulatory years 2010–2014, Units 21A and 21E, Alaska.... 8

Table 3. Wolf percent harvest chronology by month, regulatory years 2010–2014, Units 21A and 21E, Alaska. 10

Table 4. Wolf percent harvest by transport method, regulatory years 2010–2014, Units 21A and 21E, Alaska. 10

Purpose of this Report

This report provides a record of survey and inventory management activities for wolf in Units 21A and 21E for the 5 regulatory years 2010–2014 and plans for survey and inventory management activities in 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 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 more efficiently report on trends and 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 2 years and supersedes the 1976 draft Alaska wildlife management plans (ADF&G 1976).

I. RY10–RY14 Management Report

Management Area

Unit 21A and 21E includes Drainages of the Yukon River from Paimiut upstream to, but not including, the Blackburn Creek drainage; and the Innoko River totaling approximately 18,792 mi².

Summary of Status, Trend, Management Activities, and History of Wolves in Units 21A and 21E

In Units 21A and 21E, most residents consider wolves to be a competitor for moose and yet most local, state resident and nonresident hunters also consider wolves a trophy big game animal. These views were clearly expressed during an extensive public planning process during 2005 that resulted in the Yukon-Innoko Moose Management Plan (YIMMP; ADF&G 2006). This document, endorsed by the Alaska Board of Game (board) and the Federal Subsistence Board, directs the Alaska Department of Fish and Game (ADF&G) to manage wolves in this area so that they do not depress moose populations.

Wolf predation plays a significant role in the population dynamics of moose (Gasaway et al. 1992) and there is considerable interest in wolf control among residents of Unit 21E. Historically, wolf harvest has been low in these areas. The number of wolves taken through harvest is inadequate to regulate wolf numbers and promote a reduction in predation rates.

The wolf control focus area (WCFA) and bear control focus area (BCFA) are established within Unit 21E (Fig. 1). The WCFA encompasses approximately 4,126 mi², and the BCFA encompasses approximately 556 mi². The purpose of the WCFA and BCFA are to focus intensive management activities, including predation control and habitat management, in a relatively small area near villages where moose are most accessible to hunters, rather than spread this effort over the entire game management unit.

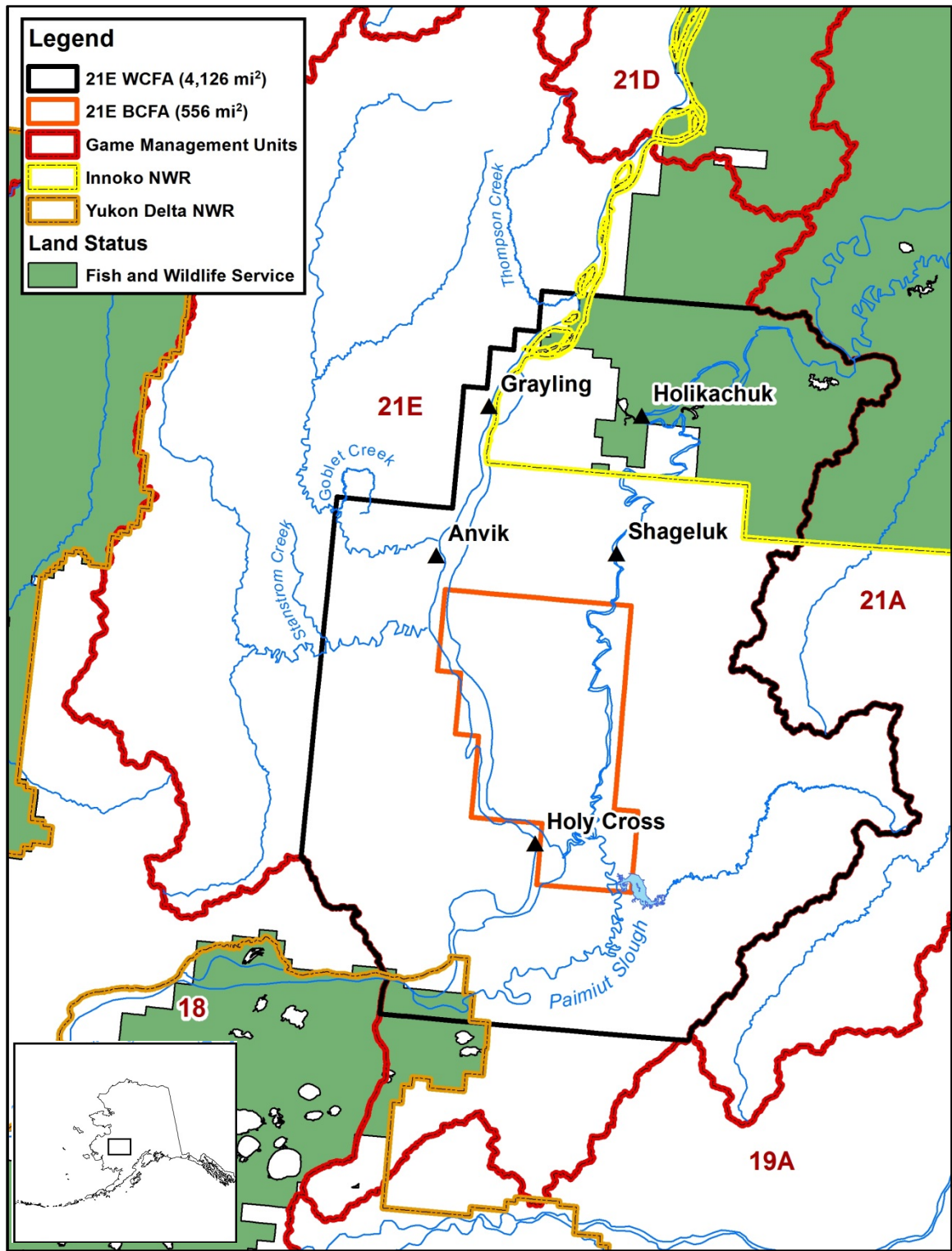


Figure 1. Unit 21E, the Wolf Control Focus Area (WCFA), the Bear Control Focus Area (BCFA) and U.S. Fish and Wildlife Service lands in Alaska.

Management Direction

The Department will manage to ensure the long-term conservation of wolves throughout their historic range in Alaska in relation to their prey and habitat. In addition, wolves will be managed to provide for the broadest possible range of human uses and values of wolves and their prey populations that meet wildlife conservation principles and which reflect the public's interest. We will work to increase public awareness and understanding of the uses, conservation, and management of wolves, their prey, and habitat in Alaska.

EXISTING WILDLIFE MANAGEMENT PLANS

- A wildlife management plan exists in the 2012 wolf management survey and inventory report for Units 21A and 21E wolf (Seavoy 2012).
- An intensive management plan (ADF&G 2016) for predation control to benefit moose guides wolf management decisions in Unit 21E. This plan was passed by the Alaska Board of Game in 2016 and is found in 5AAC 92.124.
- The YIMMP (ADF&G 2006) guides wolf management in Units 21A and 21E.

GOALS

- G1. Ensure the long-term conservation of wolves throughout their historic range in Units 21A and 21E in relation to their prey and habitat.
- G2. Provide for a broad range of human uses and values of wolves and their prey populations that meet wildlife conservation principles and which reflect the public's interest.

CODIFIED OBJECTIVES

Amounts Reasonably Necessary for Subsistence Uses

- C1. Unit 21A and 21E have a positive finding for customary and traditional uses of wolves. Amounts reasonably necessary for subsistence uses (ANS) have not been determined by the Board of Game for hunting. However, the board determined an ANS of 90% of the harvestable portion of wolves taken as furbearers under a trapping license.

Intensive Management

- C2. In the Unit 21E WCFA, reduce wolf population by at least 60–80% from the precontrol estimate of 80 wolves.
- C3. In all of Unit 21E, maintain a minimum population of 30 wolves after wolf control in the WCFA.

MANAGEMENT OBJECTIVES

Units 21A and 21E recommended in YIMMP:

- M1. Maintain a viable wolf population of at least 100 wolves, unless directed otherwise by the commissioner and the board as part of a predation control program.
- M2. Maintain a 3-year average harvest of at least 25% of the estimated wolf population in Units 21A and 21E combined.

MANAGEMENT ACTIVITIES

1. Population Status and Trend

ACTIVITY 1.1. Refine annual wolf population estimates in the area, based on aerial surveys, incidental sightings, hunter interviews, trapper questionnaires, and evaluation of sealing documents (objectives M1, M2).

Data Needs

Aerial survey data, sealing data, and supplemental information from the public allow us to refine our wolf population and trend estimates and determine whether management objectives are met. Further, they can provide data for wolf population reduction objectives if the board directs us to conduct a wolf control program (objectives C1, C2, M1, M2).

Methods

In Unit 21A and 21E, wolf populations are estimated using a combination of data sources including wolf population data from similar areas (Unit 19D East surveys, Unit 20A wolf research data), harvest records, wolf observations made during surveys for other species, previous estimates, and hunter-trapper interviews and questionnaires.

Sealing by an ADF&G representative or an appointed fur sealer is required for wolves taken in Alaska and we obtained harvest statistics primarily from these sealing certificates. We assumed that >90% of the annual wolf harvest was reported on sealing certificates because most wolf hides from western interior Alaska are sold. During the sealing process, information was collected on specific location and method of take, date, sex, color of pelt, estimated size of the wolf pack, and method of transportation. Harvest data were summarized by regulatory year (RY), which begins 1 July and ends 30 June (e.g., RY10 = 1 July 2010 through 30 June 2011).

Results and Discussion

We evaluated sealing certificates and interviewed hunters and trappers to determine a stable and abundant wolf population in Units 21A and 21E. Aerial surveys were not initiated during this regulatory period but will be conducted in the future to determine precontrol population estimates if predator control is implemented.

Recommendations for Activity 1.1

Continue. Evaluating sealing documents is the most accurate form of estimating wolf harvest. Supplemental information such as hunter and trapper interviews, incidental sightings, survey data, and hunter and trapper input, provide a framework to more accurately understand population size and dynamics.

ACTIVITY 1.2 Conduct wolf reconnaissance population estimation surveys in Unit 21E at 3-year intervals in conjunction with moose population estimation surveys in Unit 21E (objectives M1, M2).

Data Needs

Reconnaissance surveys help us estimate minimum wolf population and pack sizes. Moose population estimation surveys provide moose-to-wolf ratios.

Methods

We conducted an aerial wolf reconnaissance track survey (Stephenson 1978) in March 2009, which included a 3,600 mi² area of Unit 21E (Seavoy 2012). The survey area included that portion of Unit 21E between the Innoko and Yukon Rivers from Grayling, south to the confluence of the Innoko and Yukon rivers and approximately 15 miles west of the Yukon River between the Anvik and Bonasila rivers. This survey was conducted using a 3 fixed-wing aircraft (PA-18 Super Cub or similar aircraft) with 5 hours of survey time per aircraft. Prior knowledge of wolf locations was available because this wolf survey immediately followed moose surveys. Based on moose survey stratification information, the area surveyed has 1,900 mi² of high-quality moose habitat, and therefore high wolf densities, and 1,700 mi² of low-quality moose habitat with low wolf densities.

Results and Discussion

During the March 2009 wolf reconnaissance survey in Unit 21E, we found 60–67 wolves associated with 9–10 packs (average pack size = 6.0–7.4 wolves) and 3 single wolves. We directly observed or accounted for tracks of 38–45 wolves in 1,900 mi² of high quality moose habitat (20–24 wolves/1,000 mi²; 7.7–9.3 wolves/1,000 km²) and 25 wolves in 1,700 mi² (2,736 km²) of low quality moose habitat (14 wolves/1,000 mi²; 5.4 wolves/1,000 km²). This survey represents an incomplete minimum count due to unsuitable weather after the first day. Snow had fallen 2 days prior to the wolf survey and light conditions were excellent. However, weather only allowed 1 survey day. Because of these circumstances, it also contains uncertainty regarding pack identity for some wolves and underestimates single wolves. Because no other data are available, we used these data to guide our minimum wolf population estimate. The habitat and moose densities in the remainder of Unit 21E are similar to the survey area and we predict that wolf densities are comparable. No estimate of precision was made and ranges in our estimates represent uncertainty in our observations. We extrapolated the resulting densities to include all of Unit 21E (2,400 mi² of high-quality moose habitat and 5,600 mi² of low-quality moose habitat). Therefore, our minimum estimated Unit 21E wolf density is about 16 wolves/1,000 mi² (6.2 wolves/1,000 km²).

Based on information above, we believe that the Unit 21E wolf population is stable at 150–200 wolves in 20–30 packs. However, interpretation of this estimate should include the knowledge that it is based on data from the March 2009 partial survey with no estimate of precision; crude estimates of habitat were used to extrapolate these data to un-surveyed portions of the unit; and ranges in our estimates imply uncertainty in what was observed.

Recommendations for Activity 1.2

Activity 1.2 should continue. Wolf surveys conducted in conjunction with moose population surveys provide information to meet management objectives.

ACTIVITY 1.3. Conduct wolf predation control programs as directed by the commissioner and Board of Game (objectives C1, C2, M1, M2).

Data Needs

The decision-making framework to initiate or suspend predator control will be based on estimates of moose density in the WCFA and moose twinning rates in the BCFA (ADF&G 2016).

Methods

Wolf control has not been conducted in Unit 21E to date. If wolf control is initiated, the objective within the WCFA (Fig. 1) will be to temporarily reduce wolf numbers to the lowest level possible. The precontrol estimate for all of Unit 21E is 150 wolves with 80 in the WCFA. Alaska residents with a permit from ADF&G will be authorized to use fixed-wing aircraft to shoot either while airborne or after landing. If public permittees are unable to successfully remove at least 60–80% of wolves from the WCFA, the department will consider a removal effort by employees using helicopters to supplement public efforts.

If a geostatistical population estimator mid-point estimate, corrected for sightability, in the WCFA is lower than the objective of 1.0 moose/mi² (approximately 4,125 moose), and twinning rates are >20%, wolf control may be initiated. This ensures that the moose density is appropriate for the habitat available. All GSPE surveys will be designed to achieve precision of at least ±20% at the 90% confidence interval, but actual precision will vary with survey conditions and funding (ADF&G 2016).

Results and Discussion

ADF&G will manage hunting and trapping seasons, and wolf control to maintain a minimum of 30 wolves in all of Unit 21E. Based on information from previous wolf and moose surveys, the current size of the WCFA ensures 30 wolves will remain in Unit 21E even if all wolves within the WCFA are removed.

Recommendations for Activity 1.3

Maintain the option to conduct this activity. If moose densities within the WCFA decline below codified objectives, predator control programs can provide an effective management tool to meet moose density objectives which are outlined in the Unit 21E Intensive Management Plan (ADF&G 2016).

2. Mortality-Harvest Monitoring and Regulations

ACTIVITY 2.1. Monitor harvests and trapper effort through sealing records, trapper interviews, and trapper questionnaires (objectives C1, C2, M1, M2).

Data Needs

Fur sealing data from Wildlife Information Network (WinfoNet) is needed annually to assess harvest. This information is used for intensive management and annual reports to the Board of Game.

Methods

Wolves harvested by trappers and hunters were sealed to monitor harvest. Harvest data were archived in WinfoNet and are reported by regulatory year. Information recorded for each wolf included date of kill, name of person that harvested the wolf, location, method of take, transportation, sex of the wolf, color of the pelt, and number of wolves thought to be in the pack.

Season and Bag Limit

RY10–RY12 wolf hunting and trapping seasons for residents and nonresidents in Units 21A and 21E.

Unit	Activity	Bag Limit	Open Seasons
21A	Hunting	10 wolves	10 Aug–30 Apr
	Trapping	No limit	1 Oct–30 Apr
21E	Hunting	10 wolves	10 Aug–30 Apr
	Trapping	No limit	1 Nov–30 Apr

Note: Wolves taken under a hunting license must have hides sealed within 30 days of kill.

RY13–RY14 wolf hunting and trapping seasons in Units 21A and 21E.

Unit	Activity	Bag Limit	Open Seasons
21A	Hunting	10 wolves	10 Aug–31 May
	Trapping	No limit	1 Oct–30 Apr
21E	Hunting	10 wolves	10 Aug–31 May
	Trapping	No limit	1 Nov–30 Apr

Note: The hunting season was extended through 31 May starting in RY13. Wolves taken under a hunting license must have hides sealed within 30 days of kill.

Results and Discussion

Harvest monitoring through fur sealing is essential for wolf population management. By archiving the data in WinfoNet, we can annually assess and monitor population trends and harvest. This allows ADF&G to maintain a viable wolf population and achieve harvest objectives as directed by the Board of Game. We will continue to monitor harvest through sealing records in Units 21A and 21E and continue to collect other pertinent information about the animals harvested such as pack size, pelt color, sex, and date of kill.

Harvest by Hunters-Trappers

During RY10–RY14, 24 and 25 wolves were reported harvested in Units 21A and 21E, respectively. Snaring was the primary method of take in Unit 21A and shooting was most common in Unit 21E (Table 1).

Table 1. Wolf harvest and harvest method, regulatory years 2010–2014, Units 21A and 21E, Alaska.

Regulatory year	Unit 21A					Unit 21E				
	Shoot	Trap	Snare	Other/ Unk	Total	Shoot	Trap	Snare	Other/ Unk	Total
2010	1	0	3	0	4	4	4	0	0	8
2011	0	1	0	0	1	1	1	0	0	2
2012	2	0	2	0	4	4	3	1	0	8
2013	5	0	0	0	5	3	1	0	0	4
2014	0	0	10	0	10	1	2	0	0	3
Total	8	1	15	0	24	13	11	1	0	25
% of Total	33	4	63	0	100	52	44	4	0	100
5-year \bar{x}	1.6	0.2	3.0	0.0	4.8	2.6	2.2	0.2	0.0	5.0

Hunter Residency and Success

During RY10–RY14, 23 resident hunters harvested 42 wolves, and 6 nonresident hunters harvested 7 wolves (Table 2). Overall, residents accounted for 86% ($n = 42$) of the total harvest during RY10–RY14.

Table 2. Wolf harvest by residency, regulatory years 2010–2014, Units 21A and 21E, Alaska.

Regulatory year	Unit	Harvest by residency					Total take
		Number Residents	Resident take	Number Nonresidents	Nonresident take	Unk	
2010	21A	1	3	1	1	0	4
	21E	4	8	0	0	0	8
2011	21A	1	1	0	0	0	1
	21E	1	2	0	0	0	2
2012	21A	2	3	1	1	0	4
	21E	5	8	0	0	0	8
2013	21A	0	0	4	5	0	5
	21E	4	4	0	0	0	4
2014	21A	2	10	0	0	0	10
	21E	3	3	0	0	0	3
Total		23	42	6	7	0	49

Harvest Chronology

Approximately two-thirds of the reported wolf harvest during RY10–RY14 occurred during January–March (Table 3). The majority of the remaining harvest occurred in September, which was most likely due to opportunistic harvest during other big game hunts. There was no additional harvest during the month of May after the extension of the season in RY13.

Transport Methods

During RY10–RY14, snowmachine was the primary mode of transportation of successful hunters and trappers (Table 4).

Other Mortality

No other wolf mortality data are available for RY10–RY14.

Alaska Board of Game Actions and Emergency Orders

During RY10–RY12, no changes were made to wolf hunting or trapping regulations. The Board adopted a proposal to extend the wolf hunting season from 10 Aug–30 April to 10 Aug–31 May in 2012.

In 2016, the board adopted an intensive management plan for the Unit 21E moose population. Future changes in wolf management direction and regulations may occur if the moose population declines below 1.0 observable moose/mi² in the WCFA.

Recommendations for Activity 2.1

Continue. Harvest records such as sealing certificates provide the most accurate measurement of harvest. Trapper questionnaires and trapper interviews provide the department with supplemental information and observations and helps area biologists stay in touch with user groups.

3. Habitat Assessment-Enhancement

None.

4. Wolf Management with Public Participation and Outreach

ACTIVITY 4.1 Conduct wolf trapping and snaring clinics in communities that have expressed interest in the program, as agreed in the YIMMP (objectives C1, C2, M1, M2).

Needs

Engage the public in trapping wolves by recruiting new wolf trappers.

Methods

Organize trapper education clinics. Clinics provide information on building wolf snares, effective sets, snare locations that prevent incidental catch of moose, wolf and moose biology, and regulations.

Table 3. Wolf percent harvest chronology by month, regulatory years 2010–2014, Units 21A and 21E, Alaska.

Regulatory year	Percent harvest chronology by month (<i>n</i>)											Total harvest (<i>n</i>)
	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May		
2010	0 (0)	8 (1)	8 (1)	0 (0)	0 (0)	50 (6)	25 (3)	8 (1)	0 (0)	–	(12)	
2011	0 (0)	33 (1)	0 (0)	0 (0)	33 (1)	0 (0)	0 (0)	33 (1)	0 (0)	–	(3)	
2012	0 (0)	17 (2)	8 (1)	0 (0)	17 (2)	17 (2)	25 (3)	8 (1)	8 (1)	–	(12)	
2013	0 (0)	67 (6)	0 (0)	0 (0)	0 (0)	0 (0)	22 (2)	0 (0)	11 (1)	0 (0)	(9)	
2014	0 (0)	0 (0)	0 (0)	15 (2)	15 (2)	15 (2)	23 (3)	31 (4)	0 (0)	0 (0)	(13)	
Total (<i>n</i>)	(0)	(10)	(2)	(2)	(5)	(10)	(11)	(7)	(2)	(0)	(49)	
% of Total	0	20	4	4	10	20	23	14	4	0		

Table 4. Wolf percent harvest by transport method, regulatory years 2010–2014, Units 21A and 21E, Alaska.

Regulatory year	Percent harvest by transport method (<i>n</i>)				Total (<i>n</i>)
	Aircraft	Boat	Snowmobile	Other/Unknown	
2010	0 (0)	8 (1)	83 (10)	8 (1)	(12)
2011	0 (0)	33 (1)	33 (1)	33 (1)	(3)
2012	8 (1)	8 (1)	83 (10)	0 (0)	(12)
2013	22 (2)	44 (4)	22 (2)	11 (1)	(9)
2014	23 (3)	0 (0)	77 (10)	0 (0)	(13)

Results and Discussion

No trapping clinics were conducted during the reporting period.

Recommendations for Activity 4.1.

Continue to conduct wolf trapping clinics opportunistically; local interest exists but experts are not always available to conduct the clinic.

NONREGULATORY MANAGEMENT PROBLEMS OR NEEDS

There were no nonregulatory management problems or needs.

Data Recording and Archiving

- Wolf harvest (fur sealing) data are archived in ADF&G's WinfoNet database.
- Electronic data and files such as survey memos and reports are stored in the WinfoNet Data Archive. Project Title: McGrath Area Office. Primary Region: Region III.
- Hard copies of survey field sheets and files such as survey memos and reports are also stored in files in the McGrath office.

Agreements

None.

Permitting

None.

Conclusions and Management Recommendations

The objective to maintain a viable wolf population of at least 100 wolves was met. The objective to maintain a 3-year average harvest of at least 25% of the estimated wolf population in Units 21A and 21E was not met. During RY10–RY14 the average harvest was 9–12% of the estimated population.

We accomplished most management activities as intended during RY10–RY14. Using the best data available, we estimated annual wolf populations and monitored harvest. We also presented a predation control implementation plan (ADF&G 2016) to the Board of Game that was adopted during the March 2016 meeting.

The March 2009 wolf population survey improved our understanding of wolves in Unit 21E. However, if wolf control were to be initiated a more thorough survey of the area needs to be completed.

Collecting survey and inventory information on wolf populations is a challenge faced by wildlife managers, particularly in remote areas of Alaska such as Units 21A and 21E. Population

estimates are especially difficult to obtain because they require adequate search conditions, which occur infrequently and for short duration in Units 21A and 21E. When favorable conditions do occur, there is an additional challenge of having experienced pilot–observer teams positioned to begin surveys.

II. Project Review and RY15–RY19 Plan

Review of Management Direction

MANAGEMENT DIRECTION

We recommend no changes to wolf management goals for the next report period. However, objectives and activities are adjusted below to more clearly reflect our plan for the next 5 years.

GOALS

- G1. Ensure the long-term conservation of wolves throughout their historic range in Units 21A and 21E in relation to their prey and habitat.
- G2. Provide for a broad range of human uses and values of wolves and their prey populations that meet wildlife conservation principles and which reflect the public’s interest.

CODIFIED OBJECTIVES

Amounts Reasonably Necessary for Subsistence Uses

Units 21A and 21E have a positive finding for customary and traditional uses of wolves. Amounts reasonably necessary for subsistence uses (ANS) have not been determined by the Board of Game for hunting. However, the board determined an ANS of 90% of the harvestable portion of wolves taken as furbearers under a trapping license.

Intensive Management

- C1. In the Unit 21E WCFA (Fig. 1), reduce wolf population by at least 60–80% from the precontrol estimate of 80 wolves.
- C2. In all of Unit 21E, maintain a minimum population of 30 wolves after wolf control in the WCFA.

MANAGEMENT OBJECTIVES

- M1. Maintain at least 100 wolves in Units 21A and 21E, unless directed otherwise by the commissioner and the Board of Game as part of a predation control program.
- M2. Maintain a 3-year average harvest of at least 25% of the estimated wolf population in Units 21A and 21E combined.

REVIEW OF MANAGEMENT ACTIVITIES

1. Population Status and Trend

ACTIVITY 1.1. Refine annual wolf population estimates in the area based on aerial surveys or censuses when conditions permit, incidental, sightings, hunter interviews, trapper questionnaires, and evaluation of sealing documents (objectives C1, C2, M1, M2).

Data Needs

Aerial survey data, sealing data, and supplemental information from the public allow us to refine our wolf population and trend estimates and determine whether management objectives are met. Further, they can provide data for wolf population reduction objectives if the board directs us to conduct a wolf control program.

Methods

We will continue to monitor populations through sealing records, interviews, and other supplemental sources. However, surveys will only be conducted if predator control is implemented, and precontrol numbers need to be evaluated (ADF&G 2016). Surveys opportunistically conducted will follow Intensive Aerial Wolf Survey protocols (Gardner and Pamperin 2014).

ACTIVITY 1.2. Conduct wolf predation control programs as directed by the commissioner and board (objectives M1, M2, C1, C2).

Data Needs

The decision-making framework to initiate or suspend predator control will be based upon estimates of moose density in the WCFA and moose twinning rates in the BCFA.

If a GSPE point estimate in the WCFA is lower than the objective of 1.0 moose/mi² corrected for sightability (approximately 4,125 moose), and twinning rates are >20%, wolf control may be initiated. This ensures that the moose density is appropriate for the habitat available. All GSPE surveys will be designed to achieve precision of at least $\pm 20\%$ at the 90% confidence interval, but actual precision will vary with survey conditions and funding.

Methods

If wolf control is initiated, the objective within the WCFA will be to temporarily reduce wolf numbers to the lowest level possible. The precontrol estimate for all of Unit 21E is 150 wolves with 80 in the WCFA. Alaska residents with a permit from ADF&G will be authorized to use fixed-wing aircraft to shoot wolves within the WCFA either while airborne or after landing. If public permittees are unable to successfully remove at least 60–80% of wolves from the WCFA, the department will consider a removal effort by employees using helicopters to supplement public efforts.

ADF&G will manage hunting and trapping seasons, and wolf control to maintain a minimum of 30 wolves in all of Unit 21E. Based on information from previous wolf and moose surveys, the

current size of the WCFA ensures 30 wolves will remain in Unit 21E even if all wolves within the WCFA are removed.

2. Mortality-Harvest Monitoring

ACTIVITY 2.1. Monitor harvest through fur sealing (objectives M1, M2).

Data Needs

Fur sealing data from WinfoNet is needed annually to assess harvest. This information is used for intensive management and annual reports to the Board of Game.

Methods

Wolves harvested by trappers, hunters, and control permittees will continue to be sealed to monitor harvest. Harvest data archived in WinfoNet will be accessed and reported by regulatory year. Information recorded for each wolf will include date of kill, name of person harvesting wolf, location, method of take, transportation, sex of the wolf, color of the wolf, and number of wolves remaining in the pack.

3. Habitat Assessment-Enhancement

None.

4. Wolf Management with Public Participation and Outreach

ACTIVITY 4.1. Conduct wolf trapping and snaring clinics in communities that have expressed interest in the program, as agreed in the YIMMP (objectives C1, C2, M1, M2).

Needs

Engage the public in trapping wolves by recruiting new wolf trappers.

Methods

Organize trapper education clinics. Clinics provide information on building wolf snares, effective sets, snare locations that prevent incidental catch of moose, wolf and moose biology, and regulations.

NONREGULATORY MANAGEMENT PROBLEMS OR NEEDS

Data Recording and Archiving

- Wolf harvest (fur sealing) data are archived in WinfoNet database.
- Electronic data and files such as survey memos and reports are stored in the WinfoNet Data Archive. Project Title: McGrath Area Office. Primary Region: Region III.

- Hard copies of survey field sheets and files such as survey memos and reports are also stored in files in the McGrath office.

Agreements

The Yukon–Innoko Moose Management Plan (YIMMP; ADF&G 2006). The YIMMP (ADF&G 2006) guides wolf and moose management in Units 21A and 21E (Seavoy 2009). The plan’s management objective is to prevent a moose population decline from which recovery would be difficult, by being proactive. This objective was the guiding principle for the BOG in adopting a predation control implementation plan for Units 21A and 21E in 2010. This plan allows wolf control if moose population estimates fall below threshold levels (Seavoy 2012).

Permitting

None.

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