

# **Wolf Management Report and Plan, Game Management Unit 18:**

Report Period 1 July 2010–30 June 2015, and  
Plan Period 1 July 2015–30 June 2020

**Patrick Jones**





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Plan Period 1 July 2015–30 June 2020

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## **Purpose of this Report**

This report provides a record of survey and inventory management activities for wolves (*Canis lupus*) in Unit 18 for the 5 regulatory years 2010–2014 and plans for survey and inventory management activities for the next 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 Division of Wildlife Conservation launched this 5-year report to more efficiently report on trends and describe planned changes in 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 18 is a 42,000 square mile roadless area that encompasses the mouth of the Yukon and Kuskokwim rivers. These major rivers roughly divide the unit into thirds. The middle third between the rivers is largely flat, wet, and dotted with many lakes. The portion north of the Yukon River and the portion south and east of the Kuskokwim River are mostly upland to mountainous, and some extensive areas with trees exist near the rivers and smaller tributaries that drain in to the 2 river systems.

The habitat in Unit 18 is largely intact but is inhabited by more than 23,000 people in more than 40 villages, making Unit 18 one of Alaska’s most densely populated rural units in Alaska. The boundaries of the Yukon Delta National Wildlife Refuge and the Togiak National Wildlife Refuge approximate the Unit 18 boundary.

### **Summary of Status, Trend, Management Activities, and History of Wolves in Unit 18**

Wolf numbers were low throughout Unit 18 from the departure of reindeer herding from the 1930s through 1960s (Calista 1984) until the late 1980s, when moose populations became established. Observations from trappers, hunters, fur buyers, and agency biologists indicated that wolf numbers have increased in Unit 18, particularly along the main stem of the Yukon River and in the Kilbuck Mountains east of Bethel. More recently, there have been increased populations along the Kuskokwim River and its tributaries from Kalskag to Eek and along the coast south. The distribution and abundance of wolves in Unit 18 reflects the expanding distribution and increased abundance of moose, as well as the seasonal movements of Mulchatna caribou.

While wolves were commonly reported near reindeer herds in the 1920s and 1930s, the reindeer industry dwindled, and by the 1960s it disappeared. Anecdotal evidence from this time suggests that wolf numbers and harvest drastically diminished. Historically and currently, many wolves caught in Unit 18 are neither sold nor sealed. Current harvest data are derived from sealing

certificates and represent a minimum estimate of wolf harvest. Sealing records begin in the 1980s when the average annual harvest was 7 wolves, and the highest harvest was 17 wolves in RY88. In the 1990s the Mulchatna caribou herd expanded its range to include the southern third of Unit 18. Successful moose hunting moratoriums (2008–2013) along the Yukon and Kuskokwim rivers resulted in a larger moose population. As a result, wolves now have a wider ungulate food base in Unit 18. This led to more wolves on the landscape now than in previous decades, and in turn, higher harvest rates. The dramatic increase in harvest that occurred during 1999–2010 is correlated with an increasing and expanding wolf population within the unit and good snow accumulation during winter.

Regulated wolf hunting and trapping in Unit 18 started with a state season in 1959 of “No Limit” and “No Closed Season” and remained that way through regulatory year 1968. The first restricted season (1 October–30 April) established for wolves was in RY69; yet the bag limit remained “No Limit.” The current 10 August start of the hunting season was established in RY74 and 10 August–30 April has remained the hunting season through RY16. From RY74 through RY11 the bag limit slowly increased from 2 wolves to 5 wolves. In RY12 the current hunting bag limit of 10 wolves was established and has remained unchanged through RY16. Trapping season is 10 November–30 March with no bag limit for residents or nonresidents.

Hunting and trapping success is greatly dependent upon snow accumulation and the amount of time caribou spend in accessible areas throughout the winter. Historically and currently trapping and hunting have likely had little to no effect on the wolf population in Unit 18. Hunter success is influenced greatly by travel conditions throughout the winter. Travel conditions are a factor of total snow accumulation and when it arrives in the winter. The amount of time travel conditions are adequate for hunters and trappers varies dramatically from one winter season to the next.

## **Management Direction**

### **EXISTING WILDLIFE MANAGEMENT PLANS**

Presently, there are no plans specific to wolves in Unit 18.

### **GOALS**

- Maintain viable wolf populations in Unit 18.
- Minimize adverse interactions between wolves and the public.

### **CODIFIED OBJECTIVES**

#### Amounts Reasonably Necessary for Subsistence Uses

The Unit 18 wolf population has a positive customary and traditional use determination. The amount reasonably necessary for subsistence (ANS) value is 5–20 wolves.

## Intensive Management

None.

## **MANAGEMENT OBJECTIVES**

- Monitor wolf population status through contacts with the public, annual trapper questionnaires, and field observations.
- Monitor harvest through the sealing program and public contacts.
- Explain regulations to local hunters and trappers and promote compliance with them.
- Provide general wolf information and education to public.

## **MANAGEMENT ACTIVITIES**

### 1. Population Status and Trend

While the sex of harvested wolves that are sealed is recorded, data gathered this way are insufficient to provide any analysis of the composition of the wolf population and we have no other survey or other information that could be used to accurately determine the composition of the wolf population in Unit 18.

### 2. Mortality-Harvest Monitoring and Regulations

ACTIVITY 2.1. Monitor mortality and harvest in Unit 18 annually.

#### *Data Needs*

Annual summaries of harvest are needed to establish whether harvest was within sustained yield. Monitoring harvest data and improving harvest reporting through public education, fur-sealer support, community-based harvest assessment surveys in select communities, and improved distribution of trapper questionnaires are critical to a better understanding of actual levels of harvest and public interaction with wolves, both positive and negative.

#### *Methods*

Harvest data are derived from sealing certificates and represent a minimum estimate of wolf harvest. However, many wolves caught in Unit 18 are neither sold nor sealed. Wolf ruffs are highly prized as parka trim, and the local domestic demand for wolf pelts is very high. Local residents generally prefer stiffer home-tanned wolf pelts for parka ruffs. Harvest assessment surveys are done periodically in communities to determine the reporting rate of harvested wolves. Harvest reporting to the department as low as 50% of actual harvest has been

documented in some villages when comparing the number of furs sealed with a CITES<sup>1</sup> tag with the number estimated from a community's harvest survey.

### *Season and Bag Limit*

**Table 1. Unit 18 wolf hunting and trapping seasons and bag limits for both residents and nonresidents during regulatory years 2010–2014.**

Regulatory years	Bag limit (resident and nonresident)	Resident open season (subsistence and general hunts)	Nonresident open season
2010, 2011	Trapping: No limit	10 Nov–31 Mar	10 Nov–31 Mar
2010, 2011	Hunting: 5 wolves	10 Aug–30 Apr	10 Aug–30 Apr
2012–2015	Trapping: No limit	10 Nov–31 Mar	10 Nov–31 Mar
2012–2015	Hunting: 10 wolves	10 Aug–30 Apr	10 Aug–30 Apr

### *Results and Discussion*

#### Harvest by Hunters-Trappers

Reported and sealed harvest exceeded the minimum ANS every year of this reporting period (RY10–RY14, Table 2, Fig. 1). The average annual number of wolves sealed during RY10–RY14 was 33 compared to 49 in RY05–RY09. However, as previously noted, the number of wolves sealed is not an accurate reflection of the number of wolves actually harvested.

The reported harvest of 75 in RY10 was the highest for this reporting period but below the highest recorded harvest of 109 in RY01 (Fig. 1). The RY10 harvest represented the culmination of a few factors: a growing wolf population, good snow conditions allowing easy snowmachine travel, caribou being available to a large number of Kuskokwim River residents, and good harvest reporting. It also reflected the efforts of 3 particularly accomplished trappers. Good winter conditions benefit both trappers and hunters however trappers tend to harvest more wolves than hunters when travel conditions are marginal or worse (Table 3).

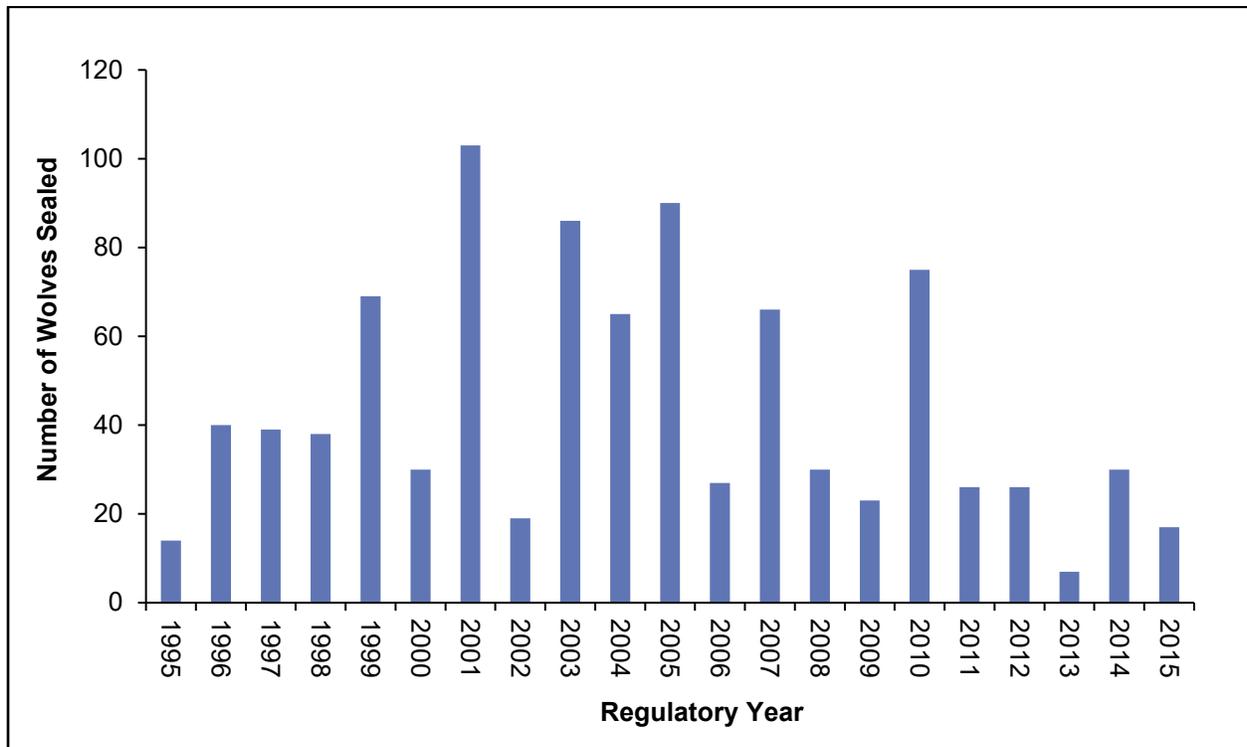
The reported harvest in RY11–RY14 does not follow the larger trend of increasing harvests of the last decade (Fig. 1). This period of lower harvest reflects a decrease in wolf numbers and very poor travel conditions. The RY13 harvest illustrates, more than any other factor, the impact of poor weather on harvest in combination with increasing gas prices in Yukon-Kuskokwim Delta communities.

Understanding true harvest is necessary for understanding not only patterns and level of use but long-term sustainable harvest. Lack of harvest reporting and failure to comply with state and federal requirement of CITES tags are a result of hunter confusion or not having access to a fur vendor. Strong cultural values for home tanned wolf hides and a common custom of giving away untanned wolf hides also complicates matters when trying to assign years and location of kill to a fur.

<sup>1</sup> CITES stands for the Convention on International Trade in Endangered Species of Wild Fauna and Flora. This is a federal program that requires the pelts of certain species legally harvested be tagged.

**Table 2. Unit 18, Alaska reported wolf harvest by location from the Yukon and Kuskokwim river drainages during regulatory years 2005–2014.**

Regulatory year	Yukon	Kuskokwim	Unknown	Total
2005	5	57	26	88
2006	1	29	1	31
2007	25	51	0	76
2008	25	5	0	30
2009	12	9	1	21
2010	21	54	0	75
2011	9	17	0	26
2012	6	20	0	26
2013	3	4	0	7
2014	16	14	2	32



**Figure 1. Number of wolves sealed in Unit 18, Alaska, regulatory years 1995–2015.**

**Table 3. Unit 18, Alaska wolf harvest by method of take, regulatory years 2005–2014.**

Regulatory year	Reported harvest			Method of take			Total harvest
	Male	Female	Unknown	Trap/snare	Shot	Unknown	
2005	27	31	30	37	23	28	88
2006	13	14	4	18	13	0	31
2007	43	27	6	25	46	5	76
2008	9	6	15	19	9	2	30
2009	11	10	0	5	16	0	21
2010	19	21	32	34	36	2	75
2011	10	5	11	1	25	0	26
2012	12	10	4	11	15	0	26
2013	1	4	2	5	2	0	7
2014	10	8	14	19	11	2	32
Total	155	136	118	174	196	74	412

#### Hunter Residency and Success

Most wolves in Unit 18 are harvested by residents of Alaska. During this reporting period, 4 wolves were harvested by nonresidents out of the 164 reported. No measure of hunter or trapper success is available.

#### Harvest Chronology

The highest reported harvests have historically been in February and March (Table 4). This pattern is explained by the timing of snow accumulation, improving travel conditions for hunters and trappers, the onset of wolf breeding season, and increasing day length. Trapping is hampered by low snow, alternating freezing and thawing temperatures, and few hours of daylight. The intensity of caribou hunting, and the subsequent incidental harvest of wolves are also dependent upon travel conditions. By mid- or late January, travel conditions usually improve. In response to these conditions and factors, more effort is concentrated by people during February–March. In years that good snowpack remains through April, people hunting wolves with snowmachines can be successful. During RY10 the high harvests in both January and April reflect the quality of winter and the amount of snowfall the area received.

The reported RY13 harvest was 7 wolves, the lowest during this reporting period. Travel conditions unitwide remained extremely poor through most of the season, which explains the lower harvest.

**Table 4. Unit 18, Alaska wolf harvest chronology by month, regulatory years 2005–2014.**

Regulatory year	Reported harvest per harvest period									n
	Aug	Sep	Nov	Dec	Jan	Feb	Mar	Apr	Unk	
2005	0	0	3	7	13	14	11	1	39	88
2006	0	1	0	8	4	2	6	1	9	31
2007	0	0	0	6	7	18	30	2	13	76
2008	0	0	3	6	4	1	11	3	2	30
2009	0	0	1	3	2	7	8	0	0	21
2010	0	2	2	12	16	13	18	4	1	68 <sup>a</sup>
2011	0	0	1	6	2	8	7	0	0	24 <sup>a</sup>
2012	0	0	1	2	0	14	8	1	0	26
2013	0	0	0	0	2	1	3	0	1	7
2014	1	2	1	12	5	5	3	0	2	31 <sup>a</sup>

<sup>a</sup>These numbers vary from those listed elsewhere in this report due to reporting and database query inconsistencies.

### Transport Methods

Hunters and trappers typically use snowmachines to harvest wolves. Five of the successful hunters were dropped off by airplane during this reporting period, but this is rare.

### *Other Mortality*

No information is available on natural mortality of wolves in Unit 18, though, in the summer of 2011 wolves on the Kuskokwim had a large mortality event, presumably the result of rabies or distemper; however, we have no evidence to support that rabies was the cause. In the following winter (2011–2012) there were fewer packs and group sizes of resident packs were smaller. This was true for all packs present on the Kuskokwim River and all tributaries except the Eek River drainage. A large number of fox did test positive for rabies in this area throughout the previous 2010–2011 winter.

### *Alaska Board of Game Actions and Emergency Orders*

There were no emergency orders regarding wolves for Unit 18 during this reporting period.

The Board of Game increased the bag limit to 10 wolves at the 2011 meeting in Utqiagvik (formerly Barrow).

### *Recommendations for Activity 2.1*

Continue.

### 3. Habitat Assessment-Enhancement

There were no direct habitat enhancement activities for wolves in Unit 18 during the reporting period.

## NONREGULATORY MANAGEMENT PROBLEMS OR NEEDS

### Data Recording and Archiving

- Harvest data are stored on an internal database housed on a server (<https://winfonet.alaska.gov/index.cfm>).
- Historical wolf sealing certificates (1990–2003) are stored in the Bethel Fish and Game office and should be scanned for more secure data archival.

### Agreements

There were no data sharing agreements for wolves in Unit 18 during this reporting period.

### Permitting

There were no permit hunts for wolves in Unit 18 during this reporting period.

## Conclusions and Management Recommendations

Estimated wolf numbers in Unit 18 have increased since the drop in the population that occurred in RY11 and appear to be reaching similar levels to what was estimated in RY10. This dip in the population is thought to be due to disease. The wolf population is likely to continue growing and expanding its range in Unit 18 in response to greater availability of ungulate prey. Moose along the Yukon River have increased in numbers and range to the point that wolf packs are established from the Unit 18 boundary at Paimiut to throughout the Yukon River delta. Wolves have also increased in the Kilbuck Mountains in response to a seasonal influx of caribou and an expanding moose population. Some resident wolf packs have become established in the Kilbuck Mountains. We surmise that a large portion of the wolves that use the eastern portion of Unit 18 are transient packs and leave the unit as caribou leave. It appears that there is substantial seasonal movement between units in March, probably in response to mating season.

The population estimate for Unit 18 during the RY10–RY14 reporting period is around 200–300 wolves in 20–35 packs; this includes wolves that use adjacent game management units at times when caribou are no longer available in Unit 18. The growing ungulate population in Unit 18 is capable of supporting a larger wolf population. As caribou have stabilized, the moose population has increased, and it appears that more packs are becoming residents in the unit in response to the abundance of moose. The nonmigratory nature of moose give wolves a prey item that is available year-round. This has allowed wolves to set up territories that they can maintain on a year-round basis. The high density of beaver along the riparian corridor throughout the unit also supports a potential for wolf packs to establish year-round territory and potential for an overall increase in the wolf population.

Current ungulate management strategies and planning efforts in Unit 18 are designed to increase caribou, moose, and muskox populations, resulting in increased availability of prey for wolves. Excessive human harvest is the principal factor limiting ungulate population growth in Unit 18, particularly for muskoxen colonizing the mainland. For these ungulate populations to grow and

become established, residents must be willing to accept hunting restrictions. However, residents also point to wolves as contributors to the problem of low ungulate populations. For our public planning efforts to be accepted, wolves may need to be harvested at sufficiently high levels to assure minimal impacts from predation on ungulates.

Currently, seasonal harvest levels range from 10% to 30% of the population despite poor understanding of wolf hunting regulations by many hunters, particularly those who take wolves opportunistically and those who use snowmachines to take wolves illegally. Wolf pelts are frequently presented for sealing after the sealing deadline has passed, and many of these are taken to be sealed by someone other than the hunter or trapper. Typically, these pelts are ones that have been given as gifts to skin sewers, frequently elderly women, who discover the need to have the pelt sealed when they are presented for tanning. We routinely seal these furs as requested and use this as an opportunity to educate the public about the sealing regulations. We have asked authorized state-appointed fur sealers that are not ADF&G staff to direct people with illegal pelts to have their pelts sealed at an ADF&G office to allow the opportunity for education and harvest data collection. We recommend continuing this practice.

## **II. Project Review and RY15–RY19 Plan**

### **Review of Management Direction**

#### **MANAGEMENT DIRECTION**

There are no changes in management direction.

#### **GOALS**

- Maintain viable wolf populations in Unit 18.
- Minimize adverse interactions between wolves and the public.

#### **CODIFIED OBJECTIVES**

##### Amounts Reasonably Necessary for Subsistence Uses

The Unit 18 wolf population has a positive customary and traditional use determination. The unitwide amounts reasonably necessary for subsistence is 5–20 wolves.

##### Intensive Management

None.

#### **MANAGEMENT OBJECTIVES**

There are no changes to the management objectives.

## **REVIEW OF MANAGEMENT ACTIVITIES**

### 1. Population Status and Trend

No change from RY10–RY14 reporting period.

### 2. Mortality-Harvest Monitoring

ACTIVITY 2.1. Monitor mortality and harvest in Unit 18 annually.

#### *Data Needs*

No change from RY10–RY14 reporting period.

#### *Methods*

No change from RY10–RY14 reporting period.

### 3. Habitat Assessment-Enhancement

No habitat assessment activities are planned for RY15–RY19.

## **NONREGULATORY MANAGEMENT PROBLEMS OR NEEDS**

### Data Recording and Archiving

- Harvest data are stored on an internal database housed on a server (<https://winfonet.alaska.gov/index.cfm>).
- Historical wolf sealing certificates are stored in the Bethel Fish and Game office and should be scanned for more secure data archival.

### Agreements

None.

### Permitting

None.

## **References Cited**

Calista Professional Services and Orutsararmuit Native Council. 1984. Prospects for reviving the reindeer industry in the Yukon-Kuskokwim region. State of Alaska State Department of Community and Regional Affairs, Municipal and Regional Assistance Division, Anchorage.



