

## **Wolf Management Report and Plan, Game Management Unit 22:**

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

**Letty Hughes**





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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 22 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**

The study area, Unit 22, is located in western Alaska and covers much of the Seward Peninsula and southern Norton Sound, including St. Lawrence and Little Diomedé islands. Wolves are not generally present on St. Lawrence Island or Little Diomedé. Game Management Unit 22 is divided into 5 administrative units (Units 22A, 22B, 22C, 22D, and 22E). Terrain varies from rugged mountains and river valleys to flat coastal wetlands. Spruce forests characterize eastern portions of the unit (Units 22A and 22B), while western portions are treeless and largely tundra covered, with willow thickets along the riparian corridors. Unit 22 is approximately 25,230 mi<sup>2</sup>.

### **Summary of Status, Trend, Management Activities, and History of Wolves in Unit 22**

Wolves were scarce throughout Unit 22 for most of the past century. From the late 1890s, when reindeer herding was introduced to the Seward Peninsula, until statehood in 1959, wolf numbers were actively suppressed by predator control programs and bounties intended to protect reindeer. In the 1960s, after government-sponsored predator control ended, wolf numbers in Unit 22 gradually increased, and wolves expanded their range westward across the Seward Peninsula (Grauvogel 1979). By 1980 reported sightings were of individual animals or small groups of 2 to 3 wolves; the Unit 22 wolf population was estimated at fewer than 100 wolves (Grauvogel 1980). There were no known wolves in the northern portion of Unit 22 in the 1980s. Prior to 1996, wolves were most abundant in Units 22A and 22B where large numbers of the migratory Western Arctic caribou herd (WAH) frequently wintered (Ballard et al. 1997). WAH winter distribution moved into the northeast portion of the unit after 1996, and wolves were then observed in that area within a year (Jim Dau, Wildlife Biologist, ADF&G, Kotzebue, personal communication). Wolves are now observed in all administrative units and major drainages in Unit 22. Anecdotal reports and staff observations suggest that wolf numbers and pack size have gradually increased across the Seward Peninsula since 1996. Wolf numbers on the Seward Peninsula can vary greatly seasonally and annually depending on distribution and abundance of WAH caribou. A study in Northwest Alaska found an average of 11% of radiomarked packs annually migrated with caribou (Ballard et al. 1997). Available resident ungulate prey in Unit 22

consists of moose and muskox. The Unit 22 moose populations are at low densities (0.18–0.39 moose/mi<sup>2</sup>). The Seward Peninsula muskox population is currently estimated at 2,287 (95% CI = 1,895–2,832) animals (Gorn and Dunker 2015) and have expanded their range across the Seward Peninsula and established groups in Units 22A, 22B West, 22C, 22D, and 22E.

## **Management Direction**

There are no specific management issues for the wolf population in Unit 22, therefore wolves will be managed to complement the 6 statewide goals established by ADF&G (1976) and approved by the Alaska Board of Game. These goals ensure wolves remain an integral part of the Seward Peninsula ecosystem, all the while providing for both consumptive and nonconsumptive human uses. Wolves are utilized in many ways in Unit 22, including hunting and trapping (both for personal use and commercial sale of furs), photography, viewing, listening, and scientific and educational uses. The use and sale of wolf pelts as a resource through harvest has been an important part of the subsistence lifestyle (Adams et al. 2008; Braem 2012a, 2012b). 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**

Direction set out in the Northwestern Alaska wolf management plan (ADF&G 1976) have been modified as a result of Board of Game regulatory actions and public input over the years and these changes have been recorded in previous management reports. The plan section of this report represents the plan for management of wolves in Unit 22 for the next period (RY15–RY19).

## **GOALS**

- Maintain a wolf population in Unit 22 that will provide for a wide range of human uses.
- Increase public awareness and understanding of uses, conservation, and management of wolves, their prey, and habitat in Alaska.

## **CODIFIED OBJECTIVES**

### Amounts Reasonably Necessary for Subsistence Uses

The Alaska Board of Game made a positive customary and traditional use determination finding for the Unit 22 wolf population at its November 2011 meeting in Utqiagvik (formerly known as Barrow). At this meeting, the board determined the amount reasonably necessary for subsistence uses (ANS) value is 5–20 wolves in Unit 22 (5 AAC 99.025).

### Intensive Management

The Board of Game has identified Western Arctic herd caribou, which occur in Unit 22, as a population qualifying for intensive management due to their importance to human harvest for consumptive uses (5 AAC 92.108). The population objective for the entire herd is at least



200,000 individuals and the harvest objective is 12,000–20,000 caribou. Specific to Unit 22, the population objective is 5,100–6,800 caribou, with a harvest objective of 300–680 individuals. The population was last estimated to be approximately 259,000 individuals in 2017 (Alex Hansen, Wildlife Biologist, ADF&G, Kotzebue, 2017 WAH photocensus memorandum, 26 January 2018), therefore active intensive management of the herd is not necessary at this time.

## MANAGEMENT OBJECTIVES

1. Assess population distribution using minimum wolf count surveys, wolves observed per hour from wildlife aerial surveys, and observations of wolf sightings.
2. Monitor wolf harvest through the fur sealing program, annual hunter/trapper questionnaires, and community-based harvest assessments conducted in selected Unit 22 villages.
3. Maintain license vendors and fur sealers in all Unit 22 villages and improve compliance with current sealing requirements through public communication and education.

## MANAGEMENT ACTIVITIES

### 1. Population Status and Trend

ACTIVITY 1.1. Assess wolf population distribution annually.

#### *Data Needs*

A wolf abundance estimate is difficult to obtain in Unit 22 because of weather and logistical factors. An index to wolf distribution, and wolves observed per hour can provide annual and historical trends in a dynamic species.

#### *Methods*

Wolf observations during fall and spring moose and muskox aerial surveys, in addition to sightings from knowledgeable hunters and trappers, are recorded and archived in ADF&G Nome area office files.

#### *Results and Discussion*

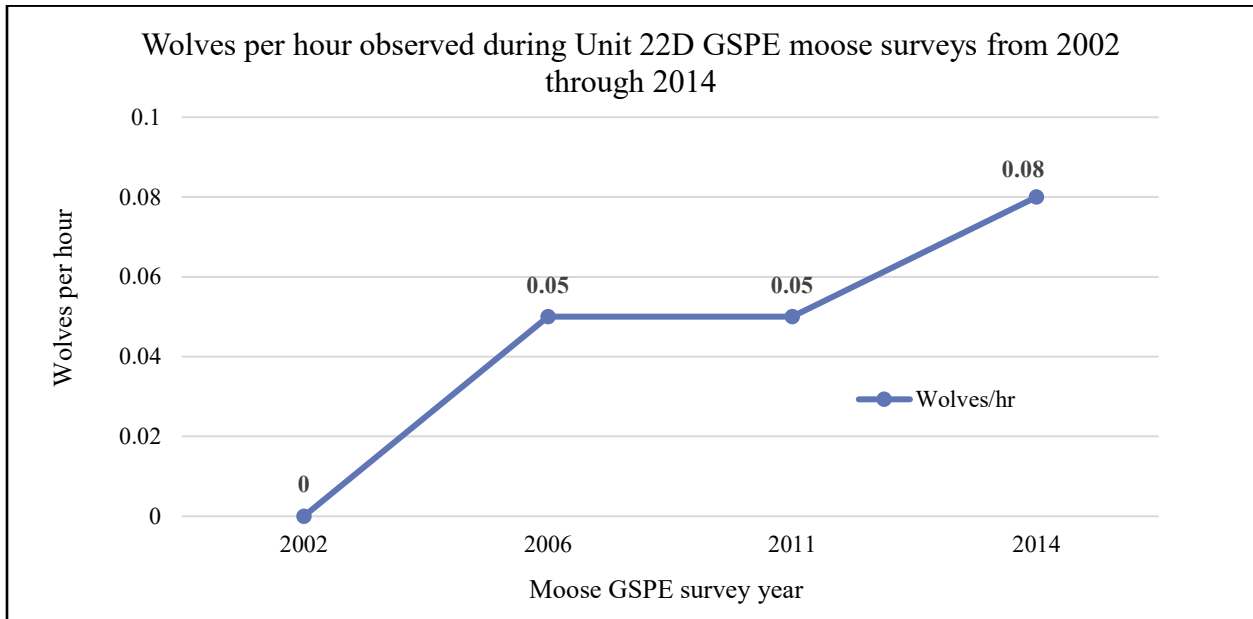
There were no reported wolf observations during the 2015 fall moose composition survey in Units 22B and 22C. Moose observers for the 2016 spring geospatial population estimator (GSPE) moose survey in Units 22B and 22C reported 32 wolves (pack size range = 2–9 wolves), and multiple wolf tracks.

Wolves observed per hour during Unit 22D and Unit 22E GSPE moose surveys between 2002 and 2014 indicate less than 1 wolf per hour is observed by observer-pilot planes (Figs. 1 and 2). At this time, the information can be used to validate the presence of wolves in late winter because sample size of data points are small, and the nominal change of wolves observed per

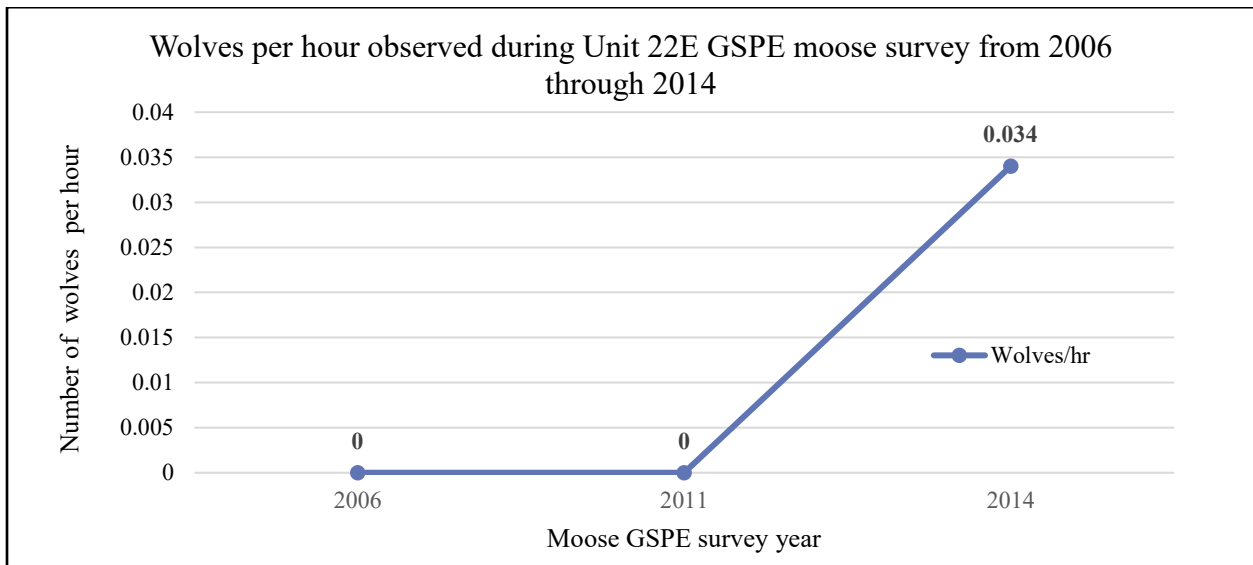
hour between GSPE survey years. As more data are collected from future moose surveys, the wolves observed per hour may become a useful index for wolf abundance.

*Recommendations for Activity 1.1.*

Continue to record wolf observations made during wildlife aerial surveys and anecdotal observations from the public and hunters. Enhance the use of the database by including the number of sightings in annual reports to establish an index that can be used in the future for discussions with advisory committees and the Alaska Board of Game (BOG).



**Figure 1. Unit 22D, Alaska wolves per hour observed during geospatial population estimator (GSPE) moose surveys, 2002–2014.**



**Figure 2. Unit 22E, Alaska wolves per hour observed during geospatial population estimator (GSPE) moose surveys 2006–2014.**

ACTIVITY 1.2. Conduct a minimum wolf count survey (MWC) to obtain the minimum population of wolves in Unit 22.

### *Data Needs*

A minimum wolf count survey helps establish an index of the minimum number of wolves in an area where moose abundance has been low historically, and to determine if the presence of wolves has increased as a result of increased ungulate abundance.

### *Methods*

A highly experienced wolf tracking pilot flies drainages looking for wolves or signs of wolves using a fixed-wing Super Cub aircraft. Wolf tracks are followed until wolves are found or the tracks can no longer be followed. Wolf and track observations are recorded on a data sheet and a waypoint is entered into a Garmin® 296 Global Positioning System (GPS). The actual number of wolves observed is the minimum count recorded and serves during management analysis as the minimum number of wolves that are present that area.

### *Results and Discussion*

Minimum wolf counts were completed in Unit 22A central in 2014 (Appendix) and in 2006. The 2014 survey found 1 single black wolf and old tracks that moved into Unit 21E. Poor snow conditions and lack of fresh snow made it difficult to follow tracks. For this reason, it is difficult to compare the 2014 results to the 2006 survey that had ideal snow conditions and found 9 wolves.

There were no caribou present in the survey area during either survey. The lack of caribou may have contributed to the low number of wolves found in the area. Wolf numbers and productivity are subject to the abundance of available prey in their area (Adams et al. 2008). However, the moose population in the survey area appears to be increasing (Gorn *In prep*), and the muskox population in Unit 22A increased more than 100% between 2012 and 2015 (Gorn and Dunker 2015). A muskox collaring project in Northwest Alaska completed by the U.S. National Park Service found 4 out of the 18 (22%) collared cows that died were killed by wolves (L. Adams, Research Wildlife Biologist, U.S. Geological Survey, Anchorage, personal communication). It will be important to conduct another survey to determine if the presence of wolves has increased in the survey area as a result of increased abundance of prey.

### *Recommendations for Activity 1.2*

Continue to conduct minimum wolf count surveys in Unit 22; however, the activity can be enhanced by increasing how often these are conducted. Our suggestion is to complete surveys in concert with spring geospatial population estimation (GSPE) moose surveys. Ideally, the wolf survey will be completed before the GSPE intensive surveys. This enhanced change will give a more accurate index over time to detect trends in the wolf population in relation to prey abundance. Another advantage to this recommendation is that pilots with extensive wolf survey experience are generally chartered to fly Unit 22 moose surveys.

The Unit 22 rotational wolf survey schedule would follow future spring moose GSPE schedules as laid out by Gorn (*In prep*):

- 1) Unit 22A in 2019.
- 2) Unit 22B (west of the Darby Mountains) and Unit 22C in 2017.
- 3) Unit 22D and Unit 22E in 2018.

## 2. Mortality-Harvest Monitoring and Regulations

ACTIVITY 2.1. Monitor wolf mortality by regulated harvest in Unit 22 annually through reviewing sealing records, the fur sealing program, and unsealed wolf pelts reported by individuals interviewed in community-based harvest assessment surveys conducted by ADF&G's Division of Subsistence in selected Unit 22 communities.

### *Data Needs*

The Alaska Board of Game has identified wolves in Unit 22 as a positive customary and traditional use and has determined the amount necessary for subsistence (ANS) equal 5–20 wolves. Annual summaries of harvest are needed to understand harvest demographics and to monitor the level of harvest. Analysis of harvest data will facilitate department recommendations for Board of Game proposals.

Community-based harvest assessment surveys conducted by the ADF&G Division of Subsistence are valuable to capture data about harvest in more remote areas of Unit 22. They are also used to gain a better understanding of unreported wolf harvest.

### *Methods*

Wolves harvested by trappers and hunters are required to be sealed within 30 days of harvest. This involves attaching a Convention on the Trade of Endangered Species (CITES) tag to the fur, gathering data about the pelt color, number of wolves in hunted pack, and sex of the harvested wolf; and providing the trapper or hunter with a sealing certificate that verifies the fur has been sealed. Harvest data are archived and monitored in ADF&G's Wildlife Information Network (WinfoNet) database. Harvest is reported by regulatory year.

Results from community-based harvest assessments conducted annually in select Unit 22 communities by the Division of Subsistence are used to gather more accurate wolf harvest.

Results from ADF&G's annual trapper questionnaires are used to monitor trapper responses to method of harvest and number of wolves harvested in addition to reporting whether the number of wolves they saw in that hunting season was average, or otherwise different from normally seen.

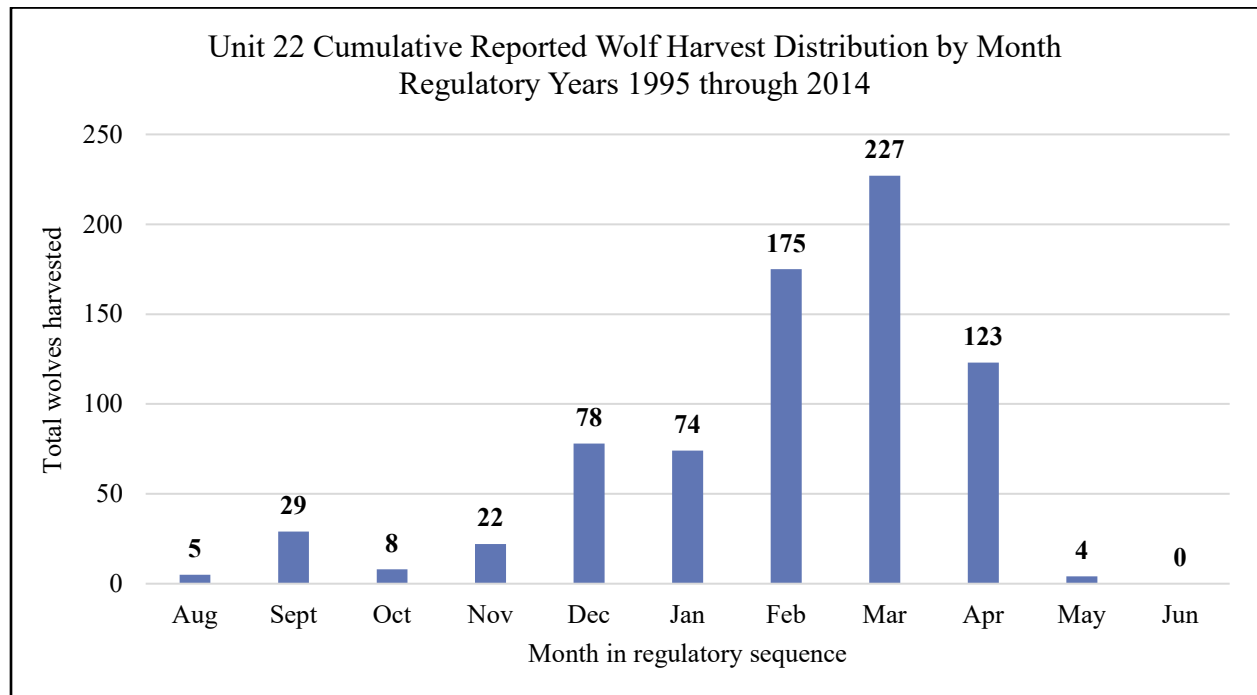
*Season and Bag Limit*

<u>Units and Bag Limits</u>	<u>Resident Open Seasons</u>	<u>Nonresident Open Seasons</u>
<i>Unit 22</i>		
Hunting: 20 wolves	1 August–31 May	1 August–31 May
Trapping: No limit	1 November–30 April	1 November–30 April

*Results and Discussion*

Harvest by Hunters-Trappers

Wolf sealing certificates indicate the average annual reported harvest during the reporting period (RY10–RY14) was 30 wolves per year (range = 25 to 36 wolves; Table 1); the next year, RY15, saw a higher harvest of 78 wolves. Sex composition of reported harvest of known sex animals was 71% males and 29% females (Table 1). Peak of harvest occurs in the months of February, March, and April (Fig. 3) when more daylight allows for longer travel and hunting. Harvest records for RY10–RY14 show 77% ( $n = 116$ ) of the Unit 22 reported wolf harvest for which location was indicated came from Units 22B, 22D, and 22E (Table 2). The winter distribution of WAH caribou was approximately 30 miles east of Shishmaref, which made harvest of wolves more opportunistic, and Unit 22 staff diligently worked to improve sealing compliance through multiple trips to Shishmaref. Historical sealing records (RY95–RY14) for Unit 22E document reported harvest ranging 0–11 wolves annually. In RY15 a male wolf was sealed from the village of Savoonga on Saint Lawrence Island. The island is generally void of large predators, so we suspect the wolf traveled over the sea ice from Russia.



**Figure 3. Unit 22, Alaska reported wolf harvest by month, regulatory years 1990–2014.**

**Table 1. Reported Unit 22, Alaska, wolf harvest during regulatory years 1990–2014.**

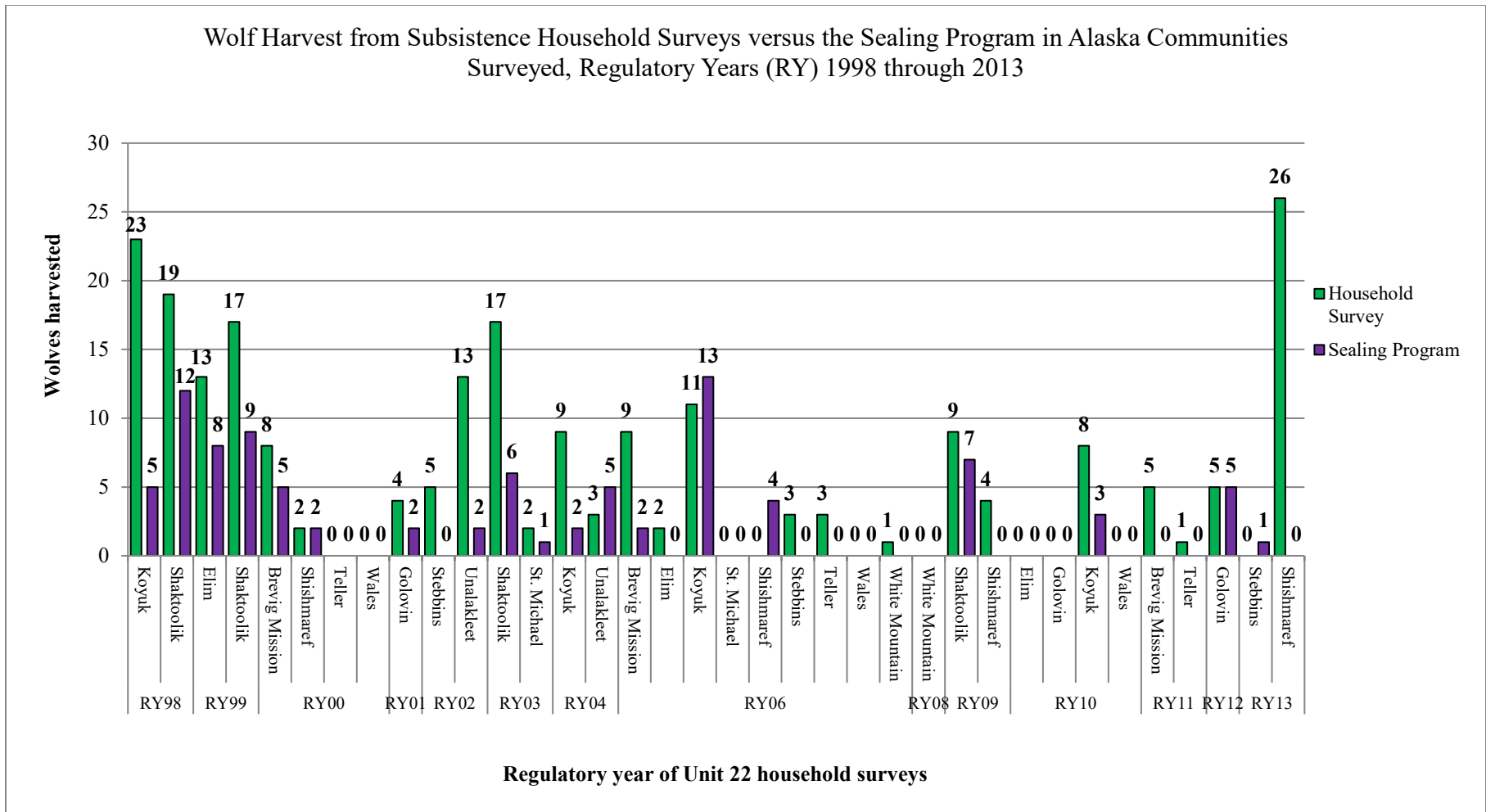
Regulatory year	Reported harvest				Method of take			Total successful trappers/hunters
	Male	Female	Unknown	Total	Trap/Snare	Shot	Unknown	
1990	14	11	6	31	5	26	0	11
1991	21	13	20	54	3	51	0	18
1992	14	7	6	27	4	17	6	11
1993	24	8	2	34	2	24	8	16
1994	15	2	7	24	1	23	0	16
1995	19	8	5	32	0	29	3	16
1996	19	4	2	25	3	21	1	18
1997	16	11	2	29	7	16	6	14
1998	33	12	6	51	6	42	3	30
1999	37	19	7	63	5	44	14	38
2000	34	23	8	65	4	55	6	34
2001	26	16	0	42	3	38	1	28
2002	25	19	3	47	6	33	8	28
2003	14	8	0	22	1	21	0	12
2004	22	14	3	39	4	34	1	26
2005	22	14	1	37	7	28	2	21
2006	20	10	0	30	3	24	3	16
2007	12	14	1	27	0	26	1	18
2008	16	9	1	26	6	17	3	16
2009	21	20	11	52	6	46	0	25
2010	23	9	0	32	2	29	1	17
2011	17	7	4	28	2	26	0	19
2012	19	8	3	30	1	24	2	22
2013	22	3	0	25	1	24	0	15
2014	20	15	1	36	6	27	3	21

**Table 2. Location of reported Unit 22, Alaska wolf harvest, regulatory years 1990–2014.**

Regulatory year	Harvest Unit 22A	Harvest Unit 22B	Harvest Unit 22C	Harvest Unit 22D	Harvest Unit 22E	Location unknown
1990	21	8	0	2	0	0
1991	43	9	0	2	0	0
1992	13	11	2	1	0	0
1993	23	11	0	0	0	0
1994	13	9	2	0	0	0
1995	15	16	1	0	0	0
1996	15	10	0	0	0	0
1997	19	9	1	0	0	0
1998	25	18	2	2	4	0
1999	18	32	0	3	10	0
2000	24	33	0	7	0	1
2001	10	24	2	4	0	2
2002	13	27	1	1	2	3
2003	11	6	4	1	0	0
2004	12	9	0	13	5	0
2005	11	12	1	13	0	0
2006	3	16	1	6	4	0
2007	1	15	3	4	4	0
2008	6	13	3	0	4	0
2009	15	18	1	18	0	0
2010	8	14	0	7	3	0
2011	3	12	4	3	6	0
2012	6	15	2	3	4	0
2013	3	13	0	9	0	0
2014	5	14	4	4	9	0

The estimated degree of unreported wolf harvest in Unit 22 is considered high. Many wolf hides are home tanned and used locally and hunters typically do not have those hides sealed. Hunters may not understand that wildlife managers gain important information through the sealing program. Household surveys conducted by the Division of Subsistence help catch additional harvest that would otherwise been missed (Georgette 2000; Georgette et al. 2004, 2005; ADF&G 2004, ADF&G 2006; Braem 2012a, 2012b; Braem and Kostick 2014; Mikow et al. 2014, Braem et al. 2017; and Georgette et al. 2017). Subsistence household surveys were completed in villages throughout the Seward Peninsula during the reporting period (RY10–RY14), including Brevig Mission, Golovin, Shishmaref, Stebbins, and Teller. Survey results documented wolf harvest in communities where sealing records did not exist for hunters of that community in the specified regulatory year (Fig. 4).

Reported wolf harvest through the sealing program has the potential to increase as department staff work to improve sealing compliance in communities. This is done by ensuring that sealers are available (Activity 2.2). Subsistence household surveys can be used to determine which communities may need more education and outreach about sealing wolves (Fig. 2).



**Figure 4. Wolf harvest from subsistence household surveys versus sealing program in Alaska communities surveyed, regulatory years 1998–2013. Data sources: Georgette 2000, Georgette et al. 2004, 2005; ADF&G 2004, 2006; Braem 2012a, 2012b; Braem and Kostick 2014, Mikow et al. 2014, Braem et al. 2017, and Georgette et al. 2017.**



ACTIVITY 2.2. Maintain fur sealers in all Unit 22 communities.

#### *Data Needs*

Regulations require that wolves are to be sealed within 30 days of harvest. Wolves that have been sealed with a CITES tag are considered reported harvest. Reported harvest helps managers monitor harvest (Activity 2.1). Fur sealers in all 13 communities of Unit 22 play an important and necessary role by helping wolf hunters and trappers keep in compliance with regulations and capturing wolf harvest data for managers.

#### *Methods*

Fur sealers in Unit 22 communities are recruited through communication with individuals, city offices, or Indian Reorganization Act (IRA) organizations. Department staff members visit communities and attend city and IRA meetings to recruit local fur sealers. Department staff members also spend time in communities to seal wolves and provide hunters with contact information of the appointed fur sealer in that community.

#### *Results and Discussion*

Throughout the reporting period, staff worked with Unit 22 fur sealing vendors to enhance communication and discuss sealing concerns. Staff also recruited and trained a new fur sealer in Shishmaref in RY15 to help wolf hunters stay in sealing compliance. Moreover, staff went out to communities to seal wolves when a fur sealer was unavailable.

It is a challenge for the department to generate interest in becoming a fur sealer among residents of area communities, and even more challenging to keep a fur sealer locally available for any length of time. It's important for department staff to develop a solid communicative relationship with fur sealers to provide and receive wolf harvest information. Conversations with sealers need to take place throughout the year, with emphasis on the winter and spring months when the peak of wolf harvest occurs. Local hunters are not always aware who to contact for fur sealing or understand how information is useful for wildlife managers. This can be remedied by department staff continuing to work with the community and hunters during community visits and IRA meetings.

#### *Recommendations for Activity 2.2.*

Continue to maintain fur sealers in all Unit 22 communities. Continue to enhance sealing compliance with current sealing requirements through public communication and education. Continue to develop relationships with fur sealers to enhance communication and sealing compliance.

### 3. Habitat Assessment-Enhancement

There is adequate wolf habitat in Unit 22 which also supports diverse prey species, including populations of caribou, moose, muskox, snowshoe and Alaska hare, and beaver. There was no habitat enhancement for wolves during the reporting period.

## NONREGULATORY MANAGEMENT PROBLEMS OR NEEDS

There were no nonregulatory management needs during the reporting period.

### Data Recording and Archiving

- Wolf track survey data and wolf observation files are stored on the computer server in the Nome ADF&G, DWC office (V://Wildlife/Wolf).
- Harvest data and sealing certificates are stored on an internal database house on a server (<http://winfonet.alaska.gov/index.cfm>). Copies of sealing certificates are stored in file folders located in the Nome ADF&G, DWC office.

### Agreements

None.

### Permitting

None.

## Conclusions and Management Recommendations

Anecdotal reports and staff observations suggest the Unit 22 wolf population is increasing. There are no quantitative data to detect abundance or the rate the population is increasing. Wolf sealing records and wildlife aerial surveys show that wolves have expanded their range throughout the Seward Peninsula. This expansion may increasingly affect moose, muskox, or caribou management throughout Unit 22. The combination of minimum count surveys, monitoring harvest, and enhancing sealing compliance will help provide wildlife managers with an index of what could be occurring in the Unit 22 wolf population.

It is a challenge to retain fur sealers because of employment turnover or lack of interest. Providing and maintaining fur sealers in addition to developing a good manager-sealer relationship will help reduce unreported wolf harvest, achieve better sealing compliance, and contribute to a better understanding of wolves on the Seward Peninsula by wildlife managers and the public alike.

## II. Project Review and RY15–RY19 Plan

### Review of Management Direction

#### MANAGEMENT DIRECTION

The existing management direction and goals for Unit 22 remain adequate for the sound management of wolves in the area. These objectives and goals ensure that the population of wolves in Unit 22 will continue to provide for widespread hunting, trapping, and viewing opportunities by both residents and nonresidents.

## GOALS

No change. The management goals for RY15–RY19 will remain as follows:

- Maintain a wolf population in Unit 22 that will provide for a wide range of human uses.
- Increase public awareness and understanding of uses, conservation, and management of wolves, their prey, and habitat in Alaska.

## CODIFIED OBJECTIVES

No change recommended.

### Amounts Reasonably Necessary for Subsistence Uses

No change recommended.

### Intensive Management

No change recommended.

## MANAGEMENT OBJECTIVES

No change. Management objectives for RY15–RY19 will remain as follows:

1. Assess population distribution using traditional track surveys, wolves observed per hour from wildlife aerial surveys, and records of wolf sightings.
2. Monitor wolf harvest and population trends through the fur sealing program, annual hunter/trapper questionnaires, and community-based harvest assessments conducted in selected Unit 22 villages.
3. Maintain license vendors and fur sealers in all Unit 22 villages and improve compliance with current sealing requirements through public communication and education.

## REVIEW OF MANAGEMENT ACTIVITIES

### 1. Population Status and Trend

ACTIVITY 1.1. Assess wolf population distribution annually.

#### *Data Needs*

No change from RY10–RY14.

#### *Methods*

No change from RY10–RY14.

## 2. Mortality-Harvest Monitoring

ACTIVITY 2.1. Monitor wolf mortality by regulated harvest in Unit 22 annually through sealing records, the fur sealing program, and by conducting community-based harvest assessment surveys in selected Unit 22 communities.

### *Data Needs*

No change from RY10–RY14.

### *Methods*

No change from RY10–RY14.

ACTIVITY 2.2. Provide and maintain fur sealer in all communities within Unit 22.

### *Data Needs*

No change from RY10–RY14.

### *Methods*

No change from RY10–RY14.

## 3. Habitat Assessment-Enhancement

None.

## **NONREGULATORY MANAGEMENT PROBLEMS OR NEEDS**

No new issues have been identified.

### Data Recording and Archiving

No change.

### Agreements

None.

### Permitting

None.

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## **Appendix. 2014 Survey report summary for Unit 22A, Alaska.**

### 2014 Unit 22A Central Wolf Track Survey

A wolf track survey was completed in the GMU 22A Unalakleet River drainage March 28-29, 2014. Pilot Marty Webb of Tundra Air from Fairbanks flew a Super Cub PA-18 to Unalakleet in; Letty Hughes from the Nome ADF&G office was the observer. Total survey time was 11 hours 47 minutes.

Snow conditions were not ideal for this survey. There had not been fresh snow in a few weeks which made it difficult to age tracks. Snow in the hills of the lower and middle drainages was minimal to nonexistent which made it difficult to follow tracks. The minimal snow also gave wolves easy travel across bare ridge tops. The wind was nonexistent for the most part which enabled us to do a thorough survey in the hills. The upper drainages were completely snow covered but we did not come across game or wolf tracks. Caribou were not present in the survey area.

A single set of wolf tracks were found going up stream in the Unalakleet River. On the North Fork one pair of tracks went downstream and approximately 9 miles from the tracks left by the pack of 8. On the South River a single track was found headed upstream.

One single black wolf was found walking in the lower Chirokey River. Tracks belonging to approximately a pack of 8 wolves were found in the lower and middle Egavik River where they spent a lot of time before moving Southeast. We cut their tracks in the North River, Unalakleet River, and North Fork; we followed them into Anvik River drainage (GMU 21E) before losing their tracks. This pack moved approximately 40 air miles. According to Marty Webb their movement through others' territory is surprising, which meant the pack did not have to worry about altercations with other packs.

In the Anvik River drainage we found one live moose that had been recently attacked in the rear legs by wolves. Three wolves were found in proximity of the moose with one adult male exhibiting bloody fur on the chest. It could not be determined if these wolves belonged to the pack of 8 that traveled over from the Egavik River or a separate pack. For this reason the three observed wolves were counted as a new pack.

This is the second wolf track survey completed in the Unalakleet drainage. The first track survey was completed in February 2006 with the same pilot. Nine wolves were found during the track survey. There were not caribou present in the survey area which may have contributed to the low number of wolves found and may likely contribute to few wolves found in the current survey. Snow conditions were ideal in 2006 compared to this survey year which is a significant factor in few wolves being found.





