

Mountain Goat Management Report and Plan, Game Management Unit 13:

Report Period 1 July 2013–30 June 2018, and
Plan Period 1 July 2018–30 June 2023

Joelle D. Hepler



©2012 ADF&G



2023

Mountain Goat Management Report and Plan, Game Management Unit 13:

Report Period 1 July 2013–30 June 2018, and

Plan Period 1 July 2018–30 June 2023

PREPARED BY:

Joelle D. Hepler

Assistant Area Wildlife Biologist

APPROVED BY:

Todd Rinaldi

Management Coordinator

REVIEWED BY:

Heidi L. Hatcher

Area Wildlife Biologist

PUBLISHED BY:

Susan Erben

Technical Reports Editor

©2023 Alaska Department of Fish and Game

Alaska Department of Fish and Game

Division of Wildlife Conservation

PO Box 115526

Juneau, AK 99811-5526



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 pay state hunting license and tag fees. These taxes and fees fund the federal Wildlife Restoration Program and the State of Alaska's Fish and Game Fund, which provided funding for the work reported on in this publication.

Species management reports and plans provide information about species that are hunted or trapped and management actions, goals, recommendations for those species, and plans for data collection. Detailed information is prepared for each species every 5 years by the area management biologist for game management units in their areas, who also develops a plan for data collection and species management for the next 5 years. This type of report is not produced for species that are not managed for hunting or trapping or for areas where there is no current or anticipated activity. Unit reports are reviewed and approved for publication by regional management coordinators and are available to the public via the Alaska Department of Fish and Game's public website.

This species management report and plan was reviewed and approved for publication by Todd Rinaldi, Management Coordinator for the Division of Wildlife Conservation.

Species management reports and plans are available via the Alaska Department of Fish and Game's public website (www.adfg.alaska.gov) or by contacting Alaska Department of Fish and Game's Division of Wildlife Conservation, PO Box 115526, Juneau, Alaska 99811-5526; phone: (907) 465-4190; email: dfg.dwc.publications@alaska.gov. The report may also be accessed through most libraries, via interlibrary loan from the Alaska State Library or the Alaska Resources Library and Information Services (www.arlis.org).

Please cite this document as follows:

Hepler, J. D. 2023. Mountain goat management report and plan, Game Management Unit 13: Report period 1 July 2013–30 June 2018, and plan period 1 July 2018–30 June 2023. Alaska Department of Fish and Game, Species Management Report and Plan ADF&G/DWC/SMR&P-2023-7, Juneau.

The State of Alaska is an Affirmative Action/Equal Opportunity Employer. The Alaska Department of Fish and Game complies with Title II of the Americans with Disabilities Act of 1990. This document is available in alternative communication formats. If you need assistance, please contact the Department ADA Coordinator via fax at (907) 465-6078; TTY/Alaska Relay 7-1-1 or 1-800-770-8973.

ADF&G does not endorse or recommend any specific company or their products. Product names used in this publication are included for completeness but do not constitute product endorsement.

Contents

Purpose of this Report.....	1
I. RY13–RY17 Management Report	1
Management Area.....	1
Management Direction.....	3
Existing Wildlife Management Plans	3
Goals	3
Codified Objectives	3
Amounts Reasonably Necessary for Subsistence Harvest.....	3
Intensive Management.....	3
Management Objectives.....	3
Management Activities	3
1. Population Status and Trend	4
2. Mortality-Harvest Monitoring and Regulations.....	7
3. Habitat Assessment-Enhancement.....	15
Nonregulatory Management Problems or Needs.....	15
Data Recording and Archiving	15
Agreements	15
Permitting.....	15
Conclusions and Management Recommendations	15
II. Project Review and RY18–RY22 Plan	16
Review of Management Direction.....	16
Management Direction.....	16
Goals	16
Codified Objectives	16
Amount Reasonably Necessary for Subsistence Uses (ANS)	16
Management Objectives.....	17
Review of Management Activities.....	17
1. Population Status and Trend	17
2. Mortality-Harvest Monitoring	17
3. Habitat Assessment-Enhancement.....	17
Nonregulatory Management Problems or Needs.....	17
Data Recording and Archiving	17
Agreements	17
Permitting.....	17
References Cited	18

List of Figures

Figure 1. A map showing Unit 13, federal lands, and Special Management Areas in Southcentral Alaska as shown in the Alaska Hunting Regulations. The Special Management Areas include management, controlled use, and closed areas, and other state lands (all indicated with black numbered circles).....	2
Figure 2. Mountain goat and Dall sheep trend count areas in Unit 13D, Southcentral Alaska.	5
Figure 3. Map of RG580 mountain goat registration permit hunt area, Unit 13D, regulatory years 2013–2017, Southcentral Alaska.	8
Figure 4. Map of DG720 mountain goat draw permit area, Unit 13D, regulatory years 2013–2017, Southcentral Alaska.	9

List of Tables

Table 1. Mountain goat counts in Unit 13D, regulatory years 2013-2017, Alaska.	6
Table 2. RG580 hunters and harvest reported in Unit 13D, regulatory years 2013–2017, Alaska.	10
Table 3. DG720 permits, hunters, and harvest in Unit 13D, regulatory years 2013–2017, Alaska.	10
Table 4. RG580 residency and success reported in Unit 13D, regulatory years 2013–2017, Alaska.	11
Table 5. DG720 residency and success reported in Unit 13D, regulatory years 2013–2017, Alaska.	11
Table 6. RG580 harvest chronology as a percentage of the total in Unit 13D, regulatory years 2013–2017, Alaska.	12
Table 7. DG720 harvest chronology as a percentage of the total in Unit 13D, regulatory years 2013–2017, Alaska.	12
Table 8. RG580 harvest by transportation method in Unit 13D, regulatory years 2013–2017, Alaska.	13
Table 9. DG720 harvest by transportation method in Unit 13D, regulatory years 2013–2017, Alaska.	14

List of Appendices

Appendix A. Goat/Sheep survey data form.	19
-----------------------------------------------	----

Purpose of this Report

This report provides a record of survey and inventory management activities for mountain goat in Unit 13 for the previous 5 regulatory years and plans for survey and inventory management activities in the 5 years following the end of that period. A regulatory year (RY) begins 1 July and ends 30 June (e.g., RY22 = 1 July 2022–30 June 2023). 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 them of wildlife management activities. In 2016 the Alaska Department of Fish and Game's Division of Wildlife Conservation launched this 5-year report to report on trends and describe potential changes in data collection activities over the next 5 years more efficiently. It replaces the mountain goat management reports of survey and inventory activities that were previously produced every 3 years.

I. RY13–RY17 Management Report

Management Area

Unit 13 encompasses 23,368 mi² and consists of that area westerly of the east bank of the Copper River and drained by all tributaries into the west bank of the Copper River from Miles Glacier including the Slana River drainages north of Suslota Creek; the drainages into the Delta River upstream from Falls Creek and Black Rapids Glacier; the drainages into the Nenana River upstream from the southeast corner of Denali National Park; the drainage into the Susitna River upstream from its junction with the Chulitna River; the drainage into the east bank of the Chulitna River upstream to its confluence with the Tokositna River; the drainages of the Chulitna River (south of Denali National Park) upstream from its confluence with the Tokositna River; the drainages into the north bank of the Tokositna River upstream to the base of the Tokositna Glacier; the drainages into the Tokositna Glacier; the drainages into the east bank of the Susitna River between its confluences with the Talkeetna and Chulitna Rivers; the drainages into the north and east bank of the Talkeetna River, including the Talkeetna River to its confluence with Clear Creek, the eastside drainages of a line up the south bank of Clear Creek to the first unnamed creek on the south, then up that unnamed creek to Lake 4408, along the northeast shore of Lake 4408, then southeast in a straight line to the northernmost fork of the Chickaloon River; the drainages into the east bank of the Chickaloon River below the line from Lake 4408; the drainages of the Matanuska River above its confluence with the Chickaloon River (Figure 1).

Additional maps describing the boundaries and special management areas in Unit 13 can be found at: <http://www.adfg.alaska.gov/index.cfm?adfg=maps.main>.

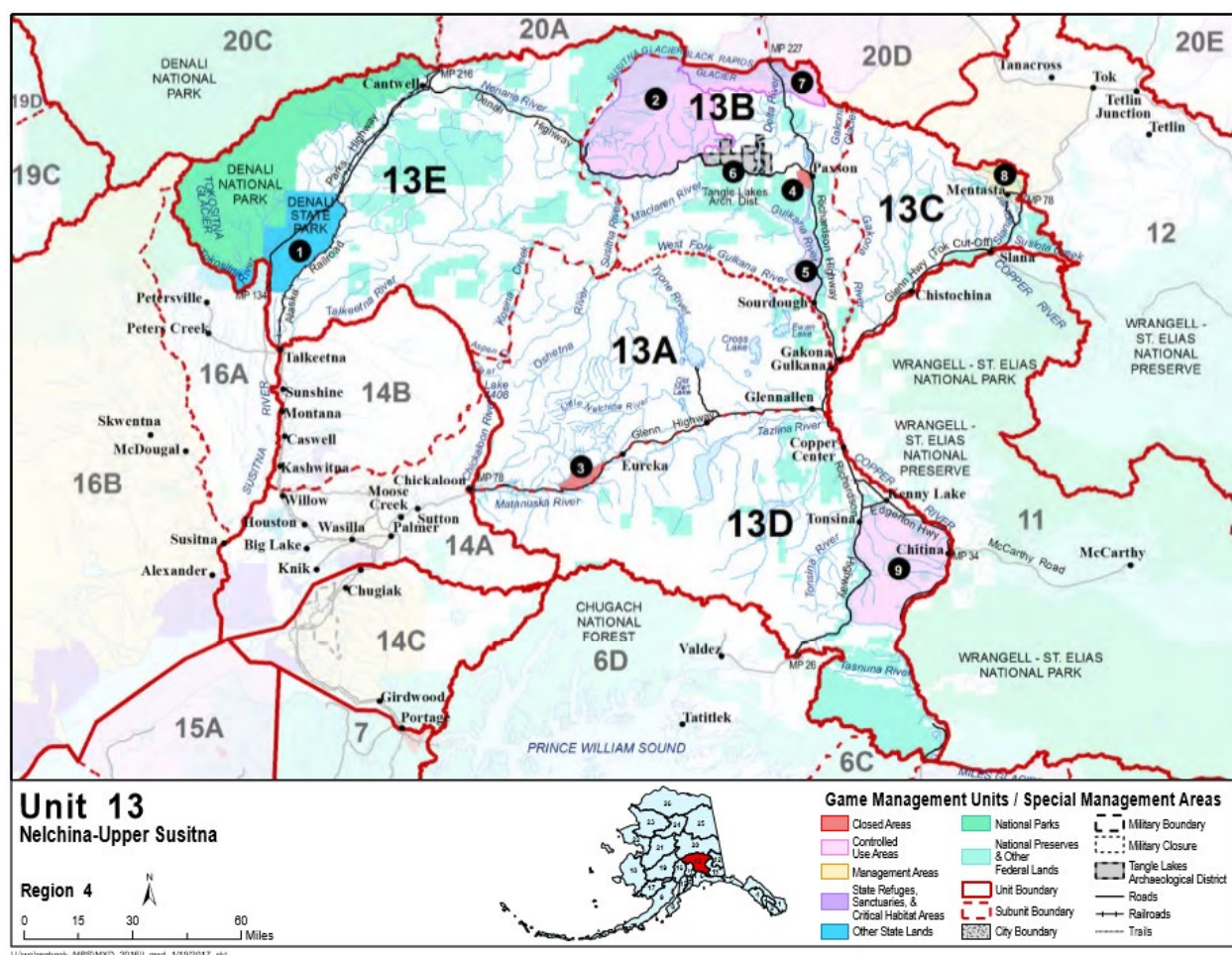


Figure 1. A map showing Unit 13, federal lands, and Special Management Areas in Southcentral Alaska as shown in the Alaska Hunting Regulations. The Special Management Areas include management, controlled use, and closed areas, and other state lands (all indicated with black numbered circles).

Summary of Status, Trend, Management Activities, and History of Mountain Goat in Unit 13

Mountain goat habitat in Unit 13 is found primarily in the glacial drainages of the central Chugach Mountains in Unit 13D. Regulations for goats in Unit 13D have varied over the years in efforts to maintain both the goat population and hunting opportunity. Seasons and bag limits were most liberal in the mid-1960s, and most harvest was taken as alternative or additional game by sheep hunters (ADF&G 1976). In 1975 the bag limit for mountain goats in Unit 13D was reduced from 2 goats to 1, and 2 years later the area was closed to hunting. In RY87, Unit 13D opened to a drawing permit hunt after a 10-year closure. The goat harvest was limited to billies (males) for RY87 and RY88 but was expanded to either sex just prior to the RY89 season. Beginning in RY07, the Board of Game (BOG) added a portion of Unit 13D to the hunt area for the Unit 11 registration permit hunt (RG580). That registration hunt has continued; one drawing permit hunt (DG720) is also offered. Due to limited funding and weather conditions, mountain

goat surveys have not been flown consistently for the past 2 decades, therefore it is difficult to ascertain population trends. However, it is suspected that the number of mountain goats in this area are regulated primarily by winter weather and secondarily by predation.

Management Direction

EXISTING WILDLIFE MANAGEMENT PLANS

The management direction set in the mountain goat management plan for the Wrangell-Chugach (ADF&G 1976) has been modified through public comments, staff recommendations, and BOG actions over the years. A record of these changes can be found in the division's previous species management reports. The plan portion of this report (RY18–RY22) contains the current management plan for mountain goats in Unit 13.

GOALS

To provide an opportunity to hunt mountain goats under aesthetically pleasing conditions.

CODIFIED OBJECTIVES

Amounts Reasonably Necessary for Subsistence Harvest

The Alaska Board of Game made a negative finding for customary and traditional uses for mountain goats in Unit 13.

Intensive Management

Mountain goats are not designated as an intensive management species in the state of Alaska. Intensive management predation control programs implemented for moose or caribou may affect predation levels on goats.

MANAGEMENT OBJECTIVES

Maintain an annual harvest of up to 10% of the estimated goat population in Unit 13D.

MANAGEMENT ACTIVITIES

Assessing population trends and monitoring harvest are integral components of management programs in Unit 13. Survey and inventory (S&I) management activities used to monitor goat populations in Unit 13 are described below.

1. Population Status and Trend

ACTIVITY 1.1. Monitor goat abundance and population composition.

Data Needs

Trends in goat abundance and composition data are necessary to determine population status in relation to management objectives. These data inform an index of annual productivity and sustainable harvest potential and provide insight into population trends and fluctuations that occur due to factors such as increased predation, icing events, severe winters, or changes in habitat, including nutritional availability.

Methods

Aerial surveys using fixed-wing aircraft are conducted in established sheep-goat trend count areas (CAs) to determine goat population trends and age composition (Figures 2 and 3; Appendix A). Surveys are generally conducted throughout July, when snow has largely melted from the majority of sheep and goat habitat. Goat observations are recorded when goats are encountered during sheep surveys. An experienced pilot-observer team flies geographic contours systematically within a CA at 70–80 mph, searching for sheep and goats and recording data. Each goat or group of goats that is observed during the survey is circled to determine age classification and number of animals present. A waypoint is recorded for each observation and a digital photograph may be taken to confirm goat numbers and classification for that waypoint upon return to the office. In many years, however, surveys are not possible due to poor survey conditions (e.g., high winds or low visibility) or limited resources.

Results and Discussion

Trend count surveys are not always consistent year to year. Most goat observations in Unit 13D are recorded incidentally during sheep surveys. The CAs are grouped in four groups: TazWest (1, 2, 16, 17, 18), TazEast (3, 5, 9), TCUA (Tonsina Controlled Use Area) (11, 12, 13), and the Tiekel/Tasnuna area (14). The mountain goat population in TazWest has fluctuated from RY13 to RY16, with a very high adult count but a much lower kid:100 adult ratio in RY16. In TazEast, the population remains stable as indicated by recent surveys while the TCUA had a slight increase in numbers in RY17 compared to previous surveys during RY13–RY17 (Table 1). Lastly, the Tiekel/Tasnuna area had a consistent count in RY16 compared with the previous survey in RY12 (32 adults and 5 kids observed). The Tiekel/Tasnuna area has only been surveyed in RY12 and RY16.

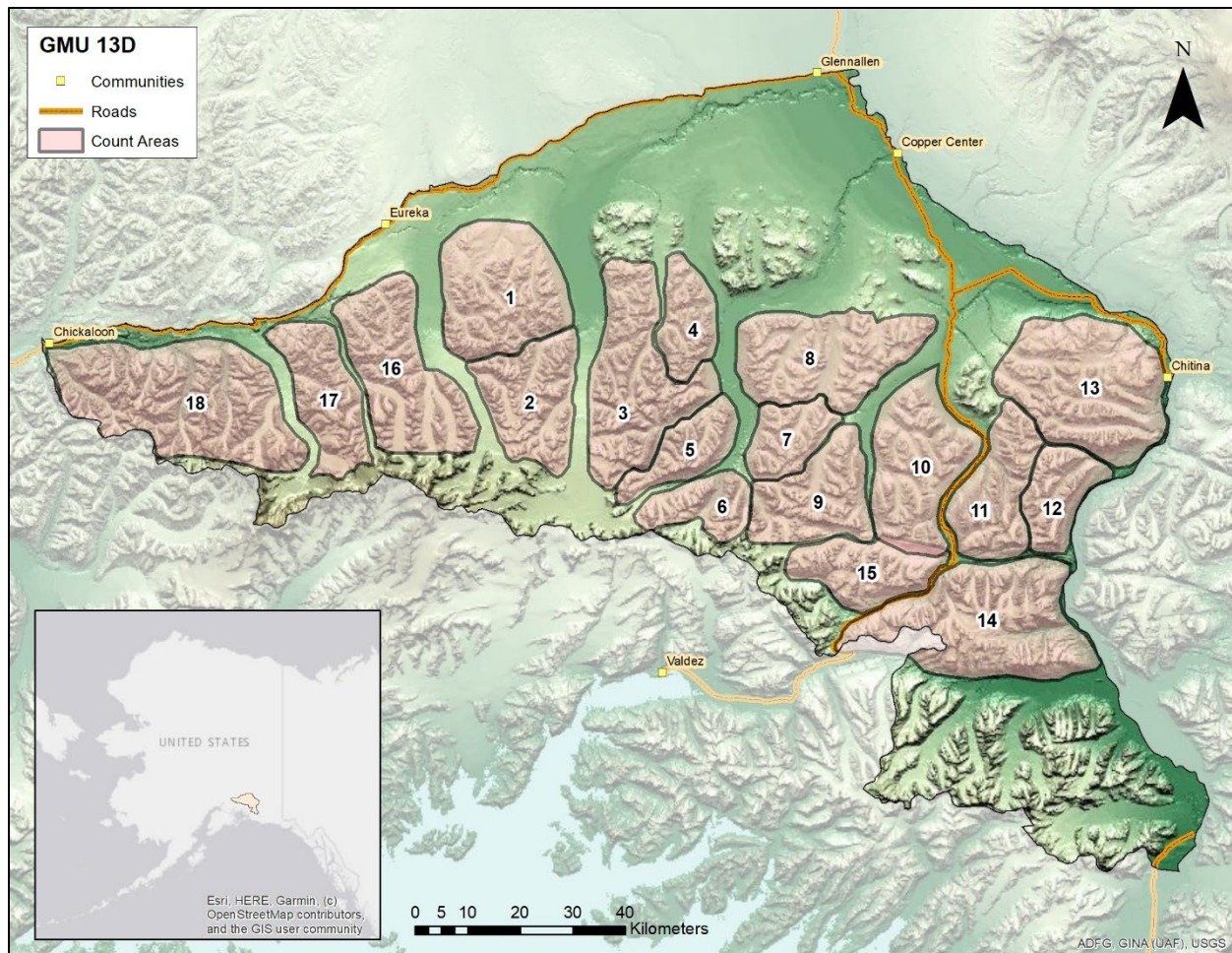


Figure 2. Mountain goat and Dall sheep trend count areas in Unit 13D, Southcentral Alaska.

Table 1. Mountain goat counts in Unit 13D, regulatory years 2013-2017, Alaska.

Regulatory year	TazWest ^a			TazEast ^b			TCUA ^c			Tiekel/Tasnuna ^d		
	Adults	Kids (%)	Kids:100 adults	Adults	Kids (%)	Kids:100 adults	Adults	Kids (%)	Kids:100 adults	Adults	Kids (%)	Kids:100 adults
2013	15	4 (20)	27	—	—	—	—	—	—	—	—	—
2014	70	17 (20)	24	29	3 (9)	10.3	8	0 (0)	0	—	—	—
2015	—	—	—	—	—	—	—	—	—	—	—	—
2016	111	11 (9)	10	26	5 (16)	19.2	3	0 (0)	0	43	11 (20)	26
2017	—	—	—	—	—	—	18	6 (33)	33	—	—	—

^a TazWest represents count areas (CAs) 1, 2, 16, 17, and 18. CA 18 was not completed in 2013.

^b TazEast represents CAs 3, 5, and 9.

^c TCUA (Tonsina Controlled Use Area) represents CAs 11, 12, and 13.

^d Tiekel/Tasnuna represents CA 14.

Recommendations for Activity 1.1

Continue to monitor goat abundance and population composition.

2. Mortality-Harvest Monitoring and Regulations

ACTIVITY 2.1. Monitor and evaluate goat harvest through hunter harvest reports.

Data Needs

It is critical in sustained yield management to understand hunter effort and success through monitoring and analyzing harvest data in Unit 13D on an annual basis.

Methods

Individuals who obtain a registration goat permit (RG580) or draw permit (DG720) from ADF&G are required to report on their ticket after a successful harvest, or after the end of the season. RG580 permit holders may hunt in Unit 11, a portion of Unit 13D, or both areas. Unit 13 hunt information is only available for hunters who reported hunting or harvesting in Unit 13; the number of hunters who did not hunt cannot be differentiated between Unit 11 and Unit 13D for RG580 permits.

Hunters are encouraged to harvest males, while the harvest of nannies with kids is prohibited. Nonresident hunters are required to hunt with a guide or a resident next-of-kin hunter.

Season and Bag Limit

<u>State hunts</u>	<u>Bag limit</u>	<u>Resident season</u>	<u>Nonresident season</u>
RG580 Unit 11, a portion of Unit 12, and a portion of Unit 13D (Figure 3)	One goat	1 September–30 November	1 September–30 November
DG720 South of the Tiekkel River and east of a line beginning at the confluence of the Tiekkel and Tonsina rivers (Figure 4)	One goat	10 August–30 November	10 August–30 November

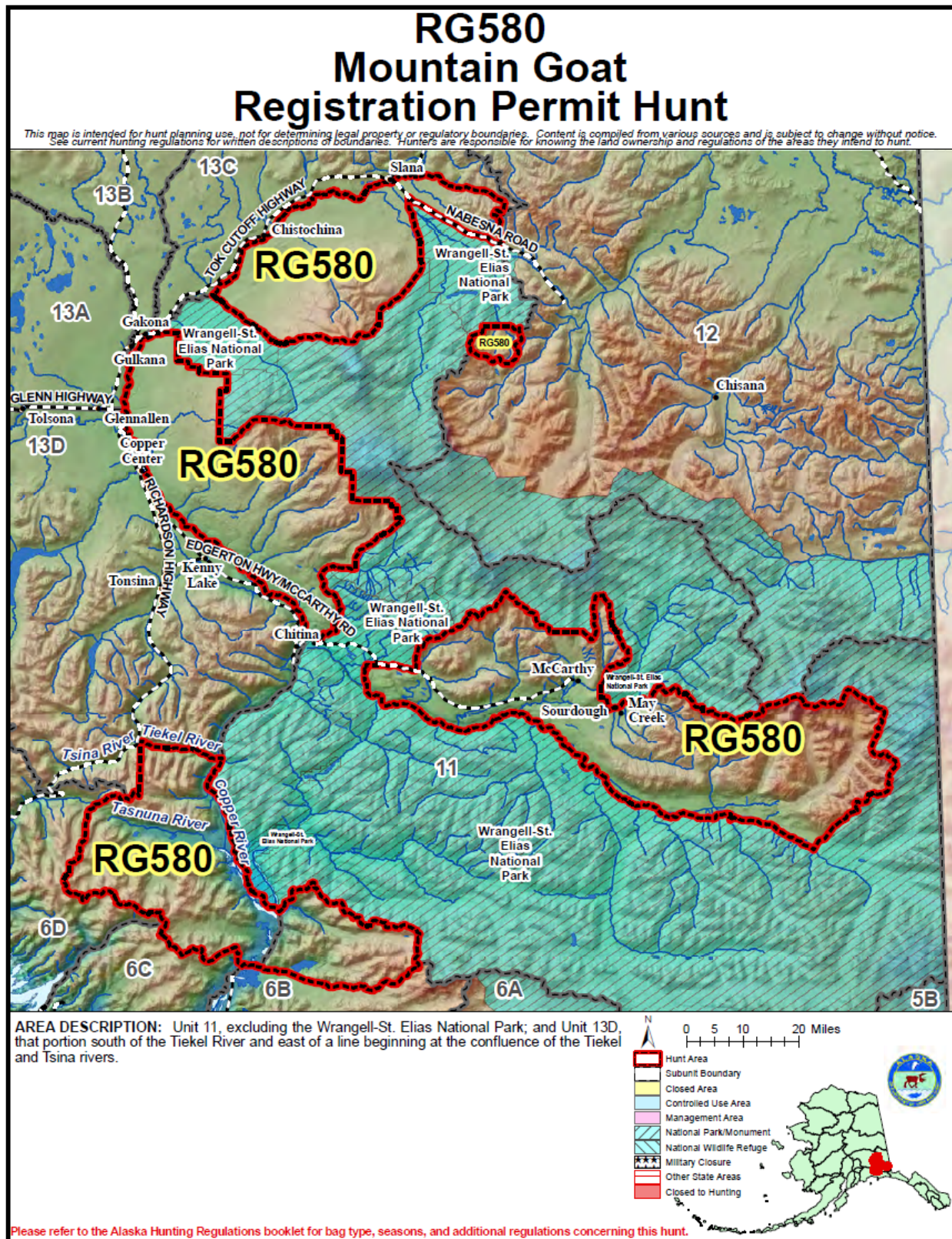


Figure 3. Map of RG580 mountain goat registration permit hunt area, Unit 13D, regulatory years 2013–2017, Southcentral Alaska.

DG720 Mountain Goat Drawing Permit Hunt

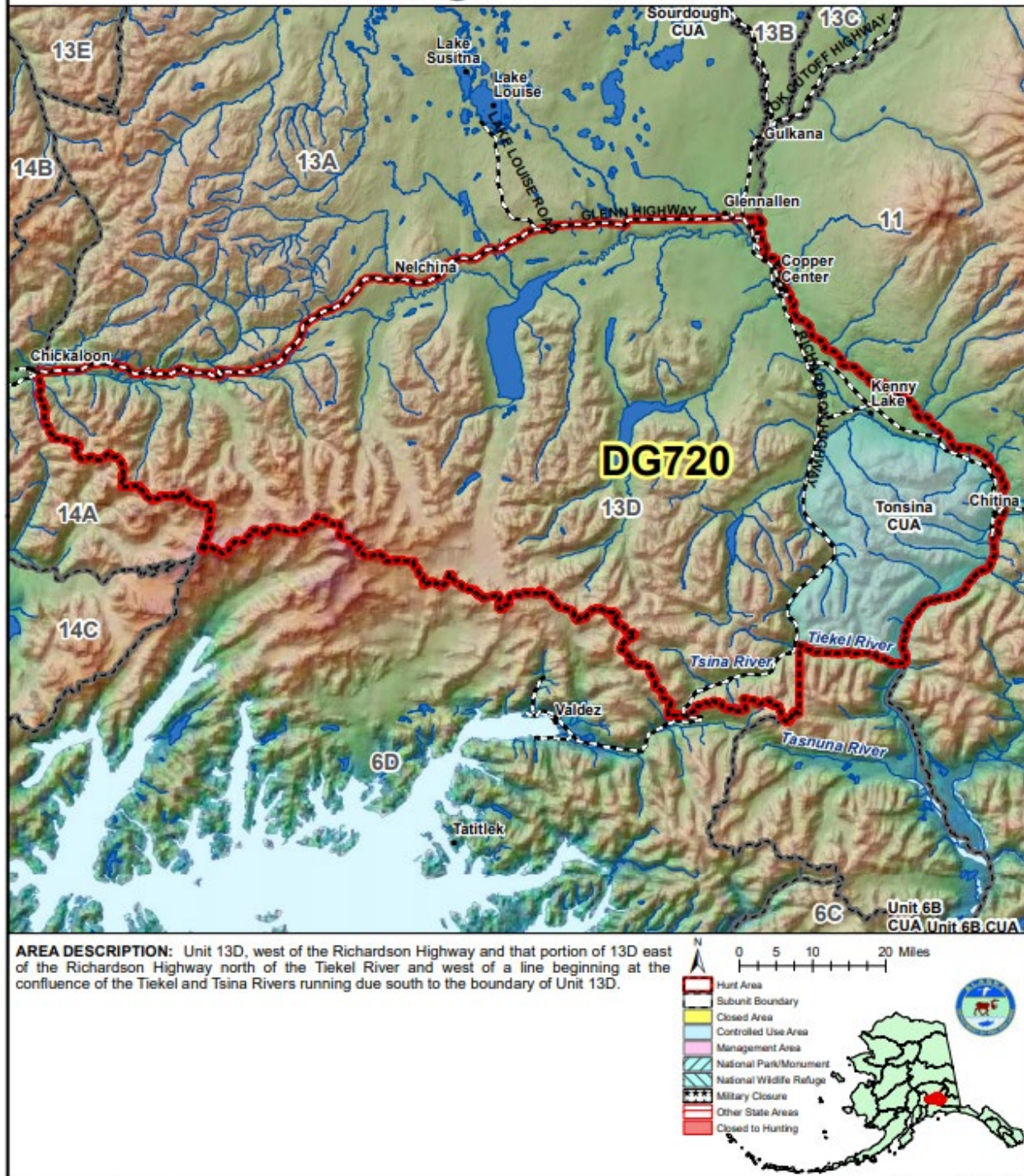


Figure 4. Map of DG720 mountain goat draw permit area, Unit 13D, regulatory years 2013–2017, Southcentral Alaska.

Results and Discussion

Harvest by Hunters

Harvest on RG580 permits in Unit 13D during RY13–RY17 averages 2.6 goats a year, which equals the RY08–RY12 average. There were no nannies harvested in RY13–RY17 (Table 2) or in RY08–RY12. The RY13–RY17 average number of permits issued (43) is a drop from the RY08–RY12 average number of permits issued (58); that may account for a decrease in harvest. Harvest on DG720 permits for RY13–RY17 averages 8 goats a year, with nannies being harvested every year (Table 3).

Table 2. RG580 hunters and harvest reported in Unit 13D, regulatory years 2013–2017, Alaska.

Regulatory year	Total hunters	Successful hunters (%)	Males harvested	Females harvested	Total harvest
2013	7	0	0	0	0
2014	4	2 (50)	2	0	2
2015	7	3 (43)	3	0	3
2016	12	6 (50)	6	0	6
2017	5	2 (40)	2	0	2

Table 3. DG720 permits, hunters, and harvest in Unit 13D, regulatory years 2013–2017, Alaska.

Regulatory year	Total permits	Hunted (%)	Successful hunt (%)	Males harvested (%)	Females harvested (%)	Total harvest
2013	50	22 (44)	10 (45)	9 (90)	1 (10)	10
2014	35	14 (40)	6 (43)	5 (83)	1 (17)	6
2015	50	17 (34)	10 (59)	7 (70)	3 (30)	10
2016	35	16 (46)	5 (31)	4 (80)	1 (20)	5
2017	35	12 (34)	9 (75)	6 (67)	3 (33)	9

Hunter Residency and Success

Hunter residency information in Unit 13D under RG580 and DG720 is only available for hunters who reported hunting or harvesting in Unit 13D. For RG580, local hunter participation (participation by residents of Unit 13) was very low with only 1 person participating during RY13–RY17 (Table 4). Nonlocal residents represented the majority of hunters who participated; however, nonresidents were more successful throughout RY13–RY17, likely due to the requirement for nonresidents to be guided in order to harvest mountain goats in Alaska. A similar trend occurred with DG720 with low local hunter participation and very variable success rates (0–100%) (Table 5). Nonlocal hunters had a very high percentage of participation (68–92%) with

variable success (23–73%). Nonresidents had lower participation but very high success rates throughout RY13–RY17, once again likely due to the guiding requirement.

Table 4. RG580 residency and success reported in Unit 13D, regulatory years 2013–2017, Alaska.

Regulatory year	Local hunters ^a		Nonlocal residents		Nonresidents		Total hunters
	Hunted (% of total)	Success rate	Hunted (% of total)	Success rate	Hunted (% of total)	Success rate	
2013	0 (0)	–	5 (71)	0%	2 (29)	0%	7
2014	0 (0)	–	4 (100)	50%	0 (0)	–	4
2015	1 (14)	0%	3 (43)	33%	3 (43)	67%	7
2016	0 (0)	–	7 (58)	14%	5 (42)	100%	12
2017	0 (0)	–	3 (60)	33%	2 (40)	50%	5

^a Resident of Unit 13.

Table 5. DG720 residency and success reported in Unit 13D, regulatory years 2013–2017, Alaska.

Regulatory year	Local hunters ^a		Nonlocal residents		Nonresidents		Total hunters
	Hunted (% of total)	Success rate	Hunted (% of total)	Success rate	Hunted (% of total)	Success rate	
2013	3 (14)	33%	15 (68)	40%	4 (18)	75%	22
2014	1 (7)	100%	12 (86)	33%	1 (7)	100%	14
2015	0 (0)	–	15 (88)	60%	2 (12)	50%	17
2016	1 (6)	0%	13 (81)	23%	2 (13)	100%	16
2017	0 (0)	–	11 (92)	73%	1 (8)	100%	12

^a Resident of Unit 13.

Harvest Chronology

For RG580, most of the goat harvest generally occurs the last week of September and into the first week of October (Table 6). No goats were harvested at the end of October or in November throughout RY13–RY17. Typically, by that time of the year snow has made goat hunting areas inaccessible. For DG720, some harvest typically occurs during the first week of the season in August. During RY13–RY17, it appears that harvest chronology trends to later dates in more recent years (Table 7). Starting in RY15, harvest occurs for the first time in the last week of September, and each successive year after that harvest continues later and later into October. This could be a result of later snowfall in recent years, allowing access to goat hunting areas for longer periods of time.

Table 6. RG580 harvest chronology as a percentage of the total in Unit 13D, regulatory years 2013–2017, Alaska.

Regulatory year	September				October				November
	1–7	8–15	16–23	24–30	1–7	8–15	16–23	24–31	1–30
2013	0	0	0	0	0	0	0	0	0
2014	0	0	0	0	0	2 (100)	0	0	0
2015	1 (33)	0	0	1 (33)	1 (33)	0	0	0	0
2016	0	0	0	5 (83)	1 (17)	0	0	0	0
2017	0	0	1 (50)	1 (50)	0	0	0	0	0

Table 7. DG720 harvest chronology as a percentage of the total in Unit 13D, regulatory years 2013–2017, Alaska.

Regulatory year	August			September				October				November
	10–17	18–24	24–31	1–7	8–15	16–23	24–30	1–7	8–15	16–23	24–31	1–30
2013	0	1 (10)	1 (10)	6 (60)	1 (10)	1 (10)	0	0	0	0	0	0
2014	1 (17)	2 (33)	2 (33)	1 (17)	0	0	0	0	0	0	0	0
2015	4 (40)	0	1 (10)	1 (10)	0	3 (30)	1 (10)	0	0	0	0	0
2016	1 (20)	0	1 (20)	0	0	1 (20)	0	2 (40)	0	0	0	0
2017	2 (22)	0	0	1 (11)	0	3 (33)	0	1 (11)	1 (11)	1 (11)	0	0

Transport Methods

Much of the goat habitat in Unit 13D is highway-accessible to some degree. For RG580, there are quite a few hunters who have success accessing the area via boat in RY13–RY17 (Table 8). For DG720, the majority of hunters in RY13–RY17 used highway vehicles, although airplane and all-terrain vehicles were also popular modes of transportation, and these tended to be associated with higher success rates (Table 9). One person did access the area by horse in RY16 but that is very uncommon for the area.

Table 8. RG580 harvest by transportation method in Unit 13D, regulatory years 2013–2017, Alaska.

Regulatory year	Boat		Highway vehicle		No transport, other, or unknown	
	Hunted	Success rate	Hunted	Success rate	Hunted	Success rate
2013	2	0%	4	–	1	0%
2014	0	–	4	50%	0	–
2015	5	60%	2	–	0	–
2016	5	100%	7	14%	0	–
2017	4	50%	1	–	0	–

Table 9. DG720 harvest by transportation method in Unit 13D, regulatory years 2013–2017, Alaska.

Regulatory year	Airplane		Horse		Boat		ATV ^a		Highway vehicle		No transport, other, or unknown	
	Hunted	Success rate	Hunted	Success rate	Hunted	Success rate	Hunted	Success rate	Hunted	Success rate	Hunted	Success rate
2013	10	50%	0	—	2	100%	1	100%	7	14%	2	50%
2014	5	40%	0	—	0	—	1	100%	5	40%	3	33%
2015	3	67%	0	—	1	100%	0	—	12	50%	1	100%
2016	1	100%	1	100%	1	0%	2	0%	11	27%	0	—
2017	2	100%	0	—	1	100%	3	67%	5	80%	1	0%

^a All-terrain vehicle.

Other Mortality

While carnivore predation on goats undoubtedly occurs, it is suspected that the mountain goat populations in Unit 13D are regulated primarily by winter weather. Goat population declines have been documented in Unit 13 following deep snowfalls.

Alaska Board of Game Actions and Emergency Orders

The most recent BOG action relative to Unit 13D added a portion of Unit 13D to the RG580 hunt area starting in RY07. No BOG actions took place during RY13–RY17.

Recommendations for Activity 2.1

Continue to monitor and evaluate goat harvest through hunter harvest reports.

3. Habitat Assessment-Enhancement

No activities.

NONREGULATORY MANAGEMENT PROBLEMS OR NEEDS

Data Recording and Archiving

- State goat harvest data is stored on WinfoNet server (<http://winfonet.alaska.gov/index.cfm>).
- Goat survey data forms (Appendix A) are stored in the “Goat” filing cabinet located in the Area Biologist office in Glennallen.
- Data are entered and stored electronically with survey waypoints, survey tracks, and pdf files of the scanned data sheets on the Glennallen Shared Drive (O:\DWC\BGDIF\Goat\Goatcomp).
- All electronic files are backed-up nightly to offsite storage maintained on State of Alaska (SOA) servers.
- A report on survey results including cost, conditions, dates flown, and count information is written and transmitted to appropriate staff and supervisors in memo format.

Agreements

There are no current data sharing agreements.

Permitting

Not applicable.

Conclusions and Management Recommendations

An average of 5 goats were harvested annually during the period of this report, 83% of which were males. All goat counts in Unit 13D were incidental with sheep surveys in the area, with the exception of the Tiekel/Tasnuna goat survey conducted in FY16. Ideal sheep survey conditions

are bright sun and limited cloud cover, whereas goats are more visible in cool overcast weather. Survey methods, therefore, may account for variation in the number of goats observed in different years. Information available suggests that the goat population in Unit 13D remains stable. The harvest within the drawing hunt areas has been low and consistent over time. There are no concerns with sustainability of these hunts.

Observations of goat populations suggest that both sexes use low-elevation areas extensively during the critical winter period. Understanding seasonal habitat selection is important in developing wildlife management strategies and devising protocols that may limit the effect of human disturbance on mountain goats. Commercial heli-ski guides operate in the central Chugach Mountains from Thompson Pass to the Matanuska Glacier. Heli-ski activities may create disturbances in critical mountain goat wintering or kidding areas. We recommend identifying important seasonal mountain goat habitat to help mitigate any negative goat population effects. Additionally, we recommend that helicopters should not hover over, circle, or harass goats in any way. Pilots should use flight paths that avoid mountain goats and their habitat, and helicopters should not land within any area known to be goat wintering habitat (White and Gregovich 2018).

II. Project Review and RY18–RY22 Plan

Review of Management Direction

MANAGEMENT DIRECTION

The management direction for Unit 13D in RY18–RY22 should be modified to reflect meaningful and realistic goals and objectives that are appropriate in the context of current access, hunting pressure, and goat populations of the unit. The following modifications are adopted for Unit 13D and coincide with statewide goals (ADF&G 2002) within the frameworks of sustained yield and species conservation.

GOALS

- Provide a sustainable opportunity to hunt mountain goats under aesthetically pleasing conditions.
- Protect and maintain the goat population and its habitat in concert with other components of the ecosystem.
- Provide an opportunity for non-consumptive uses such as viewing and photographing goats.

CODIFIED OBJECTIVES

Amount Reasonably Necessary for Subsistence Uses (ANS)

Same as RY13–RY17.

MANAGEMENT OBJECTIVES

- Maintain an annual harvest of up to 10% of the observed goat population in Unit 13D.
- Maintain a sex ratio for harvested animals of less than 30% females.

REVIEW OF MANAGEMENT ACTIVITIES

1. Population Status and Trend

ACTIVITY 1.1. Monitor goat abundance and population composition.

No change from RY13–RY17.

Methods

No change from RY13–RY17.

2. Mortality-Harvest Monitoring

ACTIVITY 2.1. Monitor and evaluate goat harvest through hunter harvest reports.

Data Needs

No change from RY13–RY17.

Methods

No change from RY13–RY17.

3. Habitat Assessment-Enhancement

No change from RY13–RY17.

NONREGULATORY MANAGEMENT PROBLEMS OR NEEDS

Data Recording and Archiving

No change from RY13–RY17.

Agreements

No change from RY13–RY17.

Permitting

No change from RY13–RY17.

References Cited

- Alaska Department of Fish and Game. 1976. Alaska wildlife management plans: A public proposal for the management of Alaska's wildlife: Southcentral Alaska. Draft proposal subsequently approved by Alaska Board of Game. Division of Game, Federal Aid in Wildlife Restoration, Project W-17-R.
- Alaska Department of Fish and Game. 2002. Strategic plan. Division of Wildlife Conservation. Juneau, Alaska.
http://www.adfg.alaska.gov/static/research/plans/pdfs/strategic_plan_wc_2002.pdf
(Accessed 14 May 2019).
- White, K. S., and D. Gregovich. 2018. Mountain goat resource selection in the Haines–Skagway area: Implications for helicopter skiing management. Alaska Department of Fish and Game, Wildlife Research Report ADF&G/DWC/WRR-2018-2 Juneau.

Appendix A. Goat/Sheep survey data form.

MOUNTAIN GOAT AND SHEEP SURVEY FORM

Area: Chugach / Talkeetna / Alaska Range / Other: _____ (circle one)

Page _____ of _____

Date: _____ Count Area: _____

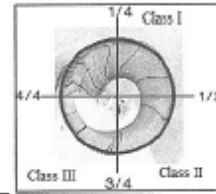
Pilot _____ Observer _____

Time Off: _____ Time Landing: _____ Total Flight Time: _____

Light: low / med / bright Cloud cover: clear / scat / broken / overcast

Snow cover (%) _____

Start Count Time: _____ End Count Time: _____ Total Count Time: _____

[illegible]

