

Sitka Black-tailed Deer Harvest Report

Southeast Alaska, 2004

2004

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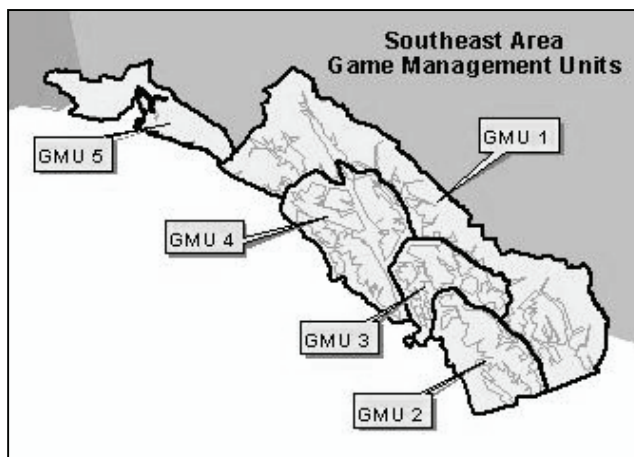
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Deer Harvest Report: Overview

This report provides a summary of the harvest of Sitka black-tailed deer for the August 1, 2004-January 30, 2005 hunting season in Region 1—Southeast Alaska. This information was collected by the Alaska Department of Fish and Game (ADFG), Division of Wildlife Conservation through a mail survey sent to 3791 hunters at the end of the hunting season (approximately 35% of total hunters). Deer hunters are randomly selected from across the region and asked to report deer they harvested, along with other hunting information, during the previous season. With the initial mailing and one follow-up reminder mailing, approximately 63% of the hunters provided hunt reports that are included in this summary. Historical information is also included for comparison with previous years.

Summary statistics on the numbers of deer harvested, number of hunters, and hunter effort are reported by Game Management Unit (GMU) within the region (see map). For statistical reasons, only GMUs with adequate reporting (>100 reports received) are included in the detailed sections of the report. All GMUs are included in the regional summary. Confidence intervals are calculated for each estimate and are indicated on the graph by thinner lines above and below the estimates.

We wish to thank all of the hunters that partici-



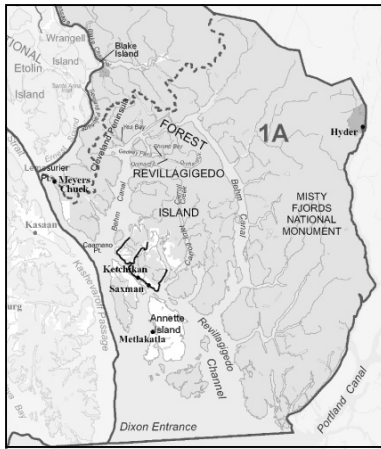
Young female Sitka black-tailed deer feeding on beach cast lichen in late-winter, Zarembo Island, AK

pated in this survey. Voluntary hunter reporting is critical to the accuracy and success of this survey. Results of the survey provide important information for management of deer populations and hunting opportunities.

GMU 1A (Ketchikan Area)

GMU 1A includes Revillagigedo (Revilla) Island, adjacent smaller islands and the mainland from Dixon Entrance to the Cleveland Peninsula. Most of the area is federal land managed by the US Forest Service and much of the mainland portion of the unit is within Misty Fjords National Monument.

Hunter access to Misty Fjords is by boat or plane, whereas on Revilla Island there is some limited road access associated with the community of Ketchikan.



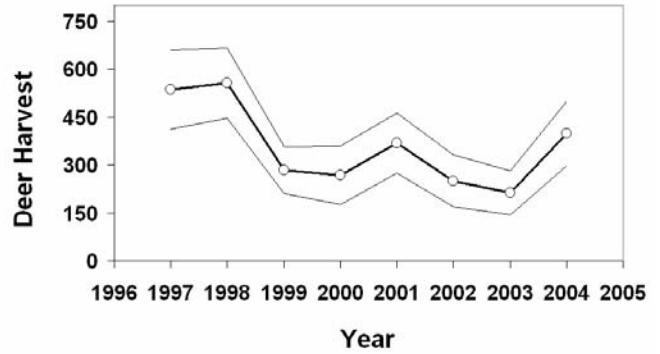
Over the last 8 years deer harvest has ranged from 213 to 556, while the number of hunters in the sub-unit has varied from 533 to 924. The deer harvest in 2004 (399±61 deer) was up significantly

from 2003 (213±42 deer), but overall there has been a general decline in deer harvest during 1997-2004. Likewise the number of hunters and hunter effort has generally declined over the past 8 years also.

The cause of this decline in hunter effort (and associated harvest) is unclear however annual variability in weather patterns and snowfall can have marked effects on deer distribution, population density and hunter accessibility in this area. Predators, namely black bears and wolves, can also regulate deer populations through mortality of fawns and also adults. While limited information is available to assess the role of predation in influencing deer densities in this area, anecdotal information suggests a possible increase in predator densities on the Cleveland Peninsula in recent years.

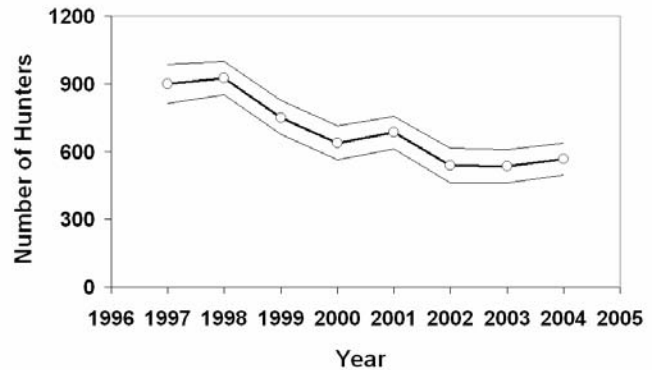
During this period no significant regulatory changes have occurred that might influence deer hunter effort or success. Likewise, it is unlikely that factors related to deer harvest survey reporting have differed during the period of study.

GMU 1A (Ketchikan Area)



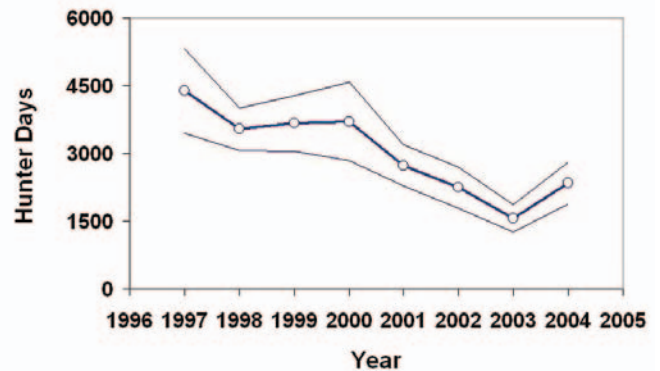
Estimated number of deer harvested in GMU 1A, 1997-2004. The lighter colored lines represent the upper and lower 95% Confidence Intervals.

GMU 1A (Ketchikan Area)



Estimated number of hunters in GMU 1A, 1997-2004. The lighter colored lines represent the upper and lower 95% Confidence Intervals.

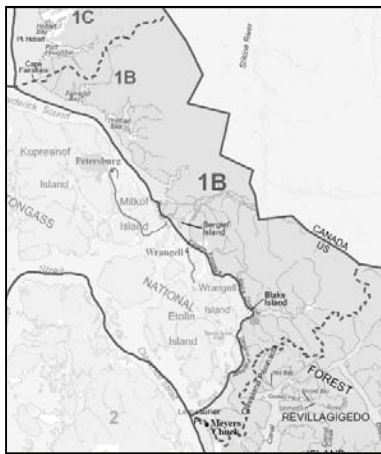
GMU 1A (Ketchikan Area)



Estimated number of deer harvested in GMU 1A, 1997-2004. The lighter colored lines represent the upper and lower 95% Confidence Intervals.

GMU 1B (Petersburg Mainland)

GMU 1B includes the mainland east of Petersburg from the Cleveland Peninsula to Cape Fanshaw. Most of the area is federal land managed by the US Forest Service and includes Thomas Bay, Bradfield Canal and the Stikine River wilderness. This area is only accessible by boat or plane though some local logging roads exist for onsite access



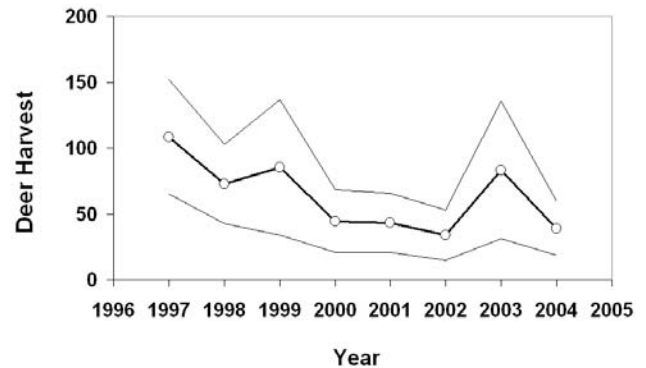
Over the last 8 years deer harvest has ranged from 34 to 108, while the number of hunters in the sub-unit has varied from 70 to 187. The deer harvest in 2004 (39 ± 12 deer) was not statistically lower than 2003 (83 ± 32 deer). Deer harvest in this area appears to be stable or has slightly declined during

1997-2004. The number of hunters appears to have declined over this same period however hunter effort has been largely stable over the past 8 years (despite a highly variable estimate in 2003).

This area has a relatively low deer density (due to typically high snow accumulation) and is largely inaccessible. In addition, aside from the communities of Petersburg and Wrangell, no large population centers are near this area. Much of the hunting effort by individuals in these communities is focused on islands to the west of the mainland where deer densities are generally higher. The combination of these factors likely results in the relatively low harvest rates in this area, as compared to other places in southeast Alaska.

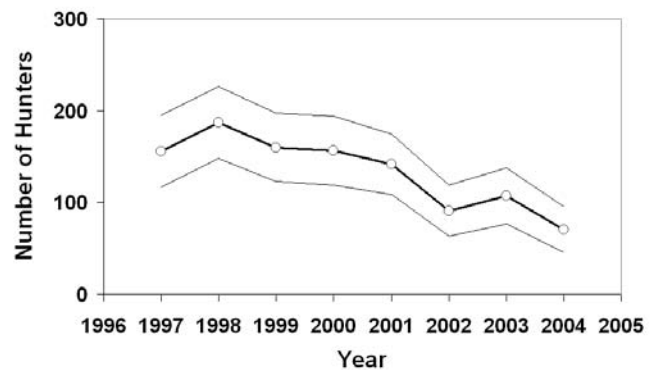
During this period no significant regulatory changes have occurred that might influence deer hunter effort or success. Likewise, it is unlikely that factors related to deer harvest survey reporting have differed during the period of study.

GMU 1B (Petersburg Area)



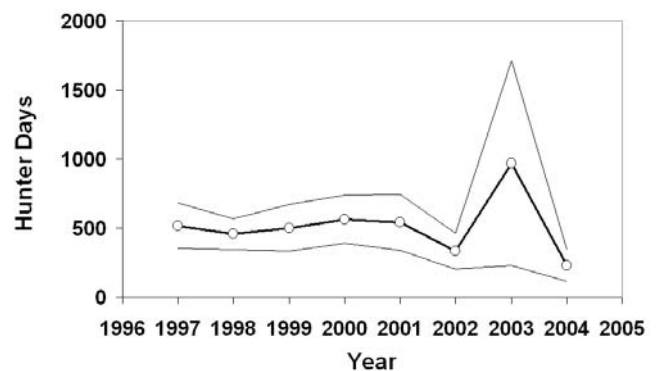
Estimated number of deer harvested in GMU 1A, 1997-2004. The lighter colored lines represent the upper and lower 95% Confidence Intervals.

GMU 1B (Petersburg Area)



Estimated number of hunters in GMU 1B, 1997-2004. The lighter colored lines represent the upper and lower 95% Confidence Intervals.

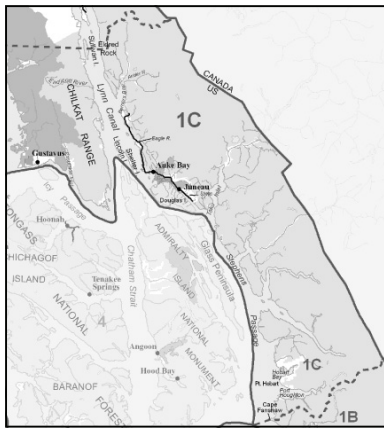
GMU 1B (Petersburg Area)



Estimated number of hunter days in GMU 1B, 1997-2004. The lighter colored lines represent the upper and lower 95% Confidence Intervals.

GMU 1C (Juneau Area)

GMU 1C includes Douglas Island, adjacent smaller islands, the Juneau mainland from Cape Fanshaw to Eldred Rock, the Chilkat Peninsula and areas in and around Glacier Bay National Park. Most of the area is federal land managed by the US Forest Service and National Park Service. A large portion of the central part of the subunit is accessible from the Juneau (pop.: 31,000) road system however the remainder of the unit



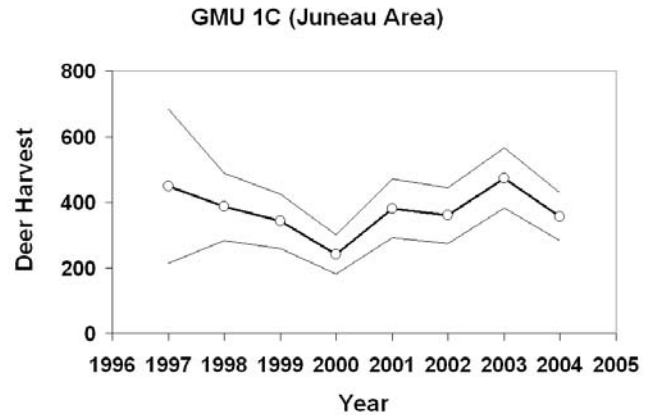
can only be accessed by boat or plane. Logging activity and associated road access is very limited in this area.

Over the last 8 years deer harvest has ranged from 241 to 474, while the number of hunters in the sub-unit has varied from 805 to 954. The deer

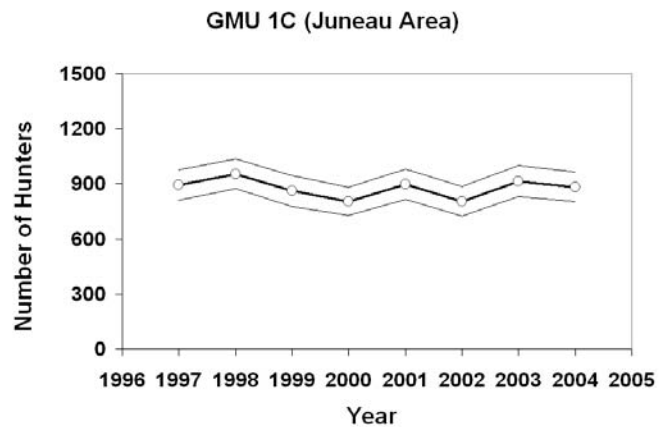
harvest in 2004 (356±44 deer) was down significantly from 2003 (474±55 deer), however there does not appear to be a significant long-term trend in deer harvest or effort between 1997-2004. Nevertheless, substantial annual variability in deer harvest appears to be common in this area.

Hunter effort associated with the Juneau road system is fairly high and hunter effort appears to be generally correlated with harvest in this area. Hunter success is likely linked to weather patterns and snow accumulation more than predation (which is limited). In particular, wet rainy periods or late-onset of snowy winter conditions particularly influences the number of hunter excursions afield. Snowfall aids hunters by increasing their ability to track animals as well as by causing deer distribution to shift to lower, less snowy areas. Consequently, the variability observed in hunter success in this area is likely attributed to yearly variability in weather and associated hunting conditions.

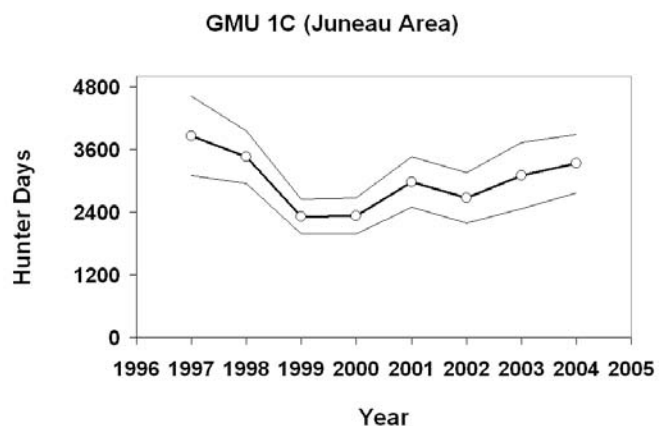
During this period no significant regulatory changes have occurred that might influence deer hunter effort or success. Likewise, it is unlikely that factors related to deer harvest survey reporting have differed during the period of study.



Estimated number of deer harvested in GMU 1C, 1997-2004. The lighter colored lines represent the upper and lower 95% Confidence Intervals.



Estimated number of hunters in GMU 1C, 1997-2004. The lighter colored lines represent the upper and lower 95% Confidence Intervals.



Estimated number of hunter days in GMU 1C, 1997-2004. The lighter colored lines represent the upper and lower 95% Confidence Intervals.

GMU 2 (Prince of Wales Island)

Prince of Wales island is the primary area of deer harvest in GMU 2, however harvest to a lesser extent occurs on small surrounding islands. Prince of Wales island is characterized by a relatively mild, maritime climate and winters are generally less severe as compared to colder, mainland areas. Prince of Wales island has been managed extensively for timber harvest

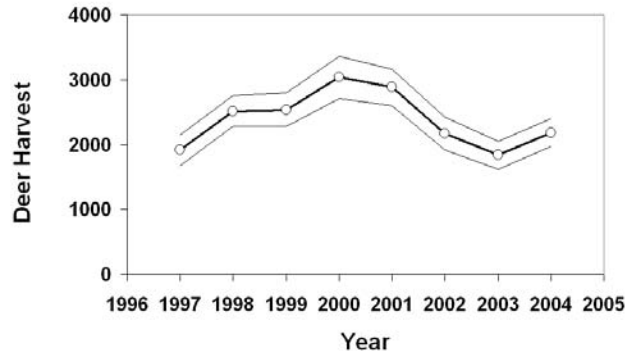


and as a result has an extensive road system (over 2500 miles of drivable surface) which is used as the primary means of access by hunters. Most deer harvest in GMU 2 is by hunters that reside either on Prince of Wales island or in the nearby community of Ketchikan.

Over the last 8 years deer harvest has ranged from 1837 to 3037, while the number of hunters in the unit has varied from 1520 to 2257. The deer harvest in 2004 (2186±128 deer) was up significantly from 2003 (1837±132 deer). Deer harvest and hunter effort in GMU 2 generally increased between 1997-2000 and subsequently declined between 2001-2004. The recent decline in deer harvest and hunter effort has not resulted in an increase in the average number of hunter days required to harvest a deer (which has remained constant across the period of study).

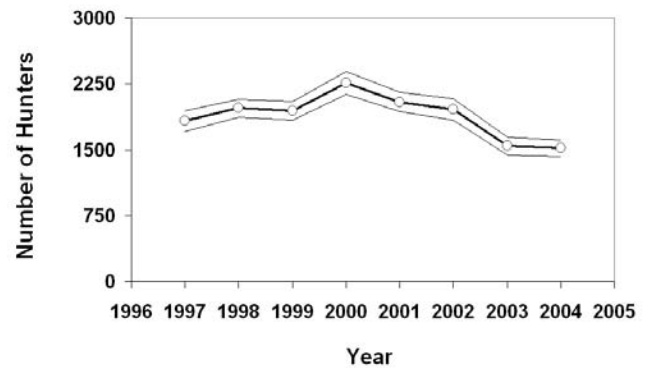
The apparent decline in deer harvest and hunter effort between 2001-2004 is potentially linked to regulatory changes that altered how GMU 2 resident hunters report their harvest. Specifically, in recent years some local hunters have reported deer harvest only to the U.S. Forest Service (which recently instituted a separate permit and reporting system). Consequently, such hunters were not able to be sampled by ADFG-WC and, as a result, their hunting experiences and harvest were not incorporated into this analyses. This problem is a special case and only relevant to GMU 2, and not other areas of southeast Alaska.

GMU 2 (Prince of Wales)



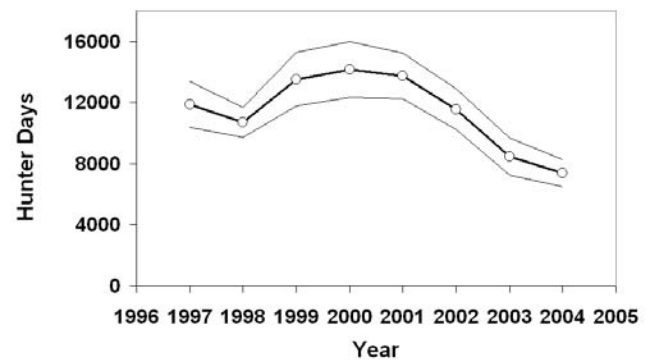
Estimated number of deer harvested in GMU 2, 1997-2004. The lighter colored lines represent the upper and lower 95% Confidence Intervals.

GMU 2 (Prince of Wales)



Estimated number of hunters in GMU 2, 1997-2004. The lighter colored lines represent the upper and lower 95% Confidence Intervals.

GMU 2 (Prince of Wales)



Estimated number of hunter days in GMU 2, 1997-2004. The lighter colored lines represent the upper and lower 95% Confidence Intervals.

GMU 3 (Central Southeast Alaska Islands):

GMU 3 includes Mitkof, Wrangell, Zarembo, Etolin, Kupreanof, Kuiu and adjacent smaller islands in central southeast Alaska. Most of the area is federal land managed by the US Forest Service. This area has seen a significant amount of logging activity over the years. Initial access to most areas is by water. However, in many areas once hunters arrive, extensive

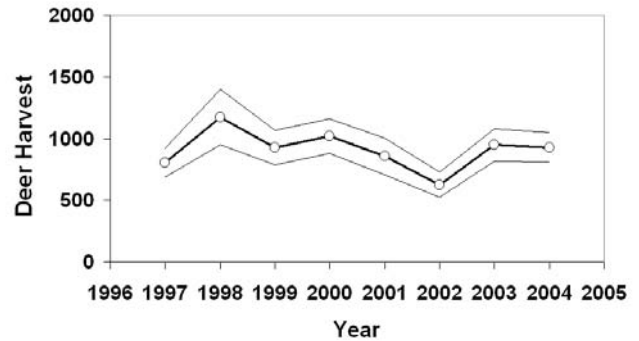


networks of logging roads are used for additional access to hunting areas. The communities of Petersburg, Wrangell and Kake are located within this sub-unit and some hunters use local road systems to access hunting areas.

Over the last 8 years deer harvest has ranged from 626 to 1173, while the number of hunters in the sub-unit has varied from 892 to 1224. The deer harvest in 2004 (930±74 deer) did not change from 2003 (948±79 deer). Overall, deer harvest declined between 1998-2002 but increased between 2002-2004. The number of deer hunters was stable between 1997-2000, declined between 2000-2002 and slightly increased between 2002-2004. Trends in hunter days were similar with the exception of a general increase between 1997-2000.

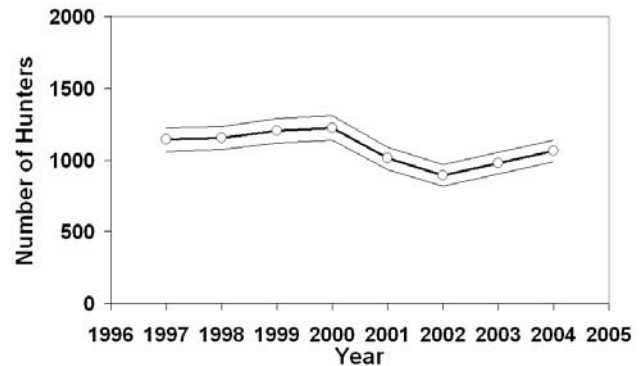
Trends in deer harvest and effort in this unit have been affected by regulatory changes that resulted in liberalization of deer hunting on the Lindenberg Peninsula beginning in 2003. This resulted in an increased harvest in a fairly large but localized part of the GMU. Consequently, an overall increase in deer harvest for 2003 and 2004 occurred, even though hunter effort did not change as significantly. Bag limits on Mitkof Island and GMU 3, in general, are more restrictive as compared to other island-dominated management units (e.g. GMU 2 & 4).

GMU 3 (Central SEAK Islands)



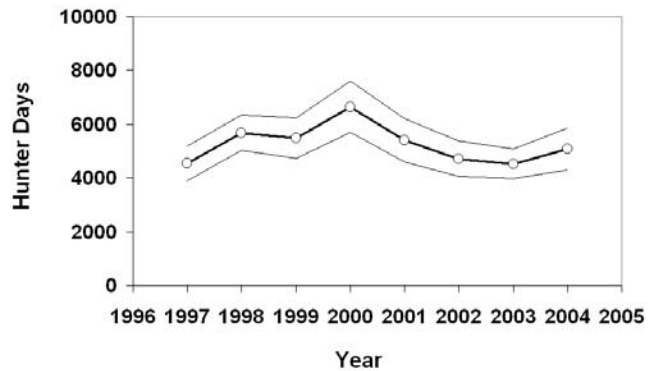
Estimated number of deer harvested in GMU 3, 1997-2004. The lighter colored lines represent the upper and lower 95% Confidence Intervals.

GMU 3 (Central SEAK Islands)



Estimated number of hunters in GMU 3, 1997-2004. The lighter colored lines represent the upper and lower 95% Confidence Intervals.

GMU 3 (Central SEAK Islands)



Estimated number of hunter days in GMU 3, 1997-2004. The lighter colored lines represent the upper and lower 95% Confidence Intervals.

GMU 4 (Admiralty, Baranof & Chichagof Islands):

GMU 4 includes Admiralty, Baranof, Chichagof and adjacent smaller islands (including Kruzof and Pleasant Islands). Most of the area is federal land managed by the US Forest Service though a significant amount of land managed by native corporations also occurs in this unit. The area is characterized by remote, rugged coastal and interior mountainous areas intermixed with areas of fairly intensive forest management. Most



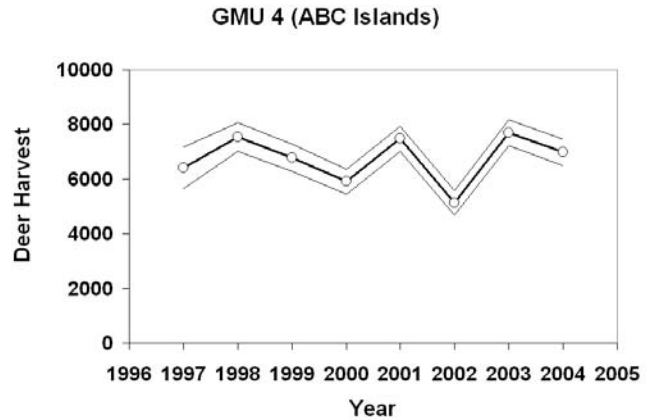
access is by boat though some areas, particularly around the community of Hoonah, can be extensively accessed by vehicles. Sitka (pop.: 8000) is the largest city in this area though the Juneau area is in close proximity to eastern Admiralty Island.

Over the last 8 years deer harvest has ranged from 5126 to 7697, while the number of hunters in the

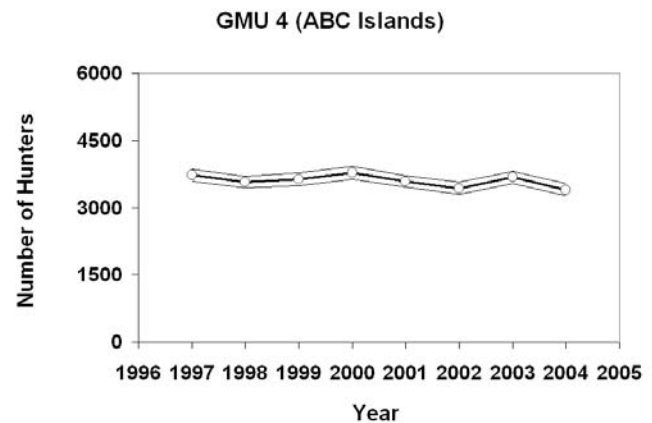
sub-unit has varied from 3397 to 3776. The deer harvest in 2004 (6978±288 deer) was down significantly from 2003 (7697±291 deer), but overall there has not been a general decline in deer harvest during 1997-2004. Likewise the number of hunters and hunter effort has been generally stable over the past 8 years, with the possible exception of a slight decline in the number of hunter days between 2000-2004.

Deer harvest in GMU 4 is very high relative to other areas in southeast Alaska and is likely due to the predominantly mild winter conditions and the absence wolves and black bears (important predators of deer in other areas). Deer harvest in this area is most closely correlated with hunter effort though weather conditions likely effect deer harvest to some extent.

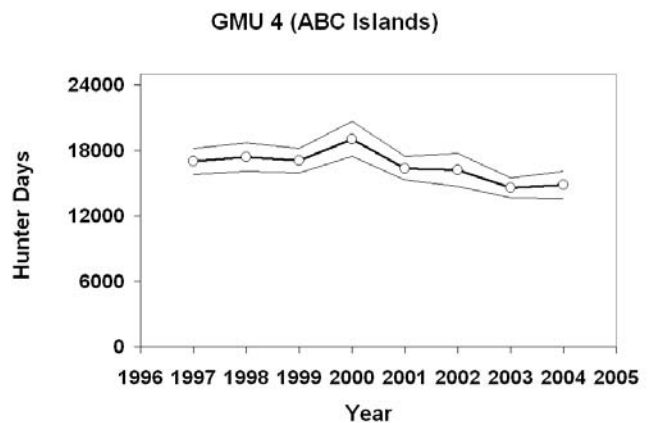
During this period no significant regulatory changes have occurred that might influence deer hunter effort or success. Likewise, it is unlikely that factors related to deer harvest survey reporting have differed during the period of study.



Estimated number of deer harvested in GMU 4, 1997-2004. The lighter colored lines represent the upper and lower 95% Confidence Intervals.



Estimated number of hunters in GMU 4, 1997-2004. The lighter colored lines represent the upper and lower 95% Confidence Intervals.



Estimated number of hunter days in GMU 4, 1997-2004. The lighter colored lines represent the upper and lower 95% Confidence Intervals.

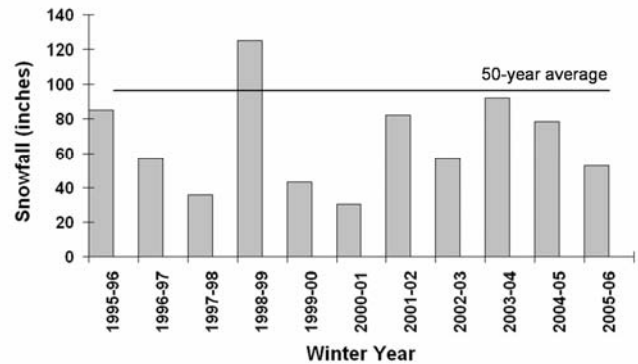
Southeast Alaska Snow Report: 1995-2006

Winter severity, particularly snow depth, can play an important role in determining deer distribution, nutritional condition, productivity and survival. As a result, biologists often rely on winter severity information in order to forecast effects of winter conditions on deer population dynamics. Due to the strong maritime influence on deer range in southeast Alaska, winter snow conditions can be extremely variable both within a given winter and between years. Snow depths also vary considerably throughout the region with northern areas (e. g. Juneau) typically receiving more winter snowfall than more southerly areas (e. g. Ketchikan/Annette). Snow depth also increases significantly with elevation and also by habitat type, with more open habitats accumulating more snow than forested habitats.

Between 1995-2006, winter conditions in southeast Alaska have been relatively mild, with only 1 out of the last 11 winters having greater than average annual snowfall in the Juneau area, and 2 out of 11 in Annette. As a result, it is unlikely that winter conditions have negatively affected deer populations throughout the region during this period. However, it is important to recognize that very severe winters have occurred in southeast Alaska in the past (e. g. early-1970s & early-1980s) with severe consequences for not only deer but other wildlife populations. If and when another severe winter occurs in southeast Alaska it is likely that deer populations and hunter success will be affected accordingly.

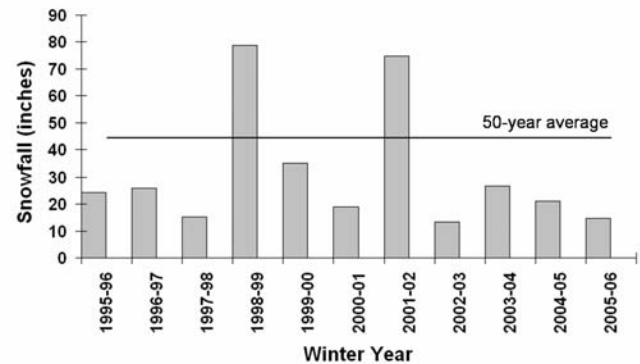
Snow conditions also vary throughout the winter season with peaks typically occurring between November and January. Typically, this allows several days of excellent late season hunting conditions. However, when the onset of snow is shifted later or earlier in the season hunting opportunities are affected accordingly.

Juneau Airport, Annual Snowfall (in.), 1995-2006



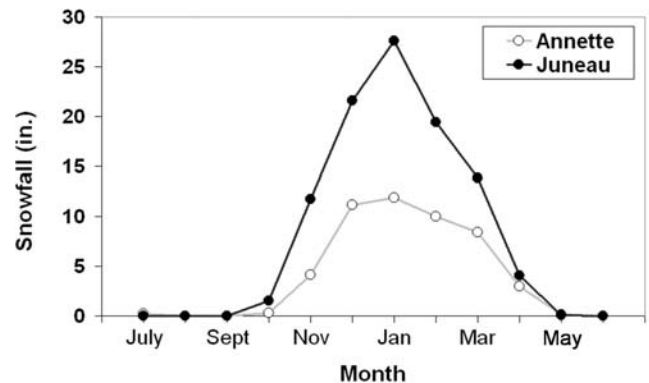
Annual winter snowfall measured at the Juneau Airport, 1995-2006. The 50-year average is depicted as a solid line. (Data: WFO, Juneau, AK)

Annette Airport, Annual Snowfall (in.), 1995-2006



Annual winter snowfall measured at the Annette Airport, 1995-2006. The 50-year average is depicted as a solid line. (Data: WFO, Juneau, AK)

Average Monthly Snowfall (in), 1956-2006

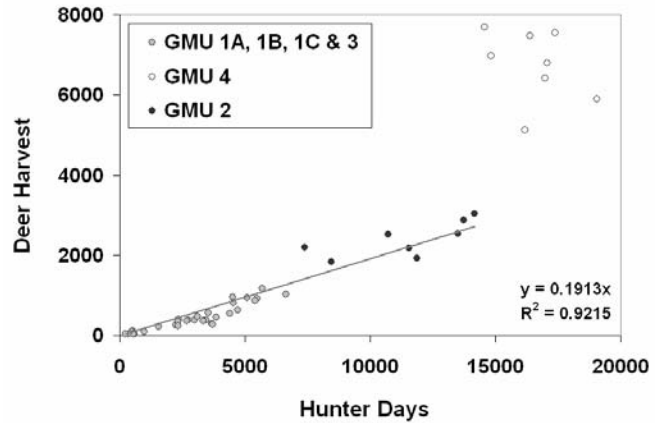


50-year monthly snowfall averages measured at the Annette and Juneau Airports, 1956-2006. (Data: WFO, Juneau, AK)

Deer Harvest Report: Regional Summary

Deer harvest patterns throughout southeast Alaska have been fairly similar between 1997-2004, with the exception of GMU 4 (ABC islands). In general, the average hunter has spent about 5 days afield for every deer harvested. However, in GMU 4 the number of days required to harvest a deer is considerably less than in other parts of southeast Alaska. This likely results from the higher densities of deer in this area which is related to typically milder winter conditions and the lack of wolves and black bears (important predators of deer elsewhere in the region). In addition, the deer hunting season and bag limits in GMU 4 are both longer and larger than is typical for other parts of southeast Alaska. It is also interesting to note that the average number of days required to harvest a deer in GMU 2 (Prince of Wales island) is similar to other areas of the region (except GMU 4), and in most years of study is slightly fewer than would be expected based on hunter success in GMU 1A, 1B, 1C and 3.

Sitka Black-tailed Deer Harvest Report Southeast



Relationship between average deer harvest and hunter days for GMU's in southeast Alaska between 1997-2004. This figure illustrates the consistent relationship between hunter effort and success for all GMUs, except GMU 4 (which required less hunter days/deer harvested).

Deer Harvest Survey Reporting: Summary By GMU of Residence

GMU	Overlays (Deer Tags)	Surveys Delivered	Surveys Returned	Sample Rate	Overall Response Rate	Survey Response Rate
1A	1,647	557	304	34%	19%	55%
1C	3,086	1,021	669	33%	22%	66%
1D	201	84	72	42%	36%	86%
2	978	471	287	48%	29%	61%
3	1,833	614	418	34%	23%	68%
4	2,206	752	432	34%	20%	57%
5A	121	44	34	36%	28%	77%
Non-resident (Alaska)	457	147	106	32%	23%	72%
Non-resident (SE Alaska)	331	101	66	31%	20%	65%
Total	10,860	3,791	2,388	35%	22%	63%