

1992 Report

Deer Pellet-Group Surveys
in Southeast Alaska

by

Mark J. Kirchhoff

Alaska Department of Fish and Game
Division of Wildlife Conservation
Douglas, Alaska

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State of Alaska
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INTRODUCTION

This report summarizes the deer pellet-group survey work conducted by the Alaska Department of Fish and Game and the United States Forest Service in Southeast Alaska during 1992. It supplements previous volumes covering surveys in the region since 1981. The reader is referred to Kirchhoff and Pitcher (1988) for a more detailed discussion of objectives, sample design, and field methodology of this program.

Pellet-group data are used by biologists to monitor deer population trends in specific watersheds throughout the region. The data also permit general comparisons of deer numbers from area to area within the region. A word of caution is advised when interpreting these data. First, comparisons over time, or from area to area, are most valid when weather conditions are similar. Pellet groups tend to decompose more rapidly with increasing precipitation and warmer temperatures, potentially confounding comparisons. Secondly, there is a notable lag between the time a deer dies, and the time the pellet groups it has been depositing disappear (pellets persist for 6-11 months). When significant over-winter mortality occurs (commonly in March), pellet groups counted in April and May will not reflect that decline.

With those caveats in mind, the 1992 results are presented below.

RESULTS

During 1992, 34 watersheds, (or value comparison units - VCUs), were surveyed. For each VCU, transect locations, physiographic information, deer population density, and trend are described. Overall, deer pellet-group densities were down region-wide compared to previous years. Twenty-six VCUs showed decreases, while six showed increases. Two VCUs were new. Complete results for each VCU are found in Table 1. A brief summary of deer population trend by game management unit follows:

Subunit 1A and Unit 2 - Southern Southeast Alaska and Prince of Wales Island. Doug Larsen, ADF&G biologist in Ketchikan, believes that deer numbers may have declined slightly from levels noted during the past seven years, but not to the point of warranting immediate management changes. Pellet-group counts dropped substantially between 1991 and 1992; however, hunter success and kill per unit effort were well within ranges obtained in the past. ADF&G suspects that part of the deflated results obtained during 1992 counts can be attributed to the wet, snow-free weather conditions which persisted in southern Southeast throughout the fall and winter of 1991-92. Deer may have been at higher elevations than usual, and the mild rainy weather probably had an effect on the persistence of pellet groups.

Wolves are currently believed to be at relatively high levels in southern Southeast, an observation corroborated by people who spend considerable time in the field, i.e. pilots, hunters, and trappers. Harvest records support this contention; during the 1991-1992

trapping season, 31 wolves were sealed from Subunit 1A and 82 from Unit 2. This is 33% and 43% above the eight year average, 1984-1992. Wolves are probably having a substantial impact on southern Southeast deer populations at this time. However, the general public perception, with the possible exception of North Prince of Wales, is that there are still "lots" of deer around. People in Unit 2 are seeing deer routinely on the beach and along the road system, and in Ketchikan, there have been deer walking along downtown streets. Nowhere does there appear to be a shortage of deer, and therefore, no significant regulatory changes are planned at this time.

Unit 3 - Central Southeast Alaska. Charlie Land, ADF&G's Petersburg biologist, believes there has been a slight decline in the deer population in Unit 3. This is based on the pellet-group surveys and on informal observations. Declines are believed to be a combination of two factors: increased wolf predation and an unusually severe winter during 1991. According to the USDA Soil Conservation Service, snow levels in February 1991 were at a 13 year high in the Petersburg district. Snow levels in April of that year continued to be way above normal. Deer mortality was probably higher than usual that winter, but even with the temporary setback, ADF&G believes that the deer herd is in good condition throughout Unit 3.

Unit 4 - Northern Southeast Alaska. E.L. Young, ADF&G's Sitka biologist, believes that deer populations in Unit 4 have fallen rather dramatically from their historically high levels. As early as 1989, biologists expressed concern that the herd may be over carrying capacity. High harvest levels, numerous reports of abundant deer, and overcropped browse were the indicators. The herd was already in poor condition when the winter of 1991 struck. According to the USDA Soil Conservation Service, from February through April of 1991, "extremely heavy snow conditions burdened the mountains of northern Southeast." Deer mortality was undoubtedly high, and although these losses were not obvious during the Spring 1991 pellet-group counts, the full magnitude showed up in 1992. Almost every VCU sampled in Unit 4 declined in 1992, with Baranof and Chichagof islands faring the worst, and Admiralty Island somewhat better. A corresponding drop in deer harvest followed.

The deer population in Unit 4 now appears to be within its carrying capacity and in a recovery mode. Even though losses were great during the winter of 1990-91, Unit 4 contains some of the best deer habitat in Southeast Alaska, and if winters continue mild, deer should prosper.

Subunit 1 C - Juneau and Mainland. Very few transects were run in this subunit during 1992. However, Matt Robus, ADF&G's Juneau area biologist, believes that populations are stable, with the highest deer numbers found on several islands surrounding Juneau: Douglas, Shelter, and Lincoln.

Unit 5 - Yakutat. Pellet-group data from the last two years indicate Yakutat's deer population is stable at about three to four hundred deer (est.) Most of these deer are found on the islands in Yakutat Bay.

NARRATIVES

Inner Point (VCU 36) - This drainage, located on the west side of Douglas Island, is popular with Juneau deer hunters. It is a small VCU containing mostly low-volume forest; it is also brushy, particularly at lower elevations. Access is sometimes difficult because of high wind and sea conditions in Stephens Passage. Pellet-group densities measured since 1985 have always been moderate, between 1 and 2 pellet groups per plot. However, in 1992, deer pellet-group density was higher, 2.04 pellet-groups per plot. This may mean that deer populations are actually higher on the island, but because an inexperienced crew gathered the data, we would prefer another year of data to confirm this.

Hawk Inlet (VCU 128) - Hawk Inlet, on the NW shore of Admiralty Island, is a good baseline VCU for deer pellet sampling as it has been surveyed almost continuously since 1982. Access to Hawk Inlet is easy from Juneau by either plane or large vessel. All three transects traverse mid-volume timber on the west side of the inlet. Data collected at Hawk Inlet in 1992 indicate that deer populations have fallen to moderate levels. This VCU will continue to be sampled regularly.

Hood Bay (VCU 171) - Three transects were established at Hood Bay, on the SW coast of Admiralty Island, in 1987. Hood Bay is an important deer hunting area for the residents of nearby Angoon. Transects #1 and #2 sample south-facing slopes to 1500 feet elevation. Transect #1 passes through a portion of sixty year old second growth at the start, and #2 is brushy its entire length. Transect #3 samples riparian habitat in the south arm of Hood Bay. Deer pellet-group densities were slightly higher in 1992 than 1990, the last year Hood Bay was sampled.

Pybus Bay (VCU 182) - Pybus Bay, on the SE coast of Admiralty Island, is another VCU that provides benchmark pellet-group density information. The bay is important to Juneau, Petersburg, and Kake hunters, and has been surveyed almost continuously since 1981. All three transects are fairly easy, although snow can sometimes be a problem at higher elevations. 1992 pellet-group density was much lower than previous years, confirming hunter's impressions that the local deer herd is in decline.

Pleasant Island (VCU 185) - Pleasant Island is located in Icy Strait close to the community of Gustavus. The island is a main source of deer to Gustavus residents, and in response to local's concerns about winterkill in 1990, the ADF&G decided to establish transects there in 1991. Greg Streveler, a local naturalist, indicated that the western half of the island was most hunted, and that a good anchorage could be had along the north shore; hence the location of the three transects. Pleasant Island is a low-lying island with extensive muskeg; the highest point on the island is a 600-foot knob. Most of the good timber (volume class 5) is found along the beach fringe and creeks. Deer pellet-group

densities in 1992 were virtually the same as measured in 1991, at 1.34 pellet groups per plot.

Port Althorp (VCU 189) - This VCU, on the NW corner of Chichagof Island, is an important deer hunting area for Elfin Cove residents. Three transects were established here in 1988. Transect #1 starts at the head of Salt Chuck Bay and ascends a south-facing slope to 1500 feet. Transect #2 starts near the old Port Althorp cannery and ascends a north-facing slope to 1200 feet. Transect #3 starts at the entrance to Salt Chuck Bay and travels along a ridge through mid-volume old growth. 1992 deer pellet-group density was down in Port Althorp from previous years.

Idaho Inlet (VCU 190) - Three transects were established in Idaho Inlet on northern Chichagof Island in 1988. This is a cold, steep-walled inlet, and all three transects sometimes have snow at higher elevations. Pellet-group densities in 1992 were found to be low.

Suntaheen Creek (VCU 209) - Three transects were established in Whitestone Harbor on northern Chichagof Island in 1988. These transects traverse a lot of muskeg; most timber in the VCU is found along the beach fringe and creeks. Pellet-group density remained at moderate levels in 1992.

Pavlof River (VCU 218) - Three transects were established in this VCU on eastern Chichagof Island in 1988. Two start at the falls at Pavlof Harbor, and #3 starts from the beach at Wachusetts Cove. A wide variety of habitat types are encountered. Pellet-group density remained at moderate levels in 1992.

Upper Tenakee (VCU 223) - Three transects were established in this VCU in upper Tenakee Inlet in 1988. Since that time considerable roading and logging operations have taken place. Deer pellet-group density measured in 1992 was much lower than that recorded in 1988.

Saltery Bay (VCU 231) - Three transects were established at Saltery Bay on Chichagof Island in 1988. Transect #2 requires a long walk through estuarine meadow to reach the starting point at the edge of a riparian spruce stand. Many deer were observed in the extensive meadows in 1988, but none were seen in 1992. Deer pellet-group density in 1992 was much lower than in 1988.

Kadashan (VCU 235) - Three new transects were established at Kadashan Bay on Chichagof Island in 1988. (Transects had previously been run at Kadashan in 1981, but locations are unknown.) In addition to these three 1988 transects, two more were added by the Forest Service in 1992 to make comparisons between the mostly unlogged Kadashan drainage and the nearby logged drainage of Corner Bay (VCU 236). The new transects at both Kadashan and Corner Bay can be found in Appendix I. 1992 pellet-group densities in Kadashan were found to be lower than those in 1988.

Corner Bay (VCU 236) - A deer pellet transect was run at Corner Bay on Chichagof Island in 1981 but the transect location is missing. In 1992 the Forest Service established five new transects in Corner Bay to make comparisons with the neighboring Kadashan drainage. Most transects at Corner Bay traversed leave strips between clearcut units. Deer pellet-group density was found to be high, over two pellet groups per plot.

Finger Mountain (VCU 247) - The Finger River drainage, in lower Hoonah Sound, has consistently exhibited some of the highest deer pellet-group densities in all of Southeast. Three transects were established here in 1983, and they have been surveyed almost every year since. Transect #1 is a nice hike to an 1100-foot knob, then it undulates up and down from there. Transect #2 parallels the Finger River and usually has a tremendous amount of deer sign. Transect #3 is short and steep to 1500 feet elevation. Deer pellet-group densities remained high at Finger Mountain in 1992.

Nakwasina (VCU 300) - This VCU, north of Sitka, is a popular local hunting area which has been sampled almost every year since 1984. Typically, deer pellet-group densities have been very high at Nakwasina. However, after the severe winter of 1991, biologists expected a big die-off. 1992 deer pellet-group density at Nakwasina was 1.64 pellet groups per plot, way down from the previous year of 3.98 pellet groups per plot.

Sealion Cove (VCU 305) - Located on northern Kruzof Island, this VCU has been sampled almost every year since 1984. In the past, very heavy browsing pressure was observed on all three transects. Deer pellet-group density declined for the second year in a row in 1992, probably in response to over-utilized winter range, with deer persisting at moderate levels.

Knight Island (VCU 361) - This VCU is a wilderness area in Yakutat Bay. Deer have frequently been seen on the island's beaches in the past, and the island is considered to be one of the best places to find deer near Yakutat. In 1991 three new transects were established on Knight Island, but because of inclement weather, only one transect was sampled - #2. This transect travels through an open hemlock-blueberry forest. Transect #2 was run again in 1992, and the results were virtually the same as 1991; deer pellet-group density was low, less than one pellet group per plot.

Yakutat Islands (VCU 368) - This VCU incorporates many of the islands found in Yakutat Bay: Kratoi, Kriwoi, Khantaak, and Dolgoi. One or two transects were established on each island in 1991. Habitat is generally mid-volume hemlock with a blueberry understory. While the islands are not ideal deer habitat, the maritime influence, less snow, and lack of wolves probably explains the persistence of deer on these islands. Deer pellet-group densities were slightly higher in 1992 than in 1991.

E. Duncan (VCU 437) - Three transects were established on the east side of Duncan Canal near Petersburg in 1990. Deer pellet-group density was higher here in 1990 than anywhere else on Kupreanof Island, but in 1992 counts were down. This may be a result of an active logging operation that obliterated part of Transect #1.

Woewodski (VCU 448) - Three transects were located on southwestern Mitkof Island in 1984. They are all well-marked and easily accessible by skiff from Petersburg. All climb to 1500 feet through moderate volume timber. 1992 deer pellet-group density was significantly lower than in 1991.

Frederick (VCU 449) - This VCU on Mitkof Island was first sampled from the beach in 1981. Deer pellet-group density then was extremely low, only 0.08 pellet groups per plot, probably because the nearby LeConte Glacier makes this NW corner of Mitkof Island colder than the rest of the island. Since 1981, timber harvest and roading activity has increased in this VCU. In 1990, three new transects were established on the road system because of easier access. Deer pellet-group density was higher than 1981, 0.55 pellet groups per plot, but still relatively low. 1992 deer pellet-group density was the same as 1991.

Blind Slough (VCU 452) - One transect was run on this southern Mitkof Island VCU in 1992. The small number of plots recorded makes the data inconclusive, but general impressions are that the deer population is at moderate levels in this VCU.

Exchange Cove (VCU 539) - Three new transects were established in Exchange Cove, on northern Prince of Wales Island, in 1988. The drainage has been partially logged and two of the transects run through clearcuts. Access to these transects is difficult by boat because a long tide flat has to be walked, and access by road is also difficult because the road is not always close to the starting points on the beach. Not many plots were recorded in 1992 because one transect had to be aborted after a crew member became ill. The available data indicate that deer populations continue to be moderate in the Exchange Cove area.

Sarkar Lake (VCU 554) - Three transects were established at Sarkar Lake on Prince of Wales Island in 1988. All three transects start at the Sarkar Rapids bridge. Transects #1 and #3 travel through clearcuts; #2 is in old growth all the way. Pellet-group density in 1992 was much lower than in 1988.

Thorne Lake (VCU 575) - Four new transects were established along the Thorne River drainage in 1992. All four transects start along Road 3015 and are accessed by vehicle from Thorne Bay. The vegetation on Transect #1 is mostly a red cedar-western hemlock overstory and a blueberry understory. There was heavy use by deer of skunk cabbage and fresh deer sign was common. The transect was considered easy to run. Transect #2 starts in the muskeg and low volume forest, but soon encounters an active logging operation. The crew detoured around the unit and got back on the original line. Timber was mostly low to mid-volume with muskegs scattered throughout. Towards the end of the line there was some high volume timber. Transect #3 is an easy transect through mostly moderate to high-volume hemlock. Numerous deer beds were observed. Transect #4 is a steep steady climb to 1500 feet. The first half is dominated by western red cedar, the second half is spruce-hemlock forest. Volume class is 5 and 6 all the way.

Overall, deer pellet-group density was moderate in the drainage, between one and two pellet groups per plot.

Little Ratz (VCU 584) - Four new transects were established in this VCU on the east coast of Prince of Wales in 1992. Access to all transects is by a new road being constructed from Thorne Bay. Transect #1 starts at a rock face shortly after Mile 9. The first ten plots travel through a twenty year old clearcut. The next fifteen plots then go through a new clearcut. After that, a red cedar and mountain hemlock forest is encountered. Transect #2 starts at the Sal Creek bridge. The first twenty-four plots go through a thinned clearcut. From there it's a short walk to the mouth of Sal Creek and the Clarence Strait coast. The return trip back to the road goes through low-volume old growth and a clearcut. Transect #3 leaves the road after Sal Creek and goes through young spruce stands where several blowdowns have opened up the overstory canopy. Transect #4 leaves the road about two miles past Sal Creek and passes through rolling terrain with low to mid-volume timber. There is some nasty side-hill brush at the end. Deer pellet-group density in the entire VCU was low, less than one pellet group per plot.

12 Mile (VCU 621) - This VCU, located near Kasaan Bay on Prince of Wales Island, has been sampled by the USFS since 1985. Deer pellet-group density in this VCU has always been low until 1991, when it shot up to 1.84 pellet groups per plot. In 1992, pellet-group density declined again to more typical levels of the past, 0.43 pellet groups per plot.

Port Refugio (VCU 635) - This VCU is located on Suemez Island off the west coast of Prince of Wales Island. Pellet groups were first counted here in 1985 by the Forest Service. Initially, deer populations were high, but pellet-group density dropped off in 1987, and has remained low since then. 1992 pellet-group counts were the lowest ever.

Helm Bay (VCU 716) - Helm Bay on the Cleveland Peninsula north of Ketchikan was intensively sampled by ADF&G crews in 1981. Three permanent transects were established in 1984. In the mid-1980s, deer pellet-group densities were low in Helm Bay, but since 1988 have been moderate. 1992 results were also moderate, between one and two pellet groups per plot.

George Inlet (VCU 748) - This VCU south of Ketchikan is easily accessible by skiff. Deer pellet-group density over the last several years has been moderate, but 1992 pellet-group density was low, less than one pellet group per plot.

Whitman Lake (VCU 752) - This roadside VCU south of Ketchikan was first sampled in 1981 and has occasionally been sampled since then when inclement weather prohibits airplane or skiff use. Such was the case in 1992. Deer pellet-group density continues to be low, less than one pellet group per plot.

Carroll Point (VCU 758) - A single transect was established in this VCU on southern Revilla Island in 1988. Taken alone, the number of plots is too low to say anything

significant about this VCU, but when combined with plots from adjacent transects in Moth Bay, a reliable judgement can be made on deer population trend on southern Revilla. 1992 deer pellet-group density continued to be low on southern Revilla.

Moth Bay (VCU 759) - Two transects were established in Moth Bay on southern Revilla Island in 1985. Combined with the transect at adjacent Carroll Point, Moth Bay is a good indicator of deer populations on southern Revilla. Deer pellet-group density continued to be low in 1992.

Gravina (VCU 999) - Northeastern Gravina Island was sampled at moderate levels in 1981 and at intensive levels in 1984, 1985, and 1986. In 1987, sampling was reduced to three transects (Nos. 1, 2, and 3). These transects are readily accessible from the Ketchikan airport. Since 1989 pellet-group densities have been moderate on Gravina Island, and 1992 results continued that trend.

LITERATURE CITED

Kirchhoff, Matthew D., and Kenneth W. Pitcher. 1988 Deer Pellet-Group Surveys in Southeast Alaska, 1981-1987. Alaska Department of Fish and Game. Federal Aid in Wildlife Restoration Progress Report Project W-22-6, Job 2.9. Juneau. 113 pp.

Table 1. Pellet-group count statistics from southeast Alaska, 1981-92.

VCU	Name	Land Acres	% CFL	Year	Plots	Pellet-Group	
						Mean	95% CI
27	Auke Bay	15,245	45%	1987	381	0.99	0.87-1.12
35	North Douglas	4,430	49%	1991	300	0.80	0.65-0.96
36	Inner Point	3,965	44%	1985	256	1.30	1.10-1.51
				86	235	1.97	1.68-2.25
				87	262	1.76	1.53-2.00
				88	200	1.21	1.02-1.39
				89	258	1.31	1.08-1.53
				92	204	2.05	1.75-2.36
65	Sumdum Glacier	40,906	15%	1987	262	1.76	1.53-2.00
82	Negro Creek	12,212	31%	1989	312	0.21	0.13-0.29
94	Sullivan Island	3,985	78%	1990	250	1.39	1.17-1.62
124	Shelter Island (All Transects)	6,162	43%	1984	713	1.46	1.33-1.60
				85	774	1.82	1.67-1.97
				86	727	2.20	2.02-2.37
124	Shelter Island (Trans. 4-8, 18)			1984	300	1.52	1.34-1.70
				85	296	2.52	2.24-2.81
				86	292	3.24	2.91-3.57
				87	288	2.91	2.57-3.24
				88	130	3.16	2.62-3.70
				89	300	1.43	1.23-1.62
125	Barlow Cove	13,712	24%	1982	2,567	1.07	1.01-1.12
				84	347	1.69	1.46-1.92
				85	347	1.55	1.35-1.76
				90	270	1.42	1.18-1.65
127	Calm Station	4,941	66%	1982	1,054	1.65	1.53-1.77
128	Hawk Inlet	14,318	57%	1982	1,605	1.21	0.99-1.42
				84	339	1.42	1.22-1.63
				85	270	1.69	1.43-1.95
				86	286	1.92	1.64-2.19
				87	278	2.54	2.19-2.89
				89	364	1.82	1.56-2.08
				90	250	2.24	1.94-2.53
				92	319	1.61	1.38-1.83

VCU	Name	Land Acres	% CFL	Year	Plots	Pellet-Group	
						Mean	95% CI
140	Dorn Island	9,485	81%	1984	230	1.27	1.02-1.53
148	Lake Kathleen	14,693	57%	1987	207	2.13	1.76-2.49
150	Lake Florence	21,342	52%	1988	294	1.48	1.27-1.69
162	Thayer Lake	25,342	79%	1987	313	2.81	2.49-3.12
				89	283	2.04	1.75-2.32
171	Hood Bay	44,355	79%	1987	358	2.31	1.99-2.63
				89	366	1.77	1.54-2.00
				90	375	1.85	1.61-2.09
				92	360	1.91	1.64-2.18
182	Pybus Bay	41,501	62%	1981	390	1.34	1.16-1.52
				84	300	1.02	0.86-1.18
				85	269	1.86	1.60-2.12
				86	235	2.00	1.70-2.29
				87	242	2.03	1.69-2.37
				89	199	2.00	1.63-2.36
				90	221	1.72	1.44-2.01
				92	236	1.13	0.97-1.30
185	Pleasant Island	8,738	16%	1991	311	1.38	1.18-1.57
				92	210	1.34	1.09-1.59
189	Port Althorp	8,040	27%	1988	195	1.80	1.47-2.13
				91	223	1.92	1.55-2.29
				92	261	1.36	1.11-1.60
190	Idaho Inlet	53,183	22%	1988	258	1.34	1.09-1.60
				92	219	0.94	0.69-1.19
202	Port Frederick	16,619	52%	1988	242	1.87	1.62-2.13
208	First No. 2	6,613	32%	1983	1,155	1.12	1.01-1.22
209	Suntaheen Cr.	13,198	49%	1988	272	1.22	1.00-1.44
				92	271	1.13	0.94-1.33
211	Point Augusta	4,688	63%	1983	757	1.78	1.62-2.01
218	Pavlof River	18,866	50%	1988	325	1.78	1.50-2.06
				92	341	1.56	1.32-1.81

VCU	Name	Land Acres	% CFL	Year	Plots	Pellet-Group	
						Mean	95% CI
221	Whip Station	4,708	53%	1981	193	0.86	0.64-1.08
222	Sand Station	12,231	50%	1981	253	0.60	0.48-0.73
223	Upper Tenakee	3,833	54%	1988	253	1.47	1.24-1.70
				92	265	0.58	0.47-0.70
231	Saltery Bay	18,478	31%	1988	256	2.02	1.69-2.35
				92	256	0.96	0.79-1.14
234	Inbetween	6,002	62%	1981	35	0.49	0.08-0.89
235	Kadashan	33,641	53%	1981	96	0.54	0.32-0.76
				88	221	2.67	2.18-3.16
				92	282	1.62	1.38-1.86
236	Corner Bay	10,930	66%	1981	60	0.35	0.17-0.53
				92	206	2.27	1.91-2.64
246	Broad Island	17,145	38%	1981	209	1.41	1.18-1.63
247	Finger Mountain.	15,918	38%	1983	2,145	1.17	1.11-1.24
				84	302	1.83	1.57-2.09
				85	279	3.23	2.79-3.67
				86	277	2.88	2.57-3.19
				87	236	3.11	2.71-3.52
				89	305	2.99	2.57-3.40
				90	225	3.36	2.99-3.74
				91	150	3.93	3.36-4.51
				92	207	2.85	2.48-3.22
				249	Lisianski	19,677	24%
91	170	1.53	1.22-1.84				
254	Soapstone	17,695	29%	1988	274	1.92	1.67-2.17
				91	270	2.05	1.77-2.33
271	Chichagof	20,680	10%	1991	301	1.39	1.19-1.58
275	Cobol	14,618	49%	1984	224	1.15	0.92-1.37
				91	185	2.96	2.37-3.54
279	Rapids Point	7,637	65%	1983	2,734	0.77	0.73-0.81
281	Ushk Bay	20,770	38%	1981	94	0.63	0.41-0.85

MEMORANDUM

State of Alaska Department of Fish and Game

To: Distribution

Date: 3 June 93

From: Mark J. Kirchhoff
Wildlife Biologist/DWC
Douglas

Telephone: 465-4265

Subject: 1993 Deer Survey Results
(preliminary)

1993 Deer Pellet Survey Results

VCU	NAME	PLOTS	MEAN (P.G./PLOT)	YEAR LAST SURVEYED - MEAN
35	North Douglas	324	0.70	1991 - 0.80
117	Couverden	350	0.35	New in 1993
124	Shelter Island	250	1.96	1990 - 1.60
185	Pleasant Island	305	1.77	1992 - 1.34
189	Port Althorp	249	1.37	1992 - 1.36
190	Idaho Inlet	306	0.56	1992 - 0.94
209	Suntaheen Creek	265	0.74	1992 - 1.13
211	Point Augusta	286	2.06	1983 - 1.78
223	Upper Tenakee	249	0.52	1992 - 0.58
231	Saltery Bay	227	0.75	1992 - 0.96
235	Kadashan	385	1.12	1992 - 1.62
236	Corner Bay	50	1.72	1992 - 2.27
247	Finger Mountain	179	3.03	1992 - 2.85
254	Soapstone	324	1.70	1991 - 2.05
300	Nakwasina	188	3.15	1992 - 1.64
305	Sealion Cove	198	1.69	1992 - 1.30
308	South Kruzof	345	1.63	New in 1993
368	Yakutat Islands	106	1.06	1992 - 0.48
431	Point Barrie	375	0.77	1988 - 0.23
442	Portage Bay	282	0.43	New in 1993
448	Woewodski	230	1.15	1992 - 0.79
452	Blind Slough	265	1.28	1992 - 1.04
454	Dry	210	1.44	1981 - 0.92
461	Woronkofski	225	0.22	1991 - 1.59
473	Onslow	341	0.69	1991 - 0.66
479	Mosman	305	0.08	New in 1993
578	Snakey Lakes	356	0.78	1989 - 1.56
581	Luck Lake	175	1.10	1988 - 2.11
621	12 Mile	258	0.84	1992 - 0.43
635	Port Refugio	213	1.78	1992 - 0.76
716	Helm Bay	286	1.36	1992 - 1.25
719	Port Stewart	289	1.19	New in 1993
722	Spacious Bay	300	0.53	New in 1993
738	Margaret	281	0.31	1991 - 0.76

The data is now being keypunched and confidence intervals will be available sometime in the near future.

VCU	Name	Land Acres	% CFL	Year	Plots	Pellet-Group	
						Mean	95% CI
288	Range Creek	6,929	33%	1983	1,788	0.51	0.46-0.55
				84	303	0.71	0.61-0.92
				85	224	1.32	1.02-1.62
295	Lake Eva	12,362	65%	1987	172	1.81	1.46-2.15
296	Portage Arm	16,101	59%	1981	213	0.53	0.39-0.68
				90	214	3.09	2.70-3.48
298	Middle Arm Kelp Bay	28,424	21%	1990	306	2.68	2.35-3.01
300	Nakwasina (All Transects)	19,575	48%	1984	196	2.51	2.14-2.88
				85	1046	3.92	3.67-4.17
				86	715	3.50	3.26-3.76
300	Nakwasina (Trans. 2,3,8)			1984	138	2.51	2.10-2.93
				85	218	3.65	3.13-4.17
				86	205	3.38	2.91-3.84
				87	195	2.31	1.90-2.71
				89	244	2.32	2.00-2.65
				90	255	2.98	2.56-3.40
				91	175	3.98	3.39-4.57
				92	223	1.64	1.37-1.90
305	Sealion Cove	9,293	69%	1984	320	1.36	1.15-1.58
				85	292	2.57	2.23-2.91
				86	235	2.87	2.44-3.29
				87	226	3.31	2.82-3.80
				89	303	1.75	1.50-2.00
				90	227	2.03	1.71-2.35
				91	219	1.63	1.36-1.91
				92	239	1.30	1.08-1.51
315	Basin Kelp Bay	8,460	60%	1990	151	1.85	1.41-2.28
321	Redoubt Bay	9,045	58%	1989	304	2.17	1.88-2.47
339	Cape Ommaney	13,725	32%	1988	172	1.74	1.43-2.05
348	West Crawfish	57,434	16%	1989	360	1.35	1.36-1.57
361	Knight Island	10,419	40%	1991	100	0.81	0.61-1.01
				92	100	0.95	0.74-1.16
363	Humpback	7,721	74%	1991	118	0.01	0.00-0.03

VCU	Name	Land Acres	% CFL	Year	Plots	Pellet-Group	
						Mean	95% CI
368	Yakutat Islands	1,021	99%	1991	415	0.32	0.24-0.39
				92	243	0.48	0.37-0.58
369	Ankau	---	---	1991	116	0.03	0.00-0.05
400	Security Bay	28,040	79%	1984	360	0.02	0.01-0.04
				89	304	0.25	0.16-0.34
403	Pillar Bay	28,227	65%	1988	337	0.16	0.10-0.22
408	Malmesbury	18,151	68%	1990	206	0.11	0.05-0.18
417	Conclusion Island	12,561	99%	1987	207	2.66	2.32-3.01
				89	200	0.95	0.72-1.18
				91	200	0.71	0.53-0.88
431	Point Barrie	22,187	27%	1988	357	0.23	0.17-0.29
434a	Big Level Island	727	61%	1981	399	1.54	1.45-1.63
				83	336	1.56	
				86	382	1.66	1.41-1.90
				89	227	1.07	
				91	456	2.16	1.90-2.41
434b	Little Level Island	263	92%	1981	114	2.48	2.02-2.94
				83	136	2.34	
				86	122	1.39	1.07-1.70
				89	137	1.52	
				91	132	3.59	3.07-4.11
435	Castle River	32,724	36%	1984	312	0.19	0.12-0.26
				87	305	0.51	0.37-0.65
				89	312	0.40	0.25-0.56
437	E. Duncan	23,744	55%	1990	227	1.12	0.92-1.32
				92	213	0.78	0.63-0.94
448	Woewodski	20,931	53%	1984	295	0.88	0.69-1.08
				85	209	1.00	0.82-1.19
				87	195	1.65	1.85-2.61
				88	433	1.33	1.16-1.51
				89	417	1.35	1.24-1.73
				90	355	1.46	1.28-1.64
				91	316	1.80	1.52-2.07
				92	248	0.79	0.62-0.97

VCU	Name	Land Acres	% CFL	Year	Plots	Pellet-Group	
						Mean	95% CI
448a	Woewodski Island	20,931	53%	1991	461	1.86	1.66-2.05
449	Frederick	6,835	70%	1981	945	0.08	0.06-0.11
				90	180	0.55	0.36-0.74
				92	227	0.54	0.42-0.65
452	Blind Slough	30,655	55%	1990	324	1.35	1.15-1.56
				92	114	1.04	0.77-1.30
454	Dry	11,033	74%	1981	91	0.92	0.56-1.28
455	Vank	8,437	99%	1981			
	a) Sokolof				900	1.73	1.61-1.85
	b) Rynda				281	0.25	0.18-0.32
	c) Greys				284	0.25	0.18-0.32
461	Woronkofski (All Transects)	14,500	63%	1985	646	1.63	1.45-1.81
461	Woronkofski (Trans. 10,11,12)			1985	218	2.01	1.62-2.39
				87	201	2.23	1.85-2.61
				89	223	2.52	2.18-2.85
				91	203	1.59	1.32-1.85
473	Onslow	28,947	55%	1984	321	0.37	0.28-0.46
				85	334	0.59	0.48-0.70
				86	347	0.72	0.59-0.84
				87	336	0.42	0.31-0.55
				88	329	0.44	0.32-0.55
				91	322	0.66	0.51-0.80
524	Frosty Bay	17,959	41%	1991	266	0.70	0.55-0.86
528	Mt. Calder	9,232	83%	1988	252	2.14	1.78-2.49
532	Red Bay	15,145	66%	1987	177	0.32	0.18-0.47
539	Exchange Cove	10,406	74%	1988	266	1.39	1.15-1.64
				92	125	1.10	0.83-1.38
554	Sarkar	32,183	60%	1988	298	1.28	1.06-1.50
				92	245	0.53	0.41-0.66
549	Sarheen	11,875	52%	1989	310	1.73	1.44-2.01

VCU	Name	Land Acres	% CFL	Year	Plots	Pellet-Group	
						Mean	95% CI
561	Warm Chuck	12,348	85%	1984	326	1.02	1.02-1.38
				85	295	1.60	1.36-1.84
				89	302	2.21	1.91-2.50
				91	291	2.05	1.73-2.37
564	Coronation	19,107	69%	1983	696	1.20	1.04-1.36
				85	228	2.34	
				88	408	1.41	1.17-1.66
				89	293	1.63	1.28-1.98
569	Baker	31,802	68%	1991	256	0.08	0.04-0.12
575	Thorne Lake	17,970	68%	1992	334	1.20	1.03-1.37
578	Snakey Lakes	6,431	84%	1986	279	0.62	0.51-0.73
				88	300	1.05	0.84-1.26
				89	200	1.56	1.26-1.86
581	Luck Lake	19,818	67%	1986	178	1.74	1.41-2.07
				88	300	2.11	1.80-2.41
584	Little Ratz	12,392	65%	1992	272	0.94	0.76-1.13
587	Tuxekan	12,129	77%	1988	300	1.06	0.84-1.28
621	12 Mile	23,344	59%	1985	196	0.31	0.19-0.43
				86	300	0.64	0.48-0.81
				87	370	0.65	0.49-0.81
				88	302	0.62	0.46-0.77
				89	235	0.78	0.59-0.98
				90	176	1.18	0.84-1.52
				91	231	1.84	1.48-2.21
				92	250	0.43	0.32-0.55
				635	Port Refugio	9,118	50%
86	324	2.52	2.09-2.96				
87	369	1.76	1.46-2.07				
88	270	1.15	0.90-1.40				
89	507	0.80	0.68-0.93				
90	232	1.25	1.03-1.48				
91	367	1.13	0.95-1.32				
92	254	0.76	0.57-0.95				
679	Kitkun Bay	15,359	75%	1988	240	0.31	0.20-0.42
				89	273	0.89	0.71-1.07

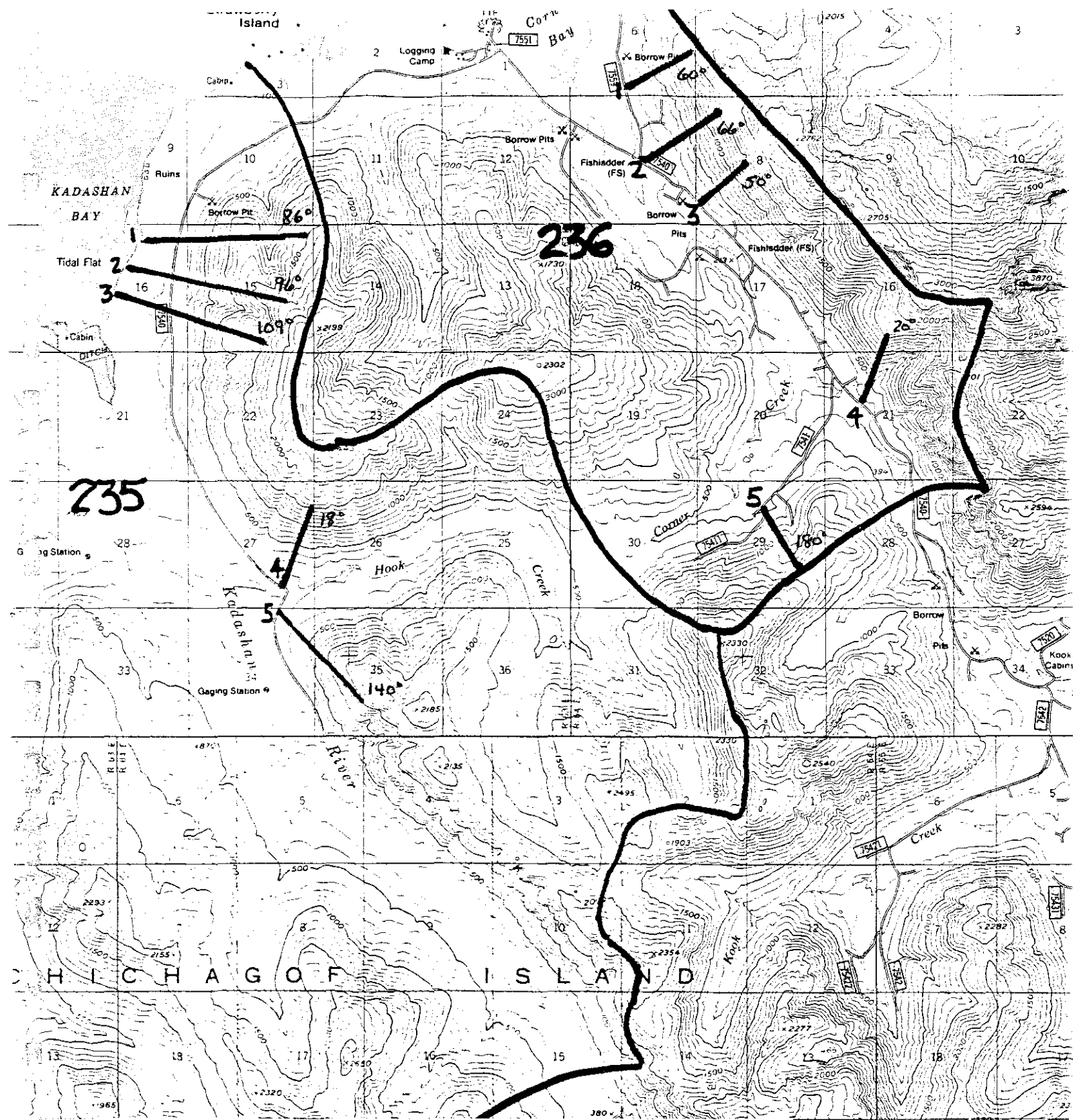
VCU	Name	Land Acres	% CFL	Year	Plots	Pellet-Group	
						Mean	95% CI
685	Nutkwa	17,079	73%	1988	234	0.09	0.02-0.16
716	Helm Bay	16,127	57%	1981	704	0.16	0.12-0.19
				84	302	0.54	0.44-0.65
				85	181	0.85	0.65-1.05
				88	247	1.66	1.38-1.95
				91	240	1.63	1.35-1.92
				92	169	1.25	0.96-1.53
738	Margaret	19,286	67%	1985	515	0.57	0.47-0.66
				86	251	0.84	0.69-1.00
				88	110	1.31	0.96-1.67
				89	129	0.62	0.44-0.80
				90	274	0.56	0.44-0.68
				91	272	0.76	0.58-0.94
748	George Inlet	19,448	28%	1981	110	0.21	0.09-0.33
				84	344	0.27	0.19-0.35
				85	313	0.52	0.39-0.65
				89	169	1.41	1.08-1.75
				90	240	1.03	0.82-1.25
				91	168	1.49	1.15-1.84
				92	195	0.65	0.49-0.81
752	Whitman Lake	6,015	38%	1981	45	0.18	0.02-0.33
				87	187	0.16	0.09-0.23
				90	193	0.46	0.32-0.59
				92	189	0.20	0.12-0.28
758	Carroll Pt.	11,629	34%	1985	118	0.66	0.46-0.86
				86	118	0.75	0.56-0.95
				88	85	1.15	0.81-1.48
				92	87	0.28	0.14-0.41
759	Moth Bay	7,652	23%	1985	140	0.59	0.42-0.74
				86	156	0.98	0.79-1.17
				88	78	0.71	0.46-0.97
				92	136	0.48	0.30-0.66
760	Lucky Cove	12,377	43%	1985	335	1.16	1.00-1.33
				86	258	1.16	0.95-1.32
				88	65	1.01	0.68-1.34
				90	263	1.10	0.92-1.27
				91	271	1.39	1.07-1.70

VCU	Name	Land Acres	% CFL	Year	Plots	Pellet-Group	
						Mean	95% CI
764	Blank Inlet	3,640	19%	1981	108	1.24	0.89-1.59
765	Dall Head	4,803	63%	1981	69	0.52	0.31-0.74
769	Alava Bay	13,563	60%	1985	311	0.52	0.39-0.65
				86	326	0.85	0.68-1.01
				91	143	1.64	1.22-2.05
772	Wasp Cove	4,882	90%	1985	271	0.41	0.31-0.51
				86	300	0.50	0.38-0.62
				89	145	0.58	0.39-0.77
				91	207	0.13	0.07-0.18
821	Winstanley Island	14,104	45%	1991	49	0.27	0.11-0.42
999	Gravina (All Transects)			1981	226	1.06	0.89-1.22
				84	1,087	0.86	0.78-0.94
				85	1,172	1.23	1.13-1.32
				86	1,267	1.40	1.30-1.50
999	Gravina (Trans. 1,2,3)			1984	376	0.88	0.73-1.03
				85	224	1.44	1.20-1.67
				86	346	1.62	1.43-1.81
				87	334	1.63	1.41-1.84
				88	278	2.06	1.78-2.35
				89	182	1.13	0.86-1.41
				90	279	1.40	1.12-1.68
				91	154	1.12	0.80-1.43
				92	302	1.22	1.05-1.38

APPENDIX I

New VCU's Sampled in 1992^a

^a Transect location forms for these and all other VCU's are located in the ADF&G Southeast Regional Office, Douglas.

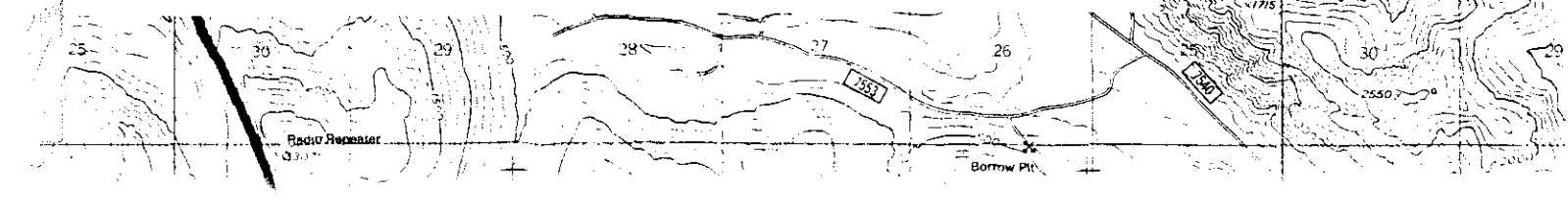


VCU 235

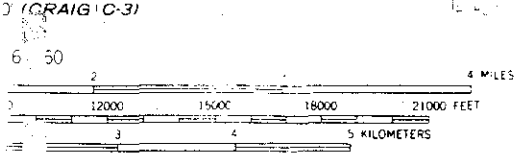
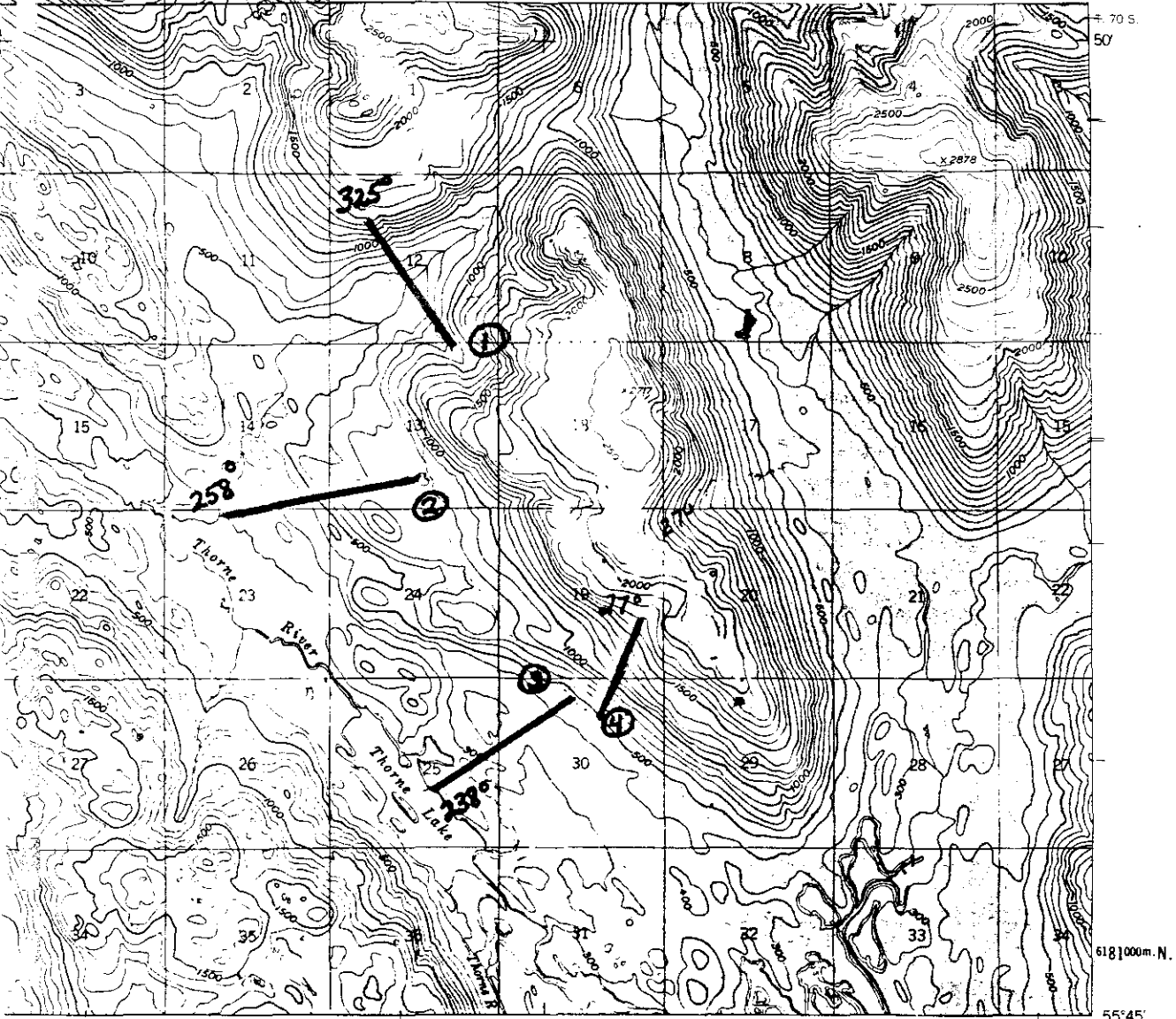
KADASHAN

VCU 236

CORNER BAY



VCU 575 THORNE LAKE



VERTICAL 100 FEET
 INDICATED BY BROKEN LINE
 MEAN SEA LEVEL
 PROXIMATE LINE OF MEAN HIGH WATER
 IS APPROXIMATELY 14 FEET



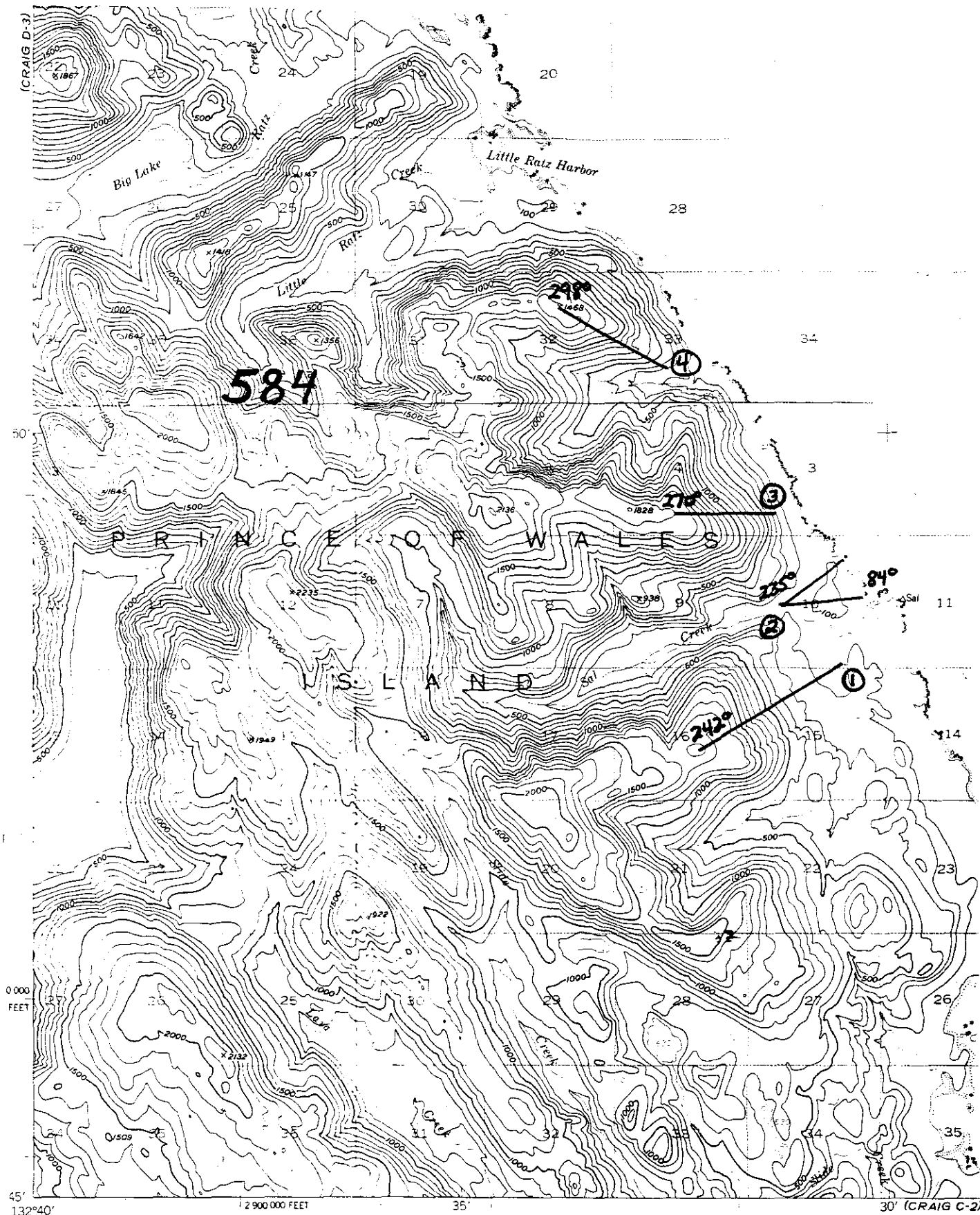
ROAD CLASSIFICATION
 No roads or trails in this area

CRAIG (D-3), ALASKA
 N5545-W13240/15X20

1949
 MINOR REVISIONS 1963

GEOLOGICAL SURVEY
 BRADDO 80225, OR WASHINGTON, D. C. 20242
 THIS ID SYMBOLS IS AVAILABLE ON REQUEST

VCU 584 LITTLE RATZ



0 000 FEET
132°40' 2 900 000 FEET 35' 30' (CRAIG C-2)
Mapped, edited, and published by the Geological Survey
Control by USC&GS
Topography by photogrammetric methods from aerial photographs
taken 1948, field annotated 1949. Map scale 1:63,360
SCALE 1 63360

APPENDIX II

Winter Weather Conditions

1992

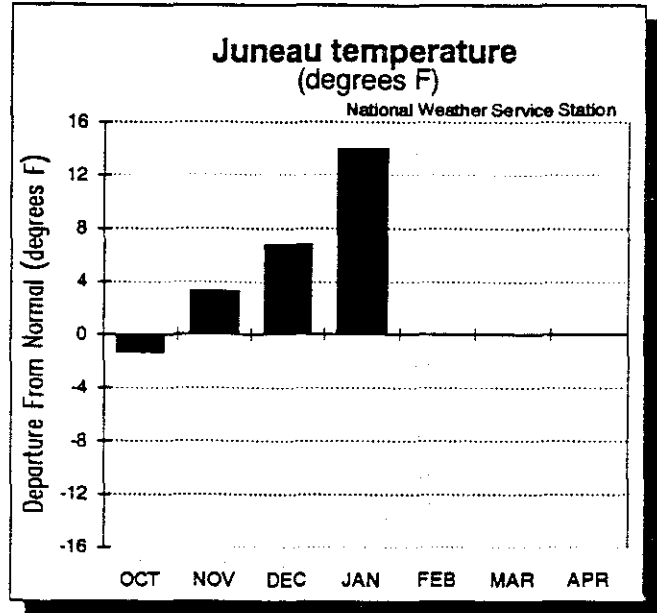
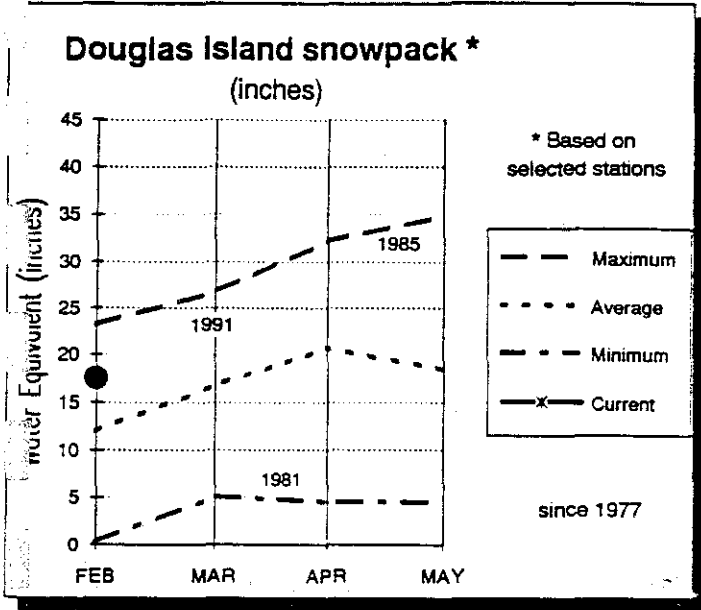
Winter Weather Conditions

January - April 1992

Data from: Alaska Snow Surveys, USDA Soil Conservation Service, Anchorage, AK.
Monthly reports on file, ADF&G, Douglas.

Southeast

February 1, 1992



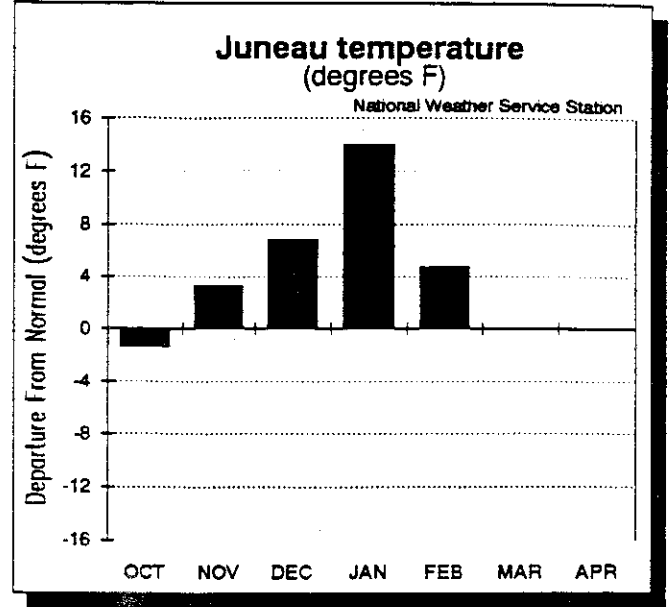
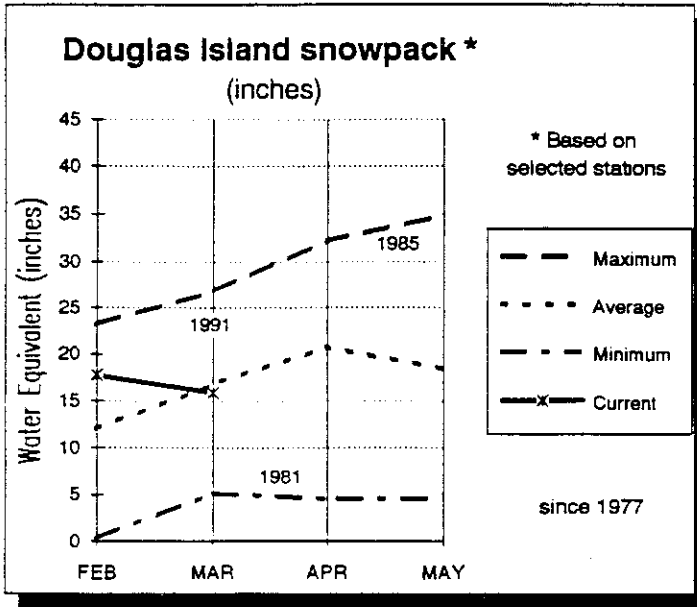
SNOWCOVER:

The most notable thing about winter so far in Southeast has been too much rain. The whole region has been relatively wet and mild -- an El Nino effect. The result has been seemingly steady rain, at times, at low elevations; but meanwhile, given sufficient elevation, a heavy snowcover has developed. On Douglas Island, the snowpack is well below last year's record early amounts, however, and is now the fourth heaviest in the last 25 years.

For more information, contact your Soil Conservation Service office in Anchorage, 271-2424.

Southeast

March 1, 1992



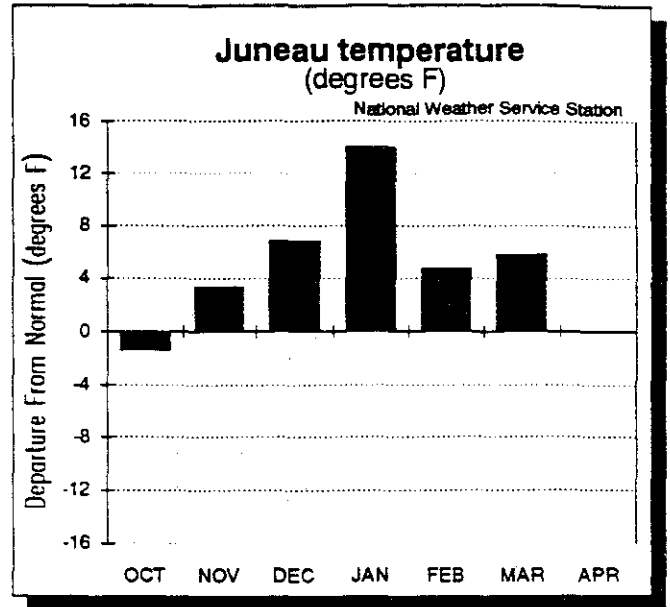
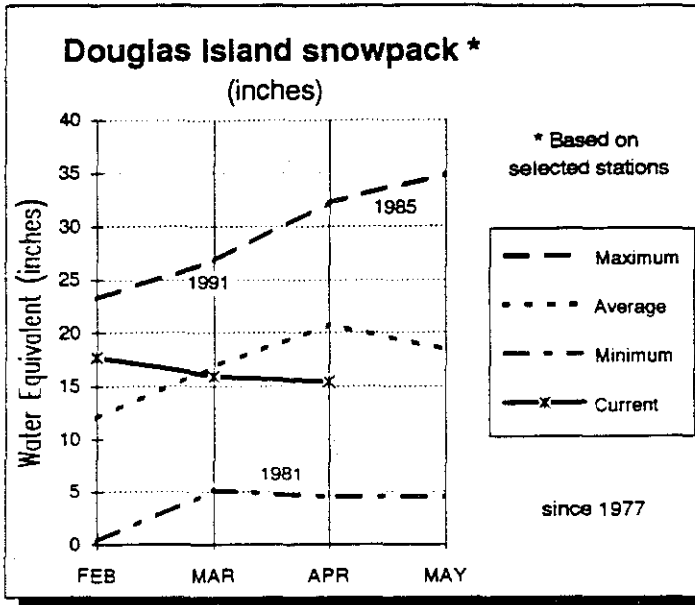
SNOWCOVER:

The region experienced a striking difference in precipitation amounts between north and south during the month. The south end received less than half normal, while the north end received nearly twice normal. Temperatures across the region were consistent, however, significantly above normal. As a result, major snow melting occurred at low elevation and/or shallow snow sites. Snowpacks, regionwide, are now well down, percentagewise, from amounts reported a month ago. In spite of these facts, the Speel River snow course, near the Snetisham Power Plant, has the heaviest snowpack since records began in 1965.

For more information, contact your Soil Conservation Service office in Anchorage, 271-2424.

Southeast

April 1, 1992



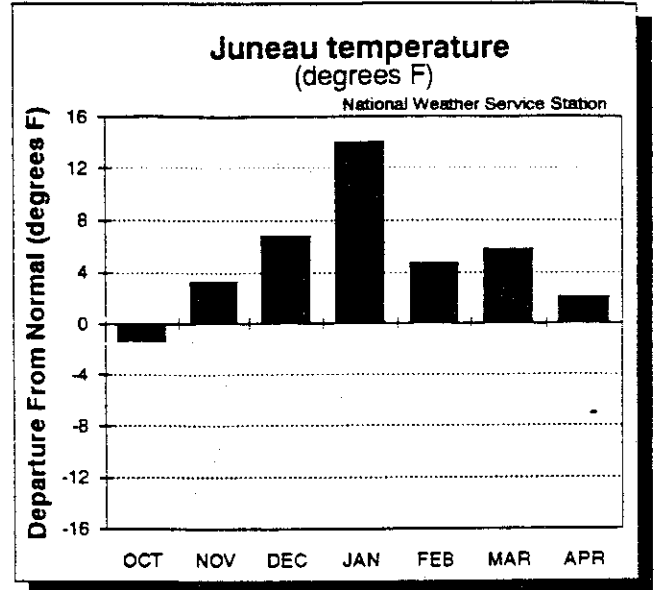
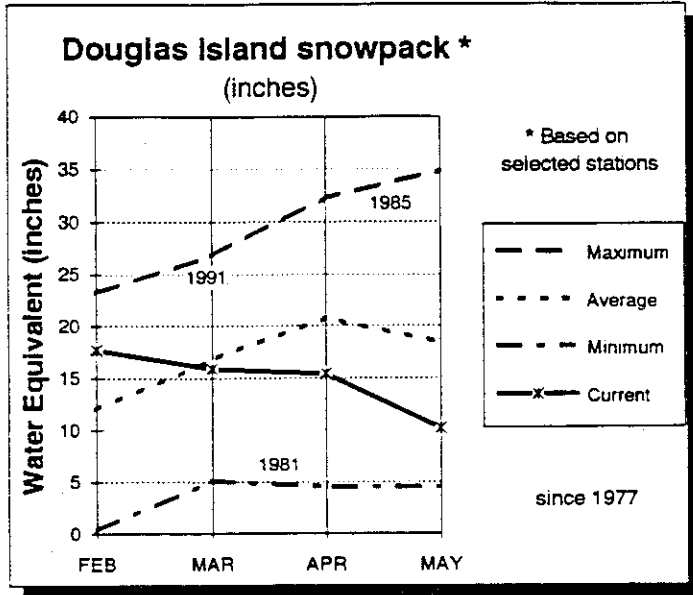
SNOWCOVER:

The region was warm and rainy in the northern part, and warm and rather dry in the southern part. The snowpack, as a result, has been downgraded, percentagewise, from amounts reported a month ago -- except at higher elevations of the northern one-third of the region where new snow offset melt losses. Most noticeable has been the rapid disappearance of low elevation snow in many areas.

For more information, contact your Soil Conservation Service office in Anchorage, 271-2424.

Southeast

May 1, 1992



SNOWCOVER:

April continued the winter-long trend of unusually mild temperatures across the region. The month was different with respect to precipitation, however, as most of the region was drier than normal for a change. Little snow is now left, except at the higher elevations and previously deeper snow areas.

For more information, contact your Soil Conservation Service office in Anchorage, 271-2424.

APPENDIX III

**Pellet-Group Densities
Reported by Transect and Elevation**

Table 2. Pellet-group density by VCU, by Transect, Spring 1992.

			Mean	Plots
For Entire Population			1.15	7802
VCU	36	INNER POINT	2.05	204
TRANSECT	1		1.46	69
TRANSECT	2		2.39	68
TRANSECT	3		2.31	67
VCU	128	HAWK INLET	1.60	319
TRANSECT	1		1.20	109
TRANSECT	2		1.37	100
TRANSECT	3		2.21	110
VCU	171	HOOD BAY	1.91	360
TRANSECT	1		1.86	130
TRANSECT	2		2.65	105
TRANSECT	3		1.33	125
VCU	182	PYBUS BAY	1.13	236
TRANSECT	1		1.26	69
TRANSECT	2		.86	81
TRANSECT	3		1.27	86
VCU	185	PLEASANT ISLAND	1.33	210
TRANSECT	1		1.81	65
TRANSECT	2		1.16	60
TRANSECT	3		1.09	85
VCU	189	PORT ALTHORP	1.35	261
TRANSECT	1		1.33	62
TRANSECT	2		.66	107
TRANSECT	3		2.17	92
VCU	190	IDAHO INLET	.94	219
TRANSECT	1		.40	77
TRANSECT	2		1.19	82
TRANSECT	3		1.28	60
VCU	209	SUNTAHEEN	1.13	271
TRANSECT	1		.93	109
TRANSECT	2		.93	79
TRANSECT	3		1.57	83
VCU	218	PAVLOV RIVER	1.56	341
TRANSECT	1		1.75	122
TRANSECT	2		1.89	119
TRANSECT	3		.93	100

			Mean	Plots
VCU	223	UPPER TENAKEE	.58	265
TRANSECT	1		.42	85
TRANSECT	2		.46	100
TRANSECT	3		.91	80
VCU	231	SALTERY BAY	.96	256
TRANSECT	1		2.16	65
TRANSECT	2		.28	125
TRANSECT	3		1.07	66
VCU	235	KADASHAN	1.62	282
TRANSECT	1		1.80	60
TRANSECT	2		1.22	45
TRANSECT	3		2.12	85
TRANSECT	4		1.39	43
TRANSECT	5		1.08	49
VCU	236	CORNER BAY	2.27	206
TRANSECT	1		2.60	41
TRANSECT	2		1.78	47
TRANSECT	3		4.14	34
TRANSECT	4		3.04	41
TRANSECT	5		.25	43
VCU	247	FINGER RIVER	2.85	207
TRANSECT	1		1.79	64
TRANSECT	2		3.77	89
TRANSECT	3		2.57	54
VCU	300	NAKWASINA	1.63	223
TRANSECT	2		1.55	70
TRANSECT	3		1.64	78
TRANSECT	8		1.70	75
VCU	305	KALININ BAY	1.29	239
TRANSECT	1		1.18	80
TRANSECT	2		1.27	109
TRANSECT	3		1.52	50
VCU	361	KNIGHT ISLAND	.95	100
TRANSECT	2		.95	100
VCU	368	YAKUTAT ISLANDS	.47	243
TRANSECT	1		.68	135
TRANSECT	2		.22	108
VCU	437	E. DUNCAN CANAL	.78	213
TRANSECT	1		.35	62
TRANSECT	2		1.02	76
TRANSECT	3		.89	75

			Mean	Plots
VCU	448	WOEWODSKI	.79	248
TRANSECT	1		.90	76
TRANSECT	2		.51	83
TRANSECT	3		.94	89
VCU	449	FREDERICK	.53	227
TRANSECT	1		.81	37
TRANSECT	2		.60	80
TRANSECT	3		.40	110
VCU	452	BLIND SLOUGH	1.03	114
TRANSECT	1		1.03	114
VCU	539	EXCHANGE COVE	1.10	125
TRANSECT	1		1.08	59
TRANSECT	2		1.12	66
VCU	554	SARKAR	.53	245
TRANSECT	1		.62	98
TRANSECT	2		.42	102
TRANSECT	3		.60	45
VCU	575	THORNE LAKE	1.20	334
TRANSECT	1		1.16	90
TRANSECT	2		.93	109
TRANSECT	3		1.42	90
TRANSECT	4		1.46	45
VCU	584	LITTLE RATZ	.94	272
TRANSECT	1		.90	110
TRANSECT	2		.57	56
TRANSECT	3		1.31	45
TRANSECT	4		1.08	61
VCU	621	12 MILE	.43	250
TRANSECT	1		.46	60
TRANSECT	2		.23	113
TRANSECT	3		.70	77
VCU	635	PORT REFUGIO	.75	254
TRANSECT	1		.55	70
TRANSECT	2		1.14	114
TRANSECT	3		.32	70
VCU	716	HELM BAY	1.24	169
TRANSECT	2		1.71	70
TRANSECT	3		.91	99
VCU	748	GEORGE INLET	.65	195
TRANSECT	1		1.03	55
TRANSECT	2		.52	65
TRANSECT	3		.48	75

			Mean	Plots
VCU	752	WHITMAN LAKE	.20	189
TRANSECT	1		.24	70
TRANSECT	2		.32	55
TRANSECT	3		.04	64
VCU	758	CARROL POINT	.27	87
TRANSECT	28		.27	87
VCU	759	MOTH BAY	.47	136
TRANSECT	2		.52	51
TRANSECT	3		.44	85
VCU	999	GRAVINA ISLAND	1.21	302
TRANSECT	1		.98	100
TRANSECT	2		1.60	113
TRANSECT	3		.98	89

Table 3. Pellet-group density by VCU, by elevation category, Spring 1992.

			Mean	Plots
		For Entire Population	1.19	7374
VCU	36	INNER POINT	2.05	204
		0-500 FT	2.32	125
		501-1000 FT	1.52	42
		1001-1500 FT	1.75	37
VCU	128	HAWK INLET	1.60	319
		0-500 FT	1.54	91
		501-1000 FT	1.71	173
		1001-1500 FT	1.34	55
VCU	171	HOOD BAY	1.91	359
		0-500 FT	1.37	251
		501-1000 FT	2.83	56
		1001-1500 FT	3.55	52
VCU	182	PYBUS BAY	1.13	236
		0-500 FT	1.03	152
		501-1000 FT	1.46	43
		1001-1500 FT	1.12	41
VCU	185	PLEASANT ISLAND	1.33	210
		0-500 FT	1.39	186
		501-1000 FT	.87	24
VCU	189	PORT ALTHORP	1.35	261
		0-500 FT	1.00	108
		501-1000 FT	1.62	151
		1001-1500 FT	.00	2
VCU	190	IDAHO INLET	.94	219
		0-500 FT	.99	179
		501-1000 FT	.70	40
VCU	209	SUNTAHEEN	1.13	271
		0-500 FT	1.10	245
		501-1000 FT	.92	14
		1001-1500 FT	2.00	12
VCU	218	PAVLOV RIVER	1.56	341
		0-500 FT	1.61	292
		501-1000 FT	1.33	30
		1001-1500 FT	1.10	19
VCU	223	UPPER TENAKEE	.58	265
		0-500 FT	.60	202
		501-1000 FT	.43	55
		1001-1500 FT	1.12	8

			Mean	Plots
VCU	231	SALTERY BAY	.96	256
		0-500 FT	.86	197
		501-1000 FT	1.55	43
		1001-1500 FT	.56	16
VCU	235	KADASHAN	1.62	282
		0-500 FT	1.83	173
		501-1000 FT	1.48	56
		1001-1500 FT	1.07	53
VCU	236	CORNER BAY	2.27	206
		0-500 FT	3.25	55
		501-1000 FT	1.88	89
		1001-1500 FT	1.95	62
VCU	247	FINGER RIVER	2.85	207
		0-500 FT	3.24	127
		501-1000 FT	2.08	34
		1001-1500 FT	2.32	46
VCU	300	NAKWASINA	1.63	223
		0-500 FT	1.37	91
		501-1000 FT	1.72	51
		1001-1500 FT	1.87	81
VCU	305	KALININ BAY	1.29	239
		0-500 FT	1.39	106
		501-1000 FT	1.46	64
		1001-1500 FT	.98	69
VCU	361	KNIGHT ISLAND	.95	100
		0-500 FT	.95	100
VCU	368	YAKUTAT ISLANDS	.47	243
		0-500 FT	.47	243
VCU	437	E. DUNCAN CANAL	.78	213
		0-500 FT	.49	133
		501-1000 FT	1.20	39
		1001-1500 FT	1.31	41
VCU	448	WOEWODSKI	.79	248
		0-500 FT	.70	84
		501-1000 FT	.84	65
		1001-1500 FT	.82	99
VCU	449	FREDERICK	.53	227
		0-500 FT	.53	127
		501-1000 FT	.60	73
		1001-1500 FT	.37	27

			Mean	Plots
VCU	452	BLIND SLOUGH	1.03	114
		0-500 FT	1.27	54
		501-1000 FT	.77	44
		1001-1500 FT	.93	16
VCU	539	EXCHANGE COVE	1.10	125
		0-500 FT	1.19	66
		501-1000 FT	1.05	53
		1001-1500 FT	.50	6
VCU	554	SARKAR	.53	245
		0-500 FT	.53	245
VCU	575	THORNE LAKE	1.20	334
		0-500 FT	1.07	194
		501-1000 FT	1.21	102
		1001-1500 FT	1.78	38
VCU	584	LITTLE RATZ	.94	272
		0-500 FT	.81	196
		501-1000 FT	1.30	53
		1001-1500 FT	1.17	23
VCU	621	12 MILE	.70	77
		0-500 FT	.81	27
		501-1000 FT	.73	30
		1001-1500 FT	.50	20
VCU	716	HELM BAY	1.24	169
		0-500 FT	.75	88
		501-1000 FT	2.11	42
		1001-1500 FT	1.43	39
VCU	748	GEORGE INLET	.65	195
		0-500 FT	.48	165
		501-1000 FT	1.33	15
		1001-1500 FT	1.80	15
VCU	752	WHITMAN LAKE	.20	189
		0-500 FT	.40	57
		501-1000 FT	.11	79
		1001-1500 FT	.11	53
VCU	758	CARROL POINT	.27	87
		0-500 FT	.27	87
VCU	759	MOTH BAY	.47	136
		0-500 FT	.47	109
		501-1000 FT	.55	18
		1001-1500 FT	.33	9
VCU	999	GRAVINA ISLAND	1.21	302
		0-500 FT	1.18	162
		501-1000 FT	1.06	108
		1001-1500 FT	1.87	32