1994 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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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 1994. 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 watershed to watershed within the region. The reader is referred to Kirchhoff and Pitcher (1988) for a more detailed discussion of objectives, sample design, and field methodology of this program.

RESULTS

During 1994, 38 watersheds, (or value comparison units - VCUs), were surveyed. Nineteen showed increases, fourteen showed decreases, and five were new. Deer populations seem to be increasing in southern Southeast, stable in central Southeast, and declining in northern Southeast. Declines were most pronounced on VCUs near Sitka. Although biologists expressed mild concern about these declines, pellet group counts around Sitka are still among the highest in Southeast. Complete results for each VCU are found in Table 1.

Within individual watersheds, deer may distribute themselves differently over time in response to varying winter weather conditions. To detect these patterns and make comparisons with hunter observations, results are also broken down by transect and 500'elevation interval in Appendix III. Winter weather conditions are reported in Appendix II.

NARRATIVES

Comet (VCU 20) - Two new transects were established in this VCU north of Juneau in 1994. Biologists wanted to see if there were any deer in the vicinity of the Kensington Mine. No deer sign of any kind was observed and these transects probably will not be run again.

North Douglas (VCU 35) - Douglas Island is located immediately opposite the City of Juneau and is heavily used by local hunters. Three transects were established at the end of the road system in 1991. The transects rise to over 1,000 feet in elevation and traverse low to moderate volume hemlock stands. Deer pellet-group densities were low, less than one pellet group per plot.

Farragut Bay (VCU 89) - Three new transects were established in the north arm of Farragut Bay by the Forest Service in 1994. A timber sale is anticipated in the near future and biologists wanted to get a snapshot of the area before it was entered for logging. Transect #1 runs up a SW facing slope to 500 feet elevation. The forest is primarily non-commercial or low volume with an abundant blueberry understory three feet high. Little browse or deer sign

was observed. Information on the other two transects aside from location and deer-pellet density was not recorded.

Thayer Lake (VCU 162) - This VCU, in the interior of Admiralty Island, was first sampled in 1987. Six 50-plot transects were laid out around the lake with different exposures. Biologists wanted to see to what extent deer used this forested inland area for winter range. Deer pellet-group density was high in 1994 at 2.27 pellet groups per plot.

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. 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 1994 were lower than previous years at 1.22 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. 1994 deer pellet-group density was about the same in Port Althorp as 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. 1994 results showed deer pellet-group density in this drainage at higher levels than in the past.

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 densities rose in 1994 to 1.04 pellet groups per plot.

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 densities were low at 0.61 pellet groups per plot.

Saltery Bay (VCU 231) - Three transects were established at Saltery Bay on Chichagof Island in 1988. Deer pellet-group density was low in 1994, at 0.97 pellet groups per plot.

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). In 1994, pellet-group densities were up at Kadashan.

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 at Corner Bay to make comparisons with the neighboring Kadashan drainage. Most transects at Corner Bay traverse leave strips between clearcut units. Deer pellet-group density in 1994 was moderate, between one and 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 1994, but were down significantly from previous years.

Soapstone (VCU 254) - Three transects were established in Soapstone Cove on northern Yakobi Island in 1988. This is a favorite hunting ground for Pelican and Elfin Cove residents. The habitat surveyed in this VCU is mostly low-volume old growth or scrub. In 1994, pellet-group densities were moderate, at 1.34 pellet groups per plot.

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. Numbers were the highest in Southeast in 1993, but dropped sharply in 1994, probably because of increased local hunting pressure.

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. Pellet-group densities dipped in 1994 to 1.29 pellet groups per plot.

South Kruzof (VCU 308) - Three new transects were established at the SE tip of Kruzof Island in 1993. This is a favorite hunting spot for many Sitka hunters. The topography of all three transects is gentle and rolling - the highest elevation reached is 200 feet. Vegetation is mostly low-volume cedar and pine interspersed with muskeg. Deer pellet-group density was moderate in 1994 at 1.72 pellet groups per plot.

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 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 1994 and deer pellet-group density continued to be low.

Yakutat Islands (VCU 368) - This VCU incorporates many of the islands found in Yakutat Bay: Krutoi, 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. In 1994, one transect was run on Kriwoi Island and one on Khantaak Island. Deer pellet-group densities remained low.

Big John Bay (VCU 427) - Three new transects were established by the Forest Service at Big John Bay near Kake in 1994. All three transects start on the Kake road system and run through extensive brush. Pellet-group counts suggest a low, but well-distributed deer population in the area.

Castle River (VCU 435) - Castle River VCU, located in Duncan Canal on Kupreanof Island, was first sampled in 1984. One transect is located on Big Castle Island, and two are located on Kupreanof Island. Pellet-group densities in 1994 remained very low.

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 mid volume hemlock-spruce forest. 1994 deer pellet-group density was moderate at 1.13 pellet groups per plot.

Woewodski Island (VCU 448a) - In 1991, six new transects were established on Woewodski Island to measure deer use in anticipation of a future timber sale. In 1994, deer pellet-group densities were moderate.

Snow (VCU 458) - Three new transects were established on the SW shore of Zarembo Island in 1994. This particular VCU was picked for sampling because it is still mostly unlogged and had favorable deer winter range characteristics. All three transects start on the coast and travel through low- to mid-volume timber with occasional second growth. Much of this second growth is probably the result of windthrow as all three crews reported a lot of blowdown. Deer pellet-group density in this VCU was low at 0.58 pellet groups per plot.

Woronkofski (VCU 461) - This island VCU, located near Wrangell, was first sampled in 1985. Twelve transects were run that ringed the island, but it was found that the transects on the south side of the island offered the most agreeable terrain and snow-free conditions; consequently, after 1985 only transects 10, 11, and 12 have been run. These three transects run to 1500 feet elevation through mid- to high-volume old-growth forest. Deer pellet-group density on Woronkofski was high in the late 1980s, but has plummeted since then to 0.26 pellet groups per plot in 1994. Biologists believe the root cause for the decline to be increased wolf predation.

Onslow (VCU 473) - This VCU, on southern Etolin Island, has been sampled since 1984. One transect is actually on Onslow Island itself, the two others are on Etolin. Deer pellet-group densities have always been in the low range in this VCU, and 1994 was no exception. Fifty elk were introduced to Etolin Island in 1987 and the herd has grown since then. Because the Etolin Island area is unique in Southeast Alaska for its combination of elk and deer, this VCU will continue to be sampled in the future to determine how these two species interact.

Fools (VCU 480) - Three new transects were established at Fools Inlet on the southern coast of Wrangell Island in 1994. The three transects start at the beach and run up a SW facing slope to 1500 feet. Transect #1 was very brushy and mostly low-volume timber - deer sign was minimal. Transect #2 was a good line to run for the first 500 feet elevation, but then cliffs made continuing in a straight line impossible. Transect #3 was the best of the lot, with many tall cedars and spruce along the way. Most of the deer sign was up high. Overall, deer pellet-group density was low in this VCU at 0.54 pellet groups per plot.

Red Bay (VCU 532) - Located on northern Prince of Wales Island, this VCU was first sampled in 1987. Red Bay has been extensively logged, making it difficult to avoid clearcuts. Pellet-group density continued low in 1994.

Sarkar (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 a combination of old-growth and second-growth; #2 is old-growth all the way. Deer pellet-group densities were low in 1994.

Thorne Lake (VCU 575) - Four 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. In 1994, the start of Transect #2 could not be found because of logging activity.. A new tree was marked and transect location form written. Deer pellet-group densities dropped to low levels in 1994.

12 Mile (VCU 621) - This VCU, located near Kasaan Bay on Prince of Wales Island, has been sampled by the Forest Service 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 1994, pellet-group density was more typical of levels of the past.

Port Refugio (VCU 635) - This VCU is located on Suemez Island off the west coast of Prince of Wales Island. Pellet groups have been counted here every year since 1985. Initially, deer populations were high, but pellet-group density dropped off in 1987 and sunk to their lowest levels in 1992. In 1994, deer pellet-group density rebounded to moderate levels at 1.85 pellet groups per plot.

George Inlet (VCU 748) - This VCU on Revilla Island is easily accessible by skiff from Ketchikan. Although 1994 results showed low pellet-group density, it improved somewhat from past years.

Carroll Pt. (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. 1994 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 1994.

Alava Bay (VCU 769) - This VCU, located on the southeastern tip of Revilla Island, was first sampled in 1985 and also in 1986 and 1991. The 1994 results showed deer pellet-group density to be low.

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 1994 results continued that trend.

LITERATURE CITED

Kirchhoff, M.D., and K.W. Pitcher. 1988. Deer Pellet-Group Surveys in Southeast Alaska, 1981-1987. Alaska Dep. Fish and Game. Fed. Aid in Wildl. Rest. Prog. Rep. Proj. W-22-6, Job 2.9. Juneau. 113 pp.

Table 1. Pellet-group count statistics from southeast Alaska, 1981-94.

VCU	Name	Land Acres	% CFL	Year	Plots	Pellet-Group Mean	95% CI
20	Comet	9,662	12%	**1994**	**180**	**0.00**	**0.00-0.00**
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
				93	324	0.74	0.62-0.87
				94	**315**	**0.91**	**0.74-1.09**
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
89	Farragut Bay			**1994**	**314**	**0.02**	**0.00-0.04**
94	Sullivan Island	3,985	78%	1990	250	1.39	1.17-1.62
117	Couverden	9,933	10%	1993	350	0.35	0.27-0.44
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
				90	300	1.60	1.37-1.82
				93	250	2.00	1.73-2.26
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

Table 1. Continued.

VCU	Name	Land Acres	% CFL	Year	Plots	Pellet-Group Mean	95% CI
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
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
				94	**282**	**2.27**	**1.98-2.56**
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
				94	**371**	**1.64**	**1.41-1.88**
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
				93	305	1.77	1.52-2.02
				94	**356**	**1.22**	**1.04-1.40**

Table 1. Continued.

VCU	Name	Land Acres	% CFL	Year	Plots	Pellet-Group Mean	95% CI
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
				93	248	1.39	1.15-1.62
				94	**253**	**1.31**	**1.06-1.56**
190	Idaho Inlet	53,183	22%	1988	258	1.34	1.09-1.60
				92	219	0.94	0.69-1.19
				93	305	0.56	0.45-0.68
				94	**294**	**0.71**	**0.58-0.84**
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
				93	265	0.73	0.58-0.88
				94	**272**	**1.05**	**0.81-1.29**
211	Point Augusta	4,688	63%	1983	757	1.78	1.62-2.01
				93	286	2.08	1.80-2.36
218	Pavlof River	18,866	50%	1988	325	1.78	1.50-2.06
				92	341	1.56	1.32-1.81
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
				93	249	0.47	0.36-0.58
				94	**319**	**0.61**	**0.48-0.74**
231	Saltery Bay	18,478	31%	1988	256	2.02	1.69-2.35
				92	256	0.96	0.79-1.14
				93	227	0.76	0.56-0.96
				94	**193**	**0.97**	**0.79-1.15**
234	Inbetween	6,002	62%	1981	35	0.49	0.08-0.89

Table 1. Continued.

VCU	Name	Land Acres	% CFL	Year	Plots	Pellet-Group Mean	Pellet-Group 95% CI
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
				93	385	1.12	0.95-1.30
				94	**294**	**1.39**	**1.18-1.60**
236	Corner Bay	10,930	66%	1981	60	0.35	0.17-0.53
				92	206	2.27	1.91-2.64
				93	50	1.72	1.25-2.19
				94	**198**	**1.69**	**1.41-1.98**
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
				93	179	3.03	2.60-3.47
				94	**275**	**2.29**	**1.96-2.62**
249	Lisianski	19,677	24%	1988	255	0.97	0.79-1.14
				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
				93	243	1.88	1.59-2.16
				94	**310**	**1.34**	**1.16-1.52**
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

Table 1. Continued.

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
				93	188	3.15	2.70-3.60
				94	**230**	**1.46**	**1.24-1.68**
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
				93	198	1.70	1.38-2.02
				94	**221**	**1.29**	**1.09-1.48**
308	South Kruzof	71,158	25%	1993	345	1.62	1.41-1.83
				94	**370**	**1.71**	**1.52-1.90**
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

Table 1. Continued.

VCU	Name	Land Acres	% CFL	Year	Plots	Pellet-Group Mean	95% CI
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
				94	**90**	**0.44**	**0.25-0.64**
363	Humpback	7,721	74%	1991	118	0.01	0.00-0.03
368	Yakutat Islands	1,021	99%	1991	415	0.32	0.24-0.39
				92	243	0.48	0.37-0.58
				93	106	1.07	0.81-1.32
				94	**251**	**0.66**	**0.52-0.80**
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
427	Big John Bay	32,711	29%	**1994**	**300**	**0.38**	**0.29-0.48**
428	Rocky Pass	49,403	35%	1989	298	0.40	0.27-0.53
431	Point Barrie	22,187	27%	1988	357	0.23	0.17-0.29
				93	375	0.77	0.64-0.90
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

Table 1. Continued.

VCU	Name	Land Acres	% CFL	Year	Plots	Pellet-Group Mean	Pellet-Group 95% CI
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
				94	**310**	**0.32**	**0.24-0.40**
437	E. Duncan	23,744	55%	1990	227	1.12	0.92-1.32
				92	213	0.78	0.63-0.94
442	Portage Bay	11,269	49%	1993	282	0.43	0.31-0.56
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
				93	230	1.06	0.85-1.27
				94	**152**	**1.14**	**0.82-1.46**
448a	Woewodski Island	20,931	53%	1991	461	1.86	1.66-2.05
				94	**510**	**1.30**	**1.15-1.46**
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
				93	265	1.28	1.04-1.51
454	Dry	11,033	74%	1981	91	0.92	0.56-1.28
				93	210	1.44	1.17-1.72

Table 1. Continued.

VCU	Name	Land Acres	% CFL	Year	Plots	Pellet-Group Mean	95% CI
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
458	Snow Passage	31,572	46%	**1994**	**345**	**0.58**	**0.45-0.70**
461	Woronkofski (All Transects)	14,500	63%	1985	646	1.63	1.45-1.81
461	Woronkofski			1985	218	2.01	1.62-2.39
	(Trans. 10,11,12)			87	201	2.23	1.85-2.61
				89	223	2.52	2.18-2.85
				91	203	1.59	1.32-1.85
				93	225	0.22	0.13-0.31
				94	**224**	**0.26**	**0.18-0.34**
467	Mosman	25,573	54%	1993	304	0.07	0.03-0.11
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
				93	341	0.68	0.55-0.82
				94	**340**	**0.88**	**0.74-1.02**
480	Fools Inlet	30,906	44%	**1994**	**194**	**0.54**	**0.38-0.70**
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
				94	**256**	**0.94**	**0.74-1.14**
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
				94	**292**	**0.92**	**0.77-1.07**

Table 1. Continued.

VCU	Name	Land Acres	% CFL	Year	Plots	Pellet-Group Mean	95% CI
549	Sarheen	11,875	52%	1989	310	1.73	1.44-2.01
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
				94	**293**	**0.76**	**0.62-0.91**
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
				93	356	0.77	0.61-0.93
581	Luck Lake	19,818	67%	1986	178	1.74	1.41-2.07
				88	300	2.11	1.80-2.41
				93	175	1.10	0.87-1.32
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
				93	258	0.84	0.63-1.05
				94	**324**	**0.93**	**0.76-1.09**

Table 1. Continued.

VCU	Name	Land Acres	% CFL	Year	Plots	Pellet-Group Mean	95% CI
635	Port Refugio	9,118	50%	1985	317	2.69	2.27-3.12
				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
				93	213	1.35	0.98-1.71
				94	**280**	**1.85**	**1.51-2.19**
679	Kitkun Bay	15,359	75%	1988	240	0.31	0.20-0.42
				89	273	0.89	0.71-1.07
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
				93	286	1.37	1.16-1.59
719	Port Stewart	21,482	55%	1993	289	1.22	1.03-1.42
722	Spacious Bay	31,461	44%	1993	300	0.54	0.43-0.64
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
				93	281	0.31	0.23-0.39
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
				94	**309**	**0.95**	**0.79-1.11**

Table 1. Continued.

VCU	Name	Land Acres	% CFL	Year	Plots	Pellet-Group Mean	95% CI
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
				94	**125**	**0.70**	**0.49-0.90**
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
				94	**136**	**0.94**	**0.71-1.17**
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
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
				94	**326**	**0.79**	**0.64-0.94**
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

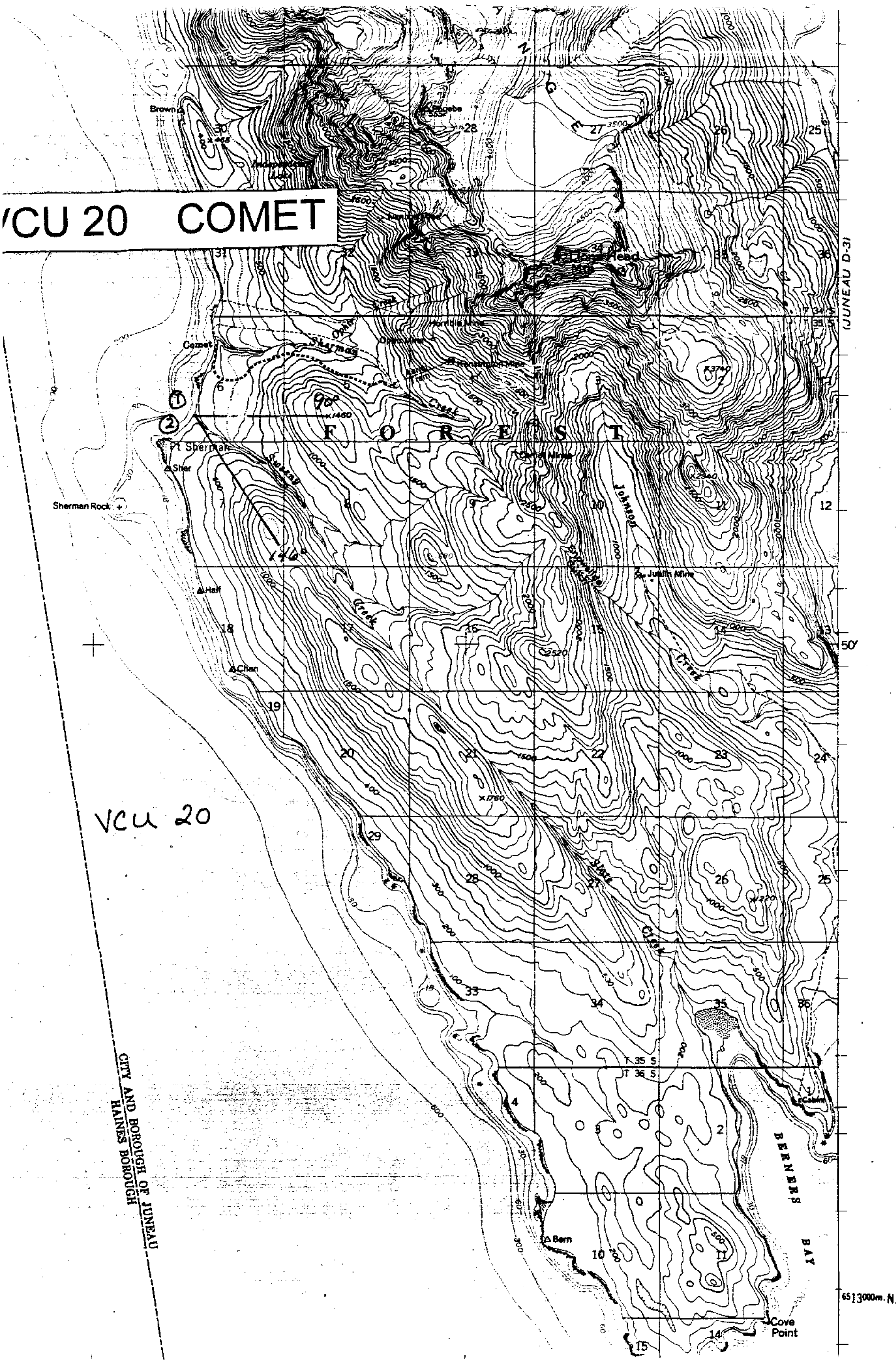
Table 1. Continued.

VCU	Name	Land Acres	% CFL	Year	Plots	Pellet-Group Mean	95% CI
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
				94	**331**	**1.58**	**1.37-1.79**

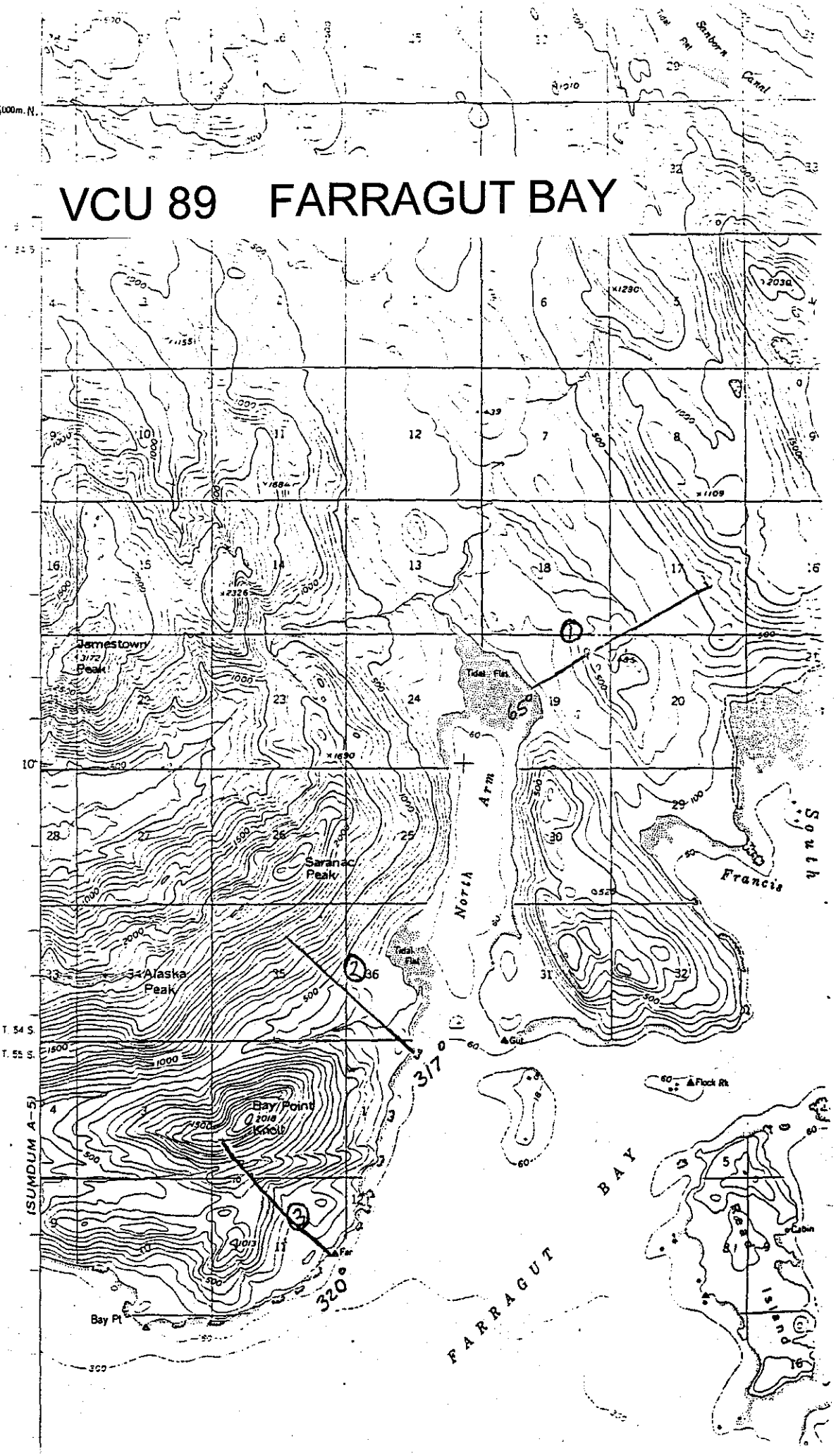
APPENDIX I

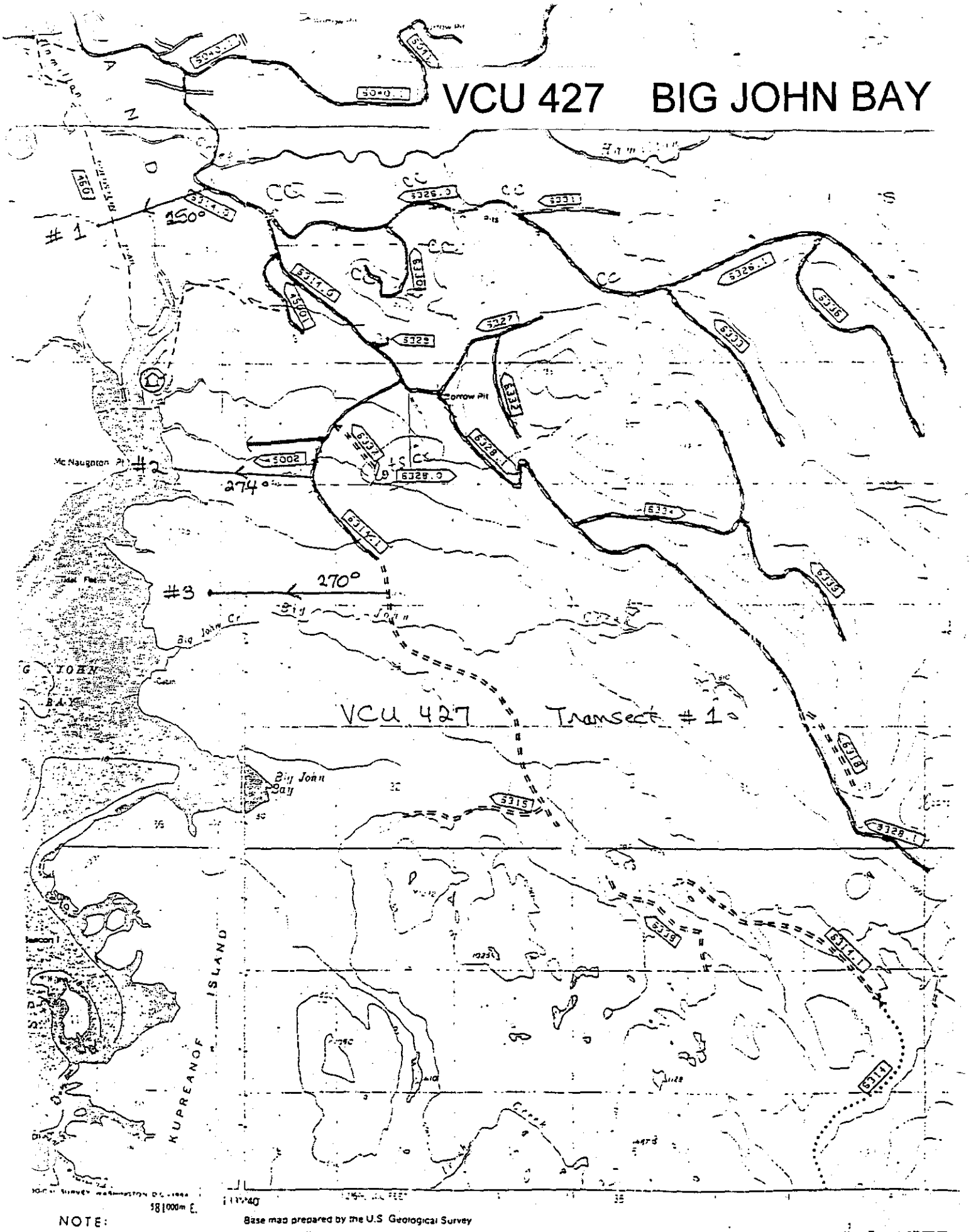
New VCU's Sampled in 1994[a]

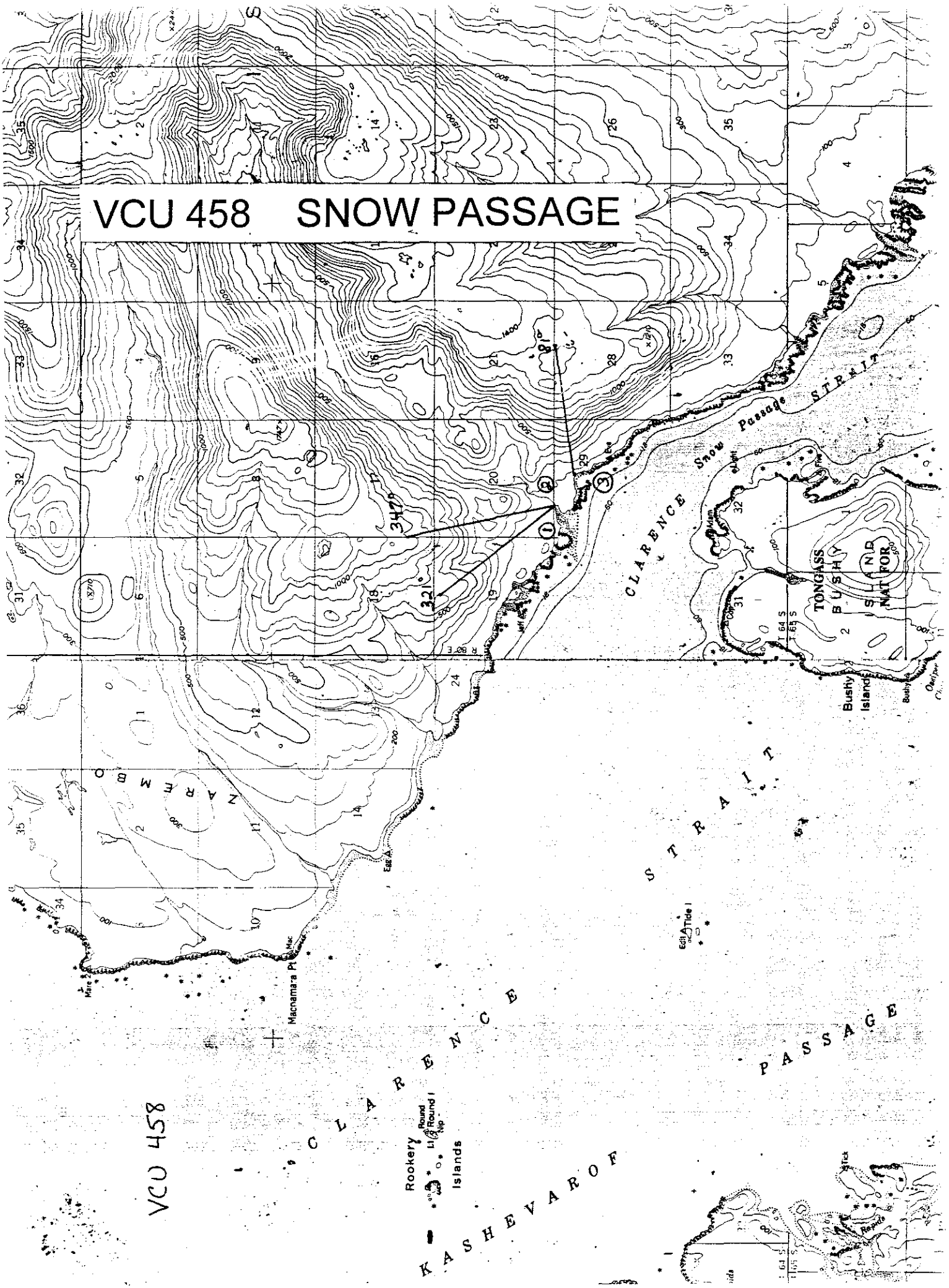
[a] Transect location forms for these and all other VCU's are located in the ADF&G Southeast Regional Office, Douglas.


VCU 20 COMET
Comet
Pt Sherman
Sherman Rock
Brown
Sherman Creek
Sweeny Creek
Johnson Creek
Slate Creek
F O R E S T
Kensington Mine
Comet Mine
Jualin Mine
Cove Point
Cabin
BERNERS BAY
(JUNEAU D-3)
50′
6513000m. N.
T 35 S
T 36 S
CITY AND BOROUGH OF JUNEAU
HAINES BOROUGH
VCU 20
90°
146°
1
2

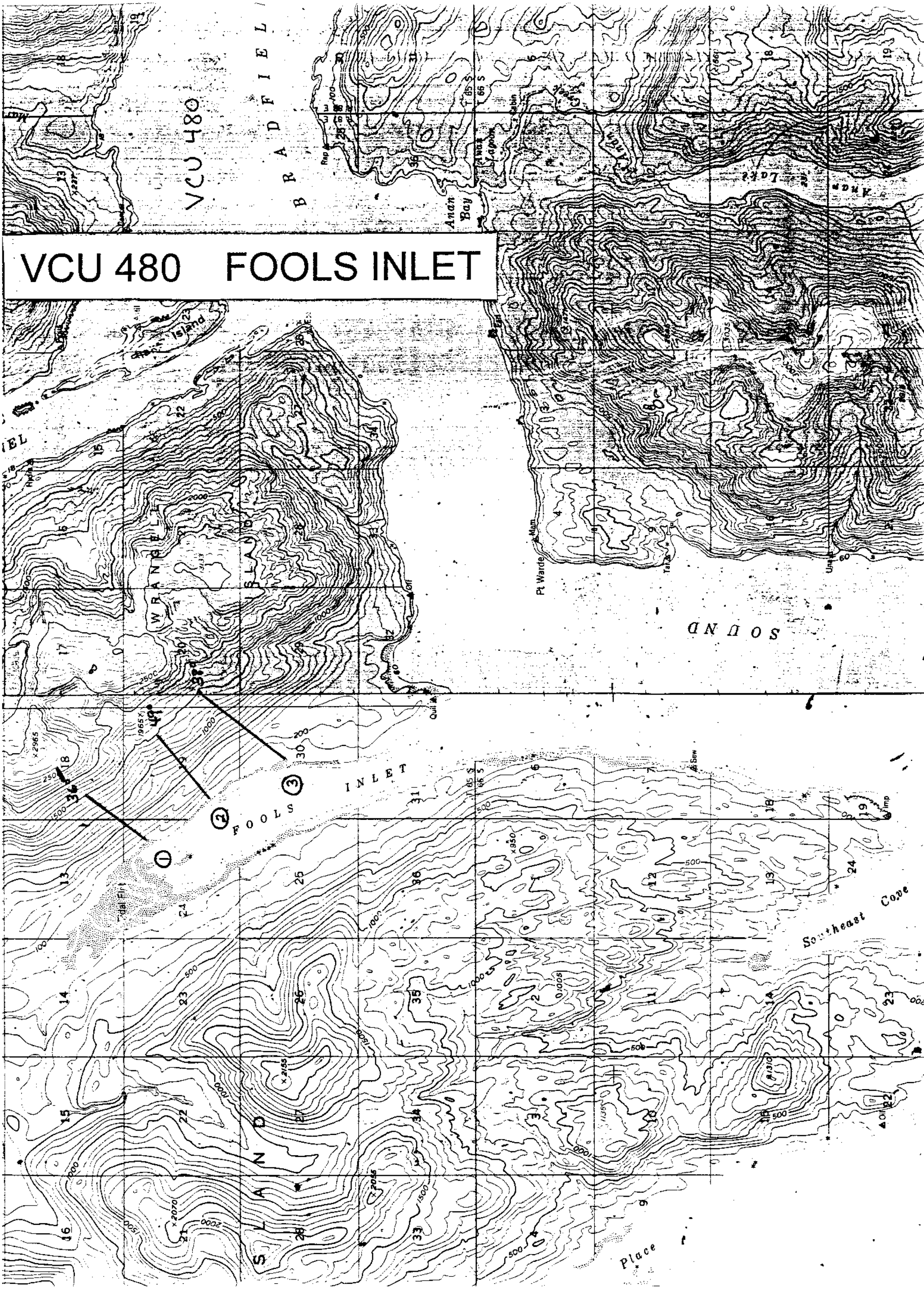
VCU 89 FARRAGUT BAY




VCU 427 BIG JOHN BAY
#1
150°
#2
274°
#3
270°
VCU 427 Transect #1
Big John Bay
Big John Cr
Mc Naughton Pt
Borrow Pit
KUPREANOF ISLAND
NOTE:
Not all road and trail locations have been photo verified
Land Status Information is not verified it is plotted as furnished by
Base map prepared by the U.S Geological Survey
Control by USGS
Topography by photogrammetric methods from aerial photographs
taken 1948 Map not field checked
Selected hydrographic data compiled from USC&GS


VCU 458 SNOW PASSAGE
3409 ft
321°
81°
CLARENCE
Snow Passage STRAIT
TONGASS
BUSHY
Bushy Islands
NAT FOR
ZAREMBO
Macnamara Pt
Egg A
Tide I
CLARENCE STRAIT
PASSAGE
KASHEVAROF
Rookery Islands
Round I
Rapids
VCU 458

VCU 480   FOOLS INLET



APPENDIX II

Winter Weather Conditions

1994

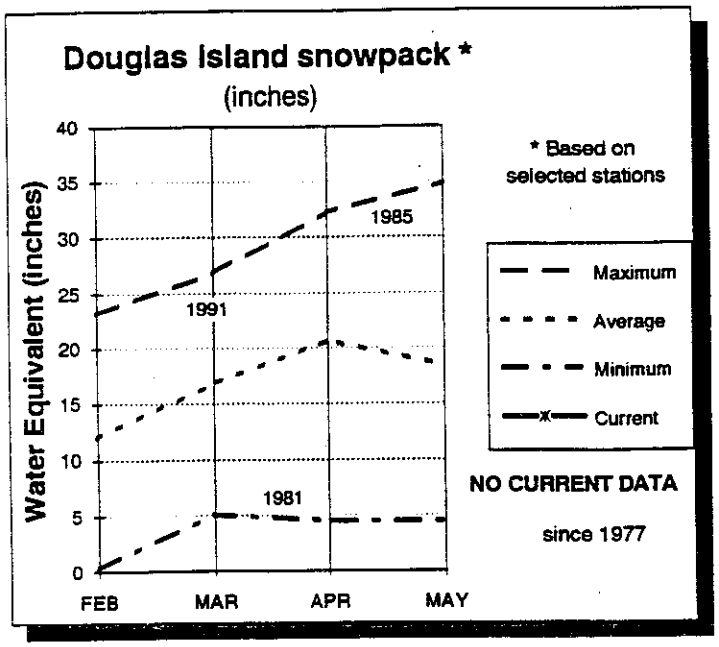
Winter Weather Conditions

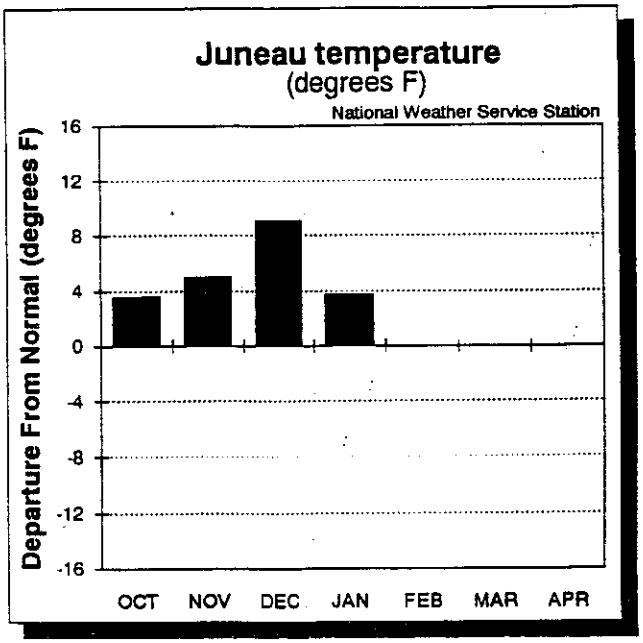
January - April 1994

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

Southeast

February 1, 1994





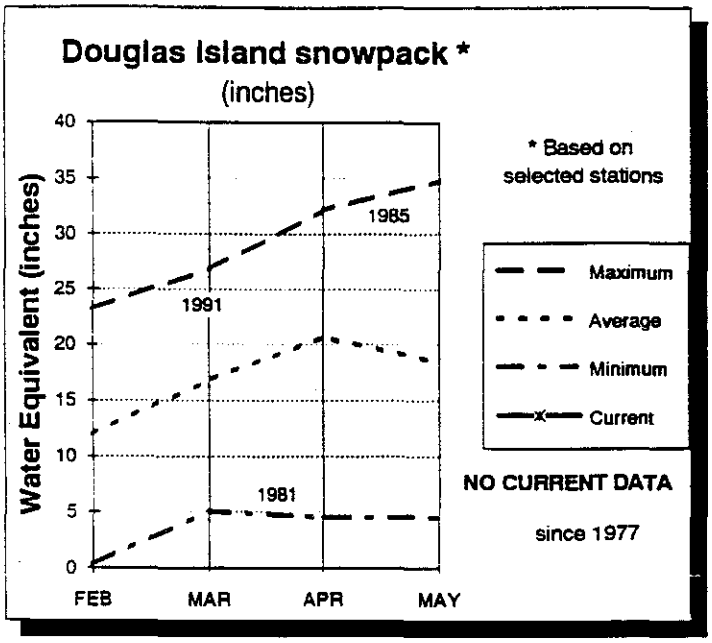
SNOWCOVER:

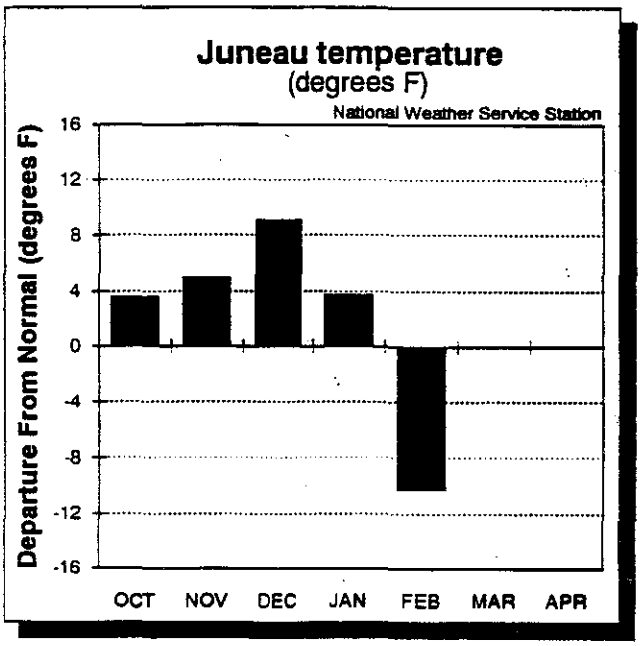
The region's snowcover is generally far below normal, thanks to both below normal precipitation over most of the region and winter-long trend of well above normal temperatures. Only the northernmost portion of the region is known to have an average or better snowpack. The snowcover north of Skagway is the heaviest for February 1st for its six-year period of record.

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

Southeast

March 1, 1994





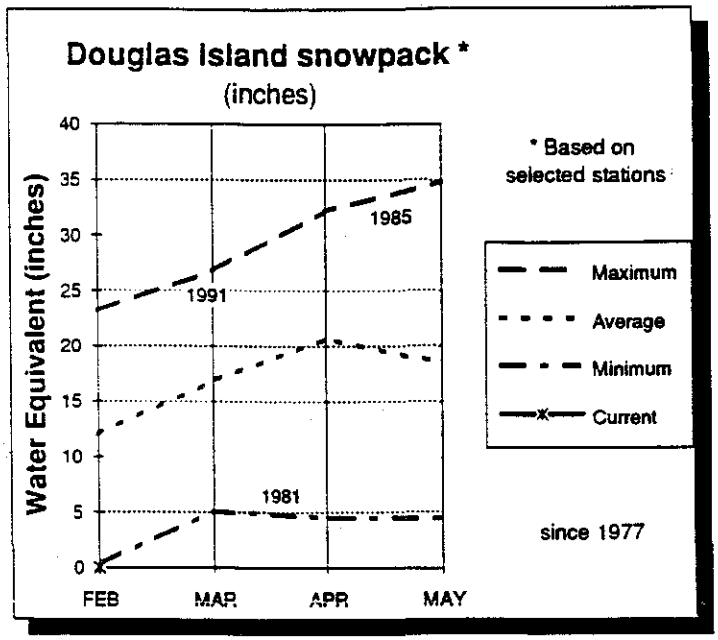
SNOWCOVER:

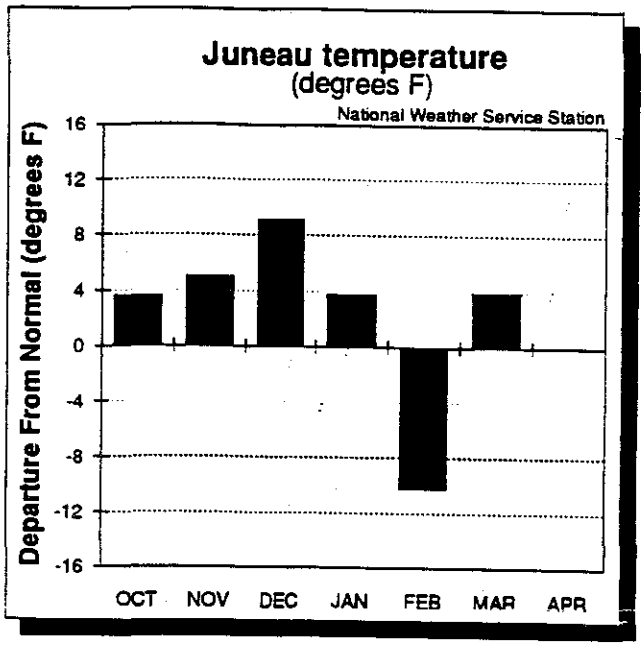
Very little snow data is available from the vast southeast region. The Snettisham Project reports 94 percent of normal snowcover near the Speel River power plant. The Forest Service reports well below normal snow overlooking Petersburg.

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

Southeast

April 1, 1994





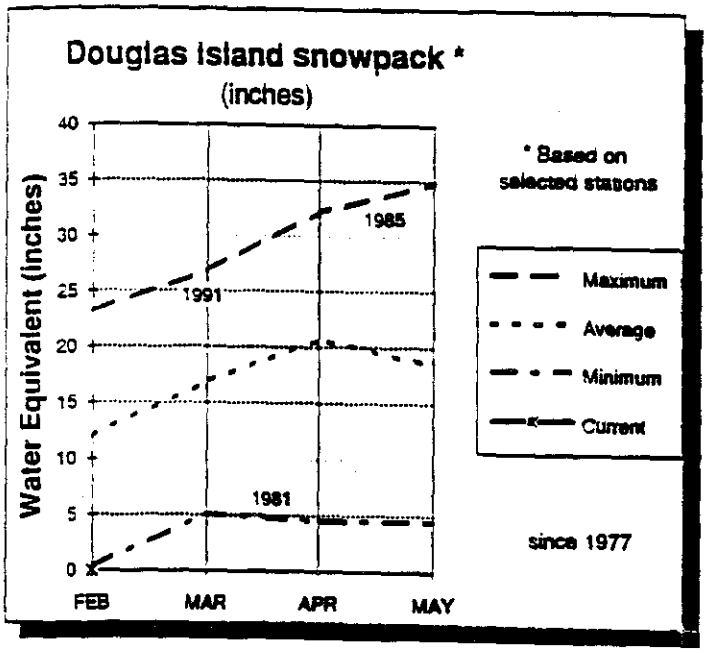
SNOWCOVER:

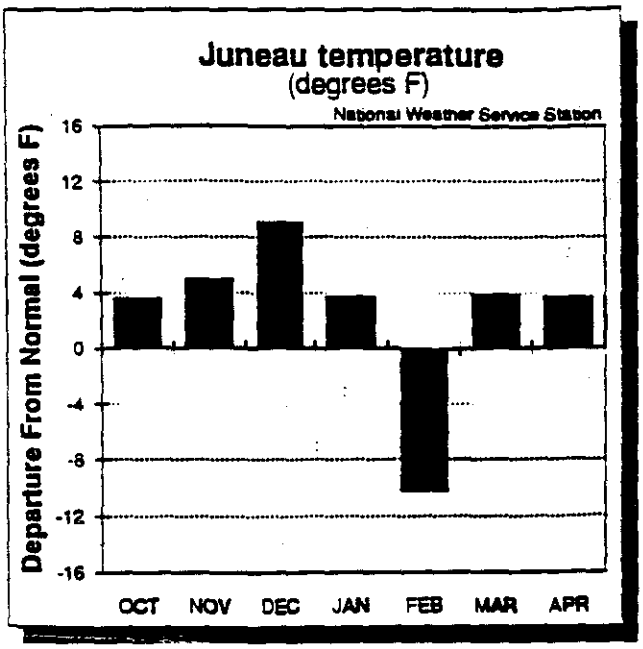
March was quite mild region-wide and generally a little moister than normal. The few reporting sites indicate the snowcover generally below normal and especially so at the lower elevations. Several sites indicate that 5 to 9 feet of snow can be expected in the elevation range of 1500 to 2500 feet. Snow is being surveyed for the first time in the drainage above the Swan Lake Power Plant.

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

Southeast

May 1, 1994





SNOWCOVER:

Most of the region with the exception of Juneau received from 70 to 95 percent of normal precipitation. Juneau has consistently received more than 130 percent of normal precipitation throughout the winter.

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. Mean pellet-group density by VCU, by transect, Spring 1994.

	PELLET-GROUPS PER PLOT	
	MEAN	NO. OF PLOTS
VCU 20 - COMET		
TRANSECT		
1	0.00	83
2	0.00	97
VCU 35 - N. DOUGLAS		
TRANSECT		
1	0.57	75
2	0.94	125
3	1.11	115
VCU 89 - FARRAGUT BAY		
TRANSECT		
1	0.02	125
2	0.01	109
3	0.04	80
VCU 162 - THAYER LAKE		
TRANSECT		
1	1.92	38
2	1.25	36
3	2.12	51
4	1.87	39
5	1.86	58
6	3.88	60
VCU 171 - HOOD BAY		
TRANSECT		
1	0.93	121
2	3.06	125
3	0.92	125
VCU 185 - PLEASANT ISLAND		
TRANSECT		
1	1.43	106
2	1.11	125
3	1.16	125
VCU 189 - PORT ALTHORP		
TRANSECT		
1	0.93	58
2	0.50	70
3	1.94	125
VCU 190 - IDAHO INLET		
TRANSECT		
1	0.49	100
2	0.92	79
3	0.76	115

TABLE 2. continued

	PELLET-GROUPS PER PLOT	
	MEAN	NO. OF PLOTS
VCU 209 - SUNTAHEEN CREEK		
TRANSECT		
1	1.14	118
2	0.87	78
3	1.11	76
VCU 223 - UPPER TENAKEE		
TRANSECT		
1	0.54	116
2	0.64	103
3	0.66	100
VCU 231 - SALTERY BAY		
TRANSECT		
1	2.90	10
2	0.71	120
3	1.14	63
VCU 235 - KADASHAN		
TRANSECT		
2	1.44	78
3	1.74	97
4	0.98	59
5	1.15	60
VCU 236 - CORNER BAY		
TRANSECT		
1	1.78	49
2	1.73	62
3	1.80	41
5	1.46	46
VCU 247 - FINGER RIVER		
TRANSECT		
1	1.99	120
2	3.05	100
3	1.56	55
VCU 254 - SOAPSTONE		
TRANSECT		
1	1.72	95
2	0.98	125
3	1.43	90
VCU 300 - NAKWASINA		
TRANSECT		
2	1.49	70
3	1.45	73
8	1.44	87

TABLE 2. continued

	PELLET-GROUPS PER PLOT	
	MEAN	NO. OF PLOTS
VCU 305 - KALININ BAY		
TRANSECT		
1	1.32	71
2	1.13	99
3	1.53	51
VCU 308 - SOUTH KRUZOF		
TRANSECT		
1	2.22	125
2	1.40	120
3	1.50	125
VCU 361 - KNIGHT ISLAND		
TRANSECT		
2	0.44	90
VCU 368 - YAKUTAT ISLANDS		
TRANSECT		
1	1.15	100
2	0.34	151
VCU 427 - BIG JOHN BAY		
TRANSECT		
1	0.31	85
2	0.46	90
3	0.38	125
VCU 435 - CASTLE		
TRANSECT		
1	0.46	107
2	0.35	78
3	0.18	125
VCU 448 - WOEWODSKI		
TRANSECT		
2	0.78	73
3	1.48	79
VCU 448a - WOEWODSKI ISLAND		
TRANSECT		
1	0.78	125
2	1.83	100
3	0.80	125
4	1.33	90
6	1.76	70
VCU 458 - SNOW		
TRANSECT		
1	0.53	100
2	0.81	125
3	0.38	120

TABLE 2. continued

	PELLET-GROUPS PER PLOT	
	MEAN	NO. OF PLOTS
VCU 461 - WORONKOFSKI		
TRANSECT		
10	0.16	80
11	0.26	53
12	0.34	91
VCU 473 - ONSLOW		
TRANSECT		
1	0.72	114
2	0.96	113
3	0.96	113
VCU 480 - FOOLS		
TRANSECT		
1	0.13	62
2	0.45	53
3	0.92	78
VCU 532 - RED BAY		
TRANSECT		
1	1.64	90
2	0.10	62
3	0.83	104
VCU 554 - SARKAR		
TRANSECT		
1	1.18	125
2	0.68	102
3	0.82	65
VCU 575 - THORNE LAKE		
TRANSECT		
1	0.74	70
2	0.81	96
3	0.34	86
4	1.59	41
VCU 621 - 12 MILE		
TRANSECT		
1	0.98	125
2	1.16	99
3	0.63	100
VCU 635 - PORT REFUGIO		
TRANSECT		
1	2.30	100
2	2.69	75
3	0.82	105
VCU 748 - GEORGE INLET		
TRANSECT		
1	1.29	55
2	1.06	125
3	0.71	129

TABLE 2. continued

	PELLET-GROUPS PER PLOT	
	MEAN	NO. OF PLOTS
VCU 758 - CARROL POINT		
TRANSECT		
28	0.70	125
VCU 759 - MOTH BAY		
TRANSECT		
2	0.89	53
3	0.98	83
VCU 769 - ALAVA BAY		
TRANSECT		
1	0.82	125
2	1.01	115
3	0.45	86
VCU 999 - GRAVINA ISLAND		
TRANSECT		
1	1.50	101
2	2.08	115
3	1.17	115

Table 3. Mean pellet-group density by VCU, by elevation, spring 1994.

	PELLET-GROUPS PER PLOT	
	MEAN	NO. OF PLOTS
VCU 20 - COMET		
0-500 FT.....	0.00	108
501-1000 FT.....	0.00	43
1001-1500 FT.....	0.00	29
VCU 35 - N. DOUGLAS		
0-500 FT.....	0.45	110
501-1000 FT.....	0.97	144
1001-1500 FT.....	1.62	61
VCU 89 - FARRAGUT BAY		
0-500 FT.....	0.02	247
501-1000 FT.....	0.03	38
1001-1500 FT.....	0.03	29
VCU 162 - THAYER LAKE		
0-500 FT.....	2.07	59
501-1000 FT.....	2.28	121
1001-1500 FT.....	2.37	102
VCU 171 - HOOD BAY		
0-500 FT.....	1.31	252
501-1000 FT.....	2.48	61
1001-1500 FT.....	2.22	58
VCU 185 - PLEASANT ISLAND		
0-500 FT.....	1.23	333
501-1000 FT.....	1.13	23
VCU 189 - PORT ALTHORP		
0-500 FT.....	1.76	169
501-1000 FT.....	0.53	64
1001-1500 FT.....	0.00	20
VCU 190 - IDAHO INLET		
0-500 FT.....	0.88	176
501-1000 FT.....	0.47	102
1001-1500 FT.....	0.38	16
VCU 209 - SUNTAHEEN CREEK		
0-500 FT.....	1.09	218
501-1000 FT.....	0.82	38
1001-1500 FT.....	1.13	16
VCU 223 - UPPER TENAKEE		
0-500 FT.....	0.80	210
501-1000 FT.....	0.25	76
1001-1500 FT.....	0.24	33
VCU 231 - SALTERY BAY		
0-500 FT.....	1.04	159
501-1000 FT.....	0.94	18
1001-1500 FT.....	0.31	16
VCU 235 - KADASHAN		
0-500 FT.....	1.52	163
501-1000 FT.....	1.08	60
1001-1500 FT.....	1.34	71

Table 3. continued.

	PELLET-GROUPS PER PLOT	
	MEAN	NO. OF PLOTS
VCU 236 - CORNER BAY		
0-500 FT.....	2.10	62
501-1000 FT.....	1.56	68
1001-1500 FT.....	1.46	68
VCU 247 - FINGER RIVER		
0-500 FT.....	3.21	143
501-1000 FT.....	1.50	94
1001-1500 FT.....	0.79	38
VCU 254 - SOAPSTONE		
0-500 FT.....	1.53	196
501-1000 FT.....	0.79	85
1001-1500 FT.....	1.69	29
VCU 300 - NAKWASINA		
0-500 FT.....	1.27	90
501-1000 FT.....	1.35	48
1001-1500 FT.....	1.70	92
VCU 305 - KALININ BAY		
0-500 FT.....	1.30	112
501-1000 FT.....	1.49	72
1001-1500 FT.....	0.84	37
VCU 308 - SOUTH KRUZOF		
0-500 FT.....	1.71	370
VCU 361 - KNIGHT ISLAND		
0-500 FT.....	0.44	90
VCU 368 - YAKUTAT ISLANDS		
0-500 FT.....	0.66	251
VCU 427 - BIG JOHN BAY		
0-500 FT.....	0.38	300
VCU 435 - CASTLE		
0-500 FT.....	0.32	310
VCU 448 - WOEWODSKI		
0-500 FT.....	0.61	62
501-1000 FT.....	0.86	35
1001-1500 FT.....	1.93	55
VCU 448a - WOEWODSKI ISLAND		
0-500 FT.....	1.16	478
501-1000 FT.....	2.13	32
VCU 458 - SNOW		
0-500 FT.....	0.51	177
501-1000 FT.....	0.89	99
1001-1500 FT.....	0.30	69
VCU 461 - WORONKOFSKI		
0-500 FT.....	0.10	116
501-1000 FT.....	0.38	58
1001-1500 FT.....	0.48	50

Table 3. continued.

	PELLET-GROUPS PER PLOT	
	MEAN	NO. OF PLOTS
VCU 473 - ONSLOW		
0-500 FT.....	0.76	273
501-1000 FT.....	1.47	45
1001-1500 FT.....	1.18	22
VCU 480 - FOOLS		
0-500 FT.....	0.28	88
501-1000 FT.....	0.70	57
1001-1500 FT.....	0.81	48
VCU 532 - RED BAY		
0-500 FT.....	0.75	195
501-1000 FT.....	1.61	57
1001-1500 FT.....	0.50	4
VCU 554 - SARKAR		
0-500 FT.....	0.92	292
VCU 575 - THORNE LAKE		
0-500 FT.....	0.54	180
501-1000 FT.....	1.09	91
1001-1500 FT.....	1.23	22
VCU 621 - 12 MILE		
0-500 FT.....	0.93	324
VCU 635 - PORT REFUGIO		
0-500 FT.....	1.85	280
VCU 748 - GEORGE INLET		
0-500 FT.....	0.77	212
501-1000 FT.....	1.24	82
1001-1500 FT.....	1.93	15
VCU 758 - CARROL POINT		
0-500 FT.....	0.58	100
501-1000 FT.....	1.16	25
VCU 759 - MOTH BAY		
0-500 FT.....	0.93	111
501-1000 FT.....	0.86	14
1001-1500 FT.....	1.18	11
VCU 769 - ALAVA BAY		
0-500 FT.....	0.71	242
501-1000 FT.....	1.29	51
1001-1500 FT.....	0.55	33
VCU 999 - GRAVINA ISLAND		
0-500 FT.....	1.46	170
501-1000 FT.....	1.77	86
1001-1500 FT.....	1.64	75