Federal Aid in Wildlife Restoration Annual Report 1 July 2001-30 June 2002

2002 Report

Deer Pellet-Group Surveys In Southeast Alaska

by

Mark J. Kirchhoff

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

March 2003

State of Alaska

Frank Murkowski, Governor

Department of Fish and Game Kevin Duffy, Acting Commissioner

Division of Wildlife Conservation Matt Robus, Acting Director

Persons intending to cite this material should obtain permission from the author(s) and/or the Alaska Department of Fish and Game. Because most reports deal with preliminary results of continuing studies, conclusions are tentative and should be identified as such. Due credit will be appreciated.

Additional copies of this report and other Division of Wildlife Conservation publications may be obtained from:

ADF&G-Wildlife Conservation P.O. Box 240020 Douglas, AK 99824-0020 (907) 465-4265

The Alaska Department of Fish and Game administers all programs and activities free from discrimination on the basis of sex, color, race, religion, national origin, age, marital status, pregnancy, parenthood, or disability. For information on alternative formats available for this and other department publications, contact the department ADA coordinator at (voice) 907-465-4120, or (TDD) 907-465-3646. Any person who believes s/he has been discriminated against should write to: ADF&G, PO Box 25526, Juneau, AK 99802-5526; or O.E.O., U.S. Department of the Interior, Washington, DC 20240.

Federal Aid in Wildlife Restoration Annual Report 1 July 2001-30 June 2002

2002 Report

Deer Pellet-Group Surveys In Southeast Alaska

by

Mark J. Kirchhoff

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

January 2003

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 2002. 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. 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 2002, 35 watersheds, (or value comparison units – VCUs) were surveyed. For each VCU, transect locations, physiographic information, deer population density, and trend are described. Complete results for each VCU are found in Table 1. A brief summary of deer population trend by game management unit follows:

Subunit 1A - Ketchikan and Mainland. In 2002 seven VCUs were surveyed in Subunit 1A. Snow at low elevations limited the number of plots recorded in several of these VCUs. Overall, deer populations remain low in this subunit.

Unit 2 - Prince of Wales Island. In 2002 eleven VCUs were surveyed in Unit 2. In most areas deer populations appear to be the same or slightly better than the previous year surveyed.

Subunit 1B and Unit 3 – Central Southeast Alaska. In 2002 seven VCUs were surveyed in Unit 3. Four of these VCUs were on Zarembo Island where populations appear to be thriving. Transects on Etolin Island, Mitkof Island, and Kupreanof Island also showed improved numbers.

Unit 4 – Northern Southeast Alaska. In 2002 seven VCUs were surveyed during a boat trip from Sitka to Hoonah. Data show deer populations about the same or slightly higher than the previous year surveyed.

Subunit 1C - Juneau and Mainland. In 2002 two VCUs on Douglas Island were surveyed. Pellet group counts were slightly down at both locations.

Unit 5 – Yakutat. In 2002 four pellet-group transects were run in VCU 368 in Yakutat. Survey results indicate that deer densities on Dolgoi Island have remained low with a pellet-group density of 0.39 pellet groups per plot. Pellet-group density on Kriwoi Island was higher at 0.90 pellet groups per plot.

NARRATIVES

North Douglas (VCU 35) – Douglas Island is located immediately opposite the City of Juneau and is heavily used by Juneau hunters. Three transects were established at the end of the road in 1991. The transects rise to over 1000 feet in elevation and traverse moderate volume hemlock stands. Deer pellet-group density in 2002 was lower than usual at 0.68 pellet groups per plot.

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. Pellet-group density in 2002 was lower than usual at 0.82 pellet groups per plot.

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 frequently 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 2002 indicate that deer populations remain about the same as in years past.

Pleasant Island (VCU 185) – Pleasant Island is located in Icy Strait close to the community of Gustavus and is a main source of deer to that town's residents. Three transects were established here in 1991. Pleasant Island is a low-lying island with extensive muskeg; the highest point on the island is 600 feet. Most of the good quality forest (volume class 5) is found along the beach fringe and creeks. Deer pellet-group density in 2002 was 1.96 pellet groups per plot.

Suntaheen Creek (VCU 209) – Three transects were established in Whitestone Harbor on northern Chichagof Island in 1988. These transects traverse a lot of muskeg and scrub; most of the better habitat in the VCU is found along the beach fringe and creeks. Pellet-group density in 2002 was moderate at 1.32 pellet groups per plot.

Pavlof (VCU 218) – Three transects were established in this VCU on eastern Chichagof Island in 1988. Two start near the falls at Pavlof Harbor and the third starts from the beach at Wachusetts Cove. A wide variety of habitat types are encountered. Pellet-group counts reached high levels in 2002 at 2.48 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. Transect 1 is a climb 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. All three transects have a SW facing aspect. Typically, deer pellet-group densities have been very high at Finger River, and 2002 was no exception at 2.99 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. All three transects traverse mid-volume forest to 1500 feet elevation and have a southerly aspect. Deer pellet-group density in 2002 was high at 2.35 pellet groups per plot.

Sealion Cove (VCU 305) – Located on northern Kruzof Island, this VCU has been sampled almost every year since 1984. Transects 1 and 3 are short and steep and run through low to mid-volume timber until breaking out into sub-alpine vegetation at approximately 900 feet elevation. Transect 2 also traverses low to mid-volume timber but is forested all the way to 1500 feet elevation. Deer pellet-group density in 2002 was 2.01 pellet groups per plot.

Yakutat Islands (VCU 368) – This VCU incorporates many of the islands found in Yakutat Bay: Krutoi, Kriwoi, Khaantaak, 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 little or no predator presence probably explains the persistence of deer on these islands. In 2002 two transects were run on Kriwoi Island, and two on Dolgoi Island. Deer pellet-group density for the combined VCU was 0.66 pellet groups per plot.

E. Duncan (VCU 437) – Three transects were established on the east side of Duncan Canal in 1990. Transect 1 is a low elevation transect which runs up to a 500-foot knob opposite the Castle Islands. A portion of this transect was clearcut in 1992. Transect 2 runs up a SW facing slope to 1500 feet elevation. It is brushy with a fair amount of blowdown. Transect 3 also runs up a SW facing slope. The transect is gradual at first, but then becomes very steep. Timber volume is moderate. Deer pellet-group density in 2002 was 1.89 pellet groups per plot.

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. Deer pellet-group density in 2002 was 1.43 pellet groups per plot.

Baht (VCU 456) – A new transect was established in this Zarembo Island VCU in 2002 as part of a greater island wide assessment of deer populations. The starting point is along the road near Little Baht Harbor about 10.8 miles east of the St. John cabin. The terrain traversed is a gentle north-facing slope to about 800 feet elevation, ending at a small lake. Several small patches of muskeg are crossed. Deer pellet-group density in 2002 was 2.75 pellet groups per plot.

St. John (VCU 457) – Three new transects were established in this Zarembo Island VCU as part of a greater island wide assessment of deer populations. All start off the road system and are plainly marked on transect location forms available at the Douglas ADF&G office. Deer pellet-group density in 2002 was 1.65 pellet groups per plot.

Snow (VCU 458) – Three 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 has 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 crews reported a lot of blowdown. Deer pellet group density in this VCU in 2002 was 1.50 pellet groups per plot.

Meter (VCU 459) – Two new transects were established in this Zarembo Island VCU as part of a greater island wide assessment of deer populations. They both start off the road system and have southerly aspects. Much of the terrain is brushy interspersed with muskegs. Deer pellet-group density in 2002 was 0.87 pellet groups per plot.

Onslow (VCU 473) – This VCU on southern Etolin Island has been sampled frequently since 1984. One transect is on Onslow Island; the two others are on Etolin. The three transects traverse low to mid-volume timber and a wide range of habitat types. Deer pellet-group density in 2002 was 0.97 pellet groups per plot.

Protection (VCU 527) – Three transects were established in this VCU in 1997 in response to concerns by local Port Protection residents about area deer herds. The three transects start on the beach about a half mile west of Merrifield Bay and traverse lower volume timber up to about 500 feet elevation. Pellet-group density in 2002 was 0.70 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 second growth. Deer pellet-group density in 2002 was 1.49 pellet groups per plot.

Sarheen (VCU 549) – Three transects were located at Sarheen on the NW coast of Prince of Wales Island in 1989. Sarheen was selected because it is mostly unlogged, protected from rough seas, and hunters reported good success there. The transects traverse low-volume timber and reach approximately 800 feet elevation. Deer pellet-group density in 2002 was 0.69 pellet groups per plot.

Sarkar (VCU 554) – Three transects were established at Sarkar Lake on Prince of Wales Island in 1989. One of these transects was changed in 2001 because of impenetrable second growth. Deer pellet-group density in 2002 was 0.76 pellet groups per plot.

Warm Chuck (VCU 561) – Located on Heceta Island off the west coast of Prince of Wales Island, this VCU is a popular hunting destination. Transects were established here in 1984 because of reported high deer populations. Transect 1 travels up a valley bottom that has been partially cutover; transect 2 traverses a flat, poorly drained area with low volume timber; and transect 3 climbs a steep hill to 1500 feet. Deer pellet-group density in 2002 was 1.17 pellet groups per plot.

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. The vegetation on transect 1 is mostly a red cedar-western hemlock overstory and a blueberry understory. Transect 2 starts in a muskeg and low volume forest, but soon encounters the edge of a clearcut. Timber is mostly low to mid-volume with muskegs scattered throughout. Transect 3 is an easy transect through mostly moderate to high volume hemlock. Transect 4 is a steady climb to 1500 feet. The first half is dominated by western red cedar, the second half is spruce-hemlock forest. Volume class is high all the way. Deer pellet-group density in 2002 was 1.12 pellet groups per plot.

Snakey Lakes (VCU 578) – This VCU, located on Prince of Wales Island, encompasses part of the Thorne River drainage. Four transects were established here by the Forest Service in 1986. Since then, roads and clearcuts have drastically altered the landscape. As a result, new starting points for transects 3 and 4 were flagged in 1993. Deer pellet-group density in 2002 was 1.45 pellet groups per plot.

Little Ratz (VCU 584) – Four transects were established in this VCU on the east coast of Prince of Wales Island in 1992. Access to all transects is by vehicle from Thorne Bay. Transect 1 starts at a rock face shortly after Mile 9. Second growth and a clearcut have to be traversed before entering a red cedar-mountain hemlock forest. Transect 2 starts at the Sal Creek bridge. The first 24 plots go through a thinned clearcut. From there it's a short walk to the mouth of Sal Creek. The return trip back to the road goes through low volume old growth and a clearcut. Transect 3 leaves the road after the Sal Creek bridge is passed and goes through young spruce stands where blowdowns are common. 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 brush at the end. Deer pellet-group density in 2002 was 2.32 pellet groups per plot.

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 2002 was 0.51 pellet groups per plot.

Trocadero (VCU 625) – Three transects were established in 1995 at the head of Trocadero Bay on the west coast of Prince of Wales Island. This VCU is popular with Craig hunters. Transect 1 heads up a south-facing slope to 1500 feet elevation. The forest is mostly low-volume red cedar. Transect 2 also heads up a south-facing slope to about 1000 feet elevation. Timber volume is low throughout the transect and there is a lot of blowdown to overcome. Transect 3 heads up a north-facing slope to about 1000 feet elevation. The start of the transect has a lot of blowdown and the timber volume is low. The understory contains a lot of salal and cedar which makes counting pellets difficult. Deer pellet-group density in 2002 was 0.93 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 have been counted here since 1985. Since then there has been a lot of logging on the island. Pellet-group density in 2002 was 1.12 pellet groups per plot.

George Inlet (VCU 748) – This VCU on Revilla Island is easily accessible by skiff from Ketchikan. Transect 1 is short and steep to 1400 feet elevation and traverses high volume timber. Transects 2 and 3 are longer and flatter and contain a greater variety of forest types including cedar stands and muskeg. Deer pellet-group density in 2002 was 0.18 pellet groups per plot.

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 populations on southern Revilla. Deer pellet-group density in 2002 was 0.36 pellet groups per plot.

Moth Bay (VCU 759) – Two transects were established in Moth Bay on southern Revilla Island in 1985. Transect 2 has a west-facing aspect and climbs to a 1200 foot high ridge through mid-volume cedar and hemlock-spruce forest. Transect 3 has more ups and downs and travels through similar forest, ending at 1100 foot elevation on an east facing slope. Combined with the transect at adjacent Carroll Point, Moth Bay is a good indicator of deer populations on southern Revilla. Deer pellet-group density in 2002 was 1.09 pellet groups per plot.

Dall Head (VCU 765) – Three transects were established on the south end of Gravina Island in 1996. Much of Dall Head has been exposed to windthrow and fire and consequently there are large areas that are in second growth, including some well stocked red cedar stands. Most of the understory is brushy conifer mixed with salal. Deer pellet group density in 2002 was 0.76 pellet groups per plot.

Duke Island (VCU 767) – Three transects were established on the north end of Duke Island in 1996. There is a lot of brush on some transects, including four-foot high salal. Most of the timber is low volume and consists of mixed conifer classes. There is not much in the way of forbs in the understory and only a moderate amount of blueberry present. Deer pellet-group density in 2002 was 0.19 pellet groups per plot.

Alava Bay (VCU 769) – This VCU, located on the southeastern tip of Revilla Island, was first sampled in 1985. All three transects have steep sections in them and all are brushy with blueberry thickets up to four feet tall. Forest types are diverse ranging from muskeg to high volume old growth. Plots were limited this year due to snow at low elevations. Deer pellet-group density was 1.22 pellet groups per plot.

Very Inlet (VCU 859) – In 2002 three new transects were established at Very Inlet in Misty Fiords National Monument. Biologists wanted to see how many deer were present on this southern mainland portion of the Tongass. The three transects traversed a variety of aspects and forest types. Deer pellet-group density was low at 0.11 pellet groups per plot.

LITERATURE CITED

Kirchhoff, M.D., and K.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. 113pp.

<u>.</u>							
VCU	Name	Land Acres	% CFL	Year	Plots	Pell Mean	et-Group 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 93 94 95 96 97 98 99 00 01 01 02	300 324 315 306 323 323 321 273 282 335 200	0.80 0.74 0.91 0.86 0.97 1.43 1.54 1.03 0.88 1.01 0.68	0.65-0.96 0.62-0.87 0.74-1.09 0.70-1.02 0.81-1.12 1.24-1.62 1.32-1.77 0.86-1.19 0.71-1.04 0.85-1.17 0.50-0.85
36	Inner Point	3,965	44%	1985 86 87 88 92 95 96 97 98 99 00 02	256 235 262 200 258 204 254 240 252 280 239 280 198	1.30 1.97 1.76 1.21 1.31 2.05 1.41 1.68 2.36 0.84 1.06 1.09 0.82	$\begin{array}{c} 1.10 - 1.51 \\ 1.68 - 2.25 \\ 1.53 - 2.00 \\ 1.02 - 1.39 \\ 1.08 - 1.53 \\ 1.75 - 2.36 \\ 1.21 - 1.60 \\ 1.45 - 1.91 \\ 2.08 - 2.64 \\ 0.69 - 0.98 \\ 0.87 - 1.25 \\ 0.90 - 1.28 \\ 0.64 - 1.00 \end{array}$
38	Rhine Creek	6,357	2%	1997	108	0.31	0.14-0.47
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	na	na	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

Table 1. Pellet-group count statistics from southeast Alaska, 1981-2002.

Table 1. continued.

		Land	%			Pellet-Group	
	Name	Acres	CFL	Year	Plots	Mean	95% C
124	Shelter Island	6,162	43%	1984	713	1.46	1.33-1.60
	(All Transects)			85 86	774 727	1.82 2.20	1.67-1.97 2.02-2.37
124	Shelter Island			1984	300	1.52	1.34-1.70
	(Trans. 4-8, 18)			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
				9 5	297	1.38	1.20-1.56
				97	312	2.51	2.23-2.78
				99	290	1.63	1.42-1.85
				01	231	2.07	1.79-2.36
124	Lincoln Island			1998	207	1.52	1.27-1.77
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
				96	325	1.26	1.07-1.46
				99	176	1.25	1.00-1.50
				02	183	1.17	0.93-1.42
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

Table	э1.	continued.

VCU	Name	Land Acres	% CFL	Year	Plots	Pelle Mean	et-Group 95% CI
162	Thayer Lake	25,342	79%	1987 89 94 98	313 283 282 308	2.81 2.04 2.27 2.13	2.49-3.12 1.75-2.32 1.98-2.56 1.87-2.38
171	Hood Bay	44,355	79%	1987 89 90 92 94 00	358 366 375 360 371 349	2.31 1.77 1.85 1.91 1.64 1.04	1.99-2.63 1.54-2.00 1.61-2.09 1.64-2.18 1.41-1.88 0.87-1.21
182	Pybus Bay	41,501	62%	1981 84 85 86 87 89 90 92 95 98	390 300 269 235 242 199 221 236 205 256	1.34 1.02 1.86 2.00 2.03 2.00 1.72 1.13 1.48 1.37	$\begin{array}{c} 1.16 - 1.52 \\ 0.86 - 1.18 \\ 1.60 - 2.12 \\ 1.70 - 2.29 \\ 1.69 - 2.37 \\ 1.63 - 2.36 \\ 1.44 - 2.01 \\ 0.97 - 1.30 \\ 1.23 - 1.74 \\ 1.16 - 1.59 \end{array}$
185	Pleasant Island	8,738	16%	1991 92 93 94 97 99 02	311 210 305 356 300 223 351	1.38 1.34 1.77 1.22 1.80 1.82 1.96	1.18-1.57 1.09-1.59 1.52-2.02 1.04-1.40 1.54-2.06 1.55-2.08 1.71-2.20
189	Port Althorp	8,040	27%	1988 91 92 93 94 98 01	195 223 261 248 253 281 225	1.80 1.92 1.36 1.39 1.31 1.48 1.81	1.47-2.13 1.55-2.29 1.11-1.60 1.15-1.62 1.06-1.56 1.27-1.70 1.49-2.13

VCU	Name	Land Acres	% CFL	Year	Plots	Pelle Mean	et-Group 95% Cl
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
				98	273	1.11	0.92-1.30
				01	308	0.94	0.78-1.11
202	Port Frederick	16,619	52%	1988	242	1.87	1.62-2.13
				96	226	1.02	0.82-1.23
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
				96	276	0.98	0.77-1.18
				97	263	1.50	1.23-1.77
				99	112	1.02	0.69-1.34
				02	218	1.32	1.03-1.60
211	Point Augusta	4,688	63%	1983	757	1.78	1.62-2.01
	-			93	286	2.08	1.80-2.36
				97	234	3.30	2.90-3.70
218	Pavlof River	18,866	50%	1988	325	1.78	1.50-2.06
				92	341	1.56	1.32-1.81
				96	349	1.50	1.30-1.70
				97	313	1.71	1.47-1.94
				99	213	2.24	1.83-2.67
				02	249	2.48	2.10-2.87
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
				96	263	0.56	0.38-0.75

	Name	Land Acres	% CFL	Year	Plots	Pell Mean	et-Group 95% Cl
231	Saltery Bay	18,478	31%	1988 92 93 94 96 97	256 256 227 193 152 170	2.02 0.96 0.76 0.97 1.90 1.99	1.69-2.35 0.79-1.14 0.56-0.96 0.79-1.15 1.47-2.33 1.59-2.39
234	Inbetween	6,002	62%	1981	35	0.49	0.08-0.89
235	Kadashan	33,641	53%	1981 88 92 93 94 95 96	96 221 282 385 294 195 204	0.54 2.67 1.62 1.12 1.39 2.64 2.36	0.32-0.76 2.18-3.16 1.38-1.86 0.95-1.30 1.18-1.60 2.20-3.07 1.96-2.76
236	Corner Bay	10,930	66%	1981 92 93 94	60 206 50 198	0.35 2.27 1.72 1.69	0.17-0.53 1.91-2.64 1.25-2.19 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 84 85 86 87 89 90 91 92 93 94 93 94 96 97 99 00	2,145 302 279 277 236 305 225 150 207 179 275 221 227 169 217	1.17 1.83 3.23 2.88 3.11 2.99 3.36 3.93 2.85 3.03 2.29 2.62 3.53 3.04 2.87	1.11-1.24 1.57-2.09 2.79-3.67 2.57-3.19 2.71-3.52 2.57-3.40 2.99-3.74 3.36-4.51 2.48-3.22 2.60-3.47 1.96-2.62 2.20-3.04 3.05-4.02 2.59-3.50 2.45-3.30

È

Table 1.	continued.	

VCU	Name	Land Acres	% CFL	Year	Plots	Pelle Mean	et-Group 95% Cl
249	Lisianski	19,677	24%	1988	255	0.97	0.79-1.14
		·		91	170	1.53	1.22-1.84
				95	317	0.70	0.56-0.85
				98	321	0.88	0.75-1.02
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
				95	283	1.48	1.27-1.69
				01	246	1.95	1.65-2.25
271	Chichagof	20,680	10%	1991	301	1.39	1.19-1.58
				95	303	0.98	0.83-1.14
				98	319	1.34	1.16-1.53
				01	291	1.23	1.04-1.43
275	Cobol	14,618	49%	1984	224	1.15	0.92-1.37
				91	185	2.96	2.37-3.54
				95	218	1.45	1.16-1.74
				98	219	2.19	1.86-2.51
				01	180	1.94	1.59-2.30
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
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
				97	353	1.44	1.21-1.67
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
				9 0	214	3.09	2.70-3.48
				97	39	1.59	0.86-2.32
98	M. Arm Kelp Bay	28,424	21%	1990	306	2.68	2.35-3.01
				97	100	2.67	2.04-3.30
300	Nakwasina	19,575	48%	1984	196	2.51	2.14-2.88
	/ a la monte de la						
	(All Transects)			85 86	1046 715	3.92 3.50	3.67-4.17

		Land	%			Pell	et-Group
VCU	Name	Acres	CFL	Year	Plots	Mean	95% CI
300	Nakwasina (Trans. 2,3,8)	19,575	48%	1984 85 86 87 90 91 92 93 94 95 96 97 98 99 00 01 02	138 218 205 195 244 255 175 223 188 230 216 210 188 217 146 181 186 181 186 132	2.51 3.65 3.38 2.31 2.32 2.98 3.98 1.64 3.15 1.46 1.75 2.82 2.79 2.99 3.20 2.64 2.33 2.35	2.10-2.93 3.13-4.17 2.91-3.84 1.90-2.71 2.00-2.65 2.56-3.40 3.39-4.57 1.37-1.90 2.70-3.60 1.24-1.68 1.48-2.10 2.35-3.29 2.31-3.27 2.48-3.49 2.64-3.76 2.23-3.05 1.91-2.75 1.90-2.80
305	Sealion Cove	9,293	69%	1984 85 86 87 90 91 92 93 94 95 96 97 98 00 01 02	320 292 235 226 303 227 219 239 198 221 210 225 223 241 201 231 119	1.36 2.57 2.87 3.31 1.75 2.03 1.63 1.30 1.63 1.70 1.29 1.30 1.63 1.76 1.71 1.42 1.40 2.01	$\begin{array}{c} 1.15 - 1.58\\ 2.23 - 2.91\\ 2.44 - 3.29\\ 2.82 - 3.80\\ 1.50 - 2.00\\ 1.71 - 2.35\\ 1.36 - 1.91\\ 1.08 - 1.51\\ 1.38 - 2.02\\ 1.09 - 1.48\\ 1.08 - 1.52\\ 1.35 - 1.90\\ 1.43 - 2.10\\ 1.44 - 1.99\\ 1.09 - 1.76\\ 1.14 - 1.66\\ 1.60 - 2.41\end{array}$
308	South Kruzof	71,158	25%	1993 94 99	345 370 365	1.62 1.71 1.38	1.41-1.83 1.52-1.90 1.16-1.58
315	Basin Kelp Bay	8,460	60%	1990	151	1.85	1.41-2.28

Ъ.,

- ...

		Land	%			Pellet-Group			
	Name	Acres	CFL	Year	Plots	Mean	95% CI		
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 93	357 375	0.23 0.77	0.17-0.29 0.64-0.90		
434a	Big Level Island	727	61%	1981 83 86 89 91 99	399 336 382 227 456 427	1.54 1.56 1.66 1.07 2.16 2.00	1.45-1.63 1.41-1.90 1.90-2.41 1.74-2.26		
434b	Little Level Island	263	92%	1981 83 86 89 91 99	114 136 122 137 132 123	2.48 2.34 1.39 1.52 3.59 2.84	2.02-2.94 1.07-1.70 3.07-4.11 2.28-3.40		
435	Castle River	32,724	36%	1984 87 89 94 98	312 305 312 310 281	0.19 0.51 0.40 0.32 0.36	0.12-0.26 0.37-0.65 0.25-0.56 0.24-0.40 0.28-0.44		
437	E. Duncan	23,744	55%	1990 92 98 02	227 213 153 254	1.12 0.78 1 <i>.</i> 04 1.89	0.92-1.32 0.63-0.94 0.77-1.30 1. 59-2.19		
442	Portage Bay	11,269	49%	1993 95 98	282 277 285	0.43 0.43 0.39	0.31-0.56 0.33-0.53 0.29-0.49		

- -

		Land	%				et-Group
	Name	Acres	CFL	Year	Plots	Mean	95% CI
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
				95	157	1.38	1.08-1.67
				96	243	2.25	1.95-2.55
				97	282	1.56	1.27-1.84
				98	282	1.10	0.91-1.29
				99	196	1.36	1.11-1.60
				00	226	1.27	1.05-1.50
				02	220	1.43	1.17-1.68
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
	0	,		92	114	1.04	0.77-1.30
				93	265	1.28	1.04-1.51
				97	245	1.61	1.34-1.88
454	Dry	11,033	74%	1981	91	0.92	0.56-1.28
	,	,		93	210	1.44	1.17-1.72
				97	188	1.26	0.88-1.39
455	Vank	8,437	99%				
	a) Sokolof			1001	000	1 70	
	a) JUNUIUI			1981	900	1.73	1.61-1.85
				99	360	0.92	0.76-1.08
	b) Rynda			198 1	281	0.25	0.18-0.32
				99	280	0.27	0.18-0.36
	c) Greys			1981	284	0.25	0.18-0.32
	-,,-			1001	204	0.20	0.10-0.02

Table 1. continued.

VCU	Name	Land Acres	% CFL	Year	Plots	Peile Mean	et-Group 95% Cl
456	Baht	16,972	69%	2002	109	2.75	2.10-3.41
457	St. John	26,112	53%	2002	220	1.65	1.38-1.93
458	Snow Passage	31,572	46%	1994 97 02	345 315 280	0.58 0.98 1.50	0.45-0.70 0.80-1.16 1.28-1.72
159	Meter	42,438	46%	2002	180	0.87	0.64-1.10
461	Woronkofski (All Transects)	14,500	63%	1985	646	1.63	1.45-1.81
461	Woronkofski (Trans. 10,11,12)			1985 87 89 91 93 94 99	218 201 223 203 225 224 216	2.01 2.23 2.52 1.59 0.22 0.26 0.11	1.62-2.39 1.85-2.61 2.18-2.85 1.32-1.85 0.13-0.31 0.18-0.34 0.06-0.17
467	Mosman	25,573	54%	1993	304	0.07	0.03-0.11
173	Onslow	28,947	55%	1984 85 86 87 88 91 93 94 97 02	321 334 347 336 329 322 341 340 346 332	0.37 0.59 0.72 0.42 0.44 0.66 0.68 0.88 0.73 0.97	0.28-0.46 0.48-0.70 0.59-0.84 0.31-0.55 0.32-0.55 0.51-0.80 0.55-0.82 0.74-1.02 0.59-0.86 0.81-1.13
474	Fisherman's Cove	(Canoe)		2001	228	0.11	0.06-0.17
480	Fools Inlet	30,906	44%	1994 01	194 201	0.54 0.61	0.38-0.70 0.45-0.77
489	Muddy River	40,275	37%	1996	348	1.53	1.26-1.80
490	Horn	9,815	55%	1998	250	0.60	0.47-0.74
504	Madan	na	60%	2001	244	0.23	0.14-0.31

.

VCU	Name	Land Acres	% CFL	Year	Plots	Pell Mean	et-Group 95% Cl
511	Harding	na	20%	2001	207	0.02	0.00-0.05
524	Frosty Bay	17,959	41%	1991	266	0.70	0.55-0.86
527	Protection	6,257	100%	1997 98 00 02	332 281 325 349	1.15 0.59 0.56 0.70	0.99-1.30 0.47-0.71 0.46-0.66 0.56-0.83
528	Mt. Calder	9,232	83%	1988 97 99	252 272 165	2.14 1.17 0.48	1.78-2.49 0.96-1.39 0.31-0.62
532	Red Bay	15,145	66%	1987 94 96 97 98 01 02	177 256 281 248 283 337 289	0.32 0.94 1.19 1.07 0.73 0.76 1.49	0.18-0.47 0.74-1.14 0.97-1.41 0.89-1.25 0.59-0.88 0.61-0.90 1.28-1.71
539	Exchange Cove	10,406	74%	1988 92 97	266 125 303	1.39 1.10 1.25	1.15-1.64 0.83-1.38 1.04-1.46
549	Sarheen	11,875	52%	1989 96 97 98 99 00 01 01 02	310 334 330 355 284 293 319 263	1.73 1.00 1.00 0.42 0.64 0.98 0.45 0.69	1.44-2.01 0.83-1.16 0.85-1.14 0.33-0.51 0.51-0.78 0.78-1.17 0.36-0.55 0.54-0.83
554	Sarkar	32,183	60%	1988 92 94 97 98 99 01 02	298 125 292 263 312 281 330 283	1.28 1.10 0.92 0.61 0.29 0.74 0.45 0.76	1.06-1.50 0.83-1.38 0.77-1.07 0.48-0.74 0.21-0.37 0.60-0.88 0.35-0.55 0.62-0.90

		Land	%				et-Group
	Name	Acres	CFL	Year	Plots	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
				96	276	1.39	1.17-1.61
				97	247	1.21	1.01-1.41
				98	246	1.29	1.08-1.51
				00	288	0.99	0.81-1.16
				02	221	1.17	0.94-1.39
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
				97	289	0.44	0.34-0.55
				01	336	0.85	0.67-1.03
569	Baker	31,802	68%	1991	256	0.08	0.04-0.12
				97	250	0.14	0.08-0.20
575	Thorne Lake	17,970	68%	1992	334	1.20	1.03-1.37
				94	293	0.76	0.62-0.91
				95	299	1.27	1.09-1.45
				97	303	0.84	0.66-0.96
				98	316	0.87	0.71-1.03
				99	231	1.02	0.83-1.21
				00	311	1.28	1.06-1.51
				01	327	0.53	0.42-0.63
				02	284	1.12	0.90-1.35
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
				97	310	1.39	1.17-1.60
				98	225	0.71	0.55-0.87
				99	250	0.86	0.67-1.05
				00	263	1.55	1.24-1.86
				01	358	0.89	0.74-1.03
				02	180	1.45	1.19-1.71

		Land	%				et-Group
VCU	Name	Acres	CFL	Year	Plots	Mean	95% C
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
				01	320	0.60	0.47-0.72
584	Little Ratz	12,392	65%	1992	272	0.94	0.76-1.13
				97	255	1.93	1.64-2.21
				98	282	0.78	0.64-0.91
				00	304	1.38	1.18-1.59
				01	287	1.20	1.00-1.39
				02	195	2.32	1.92-2.71
587	Tuxekan	12,129	77%	1988	300	1.06	0.84-1.28
				97	314	1.04	0.87-1.22
				98	353	0.48	0.37-0.58
				99	328	1.26	1.03-1.49
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 91	176	1.18	0.84-1.52
				91 92	231 250	1.84 0.43	1.48-2.21
				92	258	0.43	0.32-0.55 0.63-1.05
				94	324	0.93	0.76-1.09
				97	202	1.45	1.10-1.79
				98	280	0.83	0.63-1.02
				02	220	0.51	0.38-0.63
625	Trocadero	16,624	75%	1995	235	1.74	1.41-2.06
				97	235	1.18	0.97-1.38
				98	267	0.97	0.78-1.16
				02	332	0.93	0.75-1.10
628	Pt. Amagura	10,477	26%	1997	255	1.04	0.83-1.24
	-			98	325	0.93	0.78-1.08

VCU	Name	Land Acres	% CFL	Year	Plots	Pell Mean	et-Group 95% CI
635	Port Refugio	9,118	50%	1985 86 87 88 89 90 91 92 93 94 97 98 00 02	317 324 369 270 507 232 367 254 213 280 276 315 272 317	2.69 2.52 1.76 1.15 0.80 1.25 1.13 0.76 1.35 1.85 0.82 0.78 0.94 1.12	2.27-3.12 2.09-2.96 1.46-2.07 0.90-1.40 0.68-0.93 1.03-1.48 0.95-1.32 0.57-0.95 0.98-1.71 1.51-2.19 0.65-1.00 0.61-0.96 0.75-1.13 0.93-1.31
679	Kitkun Bay	15,359	75%	1988 89 95 97	240 273 264 261	0.31 0.89 0.40 0.31	0.20-0.42 0.71-1.07 0.28-0.52 0.19-0.44
685	Nutkwa	17,079	73%	1988	234	0.09	0.02-0.16
716	Helm Bay	16,127	57%	1981 84 85 88 91 92 93 95 97 98 99 01	704 302 181 247 240 169 286 284 265 232 182 251	0.16 0.54 0.85 1.66 1.63 1.25 1.37 1.31 0.79 0.44 0.70 0.41	0.12-0.19 0.44-0.65 0.65-1.05 1.38-1.95 1.35-1.92 0.96-1.53 1.16-1.59 1.09-1.52 0.65-0.99 0.34-0.55 0.53-0.87 0.30-0.51
719	Port Stewart	21,482	55%	1993 95 97 99 01	289 278 289 182 289	1.22 1.61 1.29 0.77 0.21	1.03-1.42 1.35-1.87 1.08-1.50 0.57-0.97 0.13-0.29

VCU	Name	Land Acres	% CFL	Year	Plots	Pelle Mean	et-Group 95% Cl
					. 1010	moun	
722	Spacious Bay	31,461	44%	1993	300	0.54	0.43-0.64
				95	283	0.45	0.35-0.54
				97	276	0.43	0.33-0.53
				99	161	0.09	0.04-0.13
				01	285	0.06	0.02-0.09
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
				95	304	0.70	0.56-0.84
				97	297	0.56	0.43-0.68
				99	264	0.47	0.98-1.45
				01	279	0.44	0.34-0.54
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 <i>.</i> 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
				96	305	0.98	0.76-1.19
				98	314	0.52	0.40-0.65
				00	270	0.51	0.38-0.64
				02	227	0.18	0.09-0.28
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
				97	181	0.81	0.63-0.98
				98	209	0.47	0.33-0.61

Ta

VCU	Name	Land Acres	% CFL	Year	Plots	Pelle Mean	et-Group 95% Cl
758	Carroll Pt.	11,629	34%	1985 86 88 92 94 98	118 118 85 87 125 125	0.66 0.75 1.15 0.28 0.70 0.51	0.46-0.86 0.56-0.95 0.81-1.48 0.14-0.41 0.49-0.90 0.38-0.64
759	Moth Bay	7,652	23%	02 1985 86 88 92 94 98 02	84 140 156 78 136 136 176 150	0.36 0.59 0.98 0.71 0.48 0.94 0.68 1.09	0.21-0.50 0.42-0.74 0.79-1.17 0.46-0.97 0.30-0.66 0.71-1.17 0.53-0.82 0.84-1.34
760	Lucky Cove	12,377	43%	1985 86 88 90 91	335 258 65 263 271	1.16 1.16 1.01 1.10 1.39	1.00-1.33 0.95-1.32 0.68-1.34 0.92-1.27 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 96 98 00 02	69 295 287 285 284	0.52 1.07 0.84 0.96 0.76	0.31-0.74 0.90-1.24 0.67-1.01 0.77-1.14 0.59-0.94
767	Duke Island	39,171	17%	1996 00 02	294 282 292	0.05 0.13 0.19	0.02-0.09 0.08-0.18 0.12-0.26
769	Alava Bay	13,563	60%	1985 86 91 94 96 98 00 02	311 326 143 326 324 335 329 107	0.52 0.85 1.64 0.79 0.93 0.66 0.75 1.22	0.39-0.65 0.68-1.01 1.22-2.05 0.64-0.94 0.77-1.09 0.52-0.79 0.56-0.93 0.90-1.55

VCU	Name	Land Acres	% CFL	Year	Plots	Peile Mean	et-Group 95% Cl
772	Wasp Cove	4,882	90%	1985 86 89	271 300 145	0.41 0.50 0.58	0.31-0.51 0.38-0.62 0.39-0.77
821	Winstanley Island	14,104	45%	91 1991	207 49	0.13 0.27	0.07-0.18 0.11-0.42
859	Very Inlet	na	na	2002	306	0.11	0.07-0.16
999	Gravina (All Transects)	na	na	1981 84 85 86	226 1,087 1,172 1,267	1.06 0.86 1.23 1.40	0.89-1.22 0.78-0.94 1.13-1.32 1.30-1.50
999	Gravina (Trans. 1,2,3)			1984 85 86 87 88 89 90 91 92 94 94 96 97 98 00	376 224 346 334 278 182 279 154 302 331 338 274 307 267	0.88 1.44 1.62 1.63 2.06 1.13 1.40 1.12 1.22 1.58 1.47 1.71 1.34 1.24	0.73-1.03 1.20-1.67 1.43-1.81 1.41-1.84 1.78-2.35 0.86-1.41 1.12-1.68 0.80-1.43 1.05-1.38 1.37-1.79 1.28-1.67 1.47-1.95 1.12-1.56 1.06-1.42

~

Appendix 1

New VCUs sampled









Winter Weather Conditions

January – April 2002

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



February 1, 2002

SNOWCOVER:

The Petersburg snow courses are 124 percent of normal. The Long Lake SNOTEL site is reporting 107 inches of snow depth and 29.5 inches of water content. The Swan Lake snow courses near Ketchikan appear to be normal to above. The length of record has not permitted averages to be established.

For more information contact your Natural Resource Conservation Service office in Anchorage: (907) 271-2424.

Southeast



March 1, 2002

SNOWCOVER:

Petersburg Ridge with 35.2 inches of water content is a record high in its 24th year of measurement. Petersburg Reservoir with 13.0 inches of water content is its 3rd highest measurement, with 1982 and 1991 being higher.

On Douglas Island all three snow courses are above normal water content with Eagle Crest at 125 percent of normal.

For more information contact your Natural Resources Conservation Service office in Anchorage: (907) 271-2424.



April 1, 2002

SNOWCOVER:

The Swan Lake snow courses were measured near Ketchikan. The water content for the Upper Swan Lake snow course is 59.7 inches, 246 percent of last year. The Lost Lake snow course has 26.0 inches of water content, last year here was no snow. The precipitation gauge of Swan Lake has caught 92.3 inches since October 1st, 105 percent of normal and 118 percent of last year. The Petersburg snow courses are 166 percent of normal and the Douglas Island snow courses are 138 percent of normal.

For more information contact the Anchorage Natural Resources Conservation Service office in Anchorage: (907) 271-2424.

Southeast May 1, 2002





SNOWCOVER:

Precipitation was minimal throughout the region, however with cooler than normal temperatures the snow pack remained high. Douglas Island across from Juneau is 130 percent of normal and the Petersburg snow courses near the reservoir are 198 percent of normal.

For more information contact the Anchorage Natural Resources Conservation Service office in Anchorage: (907) 271-2424.

Appendix 3

Pellet-Group Densities Reported by Transect and Elevation

				P	3
				Mean	Plots
VCU	35	Transect	1	.38	52
			2	.73	64
			3	.81	84
	36	Transect	2	.80	125
			3	.85	73
	128	Transect	1	.61	101
			2	1.79	42
			3	1.95	40
	185	Transect	1	3.04	107
			2	1.70	121
			3	1.26	124
	209	Transect	1	.98	85
			2	1.14	57
			3	1.83	76
	218	Transect	1	2.74	87
			2	2.79	90
			3	1.79	72
	247	Transect	1	4.11	27
			2	3.21	105
			3	1.20	30
	300	Transect	2	2.92	26
			3	1.64	61
			8	2.98	45
	305	Transect	1	2.32	22
			2	2.09	67
			3	1.60	30
	437	Transect	1	1.81	75
			2	2.23	83
			3	1.66	96
	448	Transect	1	1.57	77
			2	1.53	75
			3	1.15	68
	456	Transect	6	2.75	109
	457	Transect	4	1.61	77
			5	2.51	68
			9	.92	75

Table 2. Pellet-groups per plot, by VCU and transect, Spring, 2002.

				P	G
				Mean	Plots
VCU	458	Transect	1	1.43	100
			2	2.13	80
			3	1.07	100
	459	Transect	7	1.37	75
-			8	.51	105
	473	Transect	1	.85	104
			2	1.21	113
			3	.84	115
	527	Transect	1	.63	118
			2	.58	106
			3	.86	125
	532	Transect	4	1.40	97
			5	1.47	91
			6	1.60	101
	549	Transect	1	.60	52
			2	.80	86
			3	.65	125
	554	Transect	2	.63	90
			4	.73	94
			5	.91	99
	561	Transect	1	1.28	109
			2	.99	87
			3	1.28	25
	575	Transect	1	1.40	73
			2	.90	89
			3	.65	81
			4	2.05	41
	578	Transect	2	1.18	125
			3	2.07	55
	584	Transect	1	1.41	61
			2	1.18	56
			3	4.27	33
			4	3.53	45
	621	Transect	1	.45	110
			2	.95	20
			3	.48	90

Table 2. Pellet-groups per plot, by VCU and transect, Spring, 2002.

			• •	P(3
				Mean	Plots
VCU	625	Transect	1	1.87	82
			2	.60	125
			3	.64	125
	635	Transect	1	1.17	82
			2	1.02	125
			3	1.18	110
	748	Transect	1	.53	59
			2	.11	76
			3	.02	93
	758	Transect	28	.36	84
	759	Transect	2	.78	50
			3	1.25	100
	765	Transect	1	.99	94
		Transect	2	1.04	85
			3	.33	105
	767	Transect	1	.38	94
			2	.08	78
			3	.12	120
	769	Transect	1	2.08	26
			2	.82	38
			3	1.07	43
	859	Transect	I	.10	99
			2	.07	115
			3	.18	92

~

Table 2. Pellet-groups per plot, by VCU and transect, Spring, 2002.

				P	G
				Mean	Plots
VCU	35	Elevation	0-500	.57	94
			500-1000	.60	86
			1000-1500	1.45	20
	36	Elevation	0-500	.77	133
			500-1000	1.20	45
			1000-1500	.25	20
	128	Elevation	0-500	1.42	98
			500-1000	.89	85
	185	Elevation	0-500	2.06	319
			500-1000	.94	33
	209	Elevation	0-500	1.28	207
			500-1000	2.09	13
	218	Elevation	0-500	2.51	236
			500-1000	1.92	13
	247	Elevation	0-500	3.21	143
			500-1000	1.32	19
	300	Elevation	0-500	2.31	89
			500-1000	2.71	34
			1000-1500	1.33	9
	305	Elevation	0-500	1.89	96
			500-1000	2.52	23
	437	Elevation	0-500	1.31	148
			500-1000	3.27	44
			1000-1500	2.29	62
	448	Elevation	0-500	1.24	82
			500-1000	1.46	61
			1000-1500	1.60	77
	456	Elevation	0-500	2.83	64
			500-1000	2.64	45
	457	Elevation	0-500	2.03	145
			500-1000	1.82	11
			1000-1500	.77	64
	458	Elevation	0-500	1.58	172
			500-1000	1.83	60
			1000-1500	.81	48

Table 3. Pellet-groups per plot, by VCU and elevation, Spring, 2002.

				PG	
				Mean	Plots
VCU	459	Elevation	0-500	2.25	<u>.</u>
			500-1000	1.20	75
			1000-1500	.57	101
	473	Elevation	0-500	.91	265
			500-1000	1.47	45
			1000-1500	.73	22
	527	Elevation	0-500	.71	34(
			500-1000	.22	ç
	532	Elevation	0-500	1.47	279
			500-1000	2.10	10
	549	Elevation	0-500	.75	200
			500-1000	.49	63
	554	Elevation	0-500	.76	283
	561	Elevation	0-500	1.15	220
			500-1000	4.00	1
	575	Elevation	0-500	.88	109
			500-1000	1.28	156
			1000-1500	1.26	19
	578	Elevation	0-500	1.06	127
			500-1000	2.49	37
			1000-1500	2.13	16
	584	Elevation	0-500	2.15	141
			500-1000	2.76	54
	621	Elevation	0-500	.73	84
			500-1000	.55	65
			1000-1500	.21	71
	625	Elevation	0-500	.96	166
			500-1000	.92	155
			1000-1500	.55	11
	635	Elevation	0-500	.77	181
			500-1000	1.58	136
	748	Elevation	0-500	.06	192
			500-1000	1.12	26
			1000-1500	.11	10
	758	Elevation	0-500	.36	84

Table 3. Pellet-groups per plot, by VCU and elevation, Spring, 2002.

				PG	
				Mean	Plots
VCU	759	Elevation	0-500	1.21	126
			500-1000	.69	16
			1000-1500	.00	8
	765	Elevation	0-500	.79	265
			500-1000	.37	19
	767	Elevation	0-500	.19	292
	769	Elevation	0-500	1.22	107
	859	Elevation	0-500	.11	244
			500-1000	.10	48
			1000-1500	.21	14

Table 3. Pellet-groups per plot, by VCU and elevation, Spring, 2002.