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**Impact of a postcard follow-up on harvest survey returns**  
 by L. Couling and G. E. J. Smith


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Replace Table 8 (page 8) and Table 9 (page 9) with the following.

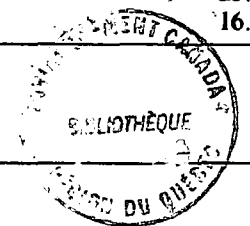
**Table 8**  
 Survey costs and returns per dollar invested

Mailing wave	Hunter group	Quest. mailed	Cost/quest. (¢)	Cost (\$)	Quest. returned	Returns/\$
Wave 1	Reminder	22 531	42.36*	9 544	9 529	1.00
	Control	22 484	26.29	5 911	6 480	1.10
Wave 2	Reminder	13 003	25.76	3 350	3 288	0.98
	Control	16 004	25.76	4 123	3 600	0.87
Both	Reminder	35 534	—	12 894	12 817	0.99
	Control	38 488	—	10 034	10 080	1.00

\*Includes postcard reminder.

**Table 9**  
 Costs of personnel and materials

Items	Ind. cost (¢)
<b>Materials</b>	
Duck questionnaire wave 1	2.43
Duck questionnaire wave 2	1.90
Goose questionnaire	1.50
Window envelope	0.92
Return envelope	0.74
Labels	0.30
Postage	14.00
Reminder card	0.80
Reminder card postage	14.00
<b>Personnel</b>	
Label and stuff questionnaire package (4 persons can process 2 500 packages/day @ \$40/person-day)	6.40
Label postcard reminders (4 persons can process 12 500 postcards/day)	1.28
Cost of sending 1 questionnaire package in 1st wave	26.29
Cost of sending 1 questionnaire package in 2nd wave	25.76
Cost of sending 1 postcard reminder	16.08





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Aussi disponible en français

No. 113, June 1980

**Impact of a postcard follow-up on harvest survey returns**by L. Couling<sup>1</sup> and G. E. J. Smith<sup>1</sup>**Introduction**

The annual migratory game bird National Harvest Survey (NHS) provides information on the number of birds killed and days hunted by recreational hunters in Canada. The survey uses a questionnaire mailed to a stratified random selection of purchasers of Migratory Game Bird Hunting Permits (MGBHP).

Because the questionnaire imposes upon a potential respondent's time and privacy, many fail to reply. This lack of participation not only reduces the usable sample size, but also can produce nonresponse bias that further reduces the validity of the survey results. To increase the participation without increasing the cost of the survey, a follow-up postcard was sent to each recipient of the questionnaire. This was one of several methods available (Filion 1974, 1978a). In an earlier sociological study (Filion 1978b) in which three follow-up mailings were used, the response to the initial mailing and a postcard follow-up alone exceeded 50%.

**Methods**

To determine the effect of a postcard reminder on hunter response, this special study was conducted in conjunction with the NHS for the 1977-78 season. Purchasers of MGBHP selected for the NHS were divided into two groups: one comprising those with odd and the other with even permit numbers. The even numbered were the control group.

Hunters in both group were sent the initial NHS questionnaires between November and January (depending upon province and zone), and those not responding within approximately 5 weeks were sent follow-up questionnaires. In addition, purchasers of odd-numbered permits, known as the postcard reminder group, were sent a postcard reminder (Fig. 1) approximately 5 days after the mailing date of the first questionnaire. The results from the two groups were compared to determine the effect of the postcard reminder on response rates, survey estimates and cost.

We grouped the provinces and territories into geographical regions, and divided the hunter sample as follows to correspond to the stratification in the NHS.

- sample A** — inexperienced hunters, Canadian residents (did not purchase MGBHP in the previous year),
- samples B and D** — experienced hunters, Canadian residents (purchased MGBHP in previous year),
- sample E** — non-residents.

<sup>1</sup>CWS, Ottawa K1A 0E7**Response rates**

Table 1 gives the number of questionnaires mailed and the number returned for both the initial mailing and follow-up mailing (the number of follow-up questionnaires mailed being the number not returned by hunters within 5 weeks of the initial mailing).

Table 2 gives the response rates by sample (i.e., the ratio of the number of respondents to the number of questionnaires mailed). These were calculated by wave for both the postcard reminder and the control groups.

**First wave of the survey**

The wave 1 entries in Table 2 show that the response rates for the postcard reminder group were approximately 50% higher than for the control group. Geographically, the Northwest and Yukon territories showed the lowest increase due to the reminder (about 30%); the Maritimes, the highest (about 58%).

For the inexperienced (sample A) and experienced (samples B and D) resident hunters, the response rate increases in the postcard reminder group were about 47 and 52%, respectively; for non-residents about 32%. In all instances in wave 1, the response rate for hunters who received postcard reminders was significantly greater ( $P < 0.05$ ) than for those who did not receive reminders.

**Second wave of survey**

Because of the increased response rate among hunters who received postcard reminders in the initial questionnaire wave, one might expect the response rate of a follow-up questionnaire wave to be less than for the control group. In most cases the opposite was true (Table 2). The reminder seemed to act as a catalyst for the second wave as well as the first. Nationally, the increase in response rate due to the postcard reminder was approximately 12%. Geographically, the lowest increase was in British Columbia (5%) and the highest in the Maritimes (25%).

Response rate increases due to the postcard reminder were about 10% for the inexperienced resident hunters and 14% for the experienced; non-residents showed a decrease due to the reminder of approximately 3%.

**Both waves of survey**


The total survey results after the two waves (Table 2) show the same patterns as in wave 1, but not as extreme. The response rate for the postcard reminder group was approximately 27% higher than for the control group. Geographically, the lowest increase due to the reminder was in the Territories (17%) and the highest in the Maritimes (37%).

For the inexperienced and experienced resident hunters, the response rate increases due to the postcard reminder were about 26% and 27% respectively; for non-residents about 18%.



**Figure 1**

Front and back portions of postcard reminder sent to purchasers of odd-numbered MGBHP 5 days after the mailing date of the first questionnaire

 Environment Canada  
Canadian Wildlife Service  
Ottawa, Canada  
K1A 0E7

Environnement Canada  
Service canadien de la faune  
Ottawa (Canada)  
K1A 0E7

To - À

Dear Waterfowl Hunter:

A few days ago we sent you a questionnaire on your hunting experiences. This is a reminder inviting you to please answer the questionnaire and return it as soon as possible. Your answers are very important because you are part of a small group of hunters chosen to represent waterfowl hunters across Canada.

If you have not yet answered the questionnaire, will you please do so today? If you have already returned the questionnaire, we thank you very much for your co-operation.

Canadian Wildlife Service  
Ottawa

061-1705 (05/79)

Cher chasseur d'oiseaux migrateurs:

Vous avez reçu il y a quelques jours un questionnaire sur vos expériences de chasse. Nous vous invitons à le remplir le plus tôt possible. Vos réponses sont très importantes puisque vous faites partie d'un petit groupe choisi pour représenter les chasseurs par tout le Canada.

Si vous avez déjà rempli le questionnaire nous vous remercions sincèrement de votre collaboration. Dans le cas contraire, auriez-vous l'obligeance de le faire dès aujourd'hui.

Service canadien de la faune  
Ottawa

**Table 1**

Number of questionnaires mailed to and returned by hunters by wave of mailing

Questionnaires	Region	Group receiving reminder				Group not receiving reminder			
		A	B&D	E	Total	A	B&D	E	Total
<b>Wave 1</b>									
Mailed	Maritimes	800	5009	50	5859	771	5020	50	5841
	Quebec	257	2390	45	2692	270	2283	55	2608
	Ontario	251	3141	476	3868	287	3067	492	3846
	Prairies	1163	6843	304	7950	1302	6407	325	8034
	BC	138	1373	21	1532	137	1352	29	1518
	Territories	304	326	0	630	291	346	0	637
	Total		2913	18722	896	22531	3058	18475	951
Returned	Maritimes	329	1863	25	2218	186	1197	17	1400
	Quebec	113	1165	19	1297	93	769	11	873
	Ontario	126	1402	225	1753	80	909	186	1175
	Prairies	466	2655	174	3296	353	1869	144	2366
	BC	73	637	13	723	42	428	8	478
	Territories	126	116	0	242	95	93	0	188
	Total		1233	7838	456	9529	849	5265	366
<b>Wave 2</b>									
Mailed	Maritimes	470	3146	25	3641	585	3823	33	4441
	Quebec	144	1225	36	1395	177	1514	44	1735
	Ontario	125	1739	251	2115	207	2158	306	2671
	Prairies	697	3828	130	4655	949	4538	181	5668
	BC	65	736	8	809	95	924	21	1040
	Territories	178	210	0	388	196	253	0	449
	Total		1679	10884	450	13003	2209	13210	585
Returned	Maritimes	114	732	4	850	115	710	7	832
	Quebec	57	386	4	447	67	439	4	510
	Ontario	55	500	65	620	67	542	67	676
	Prairies	150	904	26	1080	207	982	53	1242
	BC	10	174	2	186	21	201	5	227
	Territories	60	45	0	105	57	56	0	113
	Total		446	2741	101	3288	534	2930	136

**Response rate summary**

As Table 2 indicates, the postcard reminder was very successful in improving the response rate of the NHS. It served as a catalyst for many of the hunters who ordinarily would not have responded to the initial mailing, but who would have responded to the follow-up. The reminder served much like a first follow-up questionnaire in this respect. Also, the short interval between receipt of the initial questionnaire and of the postcard may have reinforced in the hunter's mind the idea of participation in the survey (Filion 1978a). Thus the response rate was higher for the second wave of the survey (where, as was mentioned, it was not expected).

The lower increase due to the postcard reminder for non-resident, as compared to resident, hunters might be explained in part by the fact that their response rate was already much higher than for resident hunters. (Hunters willing to travel long distances to Canada are, perhaps, more enthusiastic than the average hunter.)

**Reported hunting activity**

**Reported participation and success**

The numbers of respondents who had purchased hunting permits and who subsequently reported hunting activity (participation) are given by mailing wave in

**Table 2**  
Response rates (%) by wave of mailing, region, sample and group

Wave of mailing	Region	Group receiving reminder				Group not receiving reminder			
		A	B&D	E	Total	A	B&D	E	Total
Wave 1	Maritimes	41.1	37.2	50.0	37.9	24.1	23.8	34.0	24.0
	Quebec	44.0	48.7	42.2	48.2	34.4	33.7	20.0	33.5
	Ontario	50.2	44.6	47.3	45.3	27.9	29.6	37.8	30.6
	Prairies	40.1	41.0	57.2	41.5	27.1	29.2	44.3	29.5
	BC	52.9	46.4	61.9	47.2	30.7	31.7	27.6	31.5
	Territories	41.5	35.6	—	38.4	32.7	26.9	—	29.5
	Total	42.3	41.9	50.9	42.3	27.8	28.5	38.5	28.8
Wave 2	Maritimes	24.3	23.3	16.0	23.4	19.7	18.6	21.2	18.7
	Quebec	39.6	31.5	11.1	32.0	37.9	29.0	9.1	29.4
	Ontario	44.0	28.8	25.9	29.3	32.4	25.1	21.9	25.3
	Prairies	21.5	23.6	20.0	23.2	21.8	21.6	29.3	21.9
	BC	15.4	23.6	25.0	23.0	22.1	21.8	23.8	21.8
	Territories	33.7	21.4	—	27.1	29.1	22.1	—	25.2
	Total	26.6	25.2	22.4	25.3	24.2	22.2	23.3	22.5
Survey total (after 2 waves)	Maritimes	55.4	51.8	58.0	52.4	39.0	38.0	48.0	38.2
	Quebec	66.2	64.9	51.1	64.8	59.3	52.9	27.3	53.0
	Ontario	72.1	60.6	60.9	61.4	51.2	47.3	51.4	48.1
	Prairies	53.0	54.9	65.8	55.0	44.6	44.5	60.6	44.9
	BC	60.1	59.1	71.4	59.3	46.0	46.5	44.8	46.4
	Territories	61.2	49.4	—	55.1	52.2	43.1	—	47.3
	Total	57.6	56.5	62.2	56.9	45.9	44.4	52.8	44.8

Table 3. The percentage of those who reported activity among those who bought permits is given in Table 4. Tables 5 and 6 are similar, but in terms of successful hunters, rather than active hunters.

In Tables 4 and 6, those regions for which there is a significant difference at the 5% level between the percentages for the postcard reminder group and the control group (indicated by an asterisk) show that for both active and successful hunters the number is very small, well within the limits set by separate tests for significance carried out at the 5% level.

In some categories (principally hunter sample E), the sample sizes were so small as to make the test for significant difference unreliable. The most reliable tests were on samples combining either geographic regions or hunter sub-samples, and for all such tests no significant differences were found at the 5% level.

**Reported duck kill per active and successful hunter**

If, as indicated above, there is no difference between the postcard reminder group and the control group of hunters in terms of reported participation and success, one would expect no difference in the estimated kill of ducks per active and successful hunter for the

two groups. However, the estimated rate of duck kill depends upon and is more sensitive to a number of other factors, including response rate and quality of response (i.e., memory bias and honesty of reporting). Hence it is necessary to compare the rate of duck kill between the two groups.

For each of the hunter samples and waves of mailing, we carried out a Wilcoxon signed rank test to determine if the postcard reminder group reported significantly different numbers of ducks killed per active and successful hunter than did the control group. For both hunter groups, we estimated kill per hunter in each province and applied the test with 12 degrees of freedom (minus 1 for every province in which the two groups gave the same estimate). The test results are given in Table 7, significant results at the 5% level being indicated by an asterisk. The table includes overall estimates of mean kill per hunter in both groups for comparison.

We found no significant difference ( $P < 0.05$ ) in duck kill per active hunter between the responses of the postcard reminder group and the control group. However, in duck kill per successful hunter, experienced resident hunters (samples B and D) who responded

**Table 3**  
Numbers of permit purchasers and active hunters among respondents by mailing wave, region, sample and group

Wave of mailing	Region	Group receiving reminder				Group not receiving reminder			
		A	B&D	E	Total	A	B&D	E	Total
Wave 1 Respondents with hunting permits	Maritimes	329	1380	26	1735	186	871	17	1074
	Quebec	113	863	19	995	93	578	11	682
	Ontario	126	1088	225	1439	80	714	186	980
	Prairies	466	2047	174	2687	353	1375	144	1872
	BC	73	481	13	567	42	291	8	341
	Territories	126	79	—	205	95	50	—	145
	Total	1233	5938	457	7628	849	3879	366	5094
Respondents reporting hunting activity	Maritimes	223	1120	25	1368	123	726	17	866
	Quebec	79	748	18	845	58	483	11	552
	Ontario	93	862	196	1151	52	580	161	793
	Prairies	379	1742	168	2289	267	1188	139	1594
	BC	53	390	6	449	29	240	6	275
	Territories	80	52	—	132	66	33	—	99
	Total	907	4914	413	6234	595	3250	334	4179
Wave 2 Respondents with hunting permits	Maritimes	114	513	4	631	115	503	7	625
	Quebec	57	258	4	319	67	300	4	371
	Ontario	55	360	65	480	67	377	67	511
	Prairies	150	621	26	797	207	667	53	927
	BC	10	110	2	122	21	130	5	156
	Territories	60	28	—	88	57	27	—	84
	Total	446	1890	101	2437	534	2004	136	2674
Both waves respondents reporting hunting activity	Maritimes	63	358	3	424	72	353	7	432
	Quebec	33	191	2	226	40	216	4	260
	Ontario	39	269	56	364	38	283	58	379
	Prairies	111	461	24	596	139	543	46	728
	BC	3	84	2	89	12	99	3	114
	Territories	31	13	—	44	35	15	—	50
	Total	280	1376	87	1743	336	1509	118	1963

to wave 1 and were in the postcard reminder group reported significantly different kills from those in the control group. This difference tended to be less apparent as samples were combined, and was not significant for the total sample (A, B, D and E).

Comparison of the estimates of mean duck kill per successful hunter (corresponding to samples B and D) for the two hunter groups showed little difference in magnitude; thus the decision whether or not to use a postcard reminder will have little effect on a season's total estimate of duck kill.

**Summary of reported hunting activity**

This survey shows no evidence that hunters who re-

ceived the postcard reminder responded differently to the activity and success questions on the questionnaire than did the control group of hunters. The proportions of hunters from the two groups who reported on hunting participation and success were the same. The estimates of mean duck kill per active hunter for the two hunter groups were not significantly different. The estimates of mean duck kill per successful hunter were significantly different in some instances but not overall.

**Cost of survey**

Table 8 contains a comparison of the two hunter groups based on the cost of the ordinary survey versus that of

**Table 4**  
Percent of permit purchasers who reported hunting activity

Wave of mailing	Region	Group receiving reminder				Group not receiving reminder			
		A	B&D	E	Total	A	B&D	E	Total
Wave 1	Maritimes	67.8	81.2	96.2	78.9	66.1	83.4	100.0	80.6
	Quebec	69.9	86.7	94.7	84.9*	62.4	83.6	100.0	80.9
	Ontario	73.8	79.2	87.1	80.0	65.0	81.2	86.6	80.9
	Prairies	81.3	85.1	96.6	85.2	75.6	86.4	96.5	85.2
	BC	72.6	81.1	46.2	79.2	69.1	82.5	75.0	80.7
	Territories	63.5	65.8	—	64.4	69.5	66.0	—	68.3
	Total	73.6	82.8	90.4	81.7	70.1	83.8	91.3	82.0
Wave 2	Maritimes	55.3	69.8	75.0	67.2	62.6	70.2	100.0	69.1
	Quebec	57.9	74.0	50.0	70.9	59.7	72.0	100.0	70.1
	Ontario	70.9	74.7	86.2	75.8	56.7	75.1	86.6	74.2
	Prairies	74.0	74.2*	92.3	74.8	67.2	81.4	86.8	78.5
	BC	30.0	76.4	100.0	73.0	57.1	76.2	60.0	73.1
	Territories	51.7	46.4	—	50.0	61.4	55.6	—	59.5
	Total	62.8	72.8	86.1	71.5	62.9	75.3	86.8	73.4
Survey total (after 2 waves)	Maritimes	64.6	78.1	93.3	75.7	64.8	78.5	100.0	76.4
	Quebec	65.9	83.8	87.0	81.5	61.3	79.6	100.0	77.1
	Ontario	72.9	78.1	86.9	79.0	61.2	79.1	86.6	78.6
	Prairies	79.6	82.6	96.0	82.8	72.5	84.8	93.9	83.0
	BC	67.5	80.2	53.3	78.1	65.1	80.5	69.2	78.3
	Territories	59.7	60.8	—	60.1	66.5	62.3	—	65.1
Total	70.7	80.4	89.6	79.3	67.3	80.9	90.0	79.1	

\*P<0.05.

the survey plus the postcard reminder. Survey costs are based on the amount paid (a) to print questionnaires, labels, window envelopes, postage, etc., as itemized in Table 9, and (b) for personnel to stuff and label outgoing material. For the survey as a whole, approximately the same number of questionnaires were returned per dollar invested for both groups of hunters (Table 8). After the first wave of the survey, even though the response rate was higher for hunters who received a postcard reminder, the cost per response was also higher. For the second wave, however, the trend was reversed probably due to the catalytic effect of the reminder mentioned above.

A postcard reminder with only one wave produced almost the same overall response rate (42.3%) as two waves without a reminder (44.8%) (Table 2) and could be considered as an alternative to the latter procedure. From Table 8 it is seen that the cost per return was about the same.

**Summary**

The effect of the postcard reminder sent to hunters shortly after the first wave of the NHS was to increase

the response rate to the two-wave survey by about 27% above that of a control group of hunters who received no reminder. The quality of response by hunters who received the reminder was no different from that of the hunters who did not; reported activity, success and numbers of ducks killed by the two groups were not significantly different. The above two results were basically the same for both experienced and inexperienced hunters residing in Canada. The postcard reminder produced similar results for non-resident hunters, although the increase in response was only 18%. The cost of conducting the survey per questionnaire returned was about the same for the hunters receiving postcard reminders as for the control group.

**Conclusion**

The addition of postcard reminders immediately after the first wave greatly increased the overall response to the survey without changing the quality of the response. The resulting enlarged sample will increase the reliability and usefulness of estimates derived from the sample data. The total survey will then be more useful,

**Table 5**  
Number of hunters reporting hunting success in response to both first and second waves of mailing

Wave of mailing	Region	Group receiving reminder				Group not receiving reminder			
		A	B&D	E	Total	A	B&D	E	Total
Wave 1	Maritimes	140	911	24	1075	83	588	17	688
	Quebec	60	679	18	757	44	445	11	500
	Ontario	60	682	169	911	30	465	146	641
	Prairies	308	1511	160	1979	211	1030	129	1370
	BC	42	357	6	405	23	319	6	248
	Territories	67	42	—	109	54	30	—	84
	Total	677	4182	377	5236	445	2777	309	3531
Wave 2	Maritimes	37	292	2	331	38	286	6	330
	Quebec	19	174	2	195	32	192	4	228
	Ontario	25	216	43	284	27	216	49	292
	Prairies	87	398	24	509	100	471	44	615
	BC	3	76	1	80	11	92	3	106
	Territories	24	12	—	36	26	13	—	39
	Total	195	1168	72	1435	234	1270	106	1610

**Table 6**  
Percent of permit purchasers who reported success

Wave of mailing	Region	Group receiving reminder				Group not receiving reminder			
		A	B&D	E	Total	A	B&D	E	Total
Wave 1	Maritimes	42.6	66.0	92.3	62.0	44.6	67.5	100.0	64.1
	Quebec	53.1	78.7	94.7	76.1	47.3	77.0	100.0	73.3
	Ontario	47.6	62.7	75.1	63.3	37.5	65.1	78.5	65.4
	Prairies	66.1	73.8	92.0	73.7	59.8	74.9	89.6	73.2
	BC	57.5	74.2	46.2	71.4	54.8	75.3	75.0	72.7
	Territories	53.2	53.2	—	53.2	56.8	60.0	—	57.9
	Total	54.9	70.4	82.5	68.6	52.4	71.6	84.4	69.3
Wave 2	Maritimes	32.5	56.9	50.0	52.5	33.0	56.9	85.7	52.8
	Quebec	33.3	67.4	50.0	61.1	47.8	64.0	100.0	61.5
	Ontario	45.5	60.0	66.2	59.2	40.3	57.3	73.1	57.1
	Prairies	58.0	64.1*	92.3	63.9	48.3	70.6	83.0	66.3
	BC	30.0	69.1	50.0	65.6	52.4	70.8	60.0	68.0
	Territories	40.0	42.9	—	40.9	45.6	48.2	—	46.4
	Total	43.7	61.8	71.3	58.9	43.8	63.4	77.9	60.2
Survey total (after 2 waves)	Maritimes	40.0	63.6	86.7	59.4	40.2	63.6	95.8	59.9
	Quebec	46.5	76.1	87.0	72.5	47.5	72.6	100.0	69.1
	Ontario	47.0	62.0	73.1	62.3	38.8	62.4	77.1	62.6
	Prairies	64.1	71.6	92.0	71.4	55.5	73.5	87.8	70.9
	BC	54.2	73.3	46.7	70.4	54.0	73.9	69.2	71.2
	Territories	48.9	50.5	—	49.5	52.6	55.8	—	53.7
Total	51.9	68.3	80.5	66.3	49.1	68.8	82.7	66.2	

\*P < 0.05.

**Table 7**  
Estimated mean kill per active and successful hunter

Wave of mailing	Hunter sample	Mean duck kill/active hunter		Mean duck kill/successful hunter	
		Reminder	Control	Reminder	Control
1	A	5.7	4.9	7.8	6.6
2		5.6	5.5	8.1	7.9
Total		5.7	5.1	7.9	7.0
1	B&D	10.6	10.3	12.6*	12.1
2		9.6	10.3	11.5	12.3
Total		10.4	10.3	12.3	12.2
1	A&B&D	9.8	9.5	11.9*	11.3
2		8.9	9.4	11.0	11.6
Total		9.7	9.4	11.7*	11.5
1	E	10.8	11.3	12.0	12.4
2		9.4	9.7	11.4	11.0
Total		10.6	10.9	11.9	10.9
1	A&B&D&E (total)	9.9	9.6	11.9	11.5
2		9.0	9.4	11.0	11.5
Total		9.7	9.6	11.7	11.5

\*Indicates a significant difference between postcard reminder and control groups using Wilcoxon signed rank test,  $P < 0.05$ .

**Table 8**  
Survey costs and returns per dollar invested

Mailing wave	Hunter group	Quest. mailed	Cost/quest. (¢)	Cost (\$)	Quest. returned	Returns/\$
Wave 1	Reminder	22 531	42.36*	9 544	9 529	1.00
	Control	22 484	26.29	5 911	6 480	1.10
Wave 2	Reminder	13 003	25.76	3 350	3 288	0.98
	Control	16 004	25.76	4 123	3 600	0.87
Both	Reminder	45 015	—	12 894	12 817	0.99
	Control	38 488	—	10 034	10 080	1.00

\*Includes postcard reminder.

especially with the growing importance of data for small geographic areas. The balance between survey cost and effectiveness is a difficult one to reach, but the use of a postcard reminder is a relatively inexpensive step (compared to, say, another wave of questionnaires) towards that balance.

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**Table 9**  
Costs of personnel and materials

Items	Ind. cost (¢)
<b>Materials</b>	
Duck questionnaire wave 1	2.43
Goose questionnaire	1.50
Window envelope	0.92
Return envelope	0.74
Labels	0.30
Postage	14.00
Reminder card	0.80
Reminder card postage	14.00
<b>Personnel</b>	
Label and stuff questionnaire package (4 persons can process 2 500 packages/day @ \$40/person-day)	6.40
Label postcard reminders (4 persons can process 12 500 postcards/day)	1.28
Cost of sending 1 questionnaire package in 1st wave	26.29
Cost of sending 1 questionnaire package in 2nd wave	25.76
Cost of sending 1 postcard reminder	16.08

