Survey on the Importance of Nature to Canadians in 1996

Microdata User Guide

Special Surveys Division

??? 1999

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1.0 Introduction

The Survey on the Importance of Nature to Canadians in 1996 was conducted by Statistics Canada between the months of February and June 1997 with the cooperation and support of Environment Canada and 14 other federal, provincial and territorial partners. This manual has been produced to facilitate the manipulation of the microdata file of the survey results.

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2.0 Background

The Survey on the Importance of Nature to Canadians (the Nature Survey) is the result of a partnership of 16 federal, provincial and territorial government agencies responsible for wildlife, water, forestry, tourism, and parks and protected areas. The 1996 survey was designed to update and enhance information from surveys co-sponsored by similar partnerships in 1981, 1987 and 1991 under the name 'Survey on the Importance of Wildlife to Canadians'. The Nature Survey included questions similar to those in previous surveys on wildlife related activities and recreational fishing. It was expanded to include a new set of questions on outdoor activities in natural areas such as camping and boating, among others. The survey questionnaire was carefully designed to avoid double-counting of the same days, trips and dollars by distinguishing main and secondary reasons for participation in an activity.

A new dimension was introduced by including questions on the locations at which various nature-related activities took place. This will allow new policy and program needs to be met by enabling analyses of results by regions of interest to survey partners, such as ecozones, drainage basins, and sub-provincial management regions, among many others.

For an overview of the key findings of the survey and a guide to comparing results with those from previous surveys, the reader can consult the report untitled The Importance of Nature to Canadians: Survey highlights (1999) , published by Environment Canada and available at www.ec.gc.ca/nature/survey.htm.

3.0 Objectives

The objectives of the Survey on the Importance of Nature to Canadians were to:

- measure the social and economic importance of nature to Canadians by collecting information on nature-related activities, including activities such as viewing, studying and photographing nature, camping, and various nature-related sports such as hiking, boating, hunting and fishing

- provide basic, accurate and reliable data on nature-related activities that are homogenous across provincial/territorial boundaries

- with the help of the information from the survey, develop programs for the protection and sustainable use of the natural environment.

4.0
Concepts and Definitions

This chapter outlines concepts and definitions of interest to users of information from this microdata file. Users are referred to Chapter 12 of this document for a copy of the actual survey questions used.

Accommodation expenses: Includes costs of campgrounds, cabins, lodges, hotels, motels, resorts, etc.

Days: This refers to the number of days spent on an activity. One day is defined as all or any part of a calendar day (24 hours or less).

Equipment expenses: Includes equipment that was personally purchased for a given activity in Canada in 1996, such as:

- general outdoor equipment (cameras and accessories, recording equipment, binoculars, bikes, camping gear, special clothing, footwear, luggage, backpacks, etc.)
- skiing (skis, ski boots, ski clothing, other ski equipment, etc.)
- snowmobiling (snowmobiles, snowmobiling clothing, other snowmobiling equipment, etc.)
- hunting (guns and accessories, game carriers, calls, dogs, decoys, etc.)
- fishing (rods, reels, other fishing equipment, etc.)
- boats/Motors (boats, canoes, kayaks, sailboats, boat motors, etc.)
- vehicles (trucks, campers, Rvs/motorhomes, ATVs, etc.)
- any other equipment

Fish: Fish found in fresh and salt water (lakes, rivers, streams, oceans or other natural water bodies); for example, salmon, cod, trout, walleye, perch, pike, smelt, etc.

Food expenses: Includes food and beverages bought at stores and restaurants.

Forested areas: Large landscape of trees (woodlands) and smaller concentrations of trees in rural and urban areas.

Hunting Searching for, pursuing, stalking, trailing or lying in wait for game which may or may not be harvested. In the survey, hunting taking place as the main activity is distinguished from hunting that takes place as a secondary activity on trips taken for outdoor activities in natural areas.

Indirect nature-related activity An activity that allows the participant to experience nature indirectly. Indirect nature-related activity includes reading about nature, watching films or television programs about nature, purchasing art, crafts or posters of nature, visiting zoos, game farms, aquariums or natural history museums,

joining or contributing to naturalist, conversation or sportsmen's clubs and maintaining, restoring or purchasing land for conservation.

Industry and Occupation: The Labour Force Survey provides information about the occupation and industry attachment of employed persons. These statistics are based on the 1980 Standard Occupational Classification and the 1980 Standard Industrial Classification.

Large mammal: Deer, bear, cougar, moose, mountain sheep, caribou, seals, whales, etc.

Location: The place at which a participant took part in nature-related activities. Participants were asked to name the province, nearest city, town or village and distance from their residence of the major locations for their nature-related activities.

Natural areas: Areas at which outdoor activities take place. Natural areas include forests, water bodies, wetlands, open fields and other areas.

Nature-related activity: A recreational activity that includes, in some form, either direct or indirect contact with nature. Outdoor activity in natural areas, residential wildlife-related activity, wildlife viewing, recreational fishing, hunting, and indirect nature-related activity are included in this category.

Open land: Cultivated fields, grasslands, prairies.

Other birds: Birds other the waterfowl such as robins, sparrows, warblers, hawks, owls, grouse, partridge, pheasants, etc.

Other items expenses: Includes recreation and entertainment costs (licenses, entry fees, guide fees, etc.), retail purchases (souvenirs, books, magazines, film, and photographic services, equipment rental and repairs, batteries, etc.) And special items for hunting (ammunition, dog maintenance) or fishing (bait, tackle, line, etc.).

Other types of areas: Scrubland, desert, caves, cliffs, mountains, etc.

Other Wildlife: All remaining wildlife not covered in the other definitions such as butterflies, frogs, snakes, lizards, etc.

Outdoor activity in natural areas: One or more of 17 specified recreational activities that take place on trips to natural areas such as forests, water bodies, wetlands, open fields and other areas such as scrub lands and caves. Types of outdoor activities included are: sightseeing in natural areas, photographing natural areas, gathering nuts, berries or firewood, picnicking, camping, swimming/beach activity, canoeing/kayaking/sailing, power boating, hiking/backpacking, climbing, horse-back riding, cycling, off-road vehicle use, downhill skiing, cross-country skiing/snowshoeing, snowmobiling and relaxing in an outdoor setting.

Overnight trip: Refers to an occurrence when the respondent left his residence for a given activity and spent at least one night away from home.

Recreational fishing: Catching or attempting to catch fish for non-commercial purposes. In the survey, recreational fishing takes place as the main activity on trips is

distinguished from fishing as a secondary activity on trips taken for outdoor activities in natural areas.

residential wildlife-related activities: Activities that take place around the residence, and involve watching, photographing, feeding or studying wildlife, or maintaining shrubs, plants or birdhouses for wildlife.

same-day trip: Refers to an occurrence when the respondent left his residence for a given activity and returned on the same day.

small mammals: Rabbits, squirrels, raccoons, foxes, groundhogs, beavers and other fur-bearers

transportation expenses: Includes costs to operate private vehicles (gas and repairs of autos, private boats, planes, RVs, etc.), vehicle rental (rental and insurance costs for autos, boats, trucks, RVs, etc.), local transportation (including taxis, city buses, etc.), fares for air planes, boats, trains and buses.

water bodies: Freshwater lakes, rivers and streams, the Pacific, Atlantic and Arctic Oceans.

waterfowl: Ducks, geese, herons, cranes, etc.

wetland: Marshes, swamps, potholes, bogs, etc.

wildlife: Wild birds and other wild animals. The five types of wildlife include waterfowl, other wild birds, small and large mammals and other wildlife in a natural environment. It does not include pets or other domesticated animals, animals in zoos or game farms.

wildlife viewing: Watching, photographing, feeding, or studying wildlife on trips taken for the purpose of enjoying wildlife and natural areas. Wildlife encounters on trips taken for purposes such as vacation or business are excluded from the definition. In the survey, wildlife viewing taking place as the main activity on trips is distinguished from wildlife viewing that takes place as a secondary activity on trips taken for outdoor activities in natural areas.

5.0
Survey Methodology

The Survey on the Importance of Nature to Canadians was administered to a sub-sample of the dwellings that were in the Labour Force Survey (LFS) sample in the months of February, March and April 1997. As a result, the sample design is closely tied to that of the LFS. The LFS design is described in Chapters 5.1 through 5.5, while Chapter 5.6 indicates how the basic LFS design was modified for the Nature survey.

5.1 Population Coverage

The LFS is a monthly household survey whose sample of individuals is representative of the civilian, non-institutionalized population 15 years of age or older in Canada's ten provinces, as well as the organized communities of the Yukon territory. Specifically excluded from the survey's coverage are residents of the Yukon outside of organized communities, residents of the Northwest Territories, persons living on Indian Reserves, full-time members of the Canadian Armed Forces and inmates of institutions. These groups together represent an exclusion of less than 2% of the population aged 15 or over.

5.2 Sample Design

The LFS has undergone an extensive redesign, culminating in the introduction of a new design at the end of 1994. The sample is based upon a stratified, multi-stage design employing probability sampling at all stages of the design. The design principles are the same for each province. A diagram summarizing the design stages appears in Chapter 5.2.6.

5.2.1 Primary Stratification

Provinces are divided into both economic regions (ERs) and employment insurance economic regions (EIERs). Economic regions are geographic areas of more or less homogeneous economic structure formed on the basis of federal provincial agreements. They are relatively stable over time. Employment insurance economic regions (EIERs) are also geographic areas, and are roughly the same size and number as ERs, but they do not share the

[1] Since 1992, the LFS has been administered in the Yukon, using an alternative methodology that accommodates some of the operational difficulties inherent to remote locales. To improve reliability due to small sample size, estimates are available on a three month average basis only. These estimates are not included in national totals for the LFS.

same definitions. Labour force estimates are produced for the EIER regions for the use of Human Resources Development Canada.

The intersections of the two types of regions form the first level of stratification for the LFS. These ER/EIER intersections are treated as primary strata and secondary stratification is carried out within them.

5.2.2

Types of Areas

Within the large primary strata, more detailed strata are formed without regard to geographical constraints. However, this stratification is dependent upon other characteristics. For this purpose, the LFS frame may be divided into rural areas, larger cities (of population 50,000+), and smaller urban areas.

There is one additional component of the frame. Approximately 1% of the LFS population is found in remote areas of provinces which are less accessible to LFS interviewers than other areas. For administrative purposes, this portion of the population is sampled separately through the remote area frame.

5.2.3

Secondary Stratification

In larger cities with sufficiently large numbers of apartment buildings, the strata are subdivided into apartment frames and area frames. The apartment list frame is a register which is based upon information supplied by Canadian Mortgage and Housing Corporation (CMHC) and is maintained for the 17 largest cities across Canada. The purpose of this is to ensure better representation of apartment dwellers in the sample as well as to minimize the effect of sample growth resulting from construction of new apartment buildings. In the major cities, the apartment strata are further stratified into low income strata and regular strata. In some cases, regular apartment strata are further subdivided according to apartment size.

Where it is possible and/or necessary, the larger city area frame is further stratified into regular and high income strata. Most urban areas fall into the regular urban strata, which, in fact, cover the majority of Canada's population. The introduction of high income strata is expected to make the representation of high income households more stable over time, and will aid in the collection of earnings information with the new LFS questionnaire.

In smaller urban areas, two stratification methods are applied. For most, EAs are grouped to form strata. For the very smallest urban areas (mostly those

[2]Some populations, not congregated in places of 25 or more people, are excluded from the sampling frame.

areas classified as self-representing in the old design) the stratification used is identical to that of the old design.

Within rural areas, further stratification is carried out, where necessary, in order to reflect the differences among a number of socio-economic characteristics.

5.2.4

Cluster Delineation and Selection

Within each strata, households are not selected directly. Instead, each stratum is divided into clusters, and then a sample of clusters is selected within the stratum. Dwellings are then sampled from selected clusters. Different methods are used to define the clusters, depending on the type of stratum.

In the largest urban areas, city blocks or block faces in the area frame are combined to produce clusters of 150 to 200 dwellings, on average. For apartment strata, instead of defining clusters, the apartment building is the primary sampling unit. In other urban areas where EAs are grouped to form strata, EAs are also used as clusters. For those smallest urban areas where strata are taken from the old design, so are the clusters. These clusters are also composed of block faces. For urban areas, Census Enumeration Areas (EAs) are usually used as clusters.

Apartment buildings are sampled from the large urban apartment list frame systematically with probability proportional to the number of units in each building.

5.2.5

Dwelling Selection

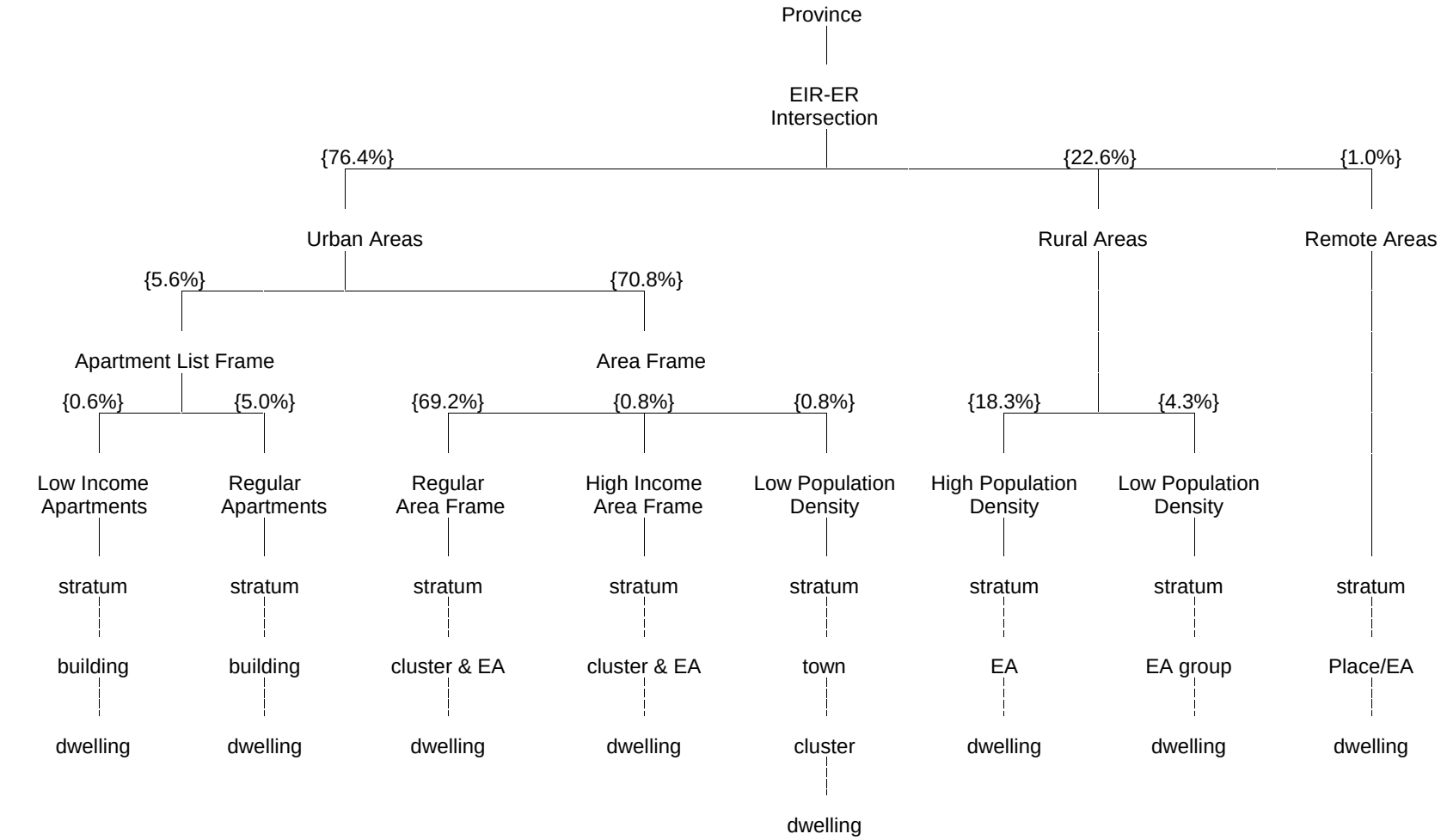
In all areas, selected clusters are first visited by enumerators in the field and a listing of all private dwellings in the cluster is prepared. From the listing, the final stage of sampling, a systematic sample of dwellings, is performed. The sample yield depends on the type of stratum. For example, in the large urban area frame, sample yields are either 4, 6, or 8 dwellings. In the large urban apartment frame, each cluster yields 5 dwellings, in the smaller urban areas, each cluster yields 3 dwellings, and in rural clusters, usually 10 dwellings are chosen.

5.2.6

Person Selection

Demographic information is obtained for all persons for whom the selected dwelling is the usual place of residence. LFS information is obtained for all civilian household members 15 years of age or older. Response burden is minimized for the elderly (70 years of age or older) by carrying forward their responses for the initial interview to the subsequent five months in the survey.

Labour Force Survey Sample Design - 1995+



= level of stratification

= stage of sampling

EIR - Employment Insurance Region
ER - Economic Region
{%} - percentage of total sample

EA - Census Enumeration Area
cluster - set of block faces

5.3 Sample Size

The sample size of the LFS is determined so as to meet the statistical precision requirements for various labour force characteristics at the provincial and sub-provincial level, and to meet the requirements of federal, provincial and municipal governments as well as a host of other data users.

The monthly LFS sample consists of approximately 59,000 dwellings. After excluding dwellings found to be vacant, dwellings demolished or converted to non-residential uses, dwellings containing only ineligible persons, dwellings under construction, and seasonal dwellings, about 52,350 dwellings remain which are occupied by one or more eligible persons. From these dwellings, LFS information is obtained for approximately 102,000 civilians aged 15 or over.

5.4 Sample Rotation

The LFS employs a panel design whereby the entire monthly sample of dwellings consists of 6 panels, or rotation groups, of approximately equal size. Each of these panels is, by itself, representative of the entire LFS population. All dwellings in a rotation group remain in the LFS sample for 6 consecutive months after which time they are replaced (rotated out of the sample) by a new panel of dwellings selected from the same or similar clusters.

This rotation pattern was adopted to minimize any problems of non-response or respondent burden that would occur if households were to remain in the sample for longer than 6 months. It also has the statistical advantage of providing a common sample base for short-term month-to-month comparisons of LFS characteristics, since five of the six rotation groups in the LFS sample are common from month to month.

Because of the rotation group feature, it is possible to readily conduct supplementary surveys using the LFS design, but employing less than the full size sample.

5.5 LFS Sample Design in the Yukon

The current LFS design for the Yukon differs quite markedly from the LFS design for the ten provinces. The regular LFS consists of six rotation groups rotating on a monthly basis, with one rotation group being replaced each month. The objective in the Yukon is to provide three-month moving averages of the main labour force characteristics. Thus, in the Yukon LFS, the rotation groups rotate quarterly, or every three months. Households are

interviewed eight times before rotating out of the sample; once every three months over a two-year period.

Four primary strata are created from the major urban centres. Within the largest strata, the city of Whitehorse, further stratification is carried out by grouping EAs, and then clusters are formed within these strata. In the other strata, the design is even simpler. Entire communities are selected, and then dwellings selected systematically from within these.

The total quarterly sample for the Yukon LFS is about 670 households. However, realized sample tend to be significantly smaller owing to the high vacancy rates found in the Yukon communities.

5.6 Modifications to the LFS design for the Nature Survey

The Nature Survey used five of the six rotation groups in the February 1997 provincial LFS sample, and all eight of the rotation groups in the February/March/April 1997 Yukon sample. All members 15 years old and over of responding LFS households were mailed the Nature Survey questionnaire.

5.7 Sample Size by Province for the Nature Survey

The following table shows the number of persons in the LFS sampled rotations who were eligible for the Nature Survey.

PROVINCE	SAMPLE SIZE
Newfoundland	3,595
Prince Edward Island	2,325
Nova Scotia	5,715
New Brunswick	5,558
Quebec	16,960
Ontario	26,025
Manitoba	6,088
Saskatchewan	5,128
Alberta	6,524
British Columbia	7,789
Yukon	1,244
CANADA	86,951

6.0
Data Collection

The Survey on the Importance of Nature to Canadians was carried out as a supplement to the Labour Force Survey (LFS). The LFS data collection methodology is described in Chapters 6.1 through 6.3, while Chapter 6.4 describes how the LFS methodology was modified for use in the Nature Survey.

6.1 Interviewing for the LFS

Data collection for the LFS is carried out each month using the computer-assisted method during the week following the LFS reference week, usually the third week of the month.

Statistics Canada interviewers, who are part-time employees hired and trained specifically to carry out the LFS, contact each of the sampled dwellings to obtain the required labour force information. Each interviewer contacts approximately 70 dwellings per month.

Dwellings new to the sample are contacted through a personal visit. The interviewer first obtains socio-demographic information for each household member and then obtains labour force information for all eligible members. All interviews are conducted using a notebook computer. Provided there is a telephone in the dwelling and permission has been granted, subsequent interviews are conducted by telephone. As a result, approximately 85% of all dwellings are interviewed by telephone. In these subsequent monthly interviews, as they are called, the interviewer confirms the socio-demographic information collected in the first month and collects the labour force information for the current month.

In all dwellings, information about all household members is obtained from a knowledgeable household member - usually the person at home when the interviewer calls. Such 'proxy' reporting, which accounts for approximately 55% of the information collected, is used to avoid the high cost and extended time requirements that would be involved in repeat visits or calls necessary to obtain information directly from each respondent.

At the conclusion of the LFS monthly interviews, interviewers introduce the supplementary survey(s), if any, to be administered to some or all household members that month.

If, during the course of the six months that a dwelling normally remains in the sample, an entire household moves out and is replaced by a new household, information is obtained about the new household for the remainder of the six-month period.

6.2

Supervision and Control

All LFS interviewers are under the supervision of a staff of senior interviewers who are responsible for ensuring that interviewers are familiar with the concepts and procedures of the LFS and its many supplementary surveys, and also for periodically monitoring their interviewers and reviewing their completed documents. The senior interviewers are, in turn, under the supervision of the LFS program managers, located in each of the six Statistics Canada regional offices.

6.3

Non-Response to the LFS

Interviewers are instructed to make all reasonable attempts to obtain LFS interviews with members of eligible households. For individuals who at first refuse to participate in the LFS, a letter is sent from the Regional Office to the dwelling address stressing the importance of the survey and the household's cooperation. This is followed by a second call (or visit) from the interviewer. For cases in which the timing of the interviewer's call (or visit) is inconvenient, an appointment is arranged to call back at a more convenient time. For cases in which there is no one home, numerous call backs are made. Under no circumstances are sampled dwellings replaced by other dwellings for reasons of non-response.

Each month, after all attempts to obtain interviews have been made, a small number of non-responding households remain. For households non-responding to the LFS and for which LFS information was obtained in the previous month, this information is brought forward and used as the current month's LFS information. No supplementary survey information is collected for these households.

6.4

Data Collection Modifications for the Nature Survey

The Nature Survey was conducted as a supplement to the February 1997 LFS, but not at the same time as the LFS interview. What follows describes how the LFS data collection methodology was modified for use in the Nature Survey.

6.4.1

Questionnaire Design and Testing

The design of the Nature Survey questionnaire was formulated by Statistics Canada and a Federal-Provincial-Territorial Task Force representing survey

sponsors. It is an update and enhancement of the questionnaire for the 1991 Survey on the Importance of Wildlife to Canadians.[3] An outline of the structure and content of the Nature Survey questionnaire is provided below, followed by a description of the testing of the survey instrument in focus groups. The final questionnaire is included in Chapter 13.

Before beginning the questionnaire, respondents were instructed to answer a number of screening questions to make sure they did not report the same days, trips and dollars in more than one section of the questionnaire. They were also provided with important definitions needed to answer the questions. The questions covered participation in nature-related activities in the calendar year 1996.

Section A of the questionnaire contained questions aimed at all respondents. The questions dealt with participation in indirect nature-related activities (questions A1), interest in participating in nature-related activities (question A2), involvement in nature-related organizations and associated expenditures on membership and donations (questions A3-A4), and the maintenance of land for conservation and associated costs (questions A5-A6).

Section B of the questionnaire (questions B1-B15) dealt with outdoor activities in natural areas in Canada. Respondents were asked to complete this section only if they had taken trips during 1996 for the main reason of participating in one or more of 17 specified outdoor activities.[4] Included were questions on same-day and overnight trip taken, days spent in province/territory and outside, the money spent on these activities, and additional amounts of money they would have been willing to spend before deciding not to participate (consumer surplus). Then respondents were asked to identify up to four locations at which they participated in these outdoor activities. For each location visited they were asked to specify: the province or territory, the nearest city town or village, the name of any park or protected area at this location, the distance of the location from home, the number of same-day and overnight trips taken to the location, the days spent at the location, and the mix of 17 specified outdoor activities in which they participated on their visits. Respondents were also asked to indicate if fish

[3] The questionnaire for the 1996 Nature Survey included questions similar in many respect to those used in the 1981, 1987 and 1991 Wildlife Survey. For example, question wording in the sections on Trips Taken to Watch, Feed, Photograph or Study Wildlife, Fishing for Recreation, Hunting waterfowl, Other Birds, Small Mammals and Large Mammals, and other sections in the two surveys may appear to be very similar. However, as a result of changes and enhancements made to the 1996 questionnaire, differences between the 1996 and the previous surveys may be due in part to changes in the questionnaire and not necessarily to actual increases or decline in participation in those activities over time. Guidelines for taking these and other changes and enhancements to the questionnaire into account when making comparisons are provided in the report, "The Importance of Nature to Canadians: Survey Highlights" cited in section 2.

[4] The 17 specified outdoor activities were: sightseeing in natural areas, photographing natural areas, gathering nuts, berries or firewood, picnicking, camping, swimming/beach activity, canoeing/kayaking/sailing, power boating, hiking/backpacking, climbing, horseback riding, cycling, off-road vehicle use, downhill skiing, cross-country skiing/snowshoeing, snowmobiling, and relaxing in an outdoor setting

and wildlife related activities were secondary reasons for their trips to the location.

Section C contained questions relevant to wildlife viewing on trips in Canada. Respondents were asked to complete this section only if they had taken trips during 1996 for the main reason of watching, feeding, photographing, or studying wildlife (wildlife viewing as a secondary reason fro trips was covered in section B). Questions in section C covered the types of wildlife viewing pursued and the types of wildlife encountered, trips, days, dollars, and consumer surplus. Respondents were also asked to provide location information of up to three locations visited for these activities, in a similar manner as described for section B.

Section D covered wildlife-related activities that occurred around the respondent's residence, and included questions on types of activities, types of wildlife encountered, days spent, and expenditures on these activities.

Section E covered trips taken for recreational fishing in Canada. Respondents were asked to complete this section only if they had taken trips during 1996 for the main reason of fishing for recreation (recreational fishing as a secondary reason for trips was covered in section B). Section E included questions on the incidence of catching fish on trips, the number of same-day and overnight trips taken, the number of days spent fishing in freshwater, the Atlantic Ocean and the Pacific Ocean, and the participant's expenditures and consumer surplus. Respondents were also asked to provide information for up to three locations they had visited, in a similar manner as described for section B.

Section F of the questionnaire examined the nature and characteristics of hunting and hunters. Respondents were asked to complete this section if they had hunted during 1996(hunting as a secondary activity on trips for outdoor activities was covered in section B). In addition to several questions on hunting in general (questions F1-F3), section F included detailed questions fro 4 major types of wildlife - waterfowl, other birds, small mammals, and large mammals (questions F4-F16). For each type of wildlife, questions covered the number of hunting trips taken and the days spent hunting, success rates, expenditures for hunting, and the additional amounts of money they would have been willing to spend before deciding not to participate (consumer surplus). Respondents were asked to provide location information fro up to two location for each type of hunting, in a similar manner as described for section B.

Section G introduced the topic of travel to the United States fro fish and wildlife activities, including watching, feeding, photographing or studying wildlife, and recreational fishing. These questions were added to the survey to enable comparison with a similar survey by the United States Fish and Wildlife Service which asked Americans about fish and wildlife-related trips taken to Canada in 1996.

The questionnaire concluded with a question on personal income. Other socio-demographic information was collected through the Labour Force Survey, such as sex, age group, and occupation, and was therefore already available for the respondents to the Nature Survey.

The Nature Survey questionnaire was tested extensively in a series of 10 focus groups in locations across Canada in August and November 1996. The focus group testing was aimed at ensuring that respondents from different walks of life and different parts of the country would understand the questions, and that response categories were sufficiently comprehensive. The testing also assessed the questionnaire layout, the flow of questions, and the length of the survey. Following the testing, the final questionnaire was prepared for the mailout.

6.4.2

Advance Collection of Socio-demographic Information

Socio-demographic information for Nature Survey respondents was available as a result of their participation in the Labour Force Survey.

As part of the LFS operation, the interviewer first obtains demographic information for each household member and then obtains labour force information for all eligible members. In the subsequent monthly interviews, the interviewer confirms the demographic information collected in the first month and collects the labour force information for the current month.

In all dwellings, this socio-demographic information about all household members is obtained from a knowledgeable household member, usually the person at home when the interviewer calls.

6.4.3

Pre-notification contact

Interviewers for the February 1997 LFS were instructed to introduce the Survey on the Importance of Nature to Canadians immediately after they had completed the LFS interview. The purpose of this introduction was to inform potential respondents that they would receive a survey questionnaire by mail, describe its coverage of nature-related activities and how the information would be used, and request them to complete and mail back the questionnaire quickly.

6.4.4

Mailout of Questionnaires

Questionnaires were prepared for mailing in the six Statistics Canada regional offices just prior to the LFS week of March 1997. Labels identifying the individuals 15 years of age and over in the Nature Survey sample were produced and attached to the questionnaires. Respondents were asked to complete the questionnaires as soon as possible upon receipt and mail them back in the postage-paid return envelopes supplied.

6.4.5

Telephone follow-ups

Incoming questionnaires were monitored using an automated "log-in" system. An identification number for each individual was included on the questionnaire label. Returned questionnaires were logged into the regional office computer using this number. Each questionnaire was first examined to determine whether it was fully or partially completed, or if the respondent had indicated a refusal to participate in the survey. They were then coded accordingly and were logged in. Questionnaires returned blank by the respondent, or returned by the Post Office as undeliverable were not logged-in and were set aside. They became eligible for follow-up.

Prior to the first follow-up, interviewers received an Outstanding Report which identified all respondents from whom a completed questionnaire had not been received, including those who had returned blank questionnaires and those returned as undeliverable by the Post Office. The first follow-up was conducted by telephone from the regional offices in April 1997, three weeks after the initial mail-out. Interviewers were instructed to try to establish whether the person believed they had already returned the questionnaire. If the person did not recall receiving the questionnaire, the interviewer verified the mailing address and sent a replacement questionnaire.

Given the lower than expected rate of return after the initial mail-out and the first follow-up (less than 30%), the decision was made to combine the planned second and third follow-ups and start completing questionnaire over the telephone using procedures similar to the first follow up. The objective of the second follow-up in May and June 1997 then became to reach the 70% completion rate target for each regional offices. Questionnaires in the queue for follow-up were randomized electronically by household to ensure that follow-ups would be conducted proportionally for all provinces and within province (e.g. the Halifax office would not complete interviews only for New Brunswick or the Vancouver office would not complete interviews only for the western part of the province).

6.5

Response to the Nature Survey

In total, 86,951 people were eligible for the Nature Survey and 61,348 questionnaire were completed for a response rate of 70.6%. After the data processing steps described in Chapter 7.2, 60,789 completed and usable questionnaires (69.9%) were used in further processing. This consisted of 28,580 useable questionnaire that were completed by telephone and 32,209 useable completed questionnaire that were received by mail. More detailed information on response rates is presented in Chapter 8 (Data Quality).

7.0
Data Processing

One of the outputs of the Nature Survey is a "clean" microdata file, which consists of the records of responses to the survey. This Chapter presents a brief summary of the processing steps involved in producing this file.

7.1 Data Capture

Capture of the survey data was done in each Statistics Canada regional office using Xterminals connected to a server. All questionnaires coded as fully completed or partially completed after a summary review were captured. Part of each data entry operator's workload was re-captured as part of a quality control program. An unedited version of the computer record was electronically transmitted to Statistics Canada's head office in Ottawa for further processing. In total, 61,348 questionnaires were captured and transmitted for the survey.

7.2 Editing

The first stage of survey processing undertaken at head office was the pre-edit. In this first edit, duplicate questionnaires for individuals were eliminated. All blank values on each record were recoded to 9's. Some answer categories were also recoded to more standard values (e.g. all 'yes' answers were coded to '1', etc.). This process was designed to make further editing easier.

A computer edit of all survey records was then conducted to ensure data quality and completeness and to eliminate extreme expenditures (outliers). The first type of edit ensured that a minimum number of questions that applied to the respondent had been answered for each record. The number of useable records after this step was 60,789.

The second type of edit detected errors in questionnaire flow within a section where questions which did not apply to the respondent (and should therefore not have been answered) were found to contain answers. In this case, the edit followed the flow of the questionnaire implied by answers to previous, and in some cases, subsequent questions. In these situations, the data was replaced by the codes ending in 6 such as 96, 996 (valid skip), depending on the length of the field.

The third type of edit identified records with a lack of information in questions which should have been answered. For this type of error, the non-response or "not-stated" code assigned in pre-edit was retained (codes ending in 9 such as 9, 99, 999, depending on the number of spaces for the field).

The fourth type of edit flagged records with extreme values of expenditures reported on the questionnaire. The 'outlier' values were examined in relationship to other variables (days spent, consumer surplus, personal income). The high values were retained on the record if the values on these other variables were also high, otherwise the high expenditure value was replaced by a 'not stated' code. A total of only 14 records were affected by the latter procedure.

7.3 Coding of Open-ended Questions

The Nature Survey included a series of questions on locations where nature-related activities took place, including province/territory, nearest city/town/village, and distance from the residence. This location information was geocoded into a 7 digit Standard Geographical Classification (SGC) code representing Province/Territory (2), Census Division (2), and Census Sub-division (3). The SGC and corresponding latitude and longitude were added to the Master file. They are not part of the Public Use Microdata File (PUMF) for confidentiality reasons. In all, information for 71,773 reported destinations was coded this way. The park or protected area information, or the name of the state visited listed in section G of the questionnaire was not coded and is also not included on the PUMF.

No other open-ended questions were included in the survey

7.4 Automated Imputing of Item Non-response on Selected Variables

Item non-response occurs when questionnaires are returned with some parts incomplete. The extent of item non-response is not a serious problem throughout the Nature Survey questionnaire in general, usually less than 10 percent for most questions. Close-ended questions (e.g., question A3) which could be answered by using a simple check-mark fared considerably better than the open-ended questions requiring more detailed answers on the subject (e.g., question A4). Questions dealing with amounts such as expenditures or days were more susceptible to item non-response than others.

An automated imputation procedure was implemented through the use of a computer edit which randomly imputed a value in cases of item non-response while respecting the distribution pattern of the data within each question. Donors and recipients were grouped into strata and a value was imputed randomly based on various percentile values from the donor records in each stratum. Using this method, the mean imputed value is roughly equal to the mean donor value, although this is not true for every question. The procedure was thoroughly tested on survey data before implementation. Both the original variables with non-response codes and the imputed variables (in the form of derived variables) were included on the data file.

Items that were included in the imputation process include: days, trips, expenditures, and consumer surplus. Other types of items such as participation in a specific activity or location information were not imputed for when missing. They were simply coded as 'not stated'.

7.5 Creation of Derived Variables

In order to facilitate data analysis, a number of the original variables on the data file were recoded into derived variables. The first type of derived variable (Type 1) was designed to create the imputed variables described in Chapter 7.4. Both the original variable and the corresponding imputed variable are included on the data file. For example, question D4 is the original variable for days spent on residential wildlife related activities, and DV45 is the corresponding imputed variable.

Type 2 derived variables were designed to group several variables into a single new variable. For example, a derived variable (DV3) was created to identify respondents who answered yes to any of the four indirect wildlife-related activities in Question A1 in order to permit computation of the number of participants in any indirect nature-related activity.

Type 3 derived variables summed total days, total expenditures, or total consumer surplus for a group of questions. For example, a derived variable (DV152) was created to calculate total expenditures on recreational fishing trips from the 5 categories in question E5.

Finally, type 4 derived variables create indexes (in percentages) of the degree of interest in participating in specific activities. For example, a derived variable (DV19) was created using the information from question A2A to produce the index of interest in joining or contributing to a naturalist, conservation or sportsman's club.

7.6 Preparing the Public Use Microdata file

The final step in data processing was to prepare a data file for survey sponsors and other users of the results. The record layout for the microdata file is shown in Chapter 13. It includes all of the original variables as well as the derived variables. Imputed variables are identified as such (see, for example, DV25 in the record layout).

The "microdata file" differs from the "master data file" held by Statistics Canada as a result of actions taken to protect the anonymity of individual survey respondents. These actions are detailed in this Chapter.

7.6.1

Assessment of Disclosure Risk with Retained Variables

The microdata file was screened to identify records which could possibly present risks for the confidentiality of some respondents. Responses which were felt to present a confidentiality risk were suppressed on the public microdata file.

Table 2. Suppressions

Variable	# of Suppressions
Household size	81
Age group	377
Gender	0
Marital status	210
Highest level of education	105
Labour force status	32
Industry	698
Occupation	1,147
Usual weekly earnings, rounded	958
Personal income, grouped	176
Total	3,777

7.6.2

Other Variables Suppressed on the PUMF

Detailed information was collected on the locations where respondents took part in their nature-related activities. In four sections of the questionnaire (Outdoor activities in natural areas; Trips taken to watch, feed, photograph or study wildlife; Fishing for recreation; Hunting), the name of the province or the territory, the name of the closest city, town or village and the name of the park or protected area where the activity took place were collected. With the exception of the province/territory code, all of this information was suppressed on the PUMF.

The other variables available on the microdata file that were suppressed on the PUMF are:

- The language in which the questionnaire/interview was completed
- The name of the city, town or village of residence
- The Postal Code of residence
- The respondent's exact age

7.6.3

Variables collapsed on the PUMF

Some information that could be crucial to future analysis was preserved in the PUMF but was collapsed to show less detail and thus reduce the risks of disclosure. The created collapsed variables are:

- CMA: The Census Metropolitan Area variable was collapsed to include only the 3 largest CMAs (i.e Montreal, Toronto and Vancouver).

- Age: The age of individual respondents on the file was collapsed into 13 age groups. This variable is identical to the one on the 1991 survey file (refer to the record layout in Chapter 13).

- Amount spent to maintain, restore or purchase land (Question A6):

  This variable was collapsed into the following three groups, as per the 1991 file -

  $000000 - $099999
  $100000 or more
  999999 - answer not specified

7.6.4

Variables Capped on the PUMF

A number of variables on the file were capped to eliminate outliers and by the same token reduce the risk of disclosure. During processing of the survey data, an outlier edit was first run to look at various expenditures reported in the questionnaire in relation to particularities of the different nature-related activities the respondent took part in and to the reported annual income. All amounts of expenditures that were flagged as outliers in this process were suppressed and later imputed for. The other variables that were capped are:

- Household size: This variable was capped at '5 or more'.

- Days participating in nature or wildlife related activities:

This variable was capped at 365 days, as per the 1991 survey. Derived variables created to impute missing days values were treated the same way. Derived variables summing days from various activities were recalculated accordingly.

- Distance traveled: This is the distance traveled from the place of residence to the destination on nature-related trips as reported by the respondent. It was capped at 5,000 kilometers.

Expenditures Even after running the outlier edit, the largest 10 amounts for each category reportedwere top coded. They were capped to the average of the largest 10 amounts to preserve comparability of estimates of expenditures between the master file and the PUMF. Derived variables created to impute missing expenditure values were treated the same way. Derived variables summing expenditures from various activities were recalculated accordingly.

Note: **The complete information on survey respondents is available on the Statistics Canada's master data file. Users requiring access to information excluded from the PUMF may purchase custom tabulations which will consist of aggregate totals. Estimates generated will be released to the user, subject to meeting the guidelines for release.**

7.7 Weighting

The principle behind estimation in a probability sample such as the LFS is that each person in the sample "represents," besides himself or herself, several other persons not in the sample. For example, in a simple random sample of 2% of the population, each person in the sample represents 50 persons in the population.

The weighting phase is a step which calculates, for each record, what this number is. This weight appears on the microdata file (variable name = WEIGHT), and must be used to derive meaningful estimates from the survey. For example, if the number of people who took trips for outdoor activities in 1996 is to be estimated, it is done by selecting the records referring to the people in the sample with that characteristic and summing the weights of those records.

Details of the method used to calculate these weights are presented in Chapter 11.

8.0
Data Quality

The response rates for the Nature Survey and the Labour Force Survey from which its sample was adopted are reported in this Chapter. The Chapter also outlines steps taken to reduce non-sampling error, and describes a measure of sampling error recommended foe use with the Nature Survey microdata file

8.1 Response Rates

The following table summarizes the response rates to the Labour Force Survey and to the Nature Survey.

	Household response rate for full LFS (02, 97) (*1)	Household response rate for LFS rotations eligible for the Nature Survey (*1)	Person level response rate to the Nature Survey (*2)
Newfoundland	97.0%	97.5%	69.9%
Prince Edward Island	97.3%	97.4%	66.7%
Nova Scotia	94.6%	95.1%	72.0%
New Brunswick	96.2%	96.8%	64.4%
Quebec	94.0%	94.7%	70.3%
Ontario	94.3%	95.3%	70.9%
Manitoba	96.5%	96.9%	73.1%
Saskatchewan	95.5%	96.0%	70.2%
Alberta	94.8%	95.5%	72.2%
British Columbia	94.3%	94.9%	71.4%
Yukon	92.6%	92.6%	72.0%
CANADA	94.8%	95.5%	70.6%

Note:

(*1) Response rate is number of responding households as a percentage of number of eligible households. The rates for the Yukon include households for February, March and April.

(*2) Response rate is number of persons responding to the Nature Survey as a percentage of number of persons responding to LFS in sampled rotations.

8.2 Sampling and Non-sampling Errors

The estimates derived from this survey are based on a sample of persons. Somewhat different figures might have been obtained if a complete census had been taken using the same questionnaire, interviewers, supervisors, processing methods, etc. as those actually used. The difference between the estimates obtained from the sample and the results from a complete count taken under similar conditions is called the sampling error of the estimate.

Errors which are not related to sampling may occur at almost every phase of a survey operation. Interviewers may misunderstand instructions, respondents may make errors in answering questions, the answers may be incorrectly entered on the questionnaire and errors may be introduced in the processing and tabulation of the data. These are all examples of non-sampling errors.

8.2.1

Non-response

Over a large number of observations, randomly occurring errors will have little effect on estimates derived from the survey. However, errors occurring systematically will contribute to biases in the survey estimates.

As described in Chapters 6 and 7, considerable time and effort was made to reduce non-sampling errors in the survey. Quality assurance measures were implemented at each step of the data collection and processing cycle to monitor the quality of the data. These measures included pre-testing of the survey questionnaire to ensure clarity and comprehension, the use of highly skilled interviewers for interviews conducted over the telephone, extensive training of interviewers with respect to the survey procedures and questionnaire, procedures to ensure that data capture errors were minimized and coding and edit quality checks to verify the processing logic.

A major source of non-sampling errors in surveys is the effect of non-response on the survey results. The extent of non-response varies from partial non-response (failure to answer just one or some questions) to total non-response. Total non-response was handled by adjusting the weight of households who responded to the survey to compensate for those who did not respond.

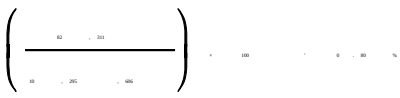
In most cases, partial non-response to the survey occurred when the respondent did not understand or misinterpreted a question, refused to

answer a question, or could not recall the requested information. Chapter 7 describes steps taken in data processing to handle partial non-response

Since it is an unavoidable fact that estimates from a sample survey are subject to sampling error, sound statistical practice calls for researchers to provide users with some indication of the magnitude of this sampling error. This Chapter introduces the measure of sampling error which Statistics Canada commonly uses and which it urges users producing estimates from this microdata file to use also.

The basis for measuring the potential size of sampling errors is the standard error of the estimates derived from survey results. However, because of the large variety of estimates that can be produced from a survey, the standard error of an estimate is usually expressed relative to the estimate to which it pertains. This resulting measure, known as the coefficient of variation (CV) of an estimate, is obtained by dividing the standard error of the estimate by the estimate itself and is expressed as a percentage of the estimate.

For example, suppose that, based upon the survey results, one estimates that 10,295,606 Canadians took a trip to participate in outdoor activities during 1996, and this estimate is found to have a standard error of 82,311. Then the coefficient of variation of the estimate is calculated as:



Further guidance in using coefficients of variation with the Nature Survey microdata is provided in Chapters 9 and 10.

8.2.2

Data Collection

Because the Nature Survey was a supplement to the LFS, the frame employed was the LFS frame, and the quality of the sampling variables in the frame was very high. However, the Nature Survey also excluded non-respondents of the LFS. Because non-response to the LFS is quite low (usually less than 5%) the impact was minimal.

Note that the LFS frame, and thus that of the Nature Survey, excludes about 2% of all people in Canada (see Chapter 5.1). It is likely that this exclusion introduces little, if any, significant bias into the survey data.

8.2.3

Non-response

A number of steps were taken during data collection to reduce non-sampling errors, as described below. A bit more than half the questionnaires completed for the survey were self-completed by respondents and mailed back to Statistics Canada.

The questionnaire contained detailed instructions on how it was to be completed. Instructions on the type of information to include were also provided in on the questionnaire. A detailed Procedures Manual was developed to assist the Regional Office staff in their duties. It contained detailed instructions on how to assess whether a questionnaire met the minimum data requirements and how to conduct telephone follow-ups of non-respondents.

Almost half the questionnaires were completed over the telephone by Statistics Canada interviewers. The training for these interviewers consisted of reviewing the Nature Survey questionnaire and reading an Interviewers Manual which contained definitions of relevant concepts and a questions and answers section. Senior interviewers were also available to answer any questions the interviewers might have.

9.0 Guidelines for Tabulation, Analysis and Release

This Chapter outlines guidelines for users tabulating, analysing, publishing or otherwise releasing any data derived from the survey microdata file. With the aid of these guidelines, users of the microdata file should be able to produce the same figures as those produced by Statistics Canada and, at the same time, will be able to develop currently unpublished figures in a manner consistent with these established guidelines.

9.1 Rounding Guidelines

In order that estimates for publication or other release derived from the microdata file correspond to those produced by Statistics Canada, users are urged to adhere to the following guidelines regarding the rounding of such estimates:

a) Estimates in the main body of a statistical table are to be rounded to the nearest hundred units using the normal rounding technique. In normal rounding, if the first or only digit to be dropped is 0 to 4, the last digit to be retained is not changed. If the first or only digit to be dropped is 5 to 9, the last digit to be retained is raised by one. For example, in normal rounding to the nearest 100, if the last two digits are between 00 and 49, they are changed to 00 and the preceding digit (the hundreds digit) is left unchanged. If the last digits are between 50 and 99 they are changed to 00 and the preceding digit is incremented by 1.

b) Marginal subtotals and totals in statistical tables are to be derived from their corresponding unrounded components and then are to be rounded themselves to the nearest 100 units using normal rounding.

c) Averages, proportions, rates and percentages are to be computed from unrounded components (i.e., numerators and/or denominators) and then are to be rounded themselves to one decimal using normal rounding. In normal rounding to a single digit, if the final or only digit to be dropped is 0 to 4, the last digit to be retained is not changed. If the first or only digit to be

dropped is 5 to 9, the last digit to be retained is increased by 1.

d) Sums and differences of aggregates (or ratios) are to be derived from their corresponding unrounded components and then are to be rounded themselves to the nearest 100 units (or the nearest one decimal) using normal rounding.

e) In instances where, due to technical or other limitations, a rounding technique other than normal rounding is used resulting in estimates to be published or otherwise released which differ from corresponding estimates published by Statistics Canada, users are urged to note the reason for such differences in the publication or release document(s).

f) Under no circumstances are unrounded estimates to be published or otherwise released by users. Unrounded estimates imply greater precision than actually exists.

9.2 Sample Weighting Guidelines for Tabulation

The sample design used for the Nature Survey was not self-weighting. When producing simple estimates, including the production of ordinary statistical tables, users must apply the proper sampling weight (variable name = WEIGHT).

If proper weights are not used, the estimates derived from the microdata file cannot be considered to be representative of the survey population, and will not correspond to those produced by Statistics Canada.

Users should also note that some software packages may not allow the generation of estimates that exactly match those available from Statistics Canada, because of their treatment of the weight field.

9.2.1

Definitions of types of estimates: Categorical vs. Quantitative

Before discussing how the Nature Survey data can be tabulated and analysed, it is useful to describe the two main types of point estimates of population characteristics which can be generated from the Nature Survey microdata file.

Categorical Estimates

Categorical estimates are estimates of the number, or percentage of the surveyed population possessing certain characteristics or falling into some defined category. The number of people who went on trips for outdoor activities during 1996, or the proportion of Ontario residents who went on a recreational fishing trip during 1996 are examples of such estimates. An estimate of the number of persons possessing a certain characteristic may also be referred to as an estimate of an aggregate.

Examples of Categorical Questions:

Q: During 1996, did you belong or contribute to any naturalist, conservation or sportsmen' clubs?
R: Yes or No

Q: In which of the following activities did you participate around your residence (Mark all that apply)?
R: Purchasing or putting out special feed for wildlife; Watching wildlife; Studying or identifying different types of wildlife; Maintaining plants, shrubs or birdhouses to attract feed or shelter wildlife; Photographing wildlife

Quantitative Estimates

Quantitative estimates are estimates of totals or of means, medians and other measures of central tendency of quantities based upon some or all of the members of the surveyed population. They also specifically involve estimates of the form X/Y where X is an estimate of surveyed population quantity total and Y is an estimate of the number of persons in the surveyed population contributing to that total quantity.

An example of a quantitative estimate is the average amount of money spent on transportation during trips for outdoor activities during 1996. The numerator is an estimate of the total amount of money spent on transportation during trips on outdoor activities 1996, and its denominator is the number of persons reporting such trips.

Examples of Quantitative Questions:

Q: What was the total amount of money you personally spent for these trips to participate in outdoor activities in Canada in 1996?

R:

Transportation	$ |___|.00
Accommodation	$ |___|.00
Food	$ |___|.00
Equipment used primarily for outdoor activities in natural areas	$ |___|.00
Other items	$ |___|.00

Q: Enter the number of days you spent fishing for recreation in Canada in 1996 beside the water body where you fished.

R: Freshwater lakes, rivers, streams |_|_| Days
Pacific Ocean |_|_| Days
Atlantic Ocean |_|_| Days

9.2.2

Tabulation of Categorical Estimates

Estimates of the number of people with a certain characteristic can be obtained from the microdata file by summing the final weights of all records possessing the characteristic(s) of interest. Proportions and ratios of the form X/Y are obtained by:

(a) summing the final weights of records having the characteristic of interest for the numerator (X),
(b) summing the final weights of records having the characteristic of interest for the denominator (Y), then
© dividing the numerator estimate by the denominator estimate.

9.2.3

Tabulation of Quantitative Estimates

Estimates of quantities can be obtained from the microdata file by multiplying the value of the variable of interest by the final weight for each record, then summing this quantity over all records of interest. For example, to obtain an estimate of the total amount of money spent on transportation during fishing trips during 1996, multiply the reported amount of money spent by the final weight for the record, then sum this value over all records which report fishing trips.

To obtain a weighted average of the form X/Y, the numerator (X) is calculated as for a quantitative estimate and the denominator (Y) is calculated as for a categorical estimate. For example, to estimate the average amount of money spent on transportation for fishing trips during 1996,

(a) estimate the total spending as described above,
(b) estimate the number of people in this category by summing the final weights of all records which report a fishing trip, then
© divide estimate (a) by estimate (b).

The Nature Survey is based upon a complex sample design, with stratification, multiple stages of selection, and unequal probabilities of selection of respondents. Using data from such complex surveys presents problems to analysts because the survey design and the selection probabilities affect the estimation and variance calculation procedures that should be used. In order for survey estimates and analyses to be free from bias, the survey weights must be used.

While many analysis procedures found in statistical packages allow weights to be used, the meaning or definition of the weight in these procedures differ from that which is appropriate in a sample survey framework, with the result that while in many cases the estimates produced by the packages are correct, the variances that are calculated are poor. Variances for simple estimates such as totals, proportions and ratios (for qualitative variables) are provided in the accompanying Sampling Variability Tables.

For other analysis techniques (for example linear regression, logistic regression and analysis of variance), a method exists which can make the variances calculated by the standard packages more meaningful, by incorporating the unequal probabilities of selection. The method re-scales the weights so that there is an average weight of 1.

For example, suppose that analysis of all male respondents is required. The steps to re-scale the weights are as follows:

- select all respondents from the file who reported SEX=male
- Calculate the AVERAGE weight for these records by summing the original person weights from the microdata file for these records and then dividing by the number of respondents who reported SEX=male
- for each of these respondents, calculate a RE-SCALED weight equal to the original person weight divided by the AVERAGE weight
- perform the analysis for these respondents using the RE-SCALED weight.

However, because the stratification and clustering of the sample's design are still not taken into account, the variance estimates calculated in this way are likely to be underestimates.

The calculation of truly meaningful variance estimates requires detailed knowledge of the design of the survey. Such detail cannot be given in this microdata file because of confidentiality. Variances that take the complete sample design into account can be calculated for many statistics by Statistics Canada on a cost recovery basis.

9.4

CV Release Guidelines

Before releasing and/or publishing any estimate from the Nature Survey, users should first determine the quality level of the estimate. The quality levels are acceptable, marginal and unacceptable. Data quality is affected by both sampling and non-sampling errors as discussed in Chapter 8. However for this purpose, the quality level of an estimate will be determined only on the basis of sampling error as reflected by the coefficient of variation as shown in the table below. Nonetheless, users should be sure to read Chapter 8 to be more fully aware of the quality characteristics of these data.

First, the number of respondents who contribute to the calculation of the estimate should be determined. If this number is less than 30, the weighted estimate should be considered to be of unacceptable quality.

For weighted estimates based on sample sizes of 30 or more, users should determine the coefficient of variation of the estimate and follow the guidelines below. These quality level guidelines should be applied to weighted rounded estimates.

All estimates can be considered releasable. However, those of marginal or unacceptable quality level must be accompanied by a warning to caution subsequent users.

Quality Level Guidelines

Quality Level of Estimate	Guidelines
1. Acceptable	Estimates have: a sample size of 30 or more, and low coefficients of variation in the range 0.0% - 16.5% No warning is required.
2. Marginal	Estimates have: a sample size of 30 or more, and high coefficients of variation in the range 16.6% - 33.3%. Estimates should be flagged with the letter M (or some similar identifier). They should be accompanied by a warning to caution subsequent users about the high levels of error, associated with the estimates.
3. Unacceptable	Estimates have: a sample size of less than 30, or very high coefficients of variation in excess of 33.3%. Statistics Canada recommends not to release estimates of unacceptable quality. However, if the user chooses to do so then estimates should be flagged with the letter U (or some similar identifier) and the following warning should accompany the estimates: "The user is advised that . . . (specify the data) . . . do not meet Statistics Canada's quality standards for this statistical program. Conclusions based on these data will be unreliable, and most likely invalid. These data and any consequent findings should not be published. If the user chooses to publish these data or findings, then this disclaimer must be published with the data."

10.0 Approximate Sampling Variability Tables

In order to supply coefficients of variation which would be applicable to a wide variety of categorical estimates produced from this microdata file and which could be readily accessed by the user, a set of Approximate Sampling Variability Tables has been produced (see Chapter 10.6). These "look up" tables allow the user to obtain an approximate coefficient of variation based on the size of the estimate calculated from the survey data.

The coefficients of variation (CV) are derived using the variance formula for simple random sampling and incorporating a factor which reflects the multistage, clustered nature of the sample design. This factor, known as the design effect, was determined by first calculating design effects for a wide range of characteristics and then choosing from among these a conservative value to be used in the lockup tables which would then apply to the entire set of characteristics.

The table below shows the design effects, sample sizes, and population counts used to produce the Approximate Sampling Variability Tables.

PROVINCE	DESIGN EFFECT	SAMPLE SIZE	POPULATION
Newfoundland	1.35	2,501	451,484
Prince Edward Island	1.23	1,518	107,084
Nova Scotia	1.43	4,068	739,719
New Brunswick	1.26	3,541	602,062
Quebec	1.67	11,857	5,907,431
Ontario	1.48	18,311	8,926,822
Manitoba	1.27	4,414	859,240
Saskatchewan	1.19	3,556	757,640
Alberta	1.14	4,670	2,137,410
British Columbia	1.22	5,448	3,073,883
Yukon	1.31	905	19,741
Canada	1.42	60,789	23,582,516

All coefficients of variation in the Approximate Sampling Variability Tables are approximate and, therefore, unofficial. Estimates of actual variance for specific variables may be obtained from Statistics Canada on a cost-recovery basis. The use of actual variance estimates would allow users to release otherwise unreleasable estimates, i.e., estimates with coefficients of variation in the 'confidential' range.

Remember: if the number of observations on which an estimate is based is less than 30, the weighted estimate should not be released regardless of the value of the coefficient of variation for this estimate. This is because the formulas used for estimating the variance do not hold true for small sample sizes.

10.1 How to use the C.V. tables for Categorical Estimates

The following rules should enable the user to determine the approximate coefficients of variation from the Sampling Variability Tables for estimates of the number, proportion or percentage of the surveyed population possessing a certain characteristic and for ratios and differences between such estimates.

Rule 1: Estimates of Numbers Possessing a Characteristic (Aggregates)

The coefficient of variation depends only on the size of the estimate itself. On the Sampling Variability Table for the appropriate geographic area, locate the estimated number in the leftmost column of the table (headed "Numerator of Percentage") and follow the asterisks (if any) across to the first figure encountered. This figure is the approximate coefficient of variation.

Rule 2: Estimates of Proportions or Percentages Possessing a Characteristic

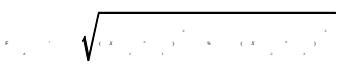
The coefficient of variation of an estimated proportion or percentage depends on both the size of the proportion or percentage and the size of the total upon which the proportion or percentage is based. Estimated proportions or percentages are relatively more reliable than the corresponding estimates of the numerator of the proportion or percentage, when the proportion or percentage is based upon a subgroup of the population. For example, the proportion of "female 24 year old who took a trip for outdoor activities during 1996" is more reliable than the estimated number of "female 24 year old who took a trip for outdoor activities during 1996." (Note that in the tables the CV's decline in value reading from left to right)

When the proportion or percentage is based upon the total population of the geographic area covered by the table, the CV of the proportion or percentage is the same as the CV of the numerator of the proportion or percentage. In this case, Rule 1 can be used.

When the proportion or percentage is based upon a subset of the total population (e.g., those in a particular sex or age group), reference should be made to the proportion or percentage (across the top of the table) and to the numerator of the proportion or percentage (down the left side of the table). The intersection of the appropriate row and column gives the coefficient of variation.

Rule 3: Estimates of Differences Between Aggregates or Percentages

The standard error of a difference between two estimates is approximately equal to the square root of the sum of squares of each standard error considered separately. That is, the standard error of a difference (d = . - X) is:

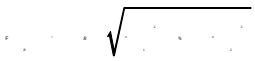


where . is estimate 1, X is estimate 2, and . and . are the coefficients of variation of . and X respectively. The coefficient of variation of d is given by ./d. This formula is accurate for the difference between separate and uncorrelated characteristics, but is only approximate otherwise.

Rule 4: Estimates of Ratios

In the case where the numerator is a subset of the denominator, the ratio should be converted to a percentage and Rule 2 applied. This would apply, for example, to the case where the denominator is the number of “people who took trips for outdoor activities during 1996” and the numerator is the number of "people who took trips for outdoor activities during 1996 that included fishing.”

In the case where the numerator is not a subset of the denominator, as for example, the ratio of the number of "people in Quebec who took trips fro outdoor activities during 1996" as compared to the number of "people in Ontario who took trips for outdoor activities during 1996", the standard deviation of the ratio of the estimates is approximately equal to the square root of the sum of squares of each coefficient of variation considered separately multiplied by R. That is, the standard error of a ratio (R = / X) is:



where and are the coefficients of variation of and X respectively. The coefficient of variation of R is given by /R. The formula will tend to overstate the error, if and X are positively correlated and understate the error if and X are negatively correlated.

Rule 5: Estimates of Differences of Ratios

In this case, Rules 3 and 4 are combined. The CV's for the two ratios are first determined using Rule 4, and then the CV of their difference is found using Rule 3.

10.1.1

Examples of using the C.V. tables for Categorical Estimates

The following 'real life' examples are included to assist users in applying the foregoing rules.

Example 1: Estimates of Numbers Possessing a Characteristic (Aggregates)

Suppose that a user estimates that 10,295,606 people took trips for outdoor activities during 1996. How does the user determine the coefficient of variation of this estimate?

(1) Refer to the CV table for CANADA.

(2) The estimated aggregate (10,295,606) does not appear in the left-hand column (the 'Numerator of Percentage' column), so it is necessary to use the figure closest to it, namely 10,000,000.

(3) The coefficient of variation for an estimated aggregate is found by referring to the first non asterisk entry on that row, namely, 0.5%.

(4) So the approximate coefficient of variation of the estimate is 0.5%.

The finding that there were 10,295,606 people who took trips for outdoor activities during 1996 is publishable with no qualifications.

Example 2: Estimates of Proportions or Percentages Possessing a Characteristic

Suppose that the user estimates that 7,338,232 / 10,295,606 = 71.3% of people who took trips for outdoor activities, did sightseeing on these trips. How does the user determine the coefficient of variation of this estimate?

(1) Refer to the table for CANADA.

(2) Because the estimate is a percentage which is based on a subset of the total population (i.e., people who took trips for outdoor activities during 1996), it is necessary to use both the percentage (71.3%) and the numerator portion of the percentage (7,338,232) in determining the coefficient of variation.

(3) The numerator, 7,338,232, does not appear in the left-hand column (the 'Numerator of Percentage' column) so it is necessary to use the figure closest to it, namely 7,000,000. Similarly, the percentage estimate does not appear as any of the column headings, so it is necessary to use the figure closest to it, 70%.

(4) The figure at the intersection of the row and column used, namely 0.5% is the coefficient of variation to be used.

(5) So the approximate coefficient of variation of the estimate is 0.5%. The finding that 71.3% of people who took trips for outdoor activities during 1996, went sightseeing on these trips, can be published with no qualifications.

Example 3: Estimates of Differences Between Aggregates or Percentages

Suppose that a user estimates that of people in Quebec 2,281,390 / 5,907,431 =38.6% reported going on a trip for outdoor activities during 1996, while 3,878,151 / 8,926,822 = 43.4% of people in Ontario reported this. How does the user determine the coefficient of variation of the difference between these two estimates?

(1) Using the QUEBEC and ONTARIO CV table in the same manner as described in example 1 gives the CV of the estimate for people in Quebec as 1.6%, and the CV of the estimate for people in Ontario as 0.9%.

(2) Using rule 3, the standard error of a difference (d = . - X) is:

where . is estimate 1, X is estimate 2, and . and .. are the coefficients of variation of . and X respectively.

That is, the standard error of the difference d = (43.4% -38.6%) = 4.8% is:

(3) The coefficient of variation of d is given by ./d = 0.7/ 4.8 = 14.5

(4) So the approximate coefficient of variation of the difference between the estimates is 14.5%. This estimate is publishable with no qualifications.

Example 4: Estimates of Ratios

Suppose that the user estimates that 2,281,390 people in Quebec reported going on a trip for outdoor activities during 1996, while 3,878,151 people in Ontario reported this. The user is interested in comparing the estimate of Quebec people versus that of Ontario people in the form of a ratio. How does the user determine the coefficient of variation of this estimate?

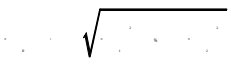
(1) First of all, this estimate is a ratio estimate, where the numerator of the estimate (=) is the number of people in Quebec who reported a trip for outdoor activities during 1996. The denominator of the estimate (= X) is the number of people in Ontario which reported this.

(2) Refer to the tables for QUEBEC and ONTARIO.

(3) The numerator of this ratio estimate is 2,281,390. The figure closest to it is 2,000,000. The coefficient of variation for this estimate is found by referring to the first non-asterisk entry on that row in the QUEBEC table, namely, 1.6%.

(4) The denominator of this ratio estimate is 3,878,151. The figure closest to it is 4,000,000. The coefficient of variation for this estimate is found by referring to the first non-asterisk entry on that row in the ONTARIO table, namely, 0.9%.

(5) So the approximate coefficient of variation of the ratio estimate is given by rule 4, which is,



w here and are the coefficients of variation of and X respectively.

That is,

The obtained ratio of Quebec versus Ontario people who took trips for outdoor activities during 1996 is 2,281,390 / 3,878,151 - which is 0.59:1. The coefficient of variation of this estimate is 1.8%, which is releasable with no qualifications.

10.2 How to use the CV tables to obtain Confidence Limits

Although coefficients of variation are widely used, a more intuitively meaningful measure of sampling error is the confidence interval of an estimate. A confidence interval constitutes a statement on the level of confidence that the true value for the population lies within a specified range of values. For example a 95% confidence interval can be described as follows:

If sampling of the population is repeated, each sample leading to a new confidence interval for an estimate, then in 95% of the samples the interval will cover the true population value.

Using the standard error of an estimate, confidence intervals for estimates may be obtained under the assumption that under repeated sampling of the population, the various estimates obtained for a population characteristic are normally distributed about the true population value. Under this assumption, the chances are about 68 out of 100 that the difference between a sample estimate and the true population value would be less than one standard error, about 95 out of 100 that the difference would be less than two standard errors, and about 99 out of 100 that the differences would be less than three standard errors. These different degrees of confidence are referred to as the confidence levels.

Confidence intervals for an estimate, X, are generally expressed as two numbers, one below the estimate and one above the estimate, as (X-k, X+k) where k is determined depending upon the level of confidence desired and the sampling error of the estimate.

Confidence intervals for an estimate can be calculated directly from the Approximate Sampling Variability Tables by first determining from the appropriate table the coefficient of variation of the estimate X, and then using the following formula to convert to a confidence interval CI:

where is the determined coefficient of variation of X, and

t = 1 if a 68% confidence interval is desired
t = 1.6 if a 90% confidence interval is desired
t = 2 if a 95% confidence interval is desired
t = 3 if a 99% confidence interval is desired.

Note: Release guidelines which apply to the estimate also apply to the confidence interval. For example, if the estimate is not releasable, then the confidence interval is not releasable either.

10.2.1

Example of using the CV tables to obtain confidence limits

A 95% confidence interval for the proportion of people who, during their trips for outdoor activities during 1996, went sightseeing (from Example 2, Chapter 10.2) would be calculated as follows.

X = 71.3%

t = 2

= 0.5% is the coefficient of variation of this estimate as determined from the tables.

CI = {.713 - (2) (.713) (.005), .713 + (2) (.713) (.005)}

CI = {.713 - .007, .713 + .007}

CI = {.706, .720}

With 95% confidence it can be said that between 70.6% and 72.0% of people who took a trip for outdoor activities during 1996, did sightseeing on these trips.

10.3 How to use the CV tables to do a t-test

Standard errors may also be used to perform hypothesis testing, a procedure for distinguishing between population parameters using sample estimates. The sample estimates can be numbers, averages, percentages, ratios, etc. Tests may be performed at various levels of significance, where a level of significance is the probability of concluding that the characteristics are different when, in fact, they are identical.

Let and X be sample estimates for two characteristics of interest. Let the standard error on the difference - X be .

If is between -2 and 2, then no conclusion

about the difference between the characteristics is justified at the 5% level of significance. If however, this ratio is smaller than -2 or larger than +2, the observed difference is significant at the 0.05 level. That is to say that the characteristics are significant.

10.3.1

Example of using the CV tables to do a t-test

Let us suppose we wish to test, at a 5% level of significance, the hypothesis that there is no difference between the proportion of people in Quebec which reported going on a trip for outdoor activities during 1996, and the proportion of people in Ontario who reported doing so. From example 3, Chapter 10.2, the standard error of the difference between these two estimates was found to be 0.7%. Hence,

Since t = 6.86 is greater than 2, it must be concluded that there is a significant difference between the two estimates at the 0.05 level of significance.

10.4 Coefficients of Variation for Quantitative Estimates

For quantitative estimates, special tables would have to be produced to determine their sampling error. Since there a large number of such variables for the Nature Survey, this has not been done.

As a general rule, however, the coefficient of variation of a quantitative total will be larger than the coefficient of variation of the corresponding categorical estimate (i.e., the estimate of the number of persons contributing to the quantitative estimate). If the corresponding categorical estimate is not releasable, the quantitative estimate will not be either. For example, the coefficient of variation of the total amount of money spent by people on wildlife and nature-related trips during 1996, would be greater than the coefficient of variation of the number of people who took wildlife and nature-related trips during 1996. Hence, if the coefficient of variation of the categorical estimate is not releasable, then the coefficient of variation of the corresponding quantitative estimate will also not be releasable.

Coefficients of variation of such estimates can be derived as required for a specific estimate using a technique known as pseudo replication. This involves dividing the records on the microdata files into subgroups (or replicates) and determining the variation in the estimate from replicate to replicate. Users wishing to derive coefficients of variation for quantitative estimates may contact Statistics Canada for advice on the allocation of records to appropriate replicates and the formulae to be used in these calculations.

10.5 Release cut-off's for the Nature Survey

The minimum size of the estimate at the provincial, regional and Canada levels are specified in the table below. Estimates smaller than the minimum size given in the "Not Releasable" column may not be released under any circumstances.

Table of Release Cutoffs

PROVINCE	Acceptable	Marginal	Unacceptable
Newfoundland	8,800 +	2,200 - 8,800	< 2,200

Prince Edward Island	3,100 +	800 - 3,100	< 800
Nova Scotia	9,400 +	2,300 - 9,400	< 2,300
New Brunswick	7,800 +	1,900 - 7,800	< 1,900
Quebec	30,400 +	7,500 - 30,400	< 7,500
Ontario	26,400 +	6,500 - 26,400	< 6,500
Manitoba	9,000 +	2,200 - 9,000	< 2,200
Saskatchewan	9,200 +	2,300 - 9,200-	< 2,300
Alberta	19,000 +	4,700 - 19,000	< 4,700
British Columbia	25,100 +	6,200 - 25,100	< 6,200
Yukon	1,000 +	300 - 1,000	< 300
Canada	20,200 +	5,000 - 20,200	< 5,000

SURVEY ON THE IMPORTANCE OF Nature TO CANADIANS IN 1996

Approximate Sampling Variability Tables for CANADA

NUMERATOR OF PERCENTAGE ('000)	ESTIMATED PERCENTAGE													
	0.1%	1.0%	2.0%	5.0%	10.0%	15.0%	20.0%	25.0%	30.0%	35.0%	40.0%	50.0%	70.0%	90.0%
1	74.1	73.8	73.4	72.2	70.3	68.3	66.3	64.2	62.0	59.8	57.4	52.4	40.6	23.4
2	52.4	52.2	51.9	51.1	49.7	48.3	46.9	45.4	43.9	42.3	40.6	37.1	28.7	16.6
3	42.8	42.6	42.4	41.7	40.6	39.5	38.3	37.1	35.8	34.5	33.1	30.3	23.4	13.5
4	37.0	36.9	36.7	36.1	35.2	34.2	33.1	32.1	31.0	29.9	28.7	26.2	20.3	11.7
5	33.1	33.0	32.8	32.3	31.4	30.6	29.7	28.7	27.7	26.7	25.7	23.4	18.2	10.5
6	30.2	30.1	30.0	29.5	28.7	27.9	27.1	26.2	25.3	24.4	23.4	21.4	16.6	9.6
7	28.0	27.9	27.7	27.3	26.6	25.8	25.1	24.3	23.4	22.6	21.7	19.8	15.3	8.9
8	26.2	26.1	25.9	25.5	24.9	24.2	23.4	22.7	21.9	21.1	20.3	18.5	14.4	8.3
9	24.7	24.6	24.5	24.1	23.4	22.8	22.1	21.4	20.7	19.9	19.1	17.5	13.5	7.8
10	23.4	23.3	23.2	22.8	22.2	21.6	21.0	20.3	19.6	18.9	18.2	16.6	12.8	7.4
11	22.3	22.2	22.1	21.8	21.2	20.6	20.0	19.4	18.7	18.0	17.3	15.8	12.2	7.1
12	21.4	21.3	21.2	20.9	20.3	19.7	19.1	18.5	17.9	17.3	16.6	15.1	11.7	6.8
13	20.5	20.5	20.4	20.0	19.5	19.0	18.4	17.8	17.2	16.6	15.9	14.5	11.3	6.5
14	19.8	19.7	19.6	19.3	18.8	18.3	17.7	17.2	16.6	16.0	15.3	14.0	10.9	6.3
15	19.1	19.0	18.9	18.7	18.2	17.6	17.1	16.6	16.0	15.4	14.8	13.5	10.5	6.1
16	18.5	18.4	18.3	18.1	17.6	17.1	16.6	16.0	15.5	14.9	14.4	13.1	10.2	5.9
17	18.0	17.9	17.8	17.5	17.1	16.6	16.1	15.6	15.0	14.5	13.9	12.7	9.8	5.7
18	17.5	17.4	17.3	17.0	16.6	16.1	15.6	15.1	14.6	14.1	13.5	12.4	9.6	5.5
19	17.0	16.9	16.8	16.6	16.1	15.7	15.2	14.7	14.2	13.7	13.2	12.0	9.3	5.4
20	16.6	16.5	16.4	16.2	15.7	15.3	14.8	14.4	13.9	13.4	12.8	11.7	9.1	5.2
21	16.2	16.1	16.0	15.8	15.3	14.9	14.5	14.0	13.5	13.0	12.5	11.4	8.9	5.1
22	15.8	15.7	15.6	15.4	15.0	14.6	14.1	13.7	13.2	12.7	12.2	11.2	8.7	5.0
23	15.4	15.4	15.3	15.1	14.7	14.2	13.8	13.4	12.9	12.5	12.0	10.9	8.5	4.9
24	********	15.1	15.0	14.7	14.4	13.9	13.5	13.1	12.7	12.2	11.7	10.7	8.3	4.8
25	********	14.8	14.7	14.4	14.1	13.7	13.3	12.8	12.4	12.0	11.5	10.5	8.1	4.7
30	********	13.5	13.4	13.2	12.8	12.5	12.1	11.7	11.3	10.9	10.5	9.6	7.4	4.3
35	********	12.5	12.4	12.2	11.9	11.6	11.2	10.9	10.5	10.1	9.7	8.9	6.9	4.0
40	********	11.7	11.6	11.4	11.1	10.8	10.5	10.2	9.8	9.4	9.1	8.3	6.4	3.7
45	********	11.0	10.9	10.8	10.5	10.2	9.9	9.6	9.2	8.9	8.6	7.8	6.1	3.5
50	********	10.4	10.4	10.2	9.9	9.7	9.4	9.1	8.8	8.5	8.1	7.4	5.7	3.3
55	********	9.9	9.9	9.7	9.5	9.2	8.9	8.7	8.4	8.1	7.7	7.1	5.5	3.2
60	********	9.5	9.5	9.3	9.1	8.8	8.6	8.3	8.0	7.7	7.4	6.8	5.2	3.0
65	********	9.1	9.1	9.0	8.7	8.5	8.2	8.0	7.7	7.4	7.1	6.5	5.0	2.9
70	********	8.8	8.8	8.6	8.4	8.2	7.9	7.7	7.4	7.1	6.9	6.3	4.9	2.8
75	********	8.5	8.5	8.3	8.1	7.9	7.7	7.4	7.2	6.9	6.6	6.1	4.7	2.7
80	********	8.2	8.2	8.1	7.9	7.6	7.4	7.2	6.9	6.7	6.4	5.9	4.5	2.6
85	********	8.0	8.0	7.8	7.6	7.4	7.2	7.0	6.7	6.5	6.2	5.7	4.4	2.5
90	********	7.8	7.7	7.6	7.4	7.2	7.0	6.8	6.5	6.3	6.1	5.5	4.3	2.5
95	********	7.6	7.5	7.4	7.2	7.0	6.8	6.6	6.4	6.1	5.9	5.4	4.2	2.4
100	********	7.4	7.3	7.2	7.0	6.8	6.6	6.4	6.2	6.0	5.7	5.2	4.1	2.3
125	********	6.6	6.6	6.5	6.3	6.1	5.9	5.7	5.5	5.3	5.1	4.7	3.6	2.1
150	********	6.0	6.0	5.9	5.7	5.6	5.4	5.2	5.1	4.9	4.7	4.3	3.3	1.9
200	********	5.2	5.2	5.1	5.0	4.8	4.7	4.5	4.4	4.2	4.1	3.7	2.9	1.7
250	**********	4.6	4.6	4.4	4.3	4.2	4.1	3.9	3.8	3.6	3.3	2.6	1.5	
300	**********	4.2	4.2	4.1	3.9	3.8	3.7	3.6	3.5	3.3	3.0	2.3	1.4	
350	**********	3.9	3.9	3.8	3.7	3.5	3.4	3.3	3.2	3.1	2.8	2.2	1.3	
400	**********	3.7	3.6	3.5	3.4	3.3	3.2	3.1	3.0	2.9	2.6	2.0	1.2	
450	**********	3.5	3.4	3.3	3.2	3.1	3.0	2.9	2.8	2.7	2.5	1.9	1.1	
500	**********	3.2	3.1	3.1	3.0	2.9	2.8	2.7	2.6	2.3	1.8	1.0		
750	**********	2.6	2.6	2.5	2.4	2.3	2.3	2.2	2.1	1.9	1.5	0.9		
1000	**********	2.3	2.2	2.2	2.1	2.0	2.0	1.9	1.8	1.7	1.3	0.7		
1500	**********	1.8	1.8	1.7	1.7	1.6	1.5	1.5	1.4	1.0	0.6			
2000	**********	1.6	1.5	1.5	1.4	1.4	1.3	1.3	1.2	0.9	0.5			
3000	**********	1.2	1.2	1.2	1.1	1.1	1.0	1.0	0.7	0.4				
4000	**********	1.0	1.0	1.0	0.9	0.9	0.8	0.6	0.4					
5000	**********	0.9	0.9	0.8	0.8	0.7	0.6	0.3						
6000	**********	0.8	0.8	0.7	0.7	0.5	0.3							
7000	**********	0.7	0.7	0.7	0.6	0.5	0.3							
8000	**********	0.7	0.6	0.6	0.5	0.3								
9000	**********	0.6	0.6	0.4	0.2									
10000	**********	0.5	0.4	0.2										
12500	**********	0.4	0.2											
15000	**********	0.3	0.2											
20000	**********	0.2												

NOTES:

(1) COEFFICIENTS OF VARIATION (CVs) ARE PERCENTAGES.
(2) FOR CVs OF ESTIMATED TOTALS, LOCATE THE CLOSEST ROW. THE LEFT-MOST COLUMN PROVIDES THE APPROXIMATE CV.
(3) FOR CVs OF ESTIMATED PROPORTIONS, LOCATE THE ROW CLOSEST THE NUMERATOR, AND THE COLUMN CLOSEST THE PERCENTAGE.
(4) CVs IN THIS TABLE ARE CRUDE AND ARE GENERALLY HIGHER THAN THE EXACT FIGURE. THEY ARE NOT OFFICIAL.

SURVEY ON THE IMPORTANCE OF Nature TO CANADIANS IN 1996

Approximate Sampling Variability Tables for NEWFOUNDLAND

NUMERATOR OF PERCENTAGE ('000)	ESTIMATED PERCENTAGE													
	0.1%	1.0%	2.0%	5.0%	10.0%	15.0%	20.0%	25.0%	30.0%	35.0%	40.0%	50.0%	70.0%	90.0%
1	********	49.0	48.7	48.0	46.7	45.4	44.0	42.6	41.2	39.7	38.1	34.8	27.0	15.6
2	********	34.6	34.5	33.9	33.0	32.1	31.1	30.1	29.1	28.1	27.0	24.6	19.1	11.0
3	********	28.3	28.1	27.7	27.0	26.2	25.4	24.6	23.8	22.9	22.0	20.1	15.6	9.0
4	********	24.5	24.4	24.0	23.4	22.7	22.0	21.3	20.6	19.8	19.1	17.4	13.5	7.8
5	**********	21.8	21.5	20.9	20.3	19.7	19.1	18.4	17.7	17.1	15.6	12.1	7.0	
6	**********	19.9	19.6	19.1	18.5	18.0	17.4	16.8	16.2	15.6	14.2	11.0	6.4	
7	**********	18.4	18.1	17.7	17.2	16.6	16.1	15.6	15.0	14.4	13.2	10.2	5.9	
8	**********	17.2	17.0	16.5	16.0	15.6	15.1	14.6	14.0	13.5	12.3	9.5	5.5	
9	**********	16.2	16.0	15.6	15.1	14.7	14.2	13.7	13.2	12.7	11.6	9.0	5.2	
10	**********	15.2	14.8	14.4	13.9	13.5	13.0	12.6	12.1	11.0	8.5	4.9		
11	**********	14.5	14.1	13.7	13.3	12.9	12.4	12.0	11.5	10.5	8.1	4.7		
12	**********	13.9	13.5	13.1	12.7	12.3	11.9	11.5	11.0	10.0	7.8	4.5		
13	**********	13.3	13.0	12.6	12.2	11.8	11.4	11.0	10.6	9.7	7.5	4.3		
14	**********	12.8	12.5	12.1	11.8	11.4	11.0	10.6	10.2	9.3	7.2	4.2		
15	**********	12.4	12.1	11.7	11.4	11.0	10.6	10.2	9.8	9.0	7.0	4.0		
16	**********	12.0	11.7	11.3	11.0	10.7	10.3	9.9	9.5	8.7	6.7	3.9		
17	**********	11.6	11.3	11.0	10.7	10.3	10.0	9.6	9.2	8.4	6.5	3.8		
18	**********	11.3	11.0	10.7	10.4	10.0	9.7	9.4	9.0	8.2	6.4	3.7		
19	**********	11.0	10.7	10.4	10.1	9.8	9.4	9.1	8.7	8.0	6.2	3.6		
20	**********	10.7	10.4	10.1	9.8	9.5	9.2	8.9	8.5	7.8	6.0	3.5		
21	**********	10.5	10.2	9.9	9.6	9.3	9.0	8.7	8.3	7.6	5.9	3.4		
22	**********	10.2	10.0	9.7	9.4	9.1	8.8	8.5	8.1	7.4	5.7	3.3		
23	**********	9.7	9.5	9.2	8.9	8.6	8.3	8.0	7.3	5.6	3.2			
24	**********	9.5	9.3	9.0	8.7	8.4	8.1	7.8	7.1	5.5	3.2			
25	**********	9.3	9.1	8.8	8.5	8.2	7.9	7.6	7.0	5.4	3.1			
30	**********	8.5	8.3	8.0	7.8	7.5	7.2	7.0	6.4	4.9	2.8			
35	**********	7.9	7.7	7.4	7.2	7.0	6.7	6.4	5.9	4.6	2.6			
40	**********	7.4	7.2	7.0	6.7	6.5	6.3	6.0	5.5	4.3	2.5			
45	**********	7.0	6.8	6.6	6.4	6.1	5.9	5.7	5.2	4.0	2.3			
50	**********	6.4	6.2	6.0	5.8	5.6	5.4	4.9	3.8	2.2				
55	**********	6.1	5.9	5.7	5.6	5.4	5.1	4.7	3.6	2.1				
60	**********	5.9	5.7	5.5	5.3	5.1	4.9	4.5	3.5	2.0				
65	**********	5.6	5.5	5.3	5.1	4.9	4.7	4.3	3.3	1.9				
70	**********	5.3	5.1	4.9	4.7	4.6	4.2	3.2	1.9					
75	**********	5.1	4.9	4.8	4.6	4.4	4.0	3.1	1.8					
80	**********	4.9	4.8	4.6	4.4	4.3	3.9	3.0	1.7					
85	**********	4.8	4.6	4.5	4.3	4.1	3.8	2.9	1.7					
90	**********	4.6	4.5	4.3	4.2	4.0	3.7	2.8	1.6					
95	**********	4.4	4.2	4.1	3.9	3.6	2.8	1.6						
100	**********	4.3	4.1	4.0	3.8	3.5	2.7	1.6						
125	**********	3.7	3.5	3.4	3.1	2.4	1.4							
150	**********	3.2	3.1	2.8	2.2	1.3								
200	**********	2.5	1.9	1.1										
250	**********	1.7	1.0											
300	**********	1.6	0.9											
350	**********	0.8												
400	**********	0.8												

NOTES:

(1) COEFFICIENTS OF VARIATION (CVs) ARE PERCENTAGES.
(2) FOR CVs OF ESTIMATED TOTALS, LOCATE THE CLOSEST ROW. THE LEFT-MOST COLUMN PROVIDES THE APPROXIMATE CV.
(3) FOR CVs OF ESTIMATED PROPORTIONS, LOCATE THE ROW CLOSEST THE NUMERATOR, AND THE COLUMN CLOSEST THE PERCENTAGE.
(4) CVs IN THIS TABLE ARE CRUDE AND ARE GENERALLY HIGHER THAN THE EXACT FIGURE. THEY ARE NOT OFFICIAL.

SURVEY ON THE IMPORTANCE OF Nature TO CANADIANS IN 1996

Approximate Sampling Variability Tables for PRINCE EDWARD ISLAND

NUMERATOR OF PERCENTAGE ('000)	ESTIMATED PERCENTAGE													
	0.1%	1.0%	2.0%	5.0%	10.0%	15.0%	20.0%	25.0%	30.0%	35.0%	40.0%	50.0%	70.0%	90.0%
1	********	29.1	29.0	28.5	27.7	27.0	26.2	25.3	24.5	23.6	22.7	20.7	16.0	9.2
2	**********		20.5	20.2	19.6	19.1	18.5	17.9	17.3	16.7	16.0	14.6	11.3	6.5
3	**********		16.5	16.0	15.6	15.1	14.6	14.1	13.6	13.1	11.9	9.2	5.3	
4	**********		14.3	13.9	13.5	13.1	12.7	12.2	11.8	11.3	10.3	8.0	4.6	
5	**********		12.7	12.4	12.1	11.7	11.3	10.9	10.5	10.1	9.2	7.2	4.1	
6	**********		11.3	11.0	10.7	10.3	10.0	9.6	9.2	8.4	6.5	3.8		
7	**********		10.5	10.2	9.9	9.6	9.2	8.9	8.6	7.8	6.1	3.5		
8	**********		9.8	9.5	9.2	9.0	8.7	8.3	8.0	7.3	5.7	3.3		
9	**********		9.2	9.0	8.7	8.4	8.2	7.9	7.6	6.9	5.3	3.1		
10	**********		8.8	8.5	8.3	8.0	7.7	7.5	7.2	6.5	5.1	2.9		
11	**********		8.1	7.9	7.6	7.4	7.1	6.8	6.2	4.8	2.8			
12	**********		7.8	7.6	7.3	7.1	6.8	6.5	6.0	4.6	2.7			
13	**********		7.5	7.3	7.0	6.8	6.5	6.3	5.7	4.4	2.6			
14	**********		7.2	7.0	6.8	6.5	6.3	6.1	5.5	4.3	2.5			
15	**********		7.0	6.8	6.5	6.3	6.1	5.8	5.3	4.1	2.4			
16	**********		6.7	6.5	6.3	6.1	5.9	5.7	5.2	4.0	2.3			
17	**********		6.3	6.1	5.9	5.7	5.5	5.0	3.9	2.2				
18	**********		6.2	6.0	5.8	5.6	5.3	4.9	3.8	2.2				
19	**********		6.0	5.8	5.6	5.4	5.2	4.7	3.7	2.1				
20	**********		5.8	5.7	5.5	5.3	5.1	4.6	3.6	2.1				
21	**********		5.7	5.5	5.3	5.1	4.9	4.5	3.5	2.0				
22	**********		5.4	5.2	5.0	4.8	4.4	3.4	2.0					
23	**********		5.3	5.1	4.9	4.7	4.3	3.3	1.9					
24	**********		5.2	5.0	4.8	4.6	4.2	3.3	1.9					
25	**********		5.1	4.9	4.7	4.5	4.1	3.2	1.8					
30	**********		4.5	4.3	4.1	3.8	2.9	1.7						
35	**********		4.0	3.8	3.5	2.7	1.6							
40	**********		3.6	3.3	2.5	1.5								
45	**********		3.1	2.4	1.4									
50	**********		2.9	2.3	1.3									
55	**********		2.2	1.2										
60	**********		2.1	1.2										
65	**********		2.0	1.1										
70	**********		1.9	1.1										
75	**********		1.1											
80	**********		1.0											
85	**********		1.0											
90	**********		1.0											
95	**********		0.9											

NOTES:
(1) COEFFICIENTS OF VARIATION (CVs) ARE PERCENTAGES.
(2) FOR CVs OF ESTIMATED TOTALS, LOCATE THE CLOSEST ROW. THE LEFT-MOST COLUMN PROVIDES THE APPROXIMATE CV.
(3) FOR CVs OF ESTIMATED PROPORTIONS, LOCATE THE ROW CLOSEST THE NUMERATOR, AND THE COLUMN CLOSEST THE PERCENTAGE.
(4) CVs IN THIS TABLE ARE CRUDE AND ARE GENERALLY HIGHER THAN THE EXACT FIGURE. THEY ARE NOT OFFICIAL.

SURVEY ON THE IMPORTANCE OF Nature TO CANADIANS IN 1996

Approximate Sampling Variability Tables for NOVA SCOTIA

NUMERATOR OF PERCENTAGE ('000)	ESTIMATED PERCENTAGE													
	0.1%	1.0%	2.0%	5.0%	10.0%	15.0%	20.0%	25.0%	30.0%	35.0%	40.0%	50.0%	70.0%	90.0%
1	********	50.6	50.3	49.6	48.2	46.9	45.5	44.0	42.5	41.0	39.4	36.0	27.9	16.1
2	********	35.8	35.6	35.0	34.1	33.2	32.2	31.1	30.1	29.0	27.9	25.4	19.7	11.4
3	********	29.2	29.1	28.6	27.9	27.1	26.3	25.4	24.6	23.7	22.7	20.8	16.1	9.3
4	********	25.3	25.2	24.8	24.1	23.4	22.7	22.0	21.3	20.5	19.7	18.0	13.9	8.0
5	********	22.6	22.5	22.2	21.6	21.0	20.3	19.7	19.0	18.3	17.6	16.1	12.5	7.2
6	********	20.7	20.6	20.2	19.7	19.1	18.6	18.0	17.4	16.7	16.1	14.7	11.4	6.6
7	********	19.1	19.0	18.7	18.2	17.7	17.2	16.6	16.1	15.5	14.9	13.6	10.5	6.1
8	**********		17.8	17.5	17.1	16.6	16.1	15.6	15.0	14.5	13.9	12.7	9.8	5.7
9	**********		16.8	16.5	16.1	15.6	15.2	14.7	14.2	13.7	13.1	12.0	9.3	5.4
10	**********		15.9	15.7	15.3	14.8	14.4	13.9	13.5	13.0	12.5	11.4	8.8	5.1
11	**********		15.2	14.9	14.5	14.1	13.7	13.3	12.8	12.4	11.9	10.8	8.4	4.8
12	**********		14.5	14.3	13.9	13.5	13.1	12.7	12.3	11.8	11.4	10.4	8.0	4.6
13	**********		14.0	13.7	13.4	13.0	12.6	12.2	11.8	11.4	10.9	10.0	7.7	4.5
14	**********		13.5	13.2	12.9	12.5	12.2	11.8	11.4	11.0	10.5	9.6	7.4	4.3
15	**********		12.8	12.5	12.1	11.7	11.4	11.0	10.6	10.2	9.3	7.2	4.2	
16	**********		12.4	12.1	11.7	11.4	11.0	10.6	10.2	9.8	9.0	7.0	4.0	
17	**********		12.0	11.7	11.4	11.0	10.7	10.3	9.9	9.6	8.7	6.8	3.9	
18	**********		11.7	11.4	11.1	10.7	10.4	10.0	9.7	9.3	8.5	6.6	3.8	
19	**********		11.4	11.1	10.8	10.4	10.1	9.8	9.4	9.0	8.2	6.4	3.7	
20	**********		11.1	10.8	10.5	10.2	9.8	9.5	9.2	8.8	8.0	6.2	3.6	
21	**********		10.8	10.5	10.2	9.9	9.6	9.3	8.9	8.6	7.8	6.1	3.5	
22	**********		10.6	10.3	10.0	9.7	9.4	9.1	8.7	8.4	7.7	5.9	3.4	
23	**********		10.3	10.1	9.8	9.5	9.2	8.9	8.5	8.2	7.5	5.8	3.4	
24	**********		10.1	9.8	9.6	9.3	9.0	8.7	8.4	8.0	7.3	5.7	3.3	
25	**********		9.9	9.6	9.4	9.1	8.8	8.5	8.2	7.9	7.2	5.6	3.2	
30	**********		9.0	8.8	8.6	8.3	8.0	7.8	7.5	7.2	6.6	5.1	2.9	
35	**********		8.4	8.2	7.9	7.7	7.4	7.2	6.9	6.7	6.1	4.7	2.7	
40	**********		7.6	7.4	7.2	7.0	6.7	6.5	6.2	5.7	4.4	2.5		
45	**********		7.2	7.0	6.8	6.6	6.3	6.1	5.9	5.4	4.2	2.4		
50	**********		6.8	6.6	6.4	6.2	6.0	5.8	5.6	5.1	3.9	2.3		
55	**********		6.5	6.3	6.1	5.9	5.7	5.5	5.3	4.8	3.8	2.2		
60	**********		6.2	6.1	5.9	5.7	5.5	5.3	5.1	4.6	3.6	2.1		
65	**********		6.0	5.8	5.6	5.5	5.3	5.1	4.9	4.5	3.5	2.0		
70	**********		5.8	5.6	5.4	5.3	5.1	4.9	4.7	4.3	3.3	1.9		
75	**********		5.4	5.3	5.1	4.9	4.7	4.5	4.2	3.2	1.9			
80	**********		5.2	5.1	4.9	4.8	4.6	4.4	4.0	3.1	1.8			
85	**********		5.1	4.9	4.8	4.6	4.4	4.3	3.9	3.0	1.7			
90	**********		4.9	4.8	4.6	4.5	4.3	4.2	3.8	2.9	1.7			
95	**********		4.8	4.7	4.5	4.4	4.2	4.0	3.7	2.9	1.6			
100	**********		4.7	4.5	4.4	4.3	4.1	3.9	3.6	2.8	1.6			
125	**********		4.1	3.9	3.8	3.7	3.5	3.2	2.5	1.4				
150	**********		3.6	3.5	3.3	3.2	2.9	2.3	1.3					
200	**********		3.0	2.9	2.8	2.5	2.0	1.1						
250	**********		2.6	2.5	2.3	1.8	1.0							
300	**********		2.1	1.6	0.9									
350	**********		1.9	1.5	0.9									
400	**********		1.4	0.8										
450	**********		1.3	0.8										
500	**********		1.2	0.7										

NOTES:

(1) COEFFICIENTS OF VARIATION (CVs) ARE PERCENTAGES.
(2) FOR CVs OF ESTIMATED TOTALS, LOCATE THE CLOSEST ROW. THE LEFT-MOST COLUMN PROVIDES THE APPROXIMATE CV.
(3) FOR CVs OF ESTIMATED PROPORTIONS, LOCATE THE ROW CLOSEST THE NUMERATOR, AND THE COLUMN CLOSEST THE PERCENTAGE.
(4) CVs IN THIS TABLE ARE CRUDE AND ARE GENERALLY HIGHER THAN THE EXACT FIGURE. THEY ARE NOT OFFICIAL.

SURVEY ON THE IMPORTANCE OF Nature TO CANADIANS IN 1996

Approximate Sampling Variability Tables for NEW BRUNSWICK

NUMERATOR OF PERCENTAGE ('000)	ESTIMATED PERCENTAGE													
	0.1%	1.0%	2.0%	5.0%	10.0%	15.0%	20.0%	25.0%	30.0%	35.0%	40.0%	50.0%	70.0%	90.0%
1	********	45.9	45.7	45.0	43.8	42.5	41.3	40.0	38.6	37.2	35.7	32.6	25.3	14.6
2	********	32.5	32.3	31.8	31.0	30.1	29.2	28.3	27.3	26.3	25.3	23.1	17.9	10.3
3	********	26.5	26.4	26.0	25.3	24.6	23.8	23.1	22.3	21.5	20.6	18.8	14.6	8.4
4	********	23.0	22.8	22.5	21.9	21.3	20.6	20.0	19.3	18.6	17.9	16.3	12.6	7.3
5	********	20.5	20.4	20.1	19.6	19.0	18.5	17.9	17.3	16.6	16.0	14.6	11.3	6.5
6	********	18.7	18.7	18.4	17.9	17.4	16.9	16.3	15.8	15.2	14.6	13.3	10.3	6.0
7	**********	17.3	17.0	16.5	16.1	15.6	15.1	14.6	14.1	13.5	12.3	9.6	5.5
8	**********	16.2	15.9	15.5	15.0	14.6	14.1	13.7	13.2	12.6	11.5	8.9	5.2
9	**********	15.2	15.0	14.6	14.2	13.8	13.3	12.9	12.4	11.9	10.9	8.4	4.9
10	**********	14.4	14.2	13.8	13.5	13.1	12.6	12.2	11.8	11.3	10.3	8.0	4.6
11	**********	13.8	13.6	13.2	12.8	12.4	12.1	11.6	11.2	10.8	9.8	7.6	4.4
12	**********	13.2	13.0	12.6	12.3	11.9	11.5	11.1	10.7	10.3	9.4	7.3	4.2
13	**********	12.5	12.1	11.8	11.4	11.1	10.7	10.3	9.9	9.1	7.0	4.0
14	**********	12.0	11.7	11.4	11.0	10.7	10.3	9.9	9.6	8.7	6.8	3.9
15	**********	11.6	11.3	11.0	10.7	10.3	10.0	9.6	9.2	8.4	6.5	3.8
16	**********	11.2	10.9	10.6	10.3	10.0	9.7	9.3	8.9	8.2	6.3	3.6
17	**********	10.9	10.6	10.3	10.0	9.7	9.4	9.0	8.7	7.9	6.1	3.5
18	**********	10.6	10.3	10.0	9.7	9.4	9.1	8.8	8.4	7.7	6.0	3.4
19	**********	10.3	10.0	9.8	9.5	9.2	8.9	8.5	8.2	7.5	5.8	3.3
20	**********	10.1	9.8	9.5	9.2	8.9	8.6	8.3	8.0	7.3	5.7	3.3
21	**********	9.8	9.6	9.3	9.0	8.7	8.4	8.1	7.8	7.1	5.5	3.2
22	**********	9.6	9.3	9.1	8.8	8.5	8.2	7.9	7.6	7.0	5.4	3.1
23	**********	9.4	9.1	8.9	8.6	8.3	8.1	7.8	7.5	6.8	5.3	3.0
24	**********	9.2	8.9	8.7	8.4	8.2	7.9	7.6	7.3	6.7	5.2	3.0
25	**********	9.0	8.8	8.5	8.3	8.0	7.7	7.4	7.1	6.5	5.1	2.9
30	**********	8.2	8.0	7.8	7.5	7.3	7.0	6.8	6.5	6.0	4.6	2.7
35	**********	7.4	7.2	7.0	6.8	6.5	6.3	6.0	5.5	4.3	2.5
40	**********	6.9	6.7	6.5	6.3	6.1	5.9	5.7	5.2	4.0	2.3
45	**********	6.5	6.3	6.2	6.0	5.8	5.5	5.3	4.9	3.8	2.2
50	**********	6.2	6.0	5.8	5.7	5.5	5.3	5.1	4.6	3.6	2.1
55	**********	5.9	5.7	5.6	5.4	5.2	5.0	4.8	4.4	3.4	2.0
60	**********	5.7	5.5	5.3	5.2	5.0	4.8	4.6	4.2	3.3	1.9
65	**********	5.3	5.1	5.0	4.8	4.6	4.4	4.0	3.1	1.8
70	**********	5.1	4.9	4.8	4.6	4.4	4.3	3.9	3.0	1.7
75	**********	4.9	4.8	4.6	4.5	4.3	4.1	3.8	2.9	1.7
80	**********	4.8	4.6	4.5	4.3	4.2	4.0	3.6	2.8	1.6
85	**********	4.6	4.5	4.3	4.2	4.0	3.9	3.5	2.7	1.6
90	**********	4.5	4.4	4.2	4.1	3.9	3.8	3.4	2.7	1.5
95	**********	4.2	4.1	4.0	3.8	3.7	3.3	2.6	1.5
100	**********	4.1	4.0	3.9	3.7	3.6	3.3	2.5	1.5
125	**********	3.6	3.5	3.3	3.2	2.9	2.3	1.3
150	**********	3.3	3.2	3.0	2.9	2.7	2.1	1.2
200	**********	2.6	2.5	2.3	1.8	1.0
250	**********	2.1	1.6	0.9
300	**********	1.9	1.5	0.8
350	**********	1.4	0.8
400	**********	1.3	0.7
450	**********	0.7
500	**********	0.7

NOTES:

(1) COEFFICIENTS OF VARIATION (CVs) ARE PERCENTAGES.
(2) FOR CVs OF ESTIMATED TOTALS, LOCATE THE CLOSEST ROW. THE LEFT-MOST COLUMN PROVIDES THE APPROXIMATE CV.
(3) FOR CVs OF ESTIMATED PROPORTIONS, LOCATE THE ROW CLOSEST THE NUMERATOR, AND THE COLUMN CLOSEST THE PERCENTAGE.
(4) CVs IN THIS TABLE ARE CRUDE AND ARE GENERALLY HIGHER THAN THE EXACT FIGURE. THEY ARE NOT OFFICIAL.

SURVEY ON THE IMPORTANCE OF Nature TO CANADIANS IN 1996

Approximate Sampling Variability Tables for QUEBEC

NUMERATOR OF PERCENTAGE ('000)	ESTIMATED PERCENTAGE													
	0.1%	1.0%	2.0%	5.0%	10.0%	15.0%	20.0%	25.0%	30.0%	35.0%	40.0%	50.0%	70.0%	90.0%
1	91.1	90.7	90.2	88.8	86.4	84.0	81.5	78.9	76.2	73.5	70.6	64.4	49.9	28.8
2	64.4	64.1	63.8	62.8	61.1	59.4	57.6	55.8	53.9	51.9	49.9	45.6	35.3	20.4
3	52.6	52.3	52.1	51.3	49.9	48.5	47.1	45.6	44.0	42.4	40.8	37.2	28.8	16.6
4	45.5	45.3	45.1	44.4	43.2	42.0	40.8	39.5	38.1	36.7	35.3	32.2	25.0	14.4
5	40.7	40.5	40.3	39.7	38.7	37.6	36.4	35.3	34.1	32.9	31.6	28.8	22.3	12.9
6	********	37.0	36.8	36.3	35.3	34.3	33.3	32.2	31.1	30.0	28.8	26.3	20.4	11.8
7	********	34.3	34.1	33.6	32.7	31.8	30.8	29.8	28.8	27.8	26.7	24.4	18.9	10.9
8	********	32.1	31.9	31.4	30.6	29.7	28.8	27.9	27.0	26.0	25.0	22.8	17.6	10.2
9	********	30.2	30.1	29.6	28.8	28.0	27.2	26.3	25.4	24.5	23.5	21.5	16.6	9.6
10	********	28.7	28.5	28.1	27.3	26.6	25.8	25.0	24.1	23.2	22.3	20.4	15.8	9.1
11	********	27.3	27.2	26.8	26.1	25.3	24.6	23.8	23.0	22.2	21.3	19.4	15.0	8.7
12	********	26.2	26.0	25.6	25.0	24.3	23.5	22.8	22.0	21.2	20.4	18.6	14.4	8.3
13	********	25.1	25.0	24.6	24.0	23.3	22.6	21.9	21.1	20.4	19.6	17.9	13.8	8.0
14	********	24.2	24.1	23.7	23.1	22.5	21.8	21.1	20.4	19.6	18.9	17.2	13.3	7.7
15	********	23.4	23.3	22.9	22.3	21.7	21.0	20.4	19.7	19.0	18.2	16.6	12.9	7.4
16	********	22.7	22.6	22.2	21.6	21.0	20.4	19.7	19.1	18.4	17.6	16.1	12.5	7.2
17	********	22.0	21.9	21.5	21.0	20.4	19.8	19.1	18.5	17.8	17.1	15.6	12.1	7.0
18	********	21.4	21.3	20.9	20.4	19.8	19.2	18.6	18.0	17.3	16.6	15.2	11.8	6.8
19	********	20.8	20.7	20.4	19.8	19.3	18.7	18.1	17.5	16.9	16.2	14.8	11.5	6.6
20	********	20.3	20.2	19.9	19.3	18.8	18.2	17.6	17.0	16.4	15.8	14.4	11.2	6.4
21	********	19.8	19.7	19.4	18.9	18.3	17.8	17.2	16.6	16.0	15.4	14.1	10.9	6.3
22	********	19.3	19.2	18.9	18.4	17.9	17.4	16.8	16.3	15.7	15.0	13.7	10.6	6.1
23	********	18.9	18.8	18.5	18.0	17.5	17.0	16.5	15.9	15.3	14.7	13.4	10.4	6.0
24	********	18.5	18.4	18.1	17.6	17.1	16.6	16.1	15.6	15.0	14.4	13.2	10.2	5.9
25	********	18.1	18.0	17.8	17.3	16.8	16.3	15.8	15.2	14.7	14.1	12.9	10.0	5.8
30	********	16.6	16.5	16.2	15.8	15.3	14.9	14.4	13.9	13.4	12.9	11.8	9.1	5.3
35	********	15.3	15.2	15.0	14.6	14.2	13.8	13.3	12.9	12.4	11.9	10.9	8.4	4.9
40	********	14.3	14.3	14.0	13.7	13.3	12.9	12.5	12.1	11.6	11.2	10.2	7.9	4.6
45	********	13.5	13.4	13.2	12.9	12.5	12.1	11.8	11.4	11.0	10.5	9.6	7.4	4.3
50	********	12.8	12.8	12.6	12.2	11.9	11.5	11.2	10.8	10.4	10.0	9.1	7.1	4.1
55	********	12.2	12.2	12.0	11.7	11.3	11.0	10.6	10.3	9.9	9.5	8.7	6.7	3.9
60	**********	11.6	11.5	11.2	10.8	10.5	10.2	9.8	9.5	9.1	8.3	6.4	3.7	
65	**********	11.2	11.0	10.7	10.4	10.1	9.8	9.5	9.1	8.8	8.0	6.2	3.6	
70	**********	10.8	10.6	10.3	10.0	9.7	9.4	9.1	8.8	8.4	7.7	6.0	3.4	
75	**********	10.4	10.3	10.0	9.7	9.4	9.1	8.8	8.5	8.2	7.4	5.8	3.3	
80	**********	10.1	9.9	9.7	9.4	9.1	8.8	8.5	8.2	7.9	7.2	5.6	3.2	
85	**********	9.8	9.6	9.4	9.1	8.8	8.6	8.3	8.0	7.7	7.0	5.4	3.1	
90	**********	9.5	9.4	9.1	8.9	8.6	8.3	8.0	7.7	7.4	6.8	5.3	3.0	
95	**********	9.3	9.1	8.9	8.6	8.4	8.1	7.8	7.5	7.2	6.6	5.1	3.0	
100	**********	9.0	8.9	8.6	8.4	8.2	7.9	7.6	7.3	7.1	6.4	5.0	2.9	
125	**********	7.9	7.7	7.5	7.3	7.1	6.8	6.6	6.3	5.8	4.5	2.6		
150	**********	7.3	7.1	6.9	6.7	6.4	6.2	6.0	5.8	5.3	4.1	2.4		
200	**********	6.3	6.1	5.9	5.8	5.6	5.4	5.2	5.0	4.6	3.5	2.0		
250	**********	5.6	5.5	5.3	5.2	5.0	4.8	4.6	4.5	4.1	3.2	1.8		
300	**********	5.0	4.9	4.7	4.6	4.4	4.2	4.1	3.7	2.9	1.7			
350	**********	4.6	4.5	4.4	4.2	4.1	3.9	3.8	3.4	2.7	1.5			
400	**********	4.3	4.2	4.1	3.9	3.8	3.7	3.5	3.2	2.5	1.4			
450	**********	4.1	4.0	3.8	3.7	3.6	3.5	3.3	3.0	2.4	1.4			
500	**********	3.9	3.8	3.6	3.5	3.4	3.3	3.2	2.9	2.2	1.3			
750	**********	3.1	3.0	2.9	2.8	2.7	2.6	2.4	1.8	1.1				
1000	**********	2.6	2.5	2.4	2.3	2.2	2.0	1.6	0.9					
1500	**********	2.0	1.9	1.8	1.7	1.3	0.7							
2000	**********	1.6	1.6	1.4	1.1	0.6								
3000	**********	0.9	0.5											
4000	**********	0.8	0.5											
5000	**********	0.4												

NOTES:

(1) COEFFICIENTS OF VARIATION (CVs) ARE PERCENTAGES.
(2) FOR CVs OF ESTIMATED TOTALS, LOCATE THE CLOSEST ROW. THE LEFT-MOST COLUMN PROVIDES THE APPROXIMATE CV.
(3) FOR CVs OF ESTIMATED PROPORTIONS, LOCATE THE ROW CLOSEST THE NUMERATOR, AND THE COLUMN CLOSEST THE PERCENTAGE.
(4) CVs IN THIS TABLE ARE CRUDE AND ARE GENERALLY HIGHER THAN THE EXACT FIGURE. THEY ARE NOT OFFICIAL.

SURVEY ON THE IMPORTANCE OF Nature TO CANADIANS IN 1996

Approximate Sampling Variability Tables for ONTARIO

NUMERATOR OF PERCENTAGE ('000)	ESTIMATED PERCENTAGE													
	0.1%	1.0%	2.0%	5.0%	10.0%	15.0%	20.0%	25.0%	30.0%	35.0%	40.0%	50.0%	70.0%	90.0%
1	84.8	84.4	84.0	82.7	80.5	78.2	75.9	73.5	71.0	68.4	65.7	60.0	46.5	26.8
2	60.0	59.7	59.4	58.5	56.9	55.3	53.7	52.0	50.2	48.4	46.5	42.4	32.9	19.0
3	49.0	48.7	48.5	47.8	46.5	45.2	43.8	42.4	41.0	39.5	37.9	34.6	26.8	15.5
4	42.4	42.2	42.0	41.4	40.3	39.1	37.9	36.7	35.5	34.2	32.9	30.0	23.2	13.4
5	37.9	37.8	37.6	37.0	36.0	35.0	33.9	32.9	31.7	30.6	29.4	26.8	20.8	12.0
6	34.6	34.5	34.3	33.8	32.9	31.9	31.0	30.0	29.0	27.9	26.8	24.5	19.0	11.0
7	32.1	31.9	31.7	31.3	30.4	29.6	28.7	27.8	26.8	25.9	24.8	22.7	17.6	10.1
8	30.0	29.9	29.7	29.2	28.5	27.7	26.8	26.0	25.1	24.2	23.2	21.2	16.4	9.5
9	********	28.1	28.0	27.6	26.8	26.1	25.3	24.5	23.7	22.8	21.9	20.0	15.5	8.9
10	********	26.7	26.6	26.2	25.5	24.7	24.0	23.2	22.5	21.6	20.8	19.0	14.7	8.5
11	********	25.5	25.3	24.9	24.3	23.6	22.9	22.2	21.4	20.6	19.8	18.1	14.0	8.1
12	********	24.4	24.2	23.9	23.2	22.6	21.9	21.2	20.5	19.7	19.0	17.3	13.4	7.7
13	********	23.4	23.3	22.9	22.3	21.7	21.0	20.4	19.7	19.0	18.2	16.6	12.9	7.4
14	********	22.6	22.5	22.1	21.5	20.9	20.3	19.6	19.0	18.3	17.6	16.0	12.4	7.2
15	********	21.8	21.7	21.4	20.8	20.2	19.6	19.0	18.3	17.7	17.0	15.5	12.0	6.9
16	********	21.1	21.0	20.7	20.1	19.6	19.0	18.4	17.7	17.1	16.4	15.0	11.6	6.7
17	********	20.5	20.4	20.1	19.5	19.0	18.4	17.8	17.2	16.6	15.9	14.6	11.3	6.5
18	********	19.9	19.8	19.5	19.0	18.4	17.9	17.3	16.7	16.1	15.5	14.1	11.0	6.3
19	********	19.4	19.3	19.0	18.5	17.9	17.4	16.9	16.3	15.7	15.1	13.8	10.7	6.2
20	********	18.9	18.8	18.5	18.0	17.5	17.0	16.4	15.9	15.3	14.7	13.4	10.4	6.0
21	********	18.4	18.3	18.0	17.6	17.1	16.6	16.0	15.5	14.9	14.3	13.1	10.1	5.9
22	********	18.0	17.9	17.6	17.2	16.7	16.2	15.7	15.1	14.6	14.0	12.8	9.9	5.7
23	********	17.6	17.5	17.2	16.8	16.3	15.8	15.3	14.8	14.3	13.7	12.5	9.7	5.6
24	********	17.2	17.1	16.9	16.4	16.0	15.5	15.0	14.5	14.0	13.4	12.2	9.5	5.5
25	********	16.9	16.8	16.5	16.1	15.6	15.2	14.7	14.2	13.7	13.1	12.0	9.3	5.4
30	********	15.4	15.3	15.1	14.7	14.3	13.9	13.4	13.0	12.5	12.0	11.0	8.5	4.9
35	********	14.3	14.2	14.0	13.6	13.2	12.8	12.4	12.0	11.6	11.1	10.1	7.9	4.5
40	********	13.3	13.3	13.1	12.7	12.4	12.0	11.6	11.2	10.8	10.4	9.5	7.3	4.2
45	********	12.6	12.5	12.3	12.0	11.7	11.3	11.0	10.6	10.2	9.8	8.9	6.9	4.0
50	********	11.9	11.9	11.7	11.4	11.1	10.7	10.4	10.0	9.7	9.3	8.5	6.6	3.8
55	********	11.4	11.3	11.2	10.9	10.5	10.2	9.9	9.6	9.2	8.9	8.1	6.3	3.6
60	********	10.9	10.8	10.7	10.4	10.1	9.8	9.5	9.2	8.8	8.5	7.7	6.0	3.5
65	********	10.5	10.4	10.3	10.0	9.7	9.4	9.1	8.8	8.5	8.2	7.4	5.8	3.3
70	********	10.1	10.0	9.9	9.6	9.4	9.1	8.8	8.5	8.2	7.9	7.2	5.6	3.2
75	********	9.7	9.7	9.6	9.3	9.0	8.8	8.5	8.2	7.9	7.6	6.9	5.4	3.1
80	********	9.4	9.4	9.2	9.0	8.7	8.5	8.2	7.9	7.6	7.3	6.7	5.2	3.0
85	********	9.2	9.1	9.0	8.7	8.5	8.2	8.0	7.7	7.4	7.1	6.5	5.0	2.9
90	**********	8.9	8.7	8.5	8.2	8.0	7.7	7.5	7.2	6.9	6.3	4.9	2.8	
95	**********	8.6	8.5	8.3	8.0	7.8	7.5	7.3	7.0	6.7	6.2	4.8	2.8	
100	**********	8.4	8.3	8.1	7.8	7.6	7.3	7.1	6.8	6.6	6.0	4.6	2.7	
125	**********	7.5	7.4	7.2	7.0	6.8	6.6	6.3	6.1	5.9	5.4	4.2	2.4	
150	**********	6.9	6.8	6.6	6.4	6.2	6.0	5.8	5.6	5.4	4.9	3.8	2.2	
200	**********	5.8	5.7	5.5	5.4	5.2	5.0	4.8	4.6	4.2	3.3	1.9		
250	**********	5.2	5.1	4.9	4.8	4.6	4.5	4.3	4.2	3.8	2.9	1.7		
300	**********	4.8	4.6	4.5	4.4	4.2	4.1	3.9	3.8	3.5	2.7	1.5		
350	**********	4.4	4.3	4.2	4.1	3.9	3.8	3.7	3.5	3.2	2.5	1.4		
400	**********	4.1	4.0	3.9	3.8	3.7	3.5	3.4	3.3	3.0	2.3	1.3		
450	**********	3.8	3.7	3.6	3.5	3.3	3.2	3.1	2.8	2.2	1.3			
500	**********	3.6	3.5	3.4	3.3	3.2	3.1	2.9	2.7	2.1	1.2			
750	**********	2.9	2.9	2.8	2.7	2.6	2.5	2.4	2.2	1.7	1.0			
1000	**********	2.5	2.4	2.3	2.2	2.2	2.1	1.9	1.5	0.8				
1500	**********	2.0	1.9	1.8	1.8	1.7	1.5	1.2	0.7					
2000	**********	1.6	1.6	1.5	1.5	1.3	1.0	0.6						
3000	**********	1.2	1.2	1.1	0.8	0.5								
4000	**********	0.9	0.7	0.4										
5000	**********	0.7	0.4											
6000	**********	0.6	0.3											
7000	**********	0.3												
8000	**********	0.3												

NOTES:

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(2) FOR CVs OF ESTIMATED TOTALS, LOCATE THE CLOSEST ROW. THE LEFT-MOST COLUMN PROVIDES THE APPROXIMATE CV.
(3) FOR CVs OF ESTIMATED PROPORTIONS, LOCATE THE ROW CLOSEST THE NUMERATOR, AND THE COLUMN CLOSEST THE PERCENTAGE.
(4) CVs IN THIS TABLE ARE CRUDE AND ARE GENERALLY HIGHER THAN THE EXACT FIGURE. THEY ARE NOT OFFICIAL.

SURVEY ON THE IMPORTANCE OF Nature TO CANADIANS IN 1996

Approximate Sampling Variability Tables for MANITOBA

NUMERATOR OF PERCENTAGE ('000)	ESTIMATED PERCENTAGE													
	0.1%	1.0%	2.0%	5.0%	10.0%	15.0%	20.0%	25.0%	30.0%	35.0%	40.0%	50.0%	70.0%	90.0%
1	********	49.3	49.1	48.3	47.0	45.7	44.4	42.9	41.5	40.0	38.4	35.1	27.2	15.7
2	********	34.9	34.7	34.2	33.3	32.3	31.4	30.4	29.3	28.3	27.2	24.8	19.2	11.1
3	********	28.5	28.3	27.9	27.2	26.4	25.6	24.8	24.0	23.1	22.2	20.2	15.7	9.1
4	********	24.7	24.5	24.2	23.5	22.9	22.2	21.5	20.7	20.0	19.2	17.5	13.6	7.8
5	********	22.1	22.0	21.6	21.0	20.4	19.8	19.2	18.6	17.9	17.2	15.7	12.1	7.0
6	********	20.1	20.0	19.7	19.2	18.7	18.1	17.5	16.9	16.3	15.7	14.3	11.1	6.4
7	********	18.7	18.6	18.3	17.8	17.3	16.8	16.2	15.7	15.1	14.5	13.3	10.3	5.9
8	********	17.4	17.4	17.1	16.6	16.2	15.7	15.2	14.7	14.1	13.6	12.4	9.6	5.5
9	**********	16.4	16.1	15.7	15.2	14.8	14.3	13.8	13.3	12.8	11.7	9.1	5.2	
10	**********	15.5	15.3	14.9	14.5	14.0	13.6	13.1	12.6	12.1	11.1	8.6	5.0	
11	**********	14.8	14.6	14.2	13.8	13.4	12.9	12.5	12.1	11.6	10.6	8.2	4.7	
12	**********	14.2	14.0	13.6	13.2	12.8	12.4	12.0	11.5	11.1	10.1	7.8	4.5	
13	**********	13.6	13.4	13.0	12.7	12.3	11.9	11.5	11.1	10.7	9.7	7.5	4.3	
14	**********	13.1	12.9	12.6	12.2	11.9	11.5	11.1	10.7	10.3	9.4	7.3	4.2	
15	**********	12.7	12.5	12.1	11.8	11.5	11.1	10.7	10.3	9.9	9.1	7.0	4.0	
16	**********	12.3	12.1	11.8	11.4	11.1	10.7	10.4	10.0	9.6	8.8	6.8	3.9	
17	**********	11.9	11.7	11.4	11.1	10.8	10.4	10.1	9.7	9.3	8.5	6.6	3.8	
18	**********	11.4	11.1	10.8	10.5	10.1	9.8	9.4	9.1	8.3	6.4	3.7		
19	**********	11.1	10.8	10.5	10.2	9.9	9.5	9.2	8.8	8.0	6.2	3.6		
20	**********	10.8	10.5	10.2	9.9	9.6	9.3	8.9	8.6	7.8	6.1	3.5		
21	**********	10.5	10.3	10.0	9.7	9.4	9.1	8.7	8.4	7.7	5.9	3.4		
22	**********	10.3	10.0	9.7	9.5	9.2	8.8	8.5	8.2	7.5	5.8	3.3		
23	**********	10.1	9.8	9.5	9.2	9.0	8.7	8.3	8.0	7.3	5.7	3.3		
24	**********	9.9	9.6	9.3	9.1	8.8	8.5	8.2	7.8	7.2	5.5	3.2		
25	**********	9.7	9.4	9.1	8.9	8.6	8.3	8.0	7.7	7.0	5.4	3.1		
30	**********	8.8	8.6	8.3	8.1	7.8	7.6	7.3	7.0	6.4	5.0	2.9		
35	**********	8.2	8.0	7.7	7.5	7.3	7.0	6.8	6.5	5.9	4.6	2.7		
40	**********	7.6	7.4	7.2	7.0	6.8	6.6	6.3	6.1	5.5	4.3	2.5		
45	**********	7.0	6.8	6.6	6.4	6.2	6.0	5.7	5.2	4.0	2.3			
50	**********	6.7	6.5	6.3	6.1	5.9	5.7	5.4	5.0	3.8	2.2			
55	**********	6.3	6.2	6.0	5.8	5.6	5.4	5.2	4.7	3.7	2.1			
60	**********	6.1	5.9	5.7	5.5	5.4	5.2	5.0	4.5	3.5	2.0			
65	**********	5.8	5.7	5.5	5.3	5.1	5.0	4.8	4.3	3.4	1.9			
70	**********	5.6	5.5	5.3	5.1	5.0	4.8	4.6	4.2	3.2	1.9			
75	**********	5.4	5.3	5.1	5.0	4.8	4.6	4.4	4.0	3.1	1.8			
80	**********	5.3	5.1	5.0	4.8	4.6	4.5	4.3	3.9	3.0	1.8			
85	**********	5.1	5.0	4.8	4.7	4.5	4.3	4.2	3.8	2.9	1.7			
90	**********	4.8	4.7	4.5	4.4	4.2	4.0	3.7	2.9	1.7				
95	**********	4.7	4.6	4.4	4.3	4.1	3.9	3.6	2.8	1.6				
100	**********	4.6	4.4	4.3	4.1	4.0	3.8	3.5	2.7	1.6				
125	**********	4.1	4.0	3.8	3.7	3.6	3.4	3.1	2.4	1.4				
150	**********	3.6	3.5	3.4	3.3	3.1	2.9	2.2	1.3					
200	**********	3.0	2.9	2.8	2.7	2.5	1.9	1.1						
250	**********	2.6	2.5	2.4	2.2	1.7	1.0							
300	**********	2.3	2.2	2.0	1.6	0.9								
350	**********	1.9	1.5	0.8										
400	**********	1.8	1.4	0.8										
450	**********	1.3	0.7											
500	**********	1.2	0.7											
750	**********	0.6												

NOTES:

(1) COEFFICIENTS OF VARIATION (CVs) ARE PERCENTAGES.
(2) FOR CVs OF ESTIMATED TOTALS, LOCATE THE CLOSEST ROW. THE LEFT-MOST COLUMN PROVIDES THE APPROXIMATE CV.
(3) FOR CVs OF ESTIMATED PROPORTIONS, LOCATE THE ROW CLOSEST THE NUMERATOR, AND THE COLUMN CLOSEST THE PERCENTAGE.
(4) CVs IN THIS TABLE ARE CRUDE AND ARE GENERALLY HIGHER THAN THE EXACT FIGURE. THEY ARE NOT OFFICIAL.

SURVEY ON THE IMPORTANCE OF Nature TO CANADIANS IN 1996

Approximate Sampling Variability Tables for SASKATCHEWAN

NUMERATOR OF PERCENTAGE ('000)	ESTIMATED PERCENTAGE													
	0.1%	1.0%	2.0%	5.0%	10.0%	15.0%	20.0%	25.0%	30.0%	35.0%	40.0%	50.0%	70.0%	90.0%
1	********	50.0	49.7	49.0	47.7	46.3	44.9	43.5	42.0	40.5	38.9	35.5	27.5	15.9
2	********	35.3	35.2	34.6	33.7	32.7	31.8	30.8	29.7	28.6	27.5	25.1	19.5	11.2
3	********	28.9	28.7	28.3	27.5	26.7	25.9	25.1	24.3	23.4	22.5	20.5	15.9	9.2
4	********	25.0	24.9	24.5	23.8	23.2	22.5	21.8	21.0	20.3	19.5	17.8	13.8	7.9
5	********	22.4	22.2	21.9	21.3	20.7	20.1	19.5	18.8	18.1	17.4	15.9	12.3	7.1
6	********	20.4	20.3	20.0	19.5	18.9	18.3	17.8	17.2	16.5	15.9	14.5	11.2	6.5
7	********	18.9	18.8	18.5	18.0	17.5	17.0	16.4	15.9	15.3	14.7	13.4	10.4	6.0
8	**********	17.6	17.3	16.8	16.4	15.9	15.4	14.9	14.3	13.8	12.6	9.7	5.6	
9	**********	16.6	16.3	15.9	15.4	15.0	14.5	14.0	13.5	13.0	11.8	9.2	5.3	
10	**********	15.7	15.5	15.1	14.6	14.2	13.8	13.3	12.8	12.3	11.2	8.7	5.0	
11	**********	15.0	14.8	14.4	14.0	13.5	13.1	12.7	12.2	11.7	10.7	8.3	4.8	
12	**********	14.4	14.1	13.8	13.4	13.0	12.6	12.1	11.7	11.2	10.3	7.9	4.6	
13	**********	13.8	13.6	13.2	12.8	12.5	12.1	11.7	11.2	10.8	9.9	7.6	4.4	
14	**********	13.3	13.1	12.7	12.4	12.0	11.6	11.2	10.8	10.4	9.5	7.4	4.2	
15	**********	12.8	12.6	12.3	12.0	11.6	11.2	10.9	10.5	10.0	9.2	7.1	4.1	
16	**********	12.2	11.9	11.6	11.2	10.9	10.5	10.1	9.7	8.9	6.9	4.0		
17	**********	11.9	11.6	11.2	10.9	10.6	10.2	9.8	9.4	8.6	6.7	3.9		
18	**********	11.5	11.2	10.9	10.6	10.3	9.9	9.5	9.2	8.4	6.5	3.7		
19	**********	11.2	10.9	10.6	10.3	10.0	9.6	9.3	8.9	8.1	6.3	3.6		
20	**********	10.9	10.7	10.4	10.0	9.7	9.4	9.1	8.7	7.9	6.2	3.6		
21	**********	10.7	10.4	10.1	9.8	9.5	9.2	8.8	8.5	7.8	6.0	3.5		
22	**********	10.4	10.2	9.9	9.6	9.3	9.0	8.6	8.3	7.6	5.9	3.4		
23	**********	10.2	9.9	9.7	9.4	9.1	8.8	8.4	8.1	7.4	5.7	3.3		
24	**********	10.0	9.7	9.5	9.2	8.9	8.6	8.3	7.9	7.3	5.6	3.2		
25	**********	9.8	9.5	9.3	9.0	8.7	8.4	8.1	7.8	7.1	5.5	3.2		
30	**********	8.9	8.7	8.5	8.2	7.9	7.7	7.4	7.1	6.5	5.0	2.9		
35	**********	8.3	8.1	7.8	7.6	7.4	7.1	6.8	6.6	6.0	4.7	2.7		
40	**********	7.5	7.3	7.1	6.9	6.6	6.4	6.2	5.6	4.4	2.5			
45	**********	7.1	6.9	6.7	6.5	6.3	6.0	5.8	5.3	4.1	2.4			
50	**********	6.7	6.5	6.4	6.2	5.9	5.7	5.5	5.0	3.9	2.2			
55	**********	6.4	6.2	6.1	5.9	5.7	5.5	5.2	4.8	3.7	2.1			
60	**********	6.2	6.0	5.8	5.6	5.4	5.2	5.0	4.6	3.6	2.1			
65	**********	5.9	5.7	5.6	5.4	5.2	5.0	4.8	4.4	3.4	2.0			
70	**********	5.7	5.5	5.4	5.2	5.0	4.8	4.7	4.2	3.3	1.9			
75	**********	5.5	5.3	5.2	5.0	4.9	4.7	4.5	4.1	3.2	1.8			
80	**********	5.2	5.0	4.9	4.7	4.5	4.4	4.0	3.1	1.8				
85	**********	5.0	4.9	4.7	4.6	4.4	4.2	3.9	3.0	1.7				
90	**********	4.9	4.7	4.6	4.4	4.3	4.1	3.7	2.9	1.7				
95	**********	4.8	4.6	4.5	4.3	4.2	4.0	3.6	2.8	1.6				
100	**********	4.6	4.5	4.4	4.2	4.1	3.9	3.6	2.8	1.6				
125	**********	4.0	3.9	3.8	3.6	3.5	3.2	2.5	1.4					
150	**********	3.7	3.6	3.4	3.3	3.2	2.9	2.2	1.3					
200	**********	3.0	2.9	2.8	2.5	1.9	1.1							
250	**********	2.6	2.5	2.2	1.7	1.0								
300	**********	2.2	2.1	1.6	0.9									
350	**********	1.9	1.5	0.8										
400	**********	1.4	0.8											
450	**********	1.3	0.7											
500	**********	1.2	0.7											

NOTES:

(1) COEFFICIENTS OF VARIATION (CVs) ARE PERCENTAGES.
(2) FOR CVs OF ESTIMATED TOTALS, LOCATE THE CLOSEST ROW. THE LEFT-MOST COLUMN PROVIDES THE APPROXIMATE CV.
(3) FOR CVs OF ESTIMATED PROPORTIONS, LOCATE THE ROW CLOSEST THE NUMERATOR, AND THE COLUMN CLOSEST THE PERCENTAGE.
(4) CVs IN THIS TABLE ARE CRUDE AND ARE GENERALLY HIGHER THAN THE EXACT FIGURE. THEY ARE NOT OFFICIAL.

SURVEY ON THE IMPORTANCE OF Nature TO CANADIANS IN 1996

Approximate Sampling Variability Tables for ALBERTA

NUMERATOR OF PERCENTAGE ('000)	ESTIMATED PERCENTAGE													
	0.1%	1.0%	2.0%	5.0%	10.0%	15.0%	20.0%	25.0%	30.0%	35.0%	40.0%	50.0%	70.0%	90.0%
1	72.1	71.8	71.4	70.3	68.5	66.5	64.5	62.5	60.4	58.2	55.9	51.0	39.5	22.8
2	51.0	50.8	50.5	49.7	48.4	47.0	45.6	44.2	42.7	41.1	39.5	36.1	27.9	16.1
3	********	41.4	41.2	40.6	39.5	38.4	37.3	36.1	34.9	33.6	32.3	29.5	22.8	13.2
4	********	35.9	35.7	35.2	34.2	33.3	32.3	31.2	30.2	29.1	27.9	25.5	19.8	11.4
5	********	32.1	31.9	31.5	30.6	29.8	28.9	27.9	27.0	26.0	25.0	22.8	17.7	10.2
6	********	29.3	29.2	28.7	27.9	27.2	26.3	25.5	24.6	23.7	22.8	20.8	16.1	9.3
7	********	27.1	27.0	26.6	25.9	25.1	24.4	23.6	22.8	22.0	21.1	19.3	14.9	8.6
8	********	25.4	25.3	24.9	24.2	23.5	22.8	22.1	21.3	20.6	19.8	18.0	14.0	8.1
9	********	23.9	23.8	23.4	22.8	22.2	21.5	20.8	20.1	19.4	18.6	17.0	13.2	7.6
10	********	22.7	22.6	22.2	21.6	21.0	20.4	19.8	19.1	18.4	17.7	16.1	12.5	7.2
11	********	21.6	21.5	21.2	20.6	20.1	19.5	18.8	18.2	17.5	16.9	15.4	11.9	6.9
12	********	20.7	20.6	20.3	19.8	19.2	18.6	18.0	17.4	16.8	16.1	14.7	11.4	6.6
13	********	19.9	19.8	19.5	19.0	18.5	17.9	17.3	16.7	16.1	15.5	14.2	11.0	6.3
14	********	19.2	19.1	18.8	18.3	17.8	17.2	16.7	16.1	15.5	14.9	13.6	10.6	6.1
15	********	18.5	18.4	18.2	17.7	17.2	16.7	16.1	15.6	15.0	14.4	13.2	10.2	5.9
16	********	17.9	17.9	17.6	17.1	16.6	16.1	15.6	15.1	14.5	14.0	12.8	9.9	5.7
17	********	17.4	17.3	17.1	16.6	16.1	15.7	15.2	14.6	14.1	13.6	12.4	9.6	5.5
18	********	16.9	16.8	16.6	16.1	15.7	15.2	14.7	14.2	13.7	13.2	12.0	9.3	5.4
19	********	16.5	16.4	16.1	15.7	15.3	14.8	14.3	13.8	13.3	12.8	11.7	9.1	5.2
20	********	16.1	16.0	15.7	15.3	14.9	14.4	14.0	13.5	13.0	12.5	11.4	8.8	5.1
21	********	15.7	15.6	15.3	14.9	14.5	14.1	13.6	13.2	12.7	12.2	11.1	8.6	5.0
22	**********	15.2	15.0	14.6	14.2	13.8	13.3	12.9	12.4	11.9	10.9	8.4	4.9	
23	**********	14.9	14.7	14.3	13.9	13.5	13.0	12.6	12.1	11.7	10.6	8.2	4.8	
24	**********	14.6	14.4	14.0	13.6	13.2	12.8	12.3	11.9	11.4	10.4	8.1	4.7	
25	**********	14.3	14.1	13.7	13.3	12.9	12.5	12.1	11.6	11.2	10.2	7.9	4.6	
30	**********	13.0	12.8	12.5	12.1	11.8	11.4	11.0	10.6	10.2	9.3	7.2	4.2	
35	**********	12.1	11.9	11.6	11.2	10.9	10.6	10.2	9.8	9.4	8.6	6.7	3.9	
40	**********	11.3	11.1	10.8	10.5	10.2	9.9	9.5	9.2	8.8	8.1	6.2	3.6	
45	**********	10.5	10.2	9.9	9.6	9.3	9.0	8.7	8.3	7.6	5.9	3.4		
50	**********	9.9	9.7	9.4	9.1	8.8	8.5	8.2	7.9	7.2	5.6	3.2		
55	**********	9.5	9.2	9.0	8.7	8.4	8.1	7.8	7.5	6.9	5.3	3.1		
60	**********	9.1	8.8	8.6	8.3	8.1	7.8	7.5	7.2	6.6	5.1	2.9		
65	**********	8.7	8.5	8.3	8.0	7.8	7.5	7.2	6.9	6.3	4.9	2.8		
70	**********	8.4	8.2	8.0	7.7	7.5	7.2	7.0	6.7	6.1	4.7	2.7		
75	**********	8.1	7.9	7.7	7.5	7.2	7.0	6.7	6.5	5.9	4.6	2.6		
80	**********	7.9	7.7	7.4	7.2	7.0	6.7	6.5	6.2	5.7	4.4	2.6		
85	**********	7.6	7.4	7.2	7.0	6.8	6.5	6.3	6.1	5.5	4.3	2.5		
90	**********	7.4	7.2	7.0	6.8	6.6	6.4	6.1	5.9	5.4	4.2	2.4		
95	**********	7.2	7.0	6.8	6.6	6.4	6.2	6.0	5.7	5.2	4.1	2.3		
100	**********	7.0	6.8	6.7	6.5	6.2	6.0	5.8	5.6	5.1	4.0	2.3		
125	**********	6.1	6.0	5.8	5.6	5.4	5.2	5.0	4.6	3.5	2.0			
150	**********	5.6	5.4	5.3	5.1	4.9	4.7	4.6	4.2	3.2	1.9			
200	**********	4.8	4.7	4.6	4.4	4.3	4.1	4.0	3.6	2.8	1.6			
250	**********	4.2	4.1	4.0	3.8	3.7	3.5	3.2	2.5	1.4				
300	**********	3.8	3.7	3.6	3.5	3.4	3.2	2.9	2.3	1.3				
350	**********	3.4	3.3	3.2	3.1	3.0	2.7	2.1	1.2					
400	**********	3.2	3.1	3.0	2.9	2.8	2.6	2.0	1.1					
450	**********	2.9	2.8	2.7	2.6	2.4	1.9	1.1						
500	**********	2.8	2.7	2.6	2.5	2.3	1.8	1.0						
750	**********	2.0	1.9	1.4	0.8									
1000	**********	1.6	1.2	0.7										
1500	**********	0.6												

NOTES:

(1) COEFFICIENTS OF VARIATION (CVs) ARE PERCENTAGES.
(2) FOR CVs OF ESTIMATED TOTALS, LOCATE THE CLOSEST ROW. THE LEFT-MOST COLUMN PROVIDES THE APPROXIMATE CV.
(3) FOR CVs OF ESTIMATED PROPORTIONS, LOCATE THE ROW CLOSEST THE NUMERATOR, AND THE COLUMN CLOSEST THE PERCENTAGE.
(4) CVs IN THIS TABLE ARE CRUDE AND ARE GENERALLY HIGHER THAN THE EXACT FIGURE. THEY ARE NOT OFFICIAL.

SURVEY ON THE IMPORTANCE OF Nature TO CANADIANS IN 1996

Approximate Sampling Variability Tables for BRITISH COLUMBIA

NUMERATOR OF PERCENTAGE ('000)	ESTIMATED PERCENTAGE													
	0.1%	1.0%	2.0%	5.0%	10.0%	15.0%	20.0%	25.0%	30.0%	35.0%	40.0%	50.0%	70.0%	90.0%
1	82.9	82.5	82.1	80.8	78.6	76.4	74.1	71.8	69.4	66.8	64.2	58.6	45.4	26.2
2	58.6	58.3	58.0	57.1	55.6	54.0	52.4	50.8	49.0	47.3	45.4	41.4	32.1	18.5
3	47.8	47.6	47.4	46.6	45.4	44.1	42.8	41.4	40.0	38.6	37.1	33.8	26.2	15.1
4	********	41.2	41.0	40.4	39.3	38.2	37.1	35.9	34.7	33.4	32.1	29.3	22.7	13.1
5	********	36.9	36.7	36.1	35.2	34.2	33.2	32.1	31.0	29.9	28.7	26.2	20.3	11.7
6	********	33.7	33.5	33.0	32.1	31.2	30.3	29.3	28.3	27.3	26.2	23.9	18.5	10.7
7	********	31.2	31.0	30.5	29.7	28.9	28.0	27.1	26.2	25.3	24.3	22.2	17.2	9.9
8	********	29.2	29.0	28.6	27.8	27.0	26.2	25.4	24.5	23.6	22.7	20.7	16.1	9.3
9	********	27.5	27.4	26.9	26.2	25.5	24.7	23.9	23.1	22.3	21.4	19.5	15.1	8.7
10	********	26.1	25.9	25.5	24.9	24.2	23.4	22.7	21.9	21.1	20.3	18.5	14.4	8.3
11	********	24.9	24.7	24.4	23.7	23.0	22.4	21.6	20.9	20.2	19.4	17.7	13.7	7.9
12	********	23.8	23.7	23.3	22.7	22.1	21.4	20.7	20.0	19.3	18.5	16.9	13.1	7.6
13	********	22.9	22.8	22.4	21.8	21.2	20.6	19.9	19.2	18.5	17.8	16.3	12.6	7.3
14	********	22.0	21.9	21.6	21.0	20.4	19.8	19.2	18.5	17.9	17.2	15.7	12.1	7.0
15	********	21.3	21.2	20.9	20.3	19.7	19.1	18.5	17.9	17.3	16.6	15.1	11.7	6.8
16	********	20.6	20.5	20.2	19.7	19.1	18.5	17.9	17.3	16.7	16.1	14.7	11.4	6.6
17	********	20.0	19.9	19.6	19.1	18.5	18.0	17.4	16.8	16.2	15.6	14.2	11.0	6.4
18	********	19.4	19.3	19.0	18.5	18.0	17.5	16.9	16.3	15.8	15.1	13.8	10.7	6.2
19	********	18.9	18.8	18.5	18.0	17.5	17.0	16.5	15.9	15.3	14.7	13.4	10.4	6.0
20	********	18.4	18.3	18.1	17.6	17.1	16.6	16.1	15.5	14.9	14.4	13.1	10.2	5.9
21	********	18.0	17.9	17.6	17.2	16.7	16.2	15.7	15.1	14.6	14.0	12.8	9.9	5.7
22	********	17.6	17.5	17.2	16.8	16.3	15.8	15.3	14.8	14.2	13.7	12.5	9.7	5.6
23	********	17.2	17.1	16.8	16.4	15.9	15.5	15.0	14.5	13.9	13.4	12.2	9.5	5.5
24	********	16.8	16.8	16.5	16.1	15.6	15.1	14.7	14.2	13.6	13.1	12.0	9.3	5.4
25	********	16.5	16.4	16.2	15.7	15.3	14.8	14.4	13.9	13.4	12.8	11.7	9.1	5.2
30	********	15.1	15.0	14.8	14.4	14.0	13.5	13.1	12.7	12.2	11.7	10.7	8.3	4.8
35	**********	13.9	13.7	13.3	12.9	12.5	12.1	11.7	11.3	10.9	9.9	7.7	4.4
40	**********	13.0	12.8	12.4	12.1	11.7	11.4	11.0	10.6	10.2	9.3	7.2	4.1
45	**********	12.2	12.0	11.7	11.4	11.1	10.7	10.3	10.0	9.6	8.7	6.8	3.9
50	**********	11.6	11.4	11.1	10.8	10.5	10.2	9.8	9.5	9.1	8.3	6.4	3.7
55	**********	11.1	10.9	10.6	10.3	10.0	9.7	9.4	9.0	8.7	7.9	6.1	3.5
60	**********	10.6	10.4	10.2	9.9	9.6	9.3	9.0	8.6	8.3	7.6	5.9	3.4
65	**********	10.0	9.8	9.5	9.2	8.9	8.6	8.3	8.0	7.3	5.6	3.3
70	**********	9.7	9.4	9.1	8.9	8.6	8.3	8.0	7.7	7.0	5.4	3.1
75	**********	9.3	9.1	8.8	8.6	8.3	8.0	7.7	7.4	6.8	5.2	3.0
80	**********	9.0	8.8	8.5	8.3	8.0	7.8	7.5	7.2	6.6	5.1	2.9
85	**********	8.8	8.5	8.3	8.0	7.8	7.5	7.2	7.0	6.4	4.9	2.8
90	**********	8.5	8.3	8.1	7.8	7.6	7.3	7.0	6.8	6.2	4.8	2.8
95	**********	8.3	8.1	7.8	7.6	7.4	7.1	6.9	6.6	6.0	4.7	2.7
100	**********	8.1	7.9	7.6	7.4	7.2	6.9	6.7	6.4	5.9	4.5	2.6
125	**********	7.2	7.0	6.8	6.6	6.4	6.2	6.0	5.7	5.2	4.1	2.3
150	**********	6.6	6.4	6.2	6.1	5.9	5.7	5.5	5.2	4.8	3.7	2.1
200	**********	5.6	5.4	5.2	5.1	4.9	4.7	4.5	4.1	3.2	1.9
250	**********	5.0	4.8	4.7	4.5	4.4	4.2	4.1	3.7	2.9	1.7
300	**********	4.5	4.4	4.3	4.1	4.0	3.9	3.7	3.4	2.6	1.5
350	**********	4.1	4.0	3.8	3.7	3.6	3.4	3.1	2.4	1.4
400	**********	3.8	3.7	3.6	3.5	3.3	3.2	2.9	2.3	1.3
450	**********	3.6	3.5	3.4	3.3	3.2	3.0	2.8	2.1	1.2
500	**********	3.3	3.2	3.1	3.0	2.9	2.6	2.0	1.2
750	**********	2.6	2.5	2.4	2.3	2.1	1.7	1.0
1000	**********	2.1	2.0	1.9	1.4	0.8
1500	**********	1.5	1.2	0.7
2000	**********	1.0	0.6

NOTES:

(1) COEFFICIENTS OF VARIATION (CVs) ARE PERCENTAGES.
(2) FOR CVs OF ESTIMATED TOTALS, LOCATE THE CLOSEST ROW. THE LEFT-MOST COLUMN PROVIDES THE APPROXIMATE CV.
(3) FOR CVs OF ESTIMATED PROPORTIONS, LOCATE THE ROW CLOSEST THE NUMERATOR, AND THE COLUMN CLOSEST THE PERCENTAGE.
(4) CVs IN THIS TABLE ARE CRUDE AND ARE GENERALLY HIGHER THAN THE EXACT FIGURE. THEY ARE NOT OFFICIAL.

SURVEY ON THE IMPORTANCE OF Nature TO CANADIANS IN 1996

Approximate Sampling Variability Tables for YUKON

NUMERATOR OF PERCENTAGE ('000)	ESTIMATED PERCENTAGE													
	0.1%	1.0%	2.0%	5.0%	10.0%	15.0%	20.0%	25.0%	30.0%	35.0%	40.0%	50.0%	70.0%	90.0%
1	**********	**********	**********	**********	15.7	15.2	14.8	14.3	13.8	13.3	12.8	11.7	9.0	5.2
2	**********	**********	**********	**********	10.8	10.4	10.1	9.8	9.4	9.0	8.3	6.4	3.7	
3	**********	**********	**********	**********	8.5	8.3	8.0	7.7	7.4	6.7	5.2	3.0		
4	**********	**********	**********	**********	7.2	6.9	6.7	6.4	5.8	4.5	2.6			
5	**********	**********	**********	**********	6.2	6.0	5.7	5.2	4.0	2.3				
6	**********	**********	**********	**********	5.4	5.2	4.8	3.7	2.1					
7	**********	**********	**********	**********	4.8	4.4	3.4	2.0						
8	**********	**********	**********	**********	4.1	3.2	1.8							
9	**********	**********	**********	**********	3.9	3.0	1.7							
10	**********	**********	**********	**********	2.9	1.7								
11	**********	**********	**********	**********	2.7	1.6								
12	**********	**********	**********	**********	2.6	1.5								
13	**********	**********	**********	**********	2.5	1.4								
14	**********	**********	**********	**********	1.4									
15	**********	**********	**********	**********	1.3									
16	**********	**********	**********	**********	1.3									
17	**********	**********	**********	**********	1.3									

NOTES:

(1) COEFFICIENTS OF VARIATION (CVs) ARE PERCENTAGES.
(2) FOR CVs OF ESTIMATED TOTALS, LOCATE THE CLOSEST ROW. THE LEFT-MOST COLUMN PROVIDES THE APPROXIMATE CV.
(3) FOR CVs OF ESTIMATED PROPORTIONS, LOCATE THE ROW CLOSEST THE NUMERATOR, AND THE COLUMN CLOSEST THE PERCENTAGE.
(4) CVs IN THIS TABLE ARE CRUDE AND ARE GENERALLY HIGHER THAN THE EXACT FIGURE. THEY ARE NOT OFFICIAL.

11.0 Weighting

Since the Nature Survey used a sub-sample of the LFS sample, the derivation of weights for the survey records is closely tied to the weighting procedure used for the LFS. The LFS weighting procedure is briefly described below, followed by a description of how the procedure was modified for use in the Nature Survey.

11.1 Weighting Procedures for the LFS

In the LFS, the final weight attached to each record is the product of the following factors: the basic weight, the cluster sub-weight, the stabilization weight, the balancing factor for non-response, and the province-age-sex ratio adjustment factor. Each is described below.

Basic Weight

In a probability sample, the sample design itself determines weights which must be used to produce unbiased estimates of the population. Each record must be weighted by the inverse of the probability of selecting the person to whom the record refers. In the example of a 2% simple random sample, this probability would be .02 for each person and the records must be weighted by 1/.02=50. Because all eligible individuals in a dwelling are interviewed (either directly, or by proxy), this probability is the same as the probability with which the dwelling is selected.

Cluster Sub-weight

The cluster delineation is such that the number of dwellings in the sample increases very slightly with moderate growth in the housing stock. Substantial growth can be tolerated in an isolated cluster before the additional sample represents a field collection problem. However, if growth takes place in more than one cluster in an interviewer assignment, the cumulative effect of all increases may create a workload problem. In clusters where substantial growth has taken place, sub-sampling is used as a means of keeping interviewer assignments manageable. The cluster sub-weight represents the inverse of this sub-sampling ratio in clusters where sub-sampling has occurred.

Stabilization Weight

Growth in the population, and hence in the number of households, would lead to an ever increasing sample size for the LFS since the final stage of sampling is conducting systematically at a fixed rate. To control costs, some dwellings are randomly dropped in order to maintain the sample size at the desired level. The stabilization weight represents the inverse of the sub-sampling ratio where stabilization has occurred.

Non-response

Notwithstanding the strict controls of the LFS, some non-response is inevitable, despite all the efforts made by the interviewers. The LFS non-response rate is approximately 5%. For certain types of non-response (eg. household temporarily absent, refusal), data from a previous month's interview with the household if any, is brought forward and used as the current month's data for the household.

In other cases, non-response is compensated for by proportionally increasing the weights of responding households. The weight of each responding record is increased by the ratio of the number of households that should have been interviewed, divided by the number that were actually interviewed. This adjustment is done separately for non-response areas, which are defined by employment insurance economic region, type of area, and rotation group. It is based on the assumption that the households that have been interviewed represent the characteristics of those that should have been interviewed. To the extent that this assumption is not true, the estimates will be somewhat biased.

LFS Sub-Weight

The product of the previously described weighting factors is called the LFS sub-weight. All members of the same sampled dwelling have the same sub-weight. Therefore, when calculating a household sub-weight, we use the sub-weight of one record (or person) from the household.

11.2 Weighting Procedures for the Nature Survey

The principles behind the calculation of the weights for the Nature Survey are nearly identical to those for the LFS. However, further adjustments were made to the LFS weights in order to derive a final weight for the individual records on the Nature Survey microdata file.

(1) An adjustment to account for the use of a five-sixths sub-sample, instead of the full LFS sample, in the provinces, and for the three-month sample in the Yukon, rather than a single month.

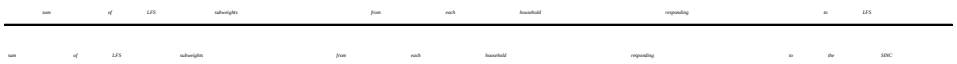
(2) An adjustment to account for the additional non-response to the Nature Survey, i.e., non-response to the Nature Survey for individuals

who did respond to the LFS or for which previous month's LFS data was brought forward.

(3) A calibration adjustment to account for independent provincial age/sex, CMA, and ER population projections after the above adjustments are made. These population projections are simply the final weighted totals from the LFS, which have been, in turn, calibrated to Statistics Canada demography projections based on the census

Nature Survey Non-response Adjustments

Adjustment (2) is taken into account by multiplying the LFS sub-weight for each responding Nature Survey record by:



to obtain a non-response adjusted Nature Survey sub-weight. Separate non-response adjustments are made within groups defined by EIER, sample design type, and rotation group.

Calibration Estimation Adjustments

The weights for each respondent were adjusted by an iterative process using a calibrated estimation procedure. This procedure ensured that estimates produced for a calibration group would agree with the population totals for that calibration group. This adjustment was made by using a two-stage iterative weighting procedure, each time using the weight obtained from the previous step, until the set of estimates agreed with the LFS population totals (which were created using Census population projections). **The final statistical weight can be found in the "WEIGHT" field on the microdata file.**

12.0 Questionnaire