Catalogue no. 11-526-X

Households and the Environment

2009

Statistics Canada Statistique Canada

Canada

How to obtain more information

For information about this product or the wide range of services and data available from Statistics Canada, visit our website at *www.statcan.gc.ca*, e-mail us at *infostats@statcan.gc.ca,* or telephone us, Monday to Friday from 8:30 a.m. to 4:30 p.m., at the following numbers:

Statistics Canada's National Contact Centre

Toll-free telephone (Canada and the United States):	
Inquiries line	1-800-263-1136
National telecommunications device for the hearing impaired	1-800-363-7629
Fax line	1-877-287-4369
Local or international calls:	
Inquiries line	1-613-951-8116
Fax line	1-613-951-0581
Depository Services Program	
Inquiries line	1-800-635-7943
Fax line	1-800-565-7757

To access this product

This product, Catalogue no. 11-526-X, is available free in electronic format. To obtain a single issue, visit our website at *www.statcan.gc.ca* and browse by "Key resource" > "Publications."

Standards of service to the public

Statistics Canada is committed to serving its clients in a prompt, reliable and courteous manner. To this end, Statistics Canada has developed *standards of service* that its employees observe. To obtain a copy of these service standards, please contact Statistics Canada toll-free at 1-800-263-1136. The service standards are also published on *www.statcan.gc.ca* under "About us" > "The agency" > "Providing services to Canadians."

Statistics Canada
Environment Accounts and Statistics Division
Environmental Protection Accounts and Surveys

Households and the Environment

2009

Published by authority of the Minister responsible for Statistics Canada

March 2011

Catalogue no. 11-526-X

ISSN 1913-5270

Frequency: Biennial

Ottawa

Cette publication est également disponible en français.

Note of appreciation

Canada owes the success of its statistical system to a long-standing partnership between Statistics Canada, the citizens of Canada, its businesses, governments and other institutions. Accurate and timely statistical information could not be produced without their continued cooperation and goodwill.

User information

Symbols

The following standard symbols are used in Statistics Canada publications:

.	not available for any reference period
..	not available for a specific reference period
...	not applicable
0	true zero or a value rounded to zero
0^s	value rounded to 0 (zero) where there is a meaningful distinction between true zero and the value that was rounded
^{p}	preliminary
^{r}	revised
x	suppressed to meet the confidentiality requirements of the *Statistics Act*
^{E}	use with caution
F	too unreliable to be published

Note

Figures may not add up to totals as a result of rounding or due to the exclusion of respondents that answered "don't know" or refused to answer certain questions.

Acknowledgements

The 2009 *Households and the Environment Survey* (HES) was a cooperative project jointly managed by the Environment Accounts and Statistics Division under the direction of Robert Smith, Director and John Marshall, Chief, Environmental Protection Accounts and Surveys, and Special Surveys Division under the direction of Jacqueline Mayda, Director and Charles Delorme, Chief, Education Surveys. Data Collection for the survey was conducted by the Collection Planning and Management Division under the direction of Duncan Wrighte, Director.

The HES 2009 Project team consisted of the following:

Gordon Dewis, project manager

Serge Legault, survey manager

Thank you to the following people for their contributions in the areas of data collection, data processing, table creation, editing, reviewing, proofreading, dissemination and technical development:

Michael Bordt
Kelley Bush
Murray Cameron
Geneviève Clavet
Carlos De Leon
Louise Demers and her team
Monique Deschambault
Don Grant
Kate Hart
Laurie Jong
Marc Lavergne
Nicolas Lavigne
A. Munro
Sheri Vermette

The contributions of the respondents, Environment Canada, Health Canada, Natural Resources Canada and provincial environmental departments were critical to the successful completion of the surveys and are gratefully acknowledged.

As well, we would like to acknowledge the vital contribution made to this project by the staff in Statistics Canada's regional offices. This project would not have been possible without their efforts.

Table of contents

Table of contents – continued

Highlights

Drinking water

- Most Canadian households had municipally-supplied water (87%).
- Prince Edward Island saw the greatest increase in the proportion of households that had municipally-supplied water increasing to 61% in 2009 from 49% in 2007.
- Two-thirds of Canadian households reported they drank primarily tap water.
- The proportion of households that drank primarily bottled water dropped to 24% from 30% in 2007.
- The proportion of households with municipally-supplied water that treated it prior to consumption dropped three percentage points from 2007 to 51%.

Indoor water conservation

- Sixty-three percent of Canadian households had a low-flow shower head.
- Forty-two percent of Canadian households had a low-volume toilet.

Heating and cooling

- Almost half (49%) of the households with thermostats had ones that were programmable.
- Slightly more than six out of ten households (61%) that had a thermostat lowered the temperature during the winter while they slept.

Energy conservation

- Three-quarters of Canadian households reported having at least one compact fluorescent light.
- Sixty-four percent of Canadian households used a clothesline or drying rack in 2009.
- Energy audits had been conducted by 12% of Canadian households in 2009, with 91% having been conducted in the preceding ten years.

Indoor air quality

- The majority of households reported that the air quality in their dwelling was good (34%), very good (37%) or excellent (18%).
- Five percent of respondents believed that someone in their household had experienced a health problem that may have been caused by the quality of the air in the dwelling.
- Thirteen percent of households in Canada reported the presence of mould or mildew in their dwelling in 2009.

Radon awareness

- Forty-two percent of Canadian households had heard of radon, with just under half (49%) able to correctly describe it.
- Three percent of these households (excluding apartment dwellers) that had heard of radon reported that they had tested their dwelling for the presence of radon. Most of these households (78%) had conducted the testing within the last ten years.

Household hazardous waste

- More than half of the households that had expired or leftover medication (57%) returned the medication to the supplier or retailer for disposal.
- Most households (62%) took or sent their unwanted paints and solvents to a depot or drop-off centre.
- Thirty-six percent of Canadian households had unwanted electronic devices to dispose of in 2009.
- Twenty-two percent of Canadian households reported that they had dead or unwanted compact fluorescent lights to dispose of, of which over half (56%) reported they put their dead or unwanted CFLs in the garbage, while 24% reported they took or sent them to a depot or drop-off centre.

Introduction

Households can have a significant impact on the environment. The *Households and the Environment Survey* (HES) aims to measure the behaviours of Canadian households with respect to the environment. First conducted in 1991, it has since been conducted in 1994, 2006, 2007, and most recently in 2009. Some of the environmental variables from the first cycle continue to be measured, but many new topics have been introduced over the years.

This report presents the results of the following major themes covered by the 2009 HES:

- Consumption and conservation of water
- Consumption and conservation of energy
- Indoor environment
- Household hazardous waste
- Purchasing decisions

The HES is a biennial survey, conducted under the umbrella of the Canadian Environmental Sustainability Indicators (CESI) program, a broader initiative of Statistics Canada, Environment Canada and Health Canada. The HES aims to provide socio-economic information that will assist in the interpretation of the CES indicators (water quality, air quality and greenhouse gas emissions).

Analysis

Water conservation

In 2005, Canadian households used 3,771.1 million cubic metres of water, which accounted for 9% of all the water used in Canada.[1,2] This equates to approximately 320 litres per person every day of the year.[3] Water can be conserved using a variety of means, including using timers on sprinklers and replacing old fixtures with more water-efficient ones. The use of cisterns to collect rainwater is another way households can reduce the amount of water they draw from their water supplies.

Indoor water conservation

Low-flow shower heads

The use of low-flow shower heads is a relatively inexpensive way for a household to reduce the amount of water used when someone takes a shower. Their uptake by Canadian households has increased over the last two decades, from 28% in 1991 to 63% in 2009 (Table 1). They were most likely to be found in households in New Brunswick (67%) and least likely to be found in households in Manitoba (49%).

Overall, households that had non-municipal water supplies, such as a well, were more likely to have had a low-flow shower head than those that had municipally-supplied water (65% and 62%, respectively). While most provinces had similar rates of adoption for households with municipal water supplies compared to those with non-municipal water supplies, households with non-municipal water supplies in Newfoundland and Labrador, Nova Scotia and Manitoba were much more likely to have had a low-flow shower head than those that had municipal water supplies (79%, 75% and 61%, respectively).

Low-volume toilets

Toilets can be modified to use less water per flush by placing a bottle in the tank or installing a dam, both of which effectively reduce the volume of the tank, or they can be designed specifically to use less water. Regardless of how this reduction was achieved, 42% of households reported having a low-volume toilet in 2009 (Table 1), compared to 9% of households in 1991. Households in Ontario (48%) and Alberta (46%) were most likely to have had one, while those in Newfoundland and Labrador (30%) and Prince Edward Island (31%) were the least likely to have reported one.

Households that had non-municipal water supplies were more likely to have had a low-volume toilet compared to those that had municipally-supplied water (48% and 42%, respectively). While most provinces have slightly higher rates of uptake for households that had non-municipally-supplied water compared to those that had a municipal water supply, households in Quebec (45% compared to 33%) and British Columbia (54% compared to 39%) were much more likely to have had a low-volume toilet if they had a non-municipal water supply.

1. Statistics Canada, 2010, *Human Activity and the Environment: Freshwater supply and demand in Canada, 2010*, Catalogue no. 16-201-X.
2. Excluding water used in hydro-electric power generation.
3. Statistics Canada, 2010, Environment Accounts and Statistics Division, special tabulation.

Outdoor water conservation

Sprinkler timers

By controlling the amount of water that is applied to lawns and gardens, households can reduce their water consumption. Sprinkler timers can enable households to achieve this goal.

Seventy percent of Canadian households[4] had a lawn in 2009 (Table 2). Of these households, 43% reported that they had watered their lawn in 2009. Almost three-quarters (72%) used a sprinkler or sprinkler system, 27% of which had a timer. Sprinkler timers were most common in Quebec and British Columbia (36% and 35%, respectively).

In 2009, 61% of households reported having gardens and areas with trees, shrubs, flowers or vegetables outside the home.[5] Almost three-quarters (73%) of these households indicated that they watered it during 2009. Sprinklers and sprinkler systems were used by 23% of those households that watered their garden, of which 36% were connected to a timer. As with lawn sprinkler timers, garden sprinkler timers were most commonly reported by households in British Columbia (48% of households that used a garden sprinkler) and Quebec (43%).

Rain barrels and cisterns

Cisterns and rain barrels can be used to collect the run-off of rain and snow from roofs. The collected water can then be used to water lawns and gardens and other uses that do not require the water to be potable. In 2009, 18% of households that were not in apartments[6] reported they had a rain barrel or cistern (Table 2). They were most commonly used in Alberta (33%), Saskatchewan (28%) and Manitoba (26%). Non-apartment households in Quebec, on the other hand, were the least likely to have used a cistern or rain barrel, with just 11% of these households reporting one.

Water supply

Household water source

The majority of Canadian households (87%) were connected to a municipal water supply (Table 3), which is a slight increase from 2007 (86%). Households in Saskatchewan and Alberta were most likely to have had their water provided by their municipality (94% and 91%, respectively). Prince Edward Island saw the greatest increase in the proportion of households that had municipally-supplied water with it increasing to 61% in 2009 from 49% in 2007.[7] Water used in New Brunswick households was slightly more likely to have come from a non-municipal source (51%), such as a well, than from a municipal water system (48%).

Drinking water decisions

Regardless of whether it came from a municipal or non-municipal source, the proportion of Canadian households that drank primarily tap water in 2009 was 66% (Table 4), up from 59% in 2007. At the same time, the proportion of households that drank primarily bottled water dropped to 24% from 30% in 2007. Nine percent of households reported that they drank both tap and bottled water equally.

Households in Prince Edward Island and British Columbia were most likely to have drunk primarily tap water (76% and 73%, respectively), while those in Quebec, Newfoundland and Labrador and Manitoba were the least likely (61%, 62% and 62%, respectively).

4. 92% of non-apartment households.
5. 80% of non-apartment households.
6. 13% of all households.
7. This increase can likely be attributed to infrastructure investments to expand the service areas of some municipal drinking water systems in Prince Edward Island.

Tap water was the primary type of drinking water reported by 66% of households that had municipally-supplied water and 64% of households that had a non-municipal water supply. Households that had a non-municipal water supply were slightly more likely to have drunk primarily bottled water than those that had a municipal supply (28% compared to 24%). Compared to 2007 this represents a shift in preference from bottled water to tap water, regardless of water source.

Households in British Columbia that had municipally-supplied water were the most likely to have drunk primarily tap water (73%), while those in Newfoundland and Labrador and New Brunswick were the least likely (60%). Bottled water was most frequently reported as the primary type of drinking water by households with a municipal water supply (31%) in New Brunswick.

Of the households that had non-municipal water supplies, those in Prince Edward Island were most likely to have drunk primarily tap water (85%), while those in Saskatchewan were the least likely (about 49%).

Water testing

Health Canada recommends that households obtaining their water from private wells have their well water tested by a laboratory two to three times a year.[8] In 2009, 33% of households on a non-municipal water supply reported that they had had their water tested by a laboratory (Table 5). Of these households, about 14% indicated that a problem was found.

Households with municipal water supplies were less likely to have had their water tested, with only 5% reporting this. Of those households that had had their water tested, about 14% reported that a problem was found.

Care must be exercised when interpreting the problem rates for municipal and non-municipal supplies because respondents were not asked about the nature of the problems found. Testing is done for a variety of contaminants such as the presence of *E. coli* and other pathogens, and metals such as lead, arsenic or mercury. Other characteristics of water quality that may be tested for include hardness, colour and clarity. Though aesthetic problems such as hardness, colour and clarity may exist, whether they constitute a 'problem' is a matter of opinion for the respondent.

Water treatment

A household may treat its water even if there are no issues with the water such as pathogens, metals or minerals. Aesthetic characteristics of the water (appearance, taste, and odour) may be such that the water is unappealing to drink. Water treatment techniques such as filtration and boiling are ways that the quality of one's drinking water may be improved.

Between 2007 and 2009, there was a slight decrease in the proportion of households served by municipal water that treated their drinking water. The proportion of households with municipally-supplied water that treated it prior to consumption dropped three percentage points from 2007 to 51% (Table 6), while the proportion of households with non-municipal water supplies that treated their water remained the same at 49%.

8. Health Canada, 2008, *What's In Your Well? – A Guide to Well Water Treatment and Maintenance*. *http://www.hc-sc.gc.ca/ewh-semt/pubs/water-eau/well-puits-eng.php* (accessed November 22, 2010).

Methods of water treatment

Households can treat their water in different ways. The type of filter or purifier used usually depends on the type of water source.

A filter or purifier can be installed on the main pipe to filter all the water used in the dwelling. Typically, these tend to be more robust systems and are more common where a household has a non-municipal water supply. Inline filtration systems often consist of more than one type of filter or purifier connected in series to address a variety of problems that may exist. Some inline filters perform simple mechanical filtration to remove particulate matter like grains of sand, while others use ceramic filters or membrane filters that have very fine pores to filter the water. Some filtration and purification systems are able to remove minerals, metals and other contaminants from the water. Another type of purification system uses ultraviolet light to neutralize any pathogens that may be present.

On-tap filters and filtration systems integrated in appliances such as refrigerators, water coolers and coffee makers, usually use a carbon or activated charcoal filter to remove impurities that may be in the water. While often effective in improving the aesthetic qualities of the water (appearance, taste and odour), these filters tend not to be effective in removing *E. coli*, if present, but may be able to remove other pathogens such as *Cryptosporidium* and *Giardia*.[9]

Jug filters are refillable pitchers that have an integrated filter cartridge. Water is added to a reservoir in the top of the pitcher and allowed to pass through the filter, usually an activated charcoal cartridge, before collecting in the main part of the jug.

Boiling water before using it is another common way to treat water. It is a very effective way to eliminate pathogens such as *E. coli*, *Cryptosporidium* and *Giardia*, but does not address other problems such as hardness and the presence of harmful metals such as lead and mercury.

Households with a municipal water supply

Municipally-supplied water is required to meet provincial and territorial government quality requirements in terms of both health factors and aesthetic characteristics (appearance, taste and odour) and the vast majority consistently meet or exceed these guidelines.[10] Despite this, just over half (51%) of Canadian households that had municipally-supplied water treated their water prior to using it (Table 6).

Boil water advisories and orders

Boil water advisories and orders are issued by public health units or other responsible authorities when there is cause for concern about the quality of drinking water from a water supply.[11] Usually, they are issued for municipal water supply systems, but they are occasionally issued when surface or ground water sources that are known to be used for private water supplies are contaminated or at risk.

Contamination by pathogens such as *E. coli* and other bacteria is one reason they are issued, but they are also issued as a precaution when planned or unplanned work is conducted on a municipal water supply system. Broken water mains can result in advisories and orders being issued for dwellings that receive their water from the affected pipe.

Weather and other natural factors can also lead to boil water advisories and orders; such as the heavy rains and fast-moving runoff that occurred in Riverside-Albert, New Brunswick in early-September 2009 causing turbidity problems in the municipality's water reservoir,[12] and the wildfires near the town of Lillooet, British Columbia in August 2009 that resulted in a boil water advisory while officials assessed the safety of the town's water supply.[13]

Jug filters were the most common form of filtration device reported by households that had municipally-supplied water, with 35% reporting using one. On-tap filters and purifiers, the next most common method of water treatment, were used by 17% of households that had a municipal water supply. Five percent of households used a filter or purifier on the main supply pipe in their dwelling.

9. Health Canada, 1998, *The Health and Environment Handbook for Health Professionals*, (Cat.: H46-2/98-211-2E; ISBN: 0-662-26649-8).
10. Health Canada, 2007, *Water Talk – Drinking Water Quality in Canada*, (HC Pub: 4155; Cat.: H128-1/07/514E; ISBN: 978-0-662-46562-1).
11. Health Canada, 2008, *Boil Water Advisories and Boil Water Orders*, *http://www.hc-sc.gc.ca/ewh-semt/pubs/water-eau/boil-ebullition-eng.php* (accessed November 22, 2010).
12. Times & Transcript (Moncton), 2009, *Boil order back on in Riverside-Albert; Torrential rains cause turbidity problem in municipal water*. (September 1, 2009).
13. Globe and Mail, 2009, *B.C. Wildfires: A town is spared*. (August 7, 2009).

Eleven percent of households that had municipally-supplied water and drank primarily tap water reported they boiled it in order to make it safe to drink. Of these households, 30% reported that they had treated their water due to a boil water advisory, while 70% did not report this as a reason they treated their water (Chart 1).

Provincially, households in Newfoundland and Labrador that had municipally-supplied water were the most likely to have treated it prior to consumption (64%), while those in Quebec were the least likely to have done so (36%) (Table 7). Households in Alberta were most likely to have had an on-tap filter (25%), while those in Newfoundland and Labrador were most likely to have used a jug filter (50%) (Table 6). Having boiled water in order to make it safe to drink was most frequently reported by households in British Columbia (19%).

Over half of those that treated their water (55%) reported they did so to improve its appearance, taste or odour (Table 7). Forty-eight percent treated it to remove water treatment chemicals such as chlorine; 15% treated their water to soften it, while 30% did so to remove metals or minerals other than for hardness. More than one-third (36%) reported that they treated their municipally-supplied water to remove possible bacterial contamination.

Households with a non-municipal water supply

The quality of water from non-municipal sources such as wells and surface sources such as springs, lakes, rivers and dugouts, is not usually monitored to the same extent as municipal water supplies. Regardless of whether they tested their wells on a regular basis, almost half (49%) of the households that obtained their water from non-municipal water sources treated it prior to consumption (Table 8).

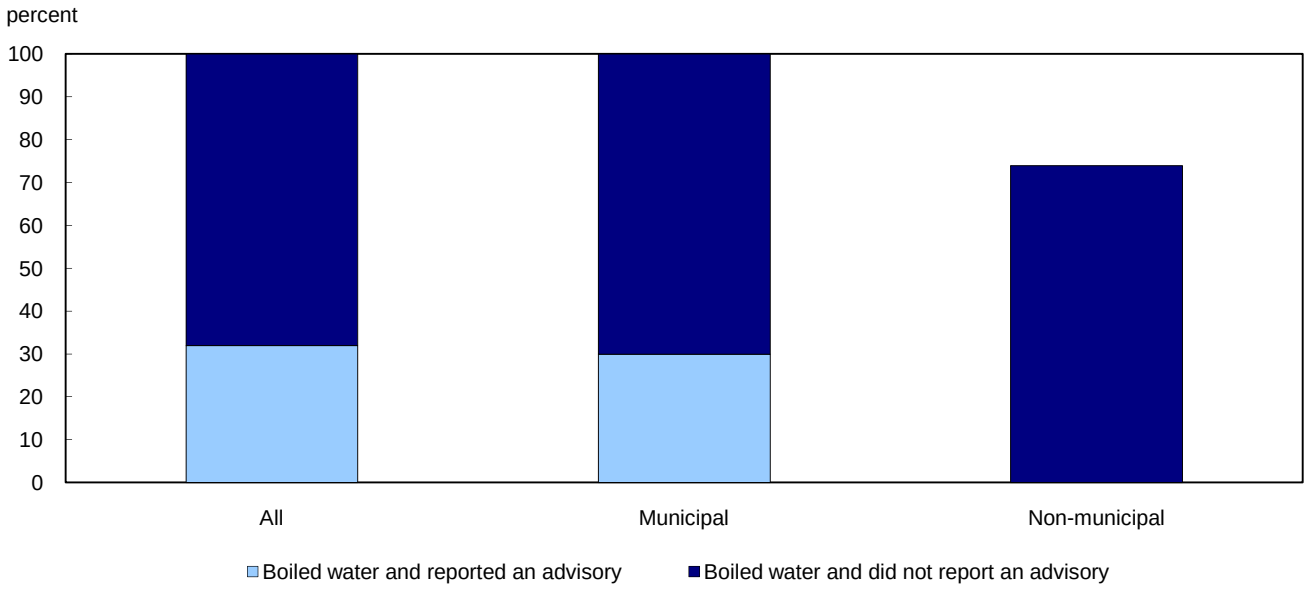
Households in Ontario and Manitoba that had non-municipal water supplies were most likely to have treated their water (55% and 54%, respectively), while those in Prince Edward Island were the least likely to have done so (37%).

Twenty-nine percent of households with a non-municipal water supply used a filter or purifier on their main supply pipe. Jug filters and on-tap filters were the next two most common forms of water treatment, with 15% and 14% of households, respectively, using these devices. Five percent of households that obtained their water from a non-municipal water source boiled it in order to make it safe to drink (Table 8).

Households in Ontario were most likely to have used a filter or purifier on the main supply pipe (35%), while those in New Brunswick and Prince Edward Island were least likely to have used one, with 25% in each reporting this method of treatment.

Of those households that drew their water from a non-municipal source, 44% treated their water to improve its appearance, taste or odour (Table 9). Thirty-one percent treated the water for hardness, while 41% treated it to remove metals or minerals other than those that cause hardness. One-third treated their water prior to consumption to remove possible bacterial contamination.

Chart 1
Households that drank primarily tap water and boiled their water in order to make it safe to drink, 2009



Source(s): Statistics Canada, Environment Accounts and Statistics Division, Households and the Environment Survey, 2009 (survey number 3881).

Five percent of households that had a non-municipal water supply and drank primarily tap water reported they boiled it in order to make it safe to drink. Of these households, 74% did not report that they had treated their water due to a boil water advisory (Chart 1).

Seven out of ten households in Alberta that had a non-municipal water supply reported they treated their water to improve its appearance, taste or odour, while households in Quebec were most likely to have treated their water to reduce its hardness (42%) (Table 9). Concerns about possible bacterial contamination were one reason that 43% of households with non-municipal water supplies in British Columbia treated their water. Forty-five percent of Nova Scotia households with private water supplies treated their water to remove metals or minerals other than for hardness.

Waste water

In 2009, the majority of Canadian households (82%) lived in dwellings connected to a municipal sewer system, while 13% had a private septic system (Table 10). Whether a household reported having a sewer connection or a septic system usually depended on whether they had municipally-supplied water or a private water source such as a well. Households in New Brunswick, Prince Edward Island and Nova Scotia were most likely to have had a private septic system, with 42%, 36% and 34%, respectively, while fewer than 10% of households in Saskatchewan and Alberta reported having had private septic systems.

Amongst those households that had municipally-supplied water, 92% were also connected to a municipal sewer system, while only 3% had a private septic system. Conversely, 87% of households that had a non-municipal water supply also had a private septic system and about 2% were connected to a communal septic system. Eight percent of households that had a non-municipal water supply were connected to a municipal sewer system.

Energy use

Canadians spend a lot of money on energy. In 2009, approximately 15% of an average household's annual expenditures on shelter were spent on energy used in the home, excluding fuel for motor vehicles.[14] Environmental concerns about the need to reduce energy consumption and rising energy costs may provide incentives for households to adopt energy conservation measures.

Heating and cooling

Controlling the temperature

More than nine out of ten (91%) Canadian households reported having a thermostat in their dwelling (Table 11). Almost half (49%) of these households had programmable thermostats, which is an increase of seven percentage points from 2007 (42%).

The overall proportion of programmable thermostats that had been programmed was unchanged from 2007 at 84%. Households in New Brunswick that had programmable thermostats were the least likely to have programmed them, with 72% indicating they had done so.

Winter temperatures

Slightly more than six out of ten households (61%) that had a thermostat lowered the temperature during the winter while they slept (Table 11), which is a slight increase from 2007 (55%). Households in Prince Edward Island were once again most likely to turn the temperature down (66%), while those in New Brunswick and Manitoba were the least likely to do so (58%).

Households that had programmable thermostats that had been programmed were much more likely to have lowered the temperature when they were asleep compared to households that had a non-programmable thermostat or a programmable thermostat that had not been programmed (74% compared to 53%, respectively). Among the households that had programmed their programmable thermostats, those in Saskatchewan and Manitoba were most likely to have programmed them to lower the temperature when the household was asleep (82% and 81%, respectively), while those in Nova Scotia were the least likely (57%) to have done so. However, households in Nova Scotia and Prince Edward Island that had non-programmable thermostats and programmable thermostats that had not been programmed were most likely to have manually lowered the temperature when asleep (64% and 63%, respectively), while those in Ontario were least likely (46%) to have done so.

Energy conservation

Energy-saving light bulbs

Conventional incandescent light bulbs are among the least energy-efficient light bulbs in use today.[15] However, there are a variety of alternative types of lights that can be used that require less energy to produce the same amount of light compared to an incandescent bulb. Compact fluorescent lights (CFLs), fluorescent tube lights, halogen lights and light-emitting diode (LED) lights are common types of energy-efficient lights. Eighty-eight percent of Canadian households reported that they had at least one of these lights in their home (Table 12).

Three-quarters of households reported having at least one compact fluorescent light, with Nova Scotia leading the way with 84% of households having one. Households in Quebec and Manitoba were the least likely to have had a CFL (69%).

14. Statistics Canada, *Survey of Household Spending 2009*, CANSIM table 203-0003 (accessed December 20, 2010).
15. Natural Resources Canada, 2009, *Choosing Lighting Fixtures – Determine Your Needs*, *http://oee.nrcan.gc.ca/residential/personal/lighting/needs.cfm?attr=4* (accessed October 20, 2010).

Fluorescent tube lights were reported by 47% of Canadian households in 2009. More than half of the households in Manitoba (55%) reported having a fluorescent tube light, while only 26% of households in Newfoundland and Labrador indicated they had one in their home.

Halogen lights are a type of incandescent light that have longer lifespans than conventional incandescent lights because they contain a halogen gas that minimizes filament wear.[16] Thirty-five percent of Canadian households reported having one of these lights, which is unchanged from 2007. Almost half of the households in Quebec (49%) indicated they had a halogen light, which is an increase of 7 percentage points from 2007.

Light-emitting diodes (LED) are extremely energy-efficient devices that come in a variety of forms, some of which are socket compatible with conventional lights.[17] Though the technology has been around for several years, it is only in the last couple of years that they have become more available on the retail market.[18] In 2009, 7% of Canadian households had a LED light. Households in British Columbia led the way in their uptake where 12% of households reported having one. Households in Quebec and Ontario were the least likely to have one, with 5% and 7% reporting one, respectively.

Energy-saving behaviours

In addition to using energy-saving light bulbs, lowering the temperature and purchasing energy-efficient major appliances, households can also reduce the amount of energy they consume through a variety of other practices.

Using dimmers on household lights

Dimmers can reduce the amount of energy consumed by lights.[19] In 2009, half of Canadian households reported having a dimmer (Table 13). Households in Quebec (53%), British Columbia (53%) and Ontario (51%) were most likely to have had one, while those in New Brunswick were least likely to have had one (36%).

Unplugging electronics when away from the home for an extended period of time

Modern electronic devices, such as cell phone chargers, televisions and computers, can consume a small amount of electricity even when they are in standby mode or turned off. These “phantom loads” can quickly add up to 100 watts or more of continuous power consumption.[20] Unplugging these devices when away for extended periods of time can result in energy savings.

In 2009, 57% of Canadian households reported that they unplugged electronics when away for extended periods of time (Table 13). Households in Newfoundland and Labrador, Prince Edward Island and Nova Scotia were the most likely to have done so (72%), while those in Quebec were the least likely to have done this (41%).

Reducing heating and cooling in certain areas of the dwelling

Heating or cooling infrequently used parts of a dwelling can result in unnecessary energy consumption. Reducing the heating or cooling in such areas by closing vents or turning off electric baseboard heaters, for example, is one step households can take to help reduce their energy consumption.

Six out of ten households reported that they reduced the heating or cooling in certain areas of their dwellings (Table 13). Households in Quebec were most likely to have done this (71%), while those in Manitoba were the least likely to have done so (46%).

16. Natural Resources Canada, 2004, *Basic Facts about Residential Lighting*, *http://oee.nrcan.gc.ca/energystar/english/pdf/basic-facts-residential-e.pdf* (Cat. No. M144-146/2008E-PDF; ISBN 978-0-662-48807-1) (accessed September 23, 2010).
17. *Ibid.*
18. *Ibid.*
19. Natural Resources Canada, 2009, *Choosing Lighting Fixtures – Determine Your Needs*, *http://oee.nrcan.gc.ca/residential/personal/lighting/needs.cfm?attr=4* (accessed October 20, 2010).
20. Natural Resources Canada, 2004, *Micro-Hydropower Systems: A Buyer’s Guide*, (Cat. No. M144-29/2004E; ISBN 0-662-35880-5).

Using a clothesline or drying rack

Clotheslines and drying racks offer an alternative to using a clothes dryer when doing laundry. Some jurisdictions have by-laws prohibiting the use of outdoor clotheslines, but during the last few years some of these by-laws have been repealed.[21]

Almost two-thirds of Canadian households (64%) reported that they used a clothesline or drying rack in 2009 (Table 13). Households in eastern Canada were generally more likely to have used one than those in western Canada, with Prince Edward Island leading the way with 80% of households reporting they used one. Households in Manitoba were the least likely to have used a clothesline or drying rack with 46% of households doing so.

Using fans for cooling

One way to manage the temperature in the home is by improving air circulation through the use of fans.

In 2009, 66% of Canadian households used a fan for cooling in the summer (Table 13). Households in Prince Edward Island were the most likely to have used them, with 84% reporting this activity, while households in Manitoba were the least likely to have used them (57%).

Closing blinds and drapes during the hottest part of the day

Closing blinds or drapes during the hottest part of the day can help reduce the amount of cooling necessary to keep the dwelling at a comfortable temperature.

More than 8 out of 10 households (83%) in Canada reported that they closed the blinds or drapes during the hottest part of the day (Table 13). Saskatchewan had the highest proportion of households that did this (93%), while Newfoundland and Labrador had the lowest proportion (59%).

Putting plastic film on windows in the winter

Putting plastic film on windows in the winter can help reduce drafts and the loss of heat to the outdoors. It can also be an inexpensive alternative to replacing older less energy-efficient windows.

Slightly more than 1 out of 5 Canadian households (21%) reported they had put plastic film on their windows in the winter (Table13). Households in Quebec were most likely to have done so, with 34% of households having reported it, while households in British Columbia and Newfoundland and Labrador were the least likely (10%).

Energy audits

An energy audit evaluates the energy efficiency of a home by looking at characteristics of the building envelope, including the walls, doors and windows. How air-tight the building is, the R-value of the insulation and other factors are assessed. Usually, a home energy audit will include a report that takes into consideration local climate factors, thermostat settings and energy consumption.

In 2009, 12% of Canadian households reported that an energy audit had been conducted on their dwelling, of which 91% reported that it had been conducted in the preceding ten years (Table 14). Saskatchewan led the country (21%),[22] while Alberta trailed with 6% of households reporting that one had been conducted.

21. The Toronto Star, April 18, 2008, *Ontario set to veto ban on clotheslines*.
22. An energy efficiency grant program that was being offered in Saskatchewan may account for the relatively high proportion of households in Saskatchewan that had conducted an energy audit.

Indoor environment

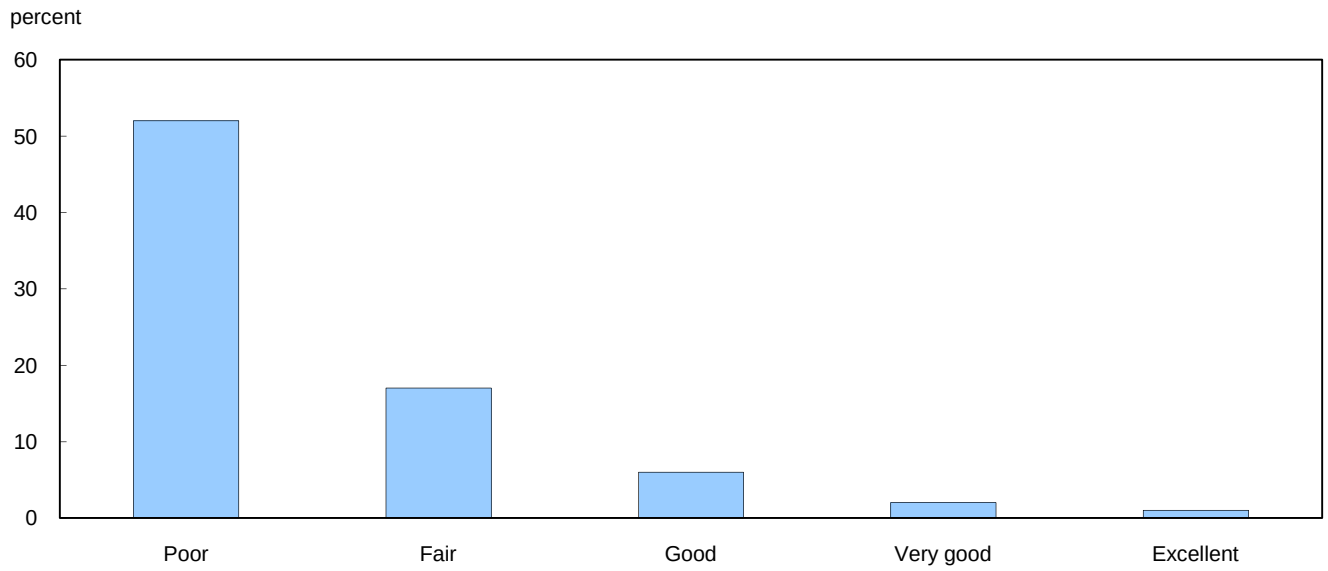
Indoor air quality

Good air quality is achieved when there are very low levels of contaminants present. Contaminants such as dust, mould, volatile organic compounds (VOCs), carbon monoxide, and radon can affect indoor air quality in the home and can thus have a negative impact on the people living there.[23]

Canadian households were asked to rate the quality of the air in their home during the previous year. The majority of households responded that their air quality was good (34%), very good (37%) or excellent (18%) (Table 15). Seven percent of households said that the air quality in their dwelling was fair, while 1% reported they considered it to be poor. Households in Ontario (88%) and Prince Edward Island (87%) were slightly less likely to report that the air quality in their dwelling was excellent, very good or good, while those in Newfoundland and Labrador and Manitoba were the most likely to do so (both 94%).

Overall, 5% of respondents thought that someone in their household had experienced a health problem that may have been caused by the quality of the air in the dwelling. Just over half (52%) of those households that suspected a health problem had been caused by the quality of the air in their dwelling reported that the air quality was poor, while 17% reported their dwelling's air quality was fair (Chart 2).

Chart 2
Incidence of suspected health problems due to indoor air quality by air quality rating, 2009



Source(s): Statistics Canada, Environment Accounts and Statistics Division, Households and the Environment Survey, 2009 (survey number 3881).

23. Canada Mortgage and Housing Corporation, 2005, *About Your House: How to Reduce Chemical Contaminants in Your Home*, (CMHC Order No. 64066).

Condensation, mould and mildew

Condensation, mould and mildew tend to go hand in hand. When warm, moist air comes into contact with a surface that is cold, moisture condenses. Water and frost that collect on windows is a visible example of this.[24] Ten to fifty litres of moisture is released in a typical home on a daily basis. In a heating season lasting 200 days, 2,000 to 10,000 litres of moisture can be trapped in the home.[25] Over time, this may result in damage to the house structure, its contents and possibly the health of those living in it. Controlling humidity is the best way to prevent mould and mildew problems.[26]

In 2009, 20% of Canadian households reported seeing condensation on the inside surfaces of their windows, other than moisture from showers or cooking (Table 15). Households in Quebec (24%) and Alberta (23%) had the highest rates of reporting, while those in Newfoundland and Labrador had the lowest rate (13%).

Mould growing in the home environment can release mould spores, toxins from the mould and mouldy odours, which can have an impact on the health of those exposed to them. Thirteen percent of households in Canada reported the presence of mould or mildew in their dwelling in 2009. Households in Prince Edward Island (about 17%), New Brunswick (15%) and Ontario (15%) were most likely to have reported the presence of mould or mildew, while those in Alberta (8%) were the least likely to have reported it.

Methods of improving indoor air quality

There are many ways to improve indoor air quality. Some of them are changes in behaviour, such as opening windows, while others are changes in equipment, such as using higher-quality furnace filters or using non-ionizing air cleaning systems.

Furnace filters

There are a variety of different types of furnace filters available to consumers. Basic filters are relatively inexpensive and filter out larger particles. Higher-quality filters usually cost more and tend to filter out smaller particles than the basic filters. Of those households that used a furnace as their main source of heat, 45% reported using higher-quality furnace filters (Table 16). More than half of the households in Manitoba (55%) and Saskatchewan (51%) that had a furnace as their primary heating system reported they used better furnace filters.

Air fresheners

While air fresheners can change how the air smells, they do not actually improve the quality of the air by removing the underlying contaminant. Still, 71% of the households that reported using air fresheners indicated they used them to improve the quality of the air in their dwelling (Table 16). Households in Alberta (78%) and Prince Edward Island (77%) were most likely to report this, while those households in British Columbia were least likely to have used air fresheners to improve their indoor air quality (64%).

Opening windows

Opening the windows can improve the ventilation and introduce fresh air to a dwelling. In 2009, 94% of Canadian households opened windows to improve air circulation in their dwelling (Table 16). During the winter months, 87% of these households opened their windows, with 33% opening them on a daily basis. Households in Prince Edward Island were the most likely to have opened their windows in the winter, with 94% of these households reporting having done so at least once.

However, only 85% of these households opened their windows on a daily basis during the summer. Seventy-seven percent of households in Manitoba that opened their windows did so on a daily basis during the summer, which made them the least likely to do so of all the provinces.

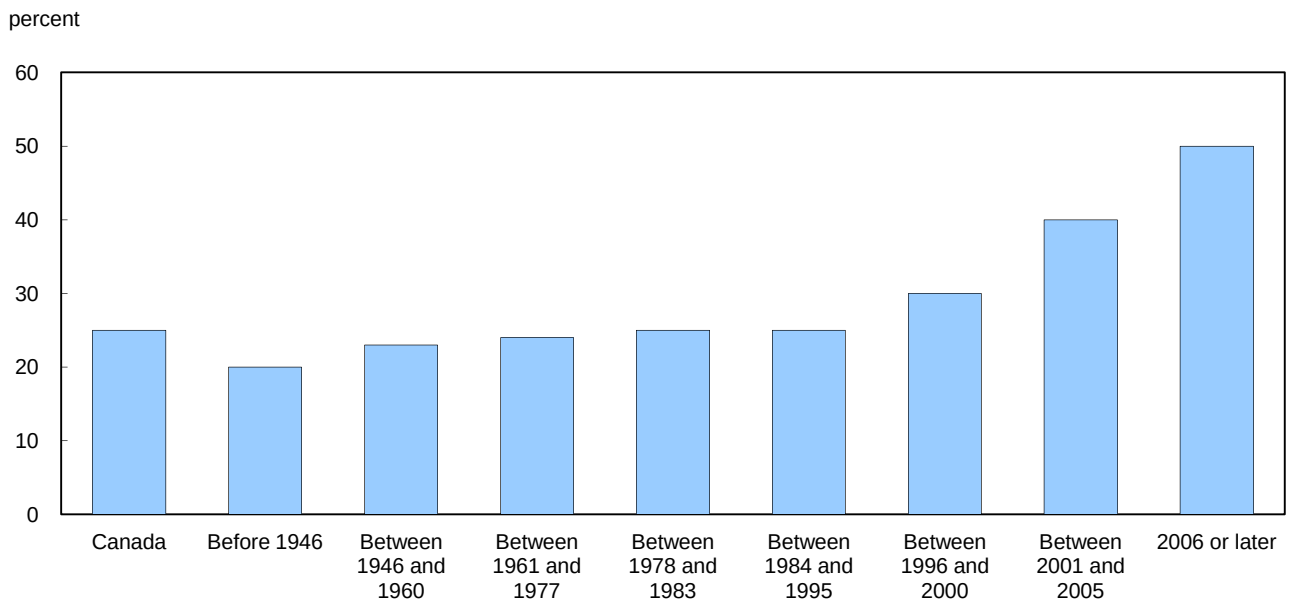
24. Canada Mortgage and Housing Corporation, 2010, *Moisture and Air Quality Problems*, *http://www.cmhc-schl.gc.ca/en/co/maho/yohoyohe/momo/moaiprre/moaiprre_001.cfm* (accessed December 20, 2010).
25. *Ibid.*
26. *Ibid.*

Furnace fans and heat recovery ventilators (HRVs)

Using a mechanical ventilation system, such as an exhaust fan or a heat recovery ventilator (HRV),[27] can be more effective at improving indoor air quality than opening windows.[28] One-quarter of Canadian households reported using a furnace fan or HRV to improve air circulation (Table 16). Households in Manitoba (36%), Saskatchewan (34%) and Alberta (31%) were most likely to have done this, while households in British Columbia (17%) and Nova Scotia (18%) were the least likely.

Generally, heat recovery ventilators are more likely to be found in newer homes, though as older homes have their heating systems replaced, their presence in older homes is increasing. Twenty percent of homes built before 1946 used a furnace fan or HRV to improve air circulation, compared to 30% of homes built between 1996 and 2000 and 50% of homes built in 2006 or later (Chart 3).

Chart 3
Use of furnace fans and heat recovery ventilators (HRVs) to improve air circulation by year of construction, 2009



Source(s): Statistics Canada, Environment Accounts and Statistics Division, Households and the Environment Survey, 2009 (survey number 3881).

27. A heat recovery ventilator is a system that exchanges stale air from a house with fresh air from outdoors transferring the heat energy in the stale air to the fresh air in the process.
28. Canada Mortgage and Housing Corporation, 2009, *About Your House: How to Get the Ventilation That You Need in Your House*, (CMHC Order No. 66348).

Radon

Assessing knowledge of radon

Radon is a radioactive gas found naturally in the environment everywhere. It is produced by the decay of uranium found in rocks and soil. Because radon is a gas, it can move freely through the soil enabling it to escape to the atmosphere or seep into buildings. Radon is invisible, odourless and tasteless, but can be measured. Radon represents over 50% of a person's exposure to naturally occurring radiation.

In outdoor air the amount of radon gas is diluted and does not pose a health risk. However, radon that enters an enclosed space, such as a home or building, can sometimes accumulate to high levels. The risk from radon exposure is long term and depends on: the level of radon in your home, how long you are exposed and your smoking habits. Long-term exposure to elevated levels of radon in the home increases your risk of developing lung cancer, especially for smokers. It is estimated that about 10% of all lung cancers worldwide are related to radon exposure.[29] In 2006, an estimated 1,900 lung cancer deaths in Canada were due to radon exposure.[30]

The only way to know if you have a radon problem is to test your home. It is simple and inexpensive and test kits are available from many home improvement stores. Health Canada encourages all Canadians to test their homes and recommends the use of a long-term test device for a minimum of 3 months, ideally during the fall/winter timeframe when your windows are closed.[31]

A Health Canada survey conducted in the 2009/2010 fall and winter heating season determined that approximately 7% of Canadian homes have radon levels in excess of the current Canadian guideline of 200 Bq/m^3, with Manitoba having the highest share of homes with elevated radon levels (23.5%).[32]

Canadian households were asked a series of questions to assess their awareness of radon. Initially, all respondents were asked whether they had heard of radon. Those that indicated they had were asked to describe radon in their own words in order to determine the extent of their knowledge. During post-collection processing a respondent's knowledge of radon was then assessed as either "correct", meaning they were able to unambiguously describe radon, or "incorrect", meaning their description was factually incorrect. Those respondents who were unable to describe radon at all were assigned to a third category. Regardless of whether their answer was correct, respondents who said they had heard of radon were asked whether they considered radon to be a health hazard.

Awareness

Forty-two percent of Canadian households had heard of radon (Table 17). Households in Manitoba and Nova Scotia were the most likely to have heard of it, with 6 out of 10 reporting they had heard of radon. Those in Quebec (38%) and Newfoundland and Labrador (33%) were least likely to have said they had heard of radon.

When respondents who had heard of radon were asked to describe it in their own words, just under half (49%) provided an answer that confirmed their knowledge. More than half of the households that had heard of it in New Brunswick (59%), Prince Edward Island (58%), Nova Scotia (56%) and Saskatchewan (56%) gave a correct answer. Slightly more than one-quarter (27%) of households gave a description that did not apply to radon, with households in Quebec (32%) and Manitoba (32%) most likely to give an incorrect description. Some households (24%) had only heard of radon and could not describe it, with 30% of households in Newfoundland and Labrador and Ontario falling into this category.

Of those households that had heard of radon, 68% said that radon is a health hazard, 11% said it is not a health hazard and 22% did not know if it is a health hazard. Households in Nova Scotia (75%), Quebec (73%) and Saskatchewan (71%) were the most likely to have correctly identified it as a health hazard, while those in Alberta (16%) were the most likely to have said it is not a health hazard.

29. World Health Organization, 2009, Handbook on Indoor Radon.
30. Health Canada, 2010, *"Radon Frequently Asked Questions"*, *http://www.hc-sc.gc.ca/ewh-semt/radiation/radon/faq_fg-eng.php* (accessed July 8, 2010).
31. Health Canada, 2009, *Radon: Protect Yourself and Your Family*, *http://www.hc-sc.gc.ca/ewh-semt/radiation/radon/protect-proteger-eng.php* (accessed January 6, 2011).
32. Health Canada, 2010, *Cross-Canada Survey of Radon Concentrations in Homes*, *http://www.hc-sc.gc.ca/ewh-semt/radiation/radon/survey-sondage-eng.php* (accessed November 30, 2010).

Testing

It is impossible to predict if any one house will have a high level of radon. The only way to know if radon is present in a dwelling is to test for it.[33] Because radon is not typically a risk in apartment buildings, except for apartments at or below grade, testing is normally only conducted in single-detached dwellings, doubles, duplexes and other non-apartment dwellings.

Forty-five percent of households not in apartments indicated that they had heard of radon (Table 18). Three percent of these households reported that they had tested their dwelling for the presence of radon. Most of these households (78%) had conducted the testing within the last ten years.

Household hazardous waste

Household hazardous waste consists of items used in the home that cannot be handled by the normal waste and recycling programs, usually because the items are environmentally-hazardous or could pose a hazard to the collection and processing staff. Many municipalities accept household hazardous waste at special depots and some retailers offer take-back programs for certain items. But in some cases households retain the items because they do not know what to do with them. Items that are treated as hazardous waste are not restricted to more obvious items such as paints, solvents and pesticides. Common household items such as compact fluorescent lights (CFLs) and fluorescent tubes, both of which contain mercury, batteries which may contain acids and heavy metals such as cadmium and lithium, electronics such as cell phones and televisions, and medication are often considered hazardous waste for disposal purposes because of what they contain.

Leftover or expired medication

Leftover and expired medications that are disposed of in a landfill can leach into the ground water and may end up in the drinking water supply. Similarly, if flushed down a toilet or poured down the drain, they can end up in surface water because some drugs are difficult or impossible to be removed by a wastewater treatment plant.[34] As a response to this issue, many pharmacies will take back leftover and expired medications in order to ensure proper disposal. As well, household hazardous waste depots often accept medications for disposal.

In 2009, 39% of Canadian households reported that they had leftover or expired medication to dispose of (Table 19). More than half of these households (57%) returned the medication to the supplier or retailer for disposal, which is up from 31% in 2005. A further 6% took or sent them to a depot or drop-off centre. Twenty-two percent put their leftover or expired medication in the garbage, while 8% poured them down the drain or sewer, flushed them down the toilet or poured them on the ground. Fifteen percent still had the medication when they were asked the question.

Provincially, households in Quebec were the most likely to have returned leftover and expired medication to the supplier or retailer with almost three-quarters (74%) of households having done so, while at 29% those in Newfoundland and Labrador were the least likely. Households in British Columbia were the most likely to have thrown them in the garbage (34%).

Paints and solvents

Paints and solvents require special disposal because of the chemical compounds they contain. These compounds can have a negative impact on the environment if not properly disposed of.[35]

33. Health Canada, 2009, *Radon: Protect Yourself and Your Family*, *http://www.hc-sc.gc.ca/ewh-semt/radiation/radon/protect-proteger-eng.php* (accessed January 6, 2011).
34. Health Canada, 2004, *It's Your Health: Proper Use and Disposal of Medication*, *http://www.hc-sc.gc.ca/hl-vs/iyh-vsv/med/disposal-defaire-eng.php* (accessed January 6, 2011).
35. Environment Canada, 2010, *Environmental Trends*, CESI Volume 1, Number 2, March 2010.

Almost 4 out of 10 (39%) Canadian households reported having had leftover paint or solvents to dispose of in 2009 (Table 19). Most of these households (62%) took or sent their unwanted paints and solvents to a depot or drop-off centre, an increase of 12 percentage points from 2005, while 8% returned them to the supplier or retailer. An additional 4% disposed of their leftover paint or solvents by placing them in the garbage. Thirty-one percent still had the paint or solvent at the time of the interview.

Households in Alberta (70%) and British Columbia (69%) were most likely to have returned leftover paint and solvents to a depot or drop-off centre, while those in Prince Edward Island were most likely to have still had them at the time of the interview (42%).

Engine oil and anti-freeze

Many retailers operate take back programs for engine oil and anti-freeze. They are also accepted by most household hazardous waste depots.

In 2009, 15% of Canadian households indicated that they had unwanted engine oil or anti-freeze to dispose of (Table 19). Just over 6 out of 10 (61%) of these households took or sent them to a depot or drop-off centre, while 19% returned them to the supplier or retailer. Eighteen percent of these households reported they still had them when the interview was conducted.

Automotive batteries

Automotive batteries contain toxic heavy metals and corrosive acids that mean they should not be disposed of in landfills.[36]

Twelve percent of Canadian households had dead or unwanted automotive batteries to dispose of in 2009 (Table 19). Slightly less than half (46%) of these households took or sent them to a depot or drop-off centre. Three out of ten (31%) returned them to the supplier or retailer, while 20% still had them at the time of the interview.

General purpose batteries

General purpose batteries, such as AA batteries, watch batteries and other non-automotive batteries, may contain a variety of heavy metals like cadmium, mercury and lithium, in addition to acids. These batteries should not be disposed of in the garbage, but instead should be taken to a special depot or drop-off centre for proper disposal.[37]

In 2009, 58% of Canadian households reported they had dead or unwanted batteries (other than automotive batteries) to dispose of (Table 19). Forty-two percent of these households disposed of them with their regular garbage. Thirty-five percent of households that had batteries to dispose of took or sent them to a depot or drop-off centre, while 7% returned them to the supplier or retailer. Eighteen percent of households still had them to dispose of when the interview was conducted.

Provincially, households in Prince Edward Island were most likely to have taken dead or unwanted batteries to a depot or drop-off centre (44%) and also most likely to have returned them to the supplier or retailer (about 22%). Households in Newfoundland and Labrador (74%) and Saskatchewan (69%) were the most likely to have put them in the garbage.

36. Environment Canada, 2004, *A Guide to Understanding the Canadian Environmental Protection Act, 1999*, *http://www.ec.gc.ca/lcpe-cepa/default.asp?lang=En&n=E00B5BD8-1&offset=10&toc=show* (accessed January 6, 2011).
37. Environment Canada, 2009, *Safe Disposal of Batteries, Paint and E-Waste*, *http://www.ec.gc.ca/education/default.asp?lang=En&xml=4DBA1745-8E1C-40E1-8777-3BDE17A467AB* (accessed January 6, 2011).

Electronic devices

Consumer electronics such as cell phones, televisions and computers are becoming increasingly popular. With more than 4 out of 5 households (81.7%) reporting that they owned a computer in 2009 and 77.2% of households having a cellphone in 2009,[38] disposal of these types of items when they reach the end of their useful lives is a significant issue for both the owners and the landfill operators.[39] As some of the components contain heavy metals and other materials that should not be disposed of in landfills, these items are often treated as household hazardous waste. But in the case a consumer electronic item is replaced while it's still working, people will sometimes donate the item to a charity or give it away, rather than put it in the garbage or send it to a recycler.

Thirty-six percent of Canadian households had unwanted electronic devices to dispose of in 2009 (Table 19). The most common method of disposal was taking or sending them to a depot or drop-off centre, with 45% of households that had them having done this, up 26 percentage points from 2005. Donating them or giving them away was reported by 22% of these households. Eleven percent of these households put them in the garbage compared to 16% that did so in 2005. More than a quarter (28%) of households that had unwanted electronic devices to dispose of still had them at the time of the interview.

Households in Saskatchewan were most likely to have taken unwanted electronic devices to a depot or drop-off centre (69%), while those in New Brunswick (28%) and Quebec (29%) were the least likely to have done so. Households in Atlantic Canada were more likely to still have had the devices at the time of the interview compared to the other provinces.

Compact fluorescent lights (CFLs)

The use of compact fluorescent lights (CFLs) has increased steadily over the last two decades.[40] Unlike conventional incandescent lights that can be thrown in the garbage when they have burnt out, CFLs contain mercury, which can have significant impacts on both human health and the environment if not properly disposed of. Consequently, these lights are generally not accepted in the regular garbage stream and need to be disposed of using a hazardous waste program. Take back programs exist in some provinces[41,42] to help consumers dispose of CFLs in a proper manner.

In 2009, 22% of Canadian households reported that they had dead or unwanted compact fluorescent lights to dispose of (Table 19). Over half of these households (56%) reported they put their dead or unwanted CFLs in the garbage, while 24% reported they took or sent them to a depot or drop-off centre. Households in Ontario (30%), British Columbia (29%) and Alberta (29%) were most likely to have used a depot or drop-off centre, while those in Newfoundland and Labrador (74%), New Brunswick (73%) and Saskatchewan (72%) were the most likely to have thrown them in the garbage. Thirteen percent of the households that had dead or unwanted CFLs still had them when the interview was conducted. Households in Ontario (50%) and British Columbia (51%) were least likely to have put them in the garbage.

Purchasing decisions

The purchasing decisions consumers make can have direct and indirect impacts on the environment. Direct impacts are those that are caused by having or using an item, such as the greenhouse gas emissions from driving a car. Indirect impacts can include, for example, the greenhouse gas emissions released by a coal-fired power plant that provides the electricity used by a household's clothes dryer. In some cases, these impacts can be eliminated by not purchasing or using an item, but in many cases it is not practical to eliminate the impact. Often there are actions that can be taken to reduce the magnitude of the impact such as using appliances that are more energy-efficient or purchasing electricity from "green" energy providers.

38. Statistics Canada, *Survey of Household Spending 2009*, CANSIM table 203-0020 (accessed December 21, 2010).
39. Environment Canada, 2003, EnviroZine, *Mounting concerns over electronic waste*, Issue 33,
40. Statistics Canada, Households and the Environment Survey, 1991, 1994, 2006, 2007 and 2009.
41. The Recycling Council of Ontario, Take back the light website: *http://www.takebackthelight.ca* (accessed October 28, 2010).
42. BC Fluorescent Light Recycling Program, LightRecycle, *http://www.productcare.org/lights* (accessed October 28, 2010).

Major appliances

Major appliances such as stoves, refrigerators, clothes washers and dryers, can consume hundreds of kilowatt hours of electricity every year.[43] Some models are much more energy-efficient than others,[44] but sometimes at a higher price. Efficiency is just one factor that may be considered. Others include the reliability, price and features a given model has.

In 2009, 54% of Canadian households reported that they had purchased a major appliance within the last five years (Table 20). Energy or water consumption was reported by 64% of these households as the most important factor considered at the time of purchase. Price was the second most reported consideration (55%), while slightly more than one-third (37%) of households reported reliability as one of the most important factors they considered, and just over a quarter (26%) cited the features the appliance offered.

Green cleaning products

Canadians are exposed to many chemicals every day, from the air we breathe to cleaning products used in the home. While many have no impact on human health or the environment, some do. Choosing environmentally-friendly or "green" cleaning products is one way the number of chemicals in the home can be reduced.[45]

Eight out of ten Canadian households reported they had purchased environmentally-friendly or "green" cleaning products in 2009 (Table 20). Ten percent reported they always did this, 19% reported they often did this and 34% reported they sometimes purchased environmentally-friendly cleaning products. Seventeen percent rarely purchased them and another 17% said they never purchased green cleaning products.

Reusable bags

Reusable and recycled bags and containers continue to be a popular choice for shoppers carrying their groceries. Many retailers are now charging customers for disposable plastic bags to discourage their use. In 2009, 49% of Canadian households reported that they always used recycled or reusable bags when shopping for groceries (Table 20), which represents a 19 percentage point increase from 2007.

Households in Quebec and Ontario (60% and 55%, respectively) led the provinces in the proportion of households reporting that they always used reusable or recycled bags or containers to carry their groceries. Eleven percent of households in Alberta, on the other hand, reported that they never used these types of bags and containers.

43. Office of Energy Efficiency, Natural Resources Canada, 2004, *Average annual energy consumption of major appliances*, *http://oee.nrcan.gc.ca/residential/personal/appliances/improvements.cfm?attr=4* (accessed January 6, 2011).
44. *Ibid.*
45. Canada Mortgage and Housing Corporation, 2005, *About Your House: How to Reduce Chemical Contaminants in Your Home*, (CMHC Order No. 64066).

Related products

Selected publications from Statistics Canada

11-526-S	Households and the Environment: Energy Use
16-001-M	Environment Accounts and Statistics Analytical and Technical Paper Series
16-201-X	Human Activity and the Environment
16-251-X	Canadian Environmental Sustainability Indicators
16-252-X	Canadian Environmental Sustainability Indicators: Highlights
16-253-X	Canadian Environmental Sustainability Indicators: Socio-economic Information
16-254-X	Canadian Environmental Sustainability Indicators: Air Quality Indicators: Data Sources and Methods
16-255-X	Canadian Environmental Sustainability Indicators: Greenhouse Gas Emissions Indicator: Data Sources and Methods
16-256-X	Canadian Environmental Sustainability Indicators: Freshwater Quality Indicator: Data Sources and Methods
16-257-X	Environment Accounts and Statistics Product Catalogue
16-401-X	Industrial Water Use
16-403-X	Survey of Drinking Water Plants
16M0001X	Households and the Environment Survey: Public Use Microdata File

Selected technical and analytical products from Statistics Canada

16-001-M2009010	Drinking Water Decisions of Canadian Municipal Households
16-001-M2010013	Recycling by Canadian Households, 2007

Selected CANSIM tables from Statistics Canada

153-0059	Households and the environment survey, use of energy-saving lights, Canada and provinces, biennial
153-0060	Households and the environment survey, use of thermostats, Canada and provinces, biennial
153-0061	Households and the environment survey, radon awareness and testing, Canada and provinces, biennial, terminated (replaced by 153-0098 for 2009)
153-0062	Households and the environment survey, dwelling's main source of water, Canada and provinces, biennial
153-0063	Households and the environment survey, primary type of drinking water consumed, Canada and provinces, biennial
153-0064	Households and the environment survey, use of fertilizer and pesticides, Canada and provinces, biennial
153-0065	Households and the environment survey, awareness of air quality advisories and their influence on behaviours, Canada and provinces, biennial
153-0066	Households and the environment survey, treatment of drinking water, Canada and provinces, biennial
153-0098	Households and the environment survey, knowledge of radon and testing, Canada and provinces, biennial

Selected surveys from Statistics Canada

3881	Households and the Environment Survey

Statistical tables

Table 1
Indoor water conservation practices, by province

	Had a low-volume toilet [1]	Had a low-flow shower head [1]	Municipal water supply		Non-municipal water supply	
			Had a low-volume toilet [2]	Had a low-flow shower head [2]	Had a low-volume toilet [3]	Had a low-flow shower head [3]
	percent					
Canada	**42**	**63**	**42**	**62**	**48**	**65**
Newfoundland and Labrador	30	59	30	56	F	79
Prince Edward Island	31	60	29	59	35	62
Nova Scotia	39	66	37	61	43	75
New Brunswick	38	67	36	66	40	69
Quebec	34	64	33	65	45	61
Ontario	48	65	48	65	54	67
Manitoba	39	49	39	48	44	61
Saskatchewan	42	51	42	51	43 E	48
Alberta	46	58	46	59	46	57
British Columbia	40	60	39	59	54	67

1. As a percentage of all households.
2. As a percentage of households that had a municipal water supply.
3. As a percentage of households that had a non-municipal water supply.

Source(s): Statistics Canada, Environment Accounts and Statistics Division, Households and the Environment Survey, 2009 (survey number 3881).

Table 2
Outdoor water conservation, by province

	Had a cistern [1]	Had a lawn [2]	Watered lawn [3]	Used a lawn sprinkler [4]	Used a timer on lawn sprinkler [5]	Had a garden [2]	Watered garden [6]	Used a garden sprinkler [7]	Used a timer on garden sprinkler [8]
	percent								
Canada	**18**	**70**	**43**	**72**	**27**	**61**	**73**	**23**	**36**
Newfoundland and Labrador	13	83	36	50	F	64	64	F	F
Prince Edward Island	16 E	80	F	F	F	69	55	F	F
Nova Scotia	13	84	22	61	F	67	56	18 E	F
New Brunswick	14	84	11 E	63	F	71	53	F	F
Quebec	11	61	25	57	36	52	64	15	43
Ontario	18	72	42	64	24	65	73	18	36
Manitoba	26	71	30	76	F	61	69	21	F
Saskatchewan	28	76	66	88	15 E	59	83	43	F
Alberta	33	75	72	84	23	61	87	31	30
British Columbia	13	66	64	83	35	61	87	39	48

1. As a percentage of households that were not in apartments.
2. As a percentage of all households.
3. As a percentage of households that had a lawn.
4. As a percentage of households that watered their lawn.
5. As a percentage of households that used a sprinkler to water their lawn.
6. As a percentage of households that had a garden.
7. As a percentage of households that watered their garden.
8. As a percentage of households that used a sprinkler to water their garden.

Source(s): Statistics Canada, Environment Accounts and Statistics Division, Households and the Environment Survey, 2009 (survey number 3881).

Table 3
Water supply, by province

	Municipal water supply	Non-municipal water supply	Non-municipal water supply	
			Private well	Surface source
	percent			
Canada	**87**	**11**	**10**	**1**
Newfoundland and Labrador	88	11 E	11 E	F
Prince Edward Island	61	39	39	F
Nova Scotia	60	39	38	F
New Brunswick	48	51	49	F
Quebec	87	11	9	2 E
Ontario	89	9	8	F
Manitoba	84	14	12 E	F
Saskatchewan	94	6 E	5 E	F
Alberta	91	8 E	6 E	F
British Columbia	90	9	7	F

Note(s): As a percentage of all households.
Source(s): Statistics Canada, Environment Accounts and Statistics Division, CANSIM table 153-0062.

Table 4
Primary type of drinking water consumed, by province

	Municipal and non-municipal water supply [1]			Municipal water supply [2]			Non-municipal water supply [3]		
	Tap water	Bottled	Both tap water and bottled water	Tap water	Bottled	Both tap water and bottled water	Tap water	Bottled	Both tap water and bottled water
	percent								
Canada	**66**	**24**	**9**	**66**	**24**	**10**	**64**	**28**	**7**
Newfoundland and Labrador	62	28	6 E	60	29	6 E	71	F	F
Prince Edward Island	76	16 E	F	70	20 E	F	85	F	F
Nova Scotia	69	24	6 E	69	23	F	71	24	F
New Brunswick	64	26	8 E	60	31	F	71	19	F
Quebec	61	29	10	61	29	10	62	29	F
Ontario	66	24	10	66	23	10	61	31	7
Manitoba	62	26	12 E	62	25	13 E	51	38	F
Saskatchewan	68	26	5 E	69	25	6 E	49 E	F	F
Alberta	68	24	8	69	23	8	55	39 E	F
British Columbia	73	17	10	73	16	11	72	16 E	F

1. As a percentage of all households.
2. As a percentage of all households that had a municipal water supply.
3. As a percentage of all households that had a non-municipal water supply.

Source(s): Statistics Canada, Environment Accounts and Statistics Division, CANSIM table 153-0063.

Table 5
Households that had their water tested by a laboratory, by province

	Households that had a municipal water supply			Households that had a non-municipal water supply		
	Water tested by a laboratory in last twelve months [1]	Water tested by a laboratory		Water tested by a laboratory in last twelve months [3]	Water tested by a laboratory	
		Problem found [2]	No problem found [2]		Problem found [2]	No problem found [2]
	percent					
Canada	**5**	**14** E	**78**	**33**	**14** E	**86**
Newfoundland and Labrador	7 E	F	F	F	F	F
Prince Edward Island	F	F	F	38	F	92
Nova Scotia	F	F	F	19 E	F	83
New Brunswick	F	F	F	26	F	91
Quebec	2 E	F	72	31	F	82
Ontario	7	14 E	78	47	9 E	90
Manitoba	F	F	F	25 E	F	86
Saskatchewan	5 E	F	F	F	F	F
Alberta	4 E	F	F	F	F	F
British Columbia	4 E	F	91	35	F	79

1. As a percentage of all households that had a municipal water supply.
2. As a percentage of households that had their water tested by a laboratory.
3. As a percentage of all households that had a non-municipal water supply.

Source(s): Statistics Canada, Environment Accounts and Statistics Division, CANSIM table 153-0062.

Table 6
Treatment of drinking water by households that had a municipal water supply, by province

	Municipal water supply [1]	Households that had a municipal water supply						
		Primary type of drinking water, tap water [2]	Treated water prior to consumption [3]	Used a filter or purifier [3]	Used a filter or purifier on the main supply pipe [3]	Used an on-tap filter or purifier [3]	Used a jug filter [3]	Boiled water in order to make it safe to drink in the last twelve months [3]
	percent							
Canada	**87**	**66**	**51**	**50**	**5**	**17**	**35**	**11**
Newfoundland and Labrador	88	60	64	67	F	21	50	15 E
Prince Edward Island	61	70	56	62	F	F	46	F
Nova Scotia	60	69	52	58	F	13 E	46	F
New Brunswick	48	60	46	50	F	19 E	33	13 E
Quebec	87	61	36	34	2 E	7	27	9
Ontario	89	66	58	57	7	20	39	11
Manitoba	84	62	52	53	F	17 E	43	8 E
Saskatchewan	94	69	46	49	6 E	21	30	6 E
Alberta	91	69	55	54	5	25	34	11 E
British Columbia	90	73	57	49	5	19	33	19

1. As a percentage of all households.
2. As a percentage of all households that had a municipal water supply.
3. Information relates only to households that reported primarily consuming tap water, or tap water and bottled water.

Source(s): Statistics Canada, Environment Accounts and Statistics Division, CANSIM tables 153-0062, 153-0063 and 153-0066.

Table 7
Reasons why households with a municipal water supply treated their tap water before using it, by province

	Treated water prior to consumption[1]	Reasons for treating[2]							
		To improve appearance, taste or odour	To remove water treatment chemicals such as chlorine	To soften the water	To remove metals or minerals other than hard water	To remove possible bacterial contamination	Due to a boil water advisory	Because treatment device was already installed or pre-existing	Other reasons
	percent								
Canada	**51**	**55**	**48**	**15**	**30**	**36**	**10**	**4**	**11**
Newfoundland and Labrador	64	50	41	F	20	23	22	F	12 E
Prince Edward Island	56	75	67	F	F	F	F	F	F
Nova Scotia	52	59	48	F	15 E	23 E	F	F	F
New Brunswick	46	54	51	F	F	18 E	25 E	F	F
Quebec	36	56	49	18	25	31	17	4 E	11 E
Ontario	58	54	50	17	33	40	7	4 E	10
Manitoba	52	65	49	F	24 E	44	F	F	F
Saskatchewan	46	75	48	13 E	32	38	9 E	F	F
Alberta	55	55	48	14	34	29	5 E	6 E	13 E
British Columbia	57	50	42	13	27	35	12	4 E	13 E

1. As a percentage of households with a municipal water supply reporting that tap water was used.
2. Relates only to households reporting that tap water was used.

Source(s): Statistics Canada, Environment Accounts and Statistics Division, CANSIM table 153-0066.

Table 8
Treatment of drinking water by households that had a non-municipal water supply, by province

	Non-municipal water supply[1]	Households that had a non-municipal water supply						
		Primary type of drinking water, tap water[2]	Treated water prior to consumption[3]	Used a filter or purifier[3]	Used a filter or purifier on the main supply pipe[3]	Used an on-tap filter or purifier[3]	Used a jug filter[3]	Boiled water in order to make it safe to drink in the last twelve months[3]
	percent							
Canada	**11**	**64**	**49**	**46**	**29**	**14**	**15**	**5**
Newfoundland and Labrador	11 E	71	F	F	F	F	F	F
Prince Edward Island	39	85	37	34	25 E	F	F	F
Nova Scotia	39	71	51	48	32	F	19 E	F
New Brunswick	51	71	52	48	25	17 E	19 E	F
Quebec	11	62	41	37	27	F	F	F
Ontario	9	61	55	51	35	16	16	F
Manitoba	14	51	54	51	F	F	F	F
Saskatchewan	6 E	49 E	F	F	F	F	F	F
Alberta	8 E	55	47	F	F	F	F	F
British Columbia	9	72	52	53	33	F	F	F

1. As a percentage of all households.
2. As a percentage of all households that had a non-municipal water supply.
3. Information relates only to households that reported primarily consuming tap water, or tap water and bottled water.

Source(s): Statistics Canada, Environment Accounts and Statistics Division, CANSIM tables 153-0062, 153-0063 and 153-0066.

Table 9
Reasons why households with a non-municipal water supply treated their tap water before using it, by province

	Treated water prior to consumption [1]	Reasons for treating [2]							
		To improve appearance, taste or odour	To remove water treatment chemicals such as chlorine	To soften the water	To remove metals or minerals other than hard water	To remove possible bacterial contamination	Due to a boil water advisory	Because treatment device was already installed or pre-existing	Other reasons
	percent								
Canada	**49**	**44**	**11**	**31**	**41**	**33**	**5** E	**4** E	**9**
Newfoundland and Labrador	F	F	F	F	F	F	F	F	F
Prince Edward Island	37	F	F	F	F	F	F	F	F
Nova Scotia	51	41	F	27 E	45	29	F	F	F
New Brunswick	52	39	F	26 E	43	24 E	F	F	F
Quebec	41	45	F	42	43	31 E	F	F	F
Ontario	55	39	7 E	32	37	36	F	F	9 E
Manitoba	54	53 E	F	37 E	F	F	F	F	F
Saskatchewan	F	F	F	F	F	F	F	F	F
Alberta	47	70	F	F	F	F	F	F	F
British Columbia	52	38 E	F	F	41 E	43 E	F	F	F

1. As a percentage of households with a non-municipal water supply reporting that tap water was used.
2. Relates only to households reporting that tap water was used.

Source(s): Statistics Canada, Environment Accounts and Statistics Division, CANSIM table 153-0066.

Table 10
Sewer and septic system connections, by province

	Sewer	Private septic system	Communal septic system	Municipal water supply [1]			Non-municipal water supply [2]		
				Sewer	Private septic system	Communal septic system	Sewer	Private septic system	Communal septic system
	percent								
Canada	**82**	**13**	**1**	**92**	**3**	**0** E	**8**	**87**	**2** E
Newfoundland and Labrador	80	15 E	F	90	F	F	F	87	F
Prince Edward Island	63	36	F	96	F	F	F	88	F
Nova Scotia	62	34	F	94	F	F	14 E	85	F
New Brunswick	52	42	F	95	F	F	12 E	83	F
Quebec	83	13	F	93	3 E	F	9 E	89	F
Ontario	81	10	F	90	3	F	F	91	F
Manitoba	85	14	F	96	F	F	F	80	F
Saskatchewan	91	6 E	F	97	F	F	F	78	F
Alberta	88	8 E	F	96	F	F	F	90	F
British Columbia	82	13	F	90	5 E	F	F	85	F

1. As a percentage of households that had a municipal water supply.
2. As a percentage of households that had a non-municipal water supply.

Source(s): Statistics Canada, Environment Accounts and Statistics Division, Households and the Environment Survey, 2009 (survey number 3881).

Table 11
Thermostat use by households during the winter, by province

	Households reporting at least one thermostat	Winter temperature lowered when asleep [1]	Main thermostat, programmable [1]	Programmable thermostat		Not programmed or non-programmable
				Programmed thermostat [2]	Winter temperature lowered when asleep [3]	Winter temperature lowered when asleep [4]
	percent					
Canada	**91**	**61**	**49**	**84**	**74**	**53**
Newfoundland and Labrador	92	60	20	74	75	59
Prince Edward Island	97	66	25	86	76	63
Nova Scotia	96	63	25	77	57	64
New Brunswick	95	58	28	72	60	57
Quebec	92	62	46	81	76	54
Ontario	88	59	61	87	70	46
Manitoba	92	58	45	75	81	47
Saskatchewan	96	65	49	83	82	53
Alberta	97	63	47	85	79	52
British Columbia	92	64	38	86	78	58

1. As a percentage of all households that had a thermostat.
2. As a percentage of all households that had a programmable thermostat.
3. As a percentage of all households that had a programmable thermostat that was programmed.
4. As a percentage of all households that had an unprogrammed or non-programmable thermostat.

Source(s): Statistics Canada, Environment Accounts and Statistics Division, CANSIM table 153-0060.

Table 12
Energy-saving lights, by province

	At least one type of energy-saving light	Compact fluorescent lights	Fluorescent tubes	Halogen lights	LED lights (excluding holiday lights)
	percent				
Canada	**88**	**75**	**47**	**35**	**7**
Newfoundland and Labrador	75	70	26	18	11
Prince Edward Island	90	80	46	16	11 E
Nova Scotia	92	84	48	20	11
New Brunswick	88	76	47	26	10
Quebec	85	69	39	49	5
Ontario	88	79	51	31	7
Manitoba	86	69	55	30	8 E
Saskatchewan	91	78	52	31	8
Alberta	89	77	50	31	8
British Columbia	89	72	50	36	12

Note(s): As a percentage of all households.

Source(s): Statistics Canada, Environment Accounts and Statistics Division, CANSIM table 153-0059.

Table 13
Energy conservation practices, by province

	Used dimmers on household lights	Unplugged electronics when away for an extended period of time	Reduced heating or cooling in certain areas of the dwelling	Used a clothesline or drying rack to dry clothing	Used fans for cooling in the summer
	percent				
Canada	**50**	**57**	**60**	**64**	**66**
Newfoundland and Labrador	43	72	58	74	68
Prince Edward Island	42	72	58	80	84
Nova Scotia	47	72	57	73	74
New Brunswick	36	60	66	69	70
Quebec	53	41	71	74	60
Ontario	51	61	55	64	65
Manitoba	42	56	46	46	57
Saskatchewan	43	60	54	54	65
Alberta	47	65	51	54	73
British Columbia	53	62	61	57	72

	Closed the blinds or drapes in the dwelling during the hottest part of the day	Put plastic film on the windows in the winter	Put on more clothing instead of adjusting the temperature	Did none of these activities
	percent			
Canada	**83**	**21**	**80**	**1** E
Newfoundland and Labrador	59	10 E	71	F
Prince Edward Island	84	18 E	87	F
Nova Scotia	82	18	83	F
New Brunswick	84	22	78	F
Quebec	75	34	73	F
Ontario	86	17	82	F
Manitoba	89	20	79	F
Saskatchewan	93	26	87	F
Alberta	88	15	83	F
British Columbia	86	10	84	F

Source(s): Statistics Canada, Environment Accounts and Statistics Division, Households and the Environment Survey, 2009 (survey number 3881).

Table 14
Energy audits, by province

	Had had an energy audit	Energy audit performed within last ten years [1]
	percent	
Canada	**12**	**91**
Newfoundland and Labrador	F	F
Prince Edward Island	12 E	94
Nova Scotia	11	100
New Brunswick	13	89
Quebec	12	88
Ontario	12	92
Manitoba	12 E	94
Saskatchewan	21	95
Alberta	6	94
British Columbia	11	88

1. As a percentage of all households that had had an energy audit.
Source(s): Statistics Canada, Environment Accounts and Statistics Division, Households and the Environment Survey, 2009 (survey number 3881).

Table 15
Rating of indoor air quality, by province

	Excellent	Very good	Good	Fair	Poor	Excellent, Very good or Good	Health problem caused by indoor air quality during past 12 months	No health problem caused by indoor air quality during past 12 months	Condensation	Mould and mildew
	percent									
Canada	**18**	**37**	**34**	**7**	**1**	**90**	**5**	**93**	**20**	**13**
Newfoundland and Labrador	26	43	25	F	F	94	F	95	13	9 E
Prince Edward Island	14 E	45	28	F	F	87	F	96	16 E	17 E
Nova Scotia	22	44	24	7 E	F	90	F	94	16	14
New Brunswick	19	38	33	8 E	F	90	5 E	92	21	15
Quebec	19	37	35	7 E	F	90	5	94	24	10
Ontario	17	36	35	8	2 E	88	6	92	20	15
Manitoba	14 E	38	42	5 E	F	94	7 E	91	22	13
Saskatchewan	16	39	38	6 E	F	92	6 E	92	21	9
Alberta	17	40	35	7	F	91	5	92	23	8
British Columbia	23	35	33	6	F	91	5	93	16	14

Source(s): Statistics Canada, Environment Accounts and Statistics Division, Households and the Environment Survey, 2009 (survey number 3881).

Table 16
Methods of improving indoor air quality, by province

	Opened windows more often to improve air circulation	Used fans	Used air conditioner more	Used a dehumidifier	Used a humidifier	Used an air cleaner (other than an ionizing air cleaner)	Used better filters in the furnace [1]	Used furnace fan or HRV to improve air circulation	Used air fresheners to improve air quality [2]	Other
	percent									
Canada	**94**	**57**	**10**	**30**	**24**	**14**	**45**	**25**	**71**	**1** E
Newfoundland and Labrador	90	61	F	38	9 E	18	F	20	75	F
Prince Edward Island	96	61	F	37	11 E	16 E	20 E	21	77	F
Nova Scotia	97	62	7 E	46	11	17	32	18	71	F
New Brunswick	93	62	8 E	46	13	20	42	20	76	F
Quebec	95	51	9	34	17	13	40	21	71	F
Ontario	93	59	13	37	31	14	44	29	71	1 E
Manitoba	87	55	18	34	23	17 E	55	36	71	F
Saskatchewan	90	62	10	22	23	14	51	34	72	F
Alberta	94	60	8 E	11	41	16	49	31	78	F
British Columbia	94	58	5	9	12	7	43	17	64	F

	Opened windows more often to improve air circulation	Opened windows during the winter					Opened windows during the summer				
		Ever [3]	Daily [3]	At least once a week [3]	A few times during the season [3]	Never [3]	Ever [3]	Daily [3]	At least once a week [3]	A few times during the season [3]	Never [3]
	percent										
Canada	**94**	**87**	**33**	**31**	**24**	**12**	**99**	**85**	**10**	**3**	**1** E
Newfoundland and Labrador	90	79	18	23	37	19	98	89	8 E	F	F
Prince Edward Island	96	94	41	29	25	F	99	96	F	F	F
Nova Scotia	97	90	32	32	26	10 E	99	92	6 E	F	F
New Brunswick	93	83	23	34	26	17	100	86	11 E	F	F
Quebec	95	86	30	33	23	13	98	86	9	3	F
Ontario	93	89	33	33	23	10	99	80	14	5	1 E
Manitoba	87	78	18 E	27	33	22	99	77	16	F	F
Saskatchewan	90	79	20	27	32	20	100	83	14	F	F
Alberta	94	84	22	29	33	15	100	88	9	F	F
British Columbia	94	92	54	25	14	7	99	96	3 E	F	F

1. As a percentage of households that had a furnace as their main type of heating equipment.
2. As a percentage of households that reported they used air fresheners.
3. As a percentage of households that opened windows more often to improve air circulation.

Source(s): Statistics Canada, Environment Accounts and Statistics Division, Households and the Environment Survey, 2009 (survey number 3881).

Table 17
Household awareness of radon in Canada, by province

	Households that had heard of radon	Households that had heard of radon [1]					
		Gave correct description of radon	Gave incorrect description of radon	Could not describe radon (had only heard of it)	Said radon is a health hazard	Said radon is not a health hazard	Did not know if radon is a health hazard
	percent						
Canada	**42**	**49**	**27**	**24**	**68**	**11**	**22**
Newfoundland and Labrador	33	42	28	30	61	F	33
Prince Edward Island	52	58	23	19 E	70	F	F
Nova Scotia	60	56	18	26	75	F	20 E
New Brunswick	53	59	21	21	70	F	20 E
Quebec	38	54	32	13	73	9	18
Ontario	40	46	25	30	66	10	23
Manitoba	60	43	32	25 E	69	11 E	20 E
Saskatchewan	55	56	20	24	71	10 E	18
Alberta	44	44	27	29	59	16	25
British Columbia	41	49	27	24	66	12	22

1. As a percentage of all households that had heard of radon.
Source(s): Statistics Canada, Environment Accounts and Statistics Division, CANSIM table 153-0098.

Table 18
Households tested for radon in Canada, by province

	Households not in apartments that had heard of radon [1]	Households not in apartments that had heard of radon			
		Had tested for radon [2]	Had tested for radon within last ten years [3]	Had not tested for radon [2]	Did not know if tested for radon [3]
	percent				
Canada	**45**	**3**	**78**	**92**	**5**
Newfoundland and Labrador	35	F	F	98	F
Prince Edward Island	51	F	F	95	F
Nova Scotia	60	F	F	86	F
New Brunswick	54	F	F	95	F
Quebec	42	F	F	95	F
Ontario	42	3	75	90	6
Manitoba	63	F	F	92	F
Saskatchewan	60	6 E	F	89	F
Alberta	47	F	F	96	F
British Columbia	43	F	F	90	F

1. As a percentage of all households that did not live in an apartment.
2. As a percentage of households that did not live in an apartment and had heard of radon.
3. As a percentage of all households that had tested for radon.
Source(s): Statistics Canada, Environment Accounts and Statistics Division, CANSIM table 153-0098.

Table 19
Household hazardous waste, by province

	Had leftover or expired medication to dispose of	Had leftover or expired medication to dispose of					
		Put them in the garbage	Took or sent them to a depot or drop-off centre	Returned them to a supplier or retailer	Poured them down the drain, sewer, ground, toilet or sink	Still had them	Other
	percent						
Canada	**39**	**22**	**6**	**57**	**8**	**15**	**1** E
Newfoundland and Labrador	25	23 E	F	29 E	26 E	F	F
Prince Edward Island	43	F	F	66	F	F	F
Nova Scotia	37	16 E	F	64	F	11 E	F
New Brunswick	34	F	F	55	17 E	F	F
Quebec	47	14	4 E	74	4 E	10	F
Ontario	36	24	8	49	7	18	F
Manitoba	32	28 E	F	39 E	24 E	14 E	F
Saskatchewan	31	27	F	52	14 E	15 E	F
Alberta	36	20	9 E	56	9 E	20	F
British Columbia	39	34	6 E	47	7 E	15	F

	Had leftover paint or solvents to dispose of	Had leftover paint or solvents to dispose of				
		Put them in the garbage	Took or sent them to a depot or drop-off centre	Returned them to a supplier or retailer	Still had them	Other
	percent					
Canada	**39**	**4**	**62**	**8**	**31**	**2**
Newfoundland and Labrador	34	F	59	F	35	F
Prince Edward Island	45	F	58	F	42	F
Nova Scotia	41	F	67	F	31	F
New Brunswick	45	F	58	F	36	F
Quebec	48	4 E	55	19	25	3 E
Ontario	36	4	63	5	34	F
Manitoba	29	F	57	F	38	F
Saskatchewan	33	F	64	F	35	F
Alberta	38	F	70	F	34	F
British Columbia	34	F	69	F	32	F

	Had unwanted engine oil or anti-freeze to dispose of	Had unwanted engine oil or anti-freeze to dispose of				
		Put them in the garbage	Took or sent them to a depot or drop-off centre	Returned them to a supplier or retailer	Still had them	Other
	percent					
Canada	**15**	**1** E	**61**	**19**	**18**	**4**
Newfoundland and Labrador	11	F	57	F	F	F
Prince Edward Island	14 E	F	F	F	F	F
Nova Scotia	12	F	42	F	F	F
New Brunswick	21	F	56	F	F	F
Quebec	14	F	48	31	15	F
Ontario	13	F	63	16	19	4 E
Manitoba	22	F	75	F	F	F
Saskatchewan	17	F	63	F	28 E	F
Alberta	18	F	78	F	14 E	F
British Columbia	18	F	61	26	20 E	F

Table 19 – continued

Household hazardous waste, by province

	Had dead or unwanted car batteries to dispose of	Had dead or unwanted car batteries to dispose of				
		Put them in the garbage	Took or sent them to a depot or drop-off centre	Returned them to a supplier or retailer	Still had them	Other
	percent					
Canada	**12**	**F**	**46**	**31**	**20**	**5** E
Newfoundland and Labrador	5 E	F	F	F	F	F
Prince Edward Island	10 E	F	F	F	F	F
Nova Scotia	11	F	56	F	F	F
New Brunswick	16	F	47	F	F	F
Quebec	11	F	41	36	20	F
Ontario	9	F	42	37	19	F
Manitoba	18 E	F	59	22 E	F	F
Saskatchewan	18	F	40	31 E	28 E	F
Alberta	15	F	46	23 E	24 E	F
British Columbia	13	F	59	26 E	18 E	F

	Had other dead or unwanted batteries to dispose of	Had other dead or unwanted batteries to dispose of				
		Put them in the garbage	Took or sent them to a depot or drop-off centre	Returned them to a supplier or retailer	Still had them	Other
	percent					
Canada	**58**	**42**	**35**	**7**	**18**	**4**
Newfoundland and Labrador	48	74	19 E	F	11 E	F
Prince Edward Island	64	19 E	44	22 E	19 E	F
Nova Scotia	58	46	35	F	22	F
New Brunswick	56	58	27	F	17 E	F
Quebec	66	32	39	11	17	8
Ontario	53	40	38	6	17	2
Manitoba	55	61	16 E	F	24 E	F
Saskatchewan	58	69	20	F	17	F
Alberta	59	53	30	3 E	19	F
British Columbia	56	44	33	8	19	F

	Had unwanted electronic devices to dispose of	Had unwanted electronic devices to dispose of					
		Put them in the garbage	Took or sent them to a depot or drop-off centre	Returned them to a supplier or retailer	Donated them or gave them away	Still had them	Other
	percent						
Canada	**36**	**11**	**45**	**5**	**22**	**28**	**2**
Newfoundland and Labrador	18	F	34	F	F	36 E	F
Prince Edward Island	36	F	51	F	F	35 E	F
Nova Scotia	41	F	61	F	11 E	30	F
New Brunswick	30	28	28	F	F	34	F
Quebec	30	13	29	9 E	31	29	3 E
Ontario	35	13	41	3 E	22	28	2 E
Manitoba	45	11 E	41	F	28 E	29 E	F
Saskatchewan	40	10 E	69	F	20	23	F
Alberta	46	5 E	63	F	16	29	F
British Columbia	43	10 E	57	F	19	26	F

Table 19 – continued

Household hazardous waste, by province

	Had dead or unwanted compact fluorescent lights (CFLs) to dispose of	Had dead or unwanted compact fluorescent lights (CFLs) to dispose of				
		Put them in the garbage	Took or sent them to a depot or drop-off centre	Donated them or gave them away	Still had them	Other
	percent					
Canada	**22**	**56**	**24**	**4**	**13**	**3**
Newfoundland and Labrador	19	74	F	F	F	F
Prince Edward Island	17	59	F	F	F	F
Nova Scotia	18	64	F	F	F	F
New Brunswick	22	73	F	F	F	F
Quebec	23	62	15	5 E	12 E	6 E
Ontario	23	50	30	5 E	13	2 E
Manitoba	17	65	F	F	F	F
Saskatchewan	17	72	F	F	F	F
Alberta	20	56	29 E	F	12 E	F
British Columbia	21	51	29	F	17 E	F

Source(s): Statistics Canada, Environment Accounts and Statistics Division, Households and the Environment Survey, 2009 (survey number 3881).

Table 20
Purchasing decisions, by province

	Purchased major appliance within last five years	Most important factors that influenced purchase [1]				
		Energy or water consumption	Reliability	Price	Features	Other
	percent					
Canada	**54**	**64**	**37**	**55**	**26**	**4**
Newfoundland and Labrador	62	51	36	60	30	F
Prince Edward Island	51	59	40	62	19 E	F
Nova Scotia	60	69	32	59	22	F
New Brunswick	59	64	37	62	21	F
Quebec	60	62	35	57	28	3 E
Ontario	51	70	37	55	23	2 E
Manitoba	48	54	35	62	30 E	F
Saskatchewan	56	62	38	61	24	F
Alberta	55	65	35	48	31	9 E
British Columbia	50	59	42	50	27	5 E

	Purchased environmentally-friendly or "green" cleaning products [2]	Purchased environmentally friendly or "green" cleaning products [2]				Never purchased environmentally-friendly or "green" cleaning products [2]
		Always	Often	Sometimes	Rarely	
	percent					
Canada	**80**	**10**	**19**	**34**	**17**	**17**
Newfoundland and Labrador	78	F	14	37	22	18
Prince Edward Island	83	F	26	36	13	15 E
Nova Scotia	84	7	17	39	21	16
New Brunswick	81	6 E	16	37	22	17
Quebec	80	11	21	30	18	17
Ontario	78	9	17	35	16	17
Manitoba	75	8 E	15	36	17	22
Saskatchewan	84	9	22	34	19	14
Alberta	82	12	20	35	15	16
British Columbia	81	14	23	30	15	15

	Used own bags or containers to carry groceries [2]	Used own bags or containers to carry groceries [2]				Never used own bags or containers to carry groceries [2]
		Always	Often	Sometimes	Rarely	
	percent					
Canada	**93**	**49**	**28**	**13**	**4**	**5**
Newfoundland and Labrador	89	38	26	20 E	F	8 E
Prince Edward Island	96	44	30	15 E	F	F
Nova Scotia	95	48	28	16	F	F
New Brunswick	93	47	30	13	F	F
Quebec	95	60	26	7	2 E	4 E
Ontario	95	55	26	10	3 E	3
Manitoba	89	35	30	16	8 E	10 E
Saskatchewan	91	23	36	24	8 E	8
Alberta	88	28	31	21	8	11
British Columbia	89	37	31	18	3 E	9

1. As a percentage of households that had purchased a major appliance within the last five years.
2. As a percentage of all households.

Source(s): Statistics Canada, Environment Accounts and Statistics Division, Households and the Environment Survey, 2009 (survey number 3881).

Methodology and data quality

Introduction

This section provides an overview of the underlying methodology of the survey and of key aspects of the data quality. It will also provide an understanding of the strengths and limitations of the data. The information may be of particular relevance when making comparisons with data from other surveys or sources of information and when drawing conclusions from time series.

Reference period

Respondents of the *Households and the Environment Survey* (HES) were asked to refer to behaviours and activities that were undertaken by the household for the following reference periods: the twelve months prior to the date of the interview.

Target population

The target population consisted of households in Canada excluding households located in Yukon, Northwest Territories and Nunavut, households located on Indian reserves or Crown lands, and households consisting entirely of full-time members of the Canadian Armed Forces. Institutions and households of certain remote regions were also excluded.

Variables measured

- Water quality concerns of households
- Consumption and conservation of water
- Conservation of energy
- Home heating and cooling
- The indoor environment
- Use of household lawn and garden equipment
- Use of gasoline-powered recreation equipment
- Pesticide and fertilizer use on lawns and gardens
- Composting and hazardous waste disposal practices
- Impacts of air and water quality on households
- Purchasing decisions

Instrument design

The questionnaire was designed by Statistics Canada in consultation with stakeholders involved in the Canadian Environment Sustainability Indicators project and in consideration of the data needs of both the project and the larger research and policy communities. Testing of the questionnaire was done by Statistics Canada's Questionnaire Design Research Centre (QDRC). One-on-one focus sessions were conducted in both English and French by the QDRC in Ottawa and Montreal in January and February 2009.

The questionnaire was designed to follow standard practices and wording, where applicable, in a computer-assisted telephone interviewing environment. This included the automatic control of question wording and flows that depended upon answers to earlier questions and the use of online edits to check for logical inconsistencies and gross capture errors.

The computer application for data collection was subjected to extensive testing before its use in the survey.

Sampling

The Households and the Environment Survey (HES) was administered from October 2009 to November 2009 to a sub-sample of the dwellings that were part of the Canadian Community Health Survey – Annual Component, 2009 (CCHS 2009) between January 1st and June 30th, 2009. The details of the CCHS sample design are available upon request. The resulting sample size for HES 2009 consisted of 20,000 dwellings.

Data collection

Data collection took place from October 2009 to December 2009. Participation in the survey was voluntary and data were collected directly from a representative of the selected household by telephone interview. Depending on this person's availability and operational constraints, the HES interview was completed immediately or arrangements were made to call back in order to complete the interview. An automated call scheduler managed follow-up calls in order to try to make contact with the respondent at different times of day throughout the collection period.

Interviews for the HES were conducted by Statistics Canada's regional offices using a computer-assisted telephone interviewing (CATI) application. The initial sample size consisted of 20,000 dwellings. A total of 14,754 responding units yielded a final response rate of 73.8% to the HES.

Error detection

The HES questionnaire incorporated many features to maximize the quality of the data collected. There were multiple edits in the computer-assisted interview application to compare the entered data against unusual values and logical inconsistencies between sections of the questionnaire. When an edit failed, the interviewer was prompted to correct the information, with the help of the respondent. As well, the interviewer had the ability to enter a response of "Don't know" or "Refused" if the respondent did not answer a question.

Estimation

Estimates representing in-scope households were produced by assigning weights to each sampled household. The weight of a sampled household indicated the number of households in the population that the unit represented. The initial weight was provided by the CCHS and incorporated the probability of selecting the unit in their sample, as well as other adjustments such as the treatment of non-response to the CCHS.

In order to produce the HES weights, a first adjustment was made to the initial weight to reflect the fact that only a subsample of the CCHS was used. A second adjustment was made to account for the HES nonresponse. Finally, a third and final adjustment was made to produce the final weight. This final adjustment consisted of a post-stratification to the Census projections. The quality of the estimates was assessed using estimates of their CV. Given the complexity of the HES design, CVs cannot be calculated using a simple formula therefore bootstrap replicate weights were used to obtain the CVs of the estimates.

Quality evaluation

All published data were compared to data from previous cycles of the survey to ensure consistency. Subject-matter experts confronted the data using other sources as well as by identifying and researching any values that were not consistent with others in the same domain.

Disclosure control

Statistics Canada is prohibited by law from releasing any data that would divulge information obtained under the *Statistics Act* that relates to any identifiable person, business or organization without the prior knowledge or the consent in writing of that person, business or organization. Various confidentiality rules are applied to all data that are released or published to prevent the publication or disclosure of any information deemed confidential. If necessary, data are suppressed to prevent direct or residual disclosure of identifiable data.

Coverage error

The coverage error of the CCHS, of which the HES is a subsample, is estimated at less than 2%.

Response rates and sampling error

The response rate for this survey was 73.8%. Provincial response rates ranged from 68.8% to 75.5%.

Sampling error is defined as the error that results from estimating a population characteristic by measuring a portion of the population rather than the entire population. For probability sample surveys, methods exist to calculate sampling error.

The coefficient of variation (CV) provides such a measure. It is the ratio of the standard error of the survey estimate to the average value of the estimate itself, across all possible samples. The coefficient of variation is usually computed as the estimate of the standard error of the survey estimate to the estimate itself. This relative measure of sampling error is usually expressed as a percentage (10% instead of 0.1). It is very useful in comparing the precision of sample estimates, where their sizes or scale differ from one another.

The extent of this sampling error is quantified by the CV with the following guidelines:

- 16.5% and below: acceptable estimate;
- 16.6% to 33.3%: marginal estimate requiring cautionary note to users; and
- 33.3% and above: unacceptable estimate.

Estimates that do not meet an acceptable level of quality are either flagged for caution or suppressed. CV tables are prepared by Statistics Canada and made available to help users understand the quality of individual estimates.

For example, CVs for the proportion of households that gave a correct description of radon in 2009 for Canada and the provinces are as follows:

Canada	2.00%
Newfoundland and Labrador	10.59%
Prince Edward Island	8.65%
Nova Scotia	6.00%
New Brunswick	6.83%
Quebec	4.31%
Ontario	3.91%
Manitoba	10.73%
Saskatchewan	5.54%
Alberta	6.87%
British Columbia	5.50%

Data comparability over time

The HES sample was selected from the 2007 (January to June) respondents to the Canadian Community Health Survey (CCHS). All the details of the CCHS sample design can be obtained upon request. In Quebec and in Ontario, the HES sample was selected from the CCHS respondents in order to allow for reliable estimates; i.e., with a coefficient of variation (CV) of 16.5% or better for proportions as small as 10% in census metropolitan areas (CMAs) and in the non-CMA portion of each province. In the other provinces, all the CCHS responding dwellings were selected in order to allow for the most reliable estimates possible. The initial HES 2007 sample size consisted of 29,980 dwellings.

Data collection

Topic: Radon awareness

Discussion

In 2007, respondents were asked if they were “aware of radon gas and its impacts on human health”, while in 2009 respondents were initially asked if they had “heard of radon” and then asked a series of follow-up questions if they indicated they had. This change separated awareness of radon (i.e. they had heard of it) from knowledge of the properties of radon. Thus, care must be taken when making direct comparisons for this response.

Potential impact on comparability

Moderate impact – Comparisons should be made with caution.

Appendix I

Questionnaire – Households and the Environment Survey - 2009 (HES)

Households and the Environment Survey - 2009

Copy of the questionnaire can be seen at the end of this report (or IMDB record number 3881).

Dwelling Characteristics (DC)

DC_BEG Beginning of section

Content block

External variables required:

HHLDNUM: number of members in household, from Demographics block.
DWELCODE: dwelling type, from Entry block.

DC_R01 **The first set of questions are about the dwelling in which you currently reside.**

INTERVIEWER: Press <1> to continue.

DC_Q01A **In what year was this dwelling originally built?**

INTERVIEWER: Provide best estimate.

|_|_|_|_|
(MIN: 1800) (MAX: 2009)
DK, RF (Go to DC_Q01B)
Go to DC_D02

Note: Coverage: All respondents.

DC_Q01B **Was it built...?**

INTERVIEWER: Read categories to respondent.

1 **Before 1946**
2 **Between 1946 and 1960**
3 **Between 1961 and 1977**
4 **Between 1978 and 1983**
5 **Between 1984 and 1995**
6 **Between 1996 and 2000**
7 **Between 2001 and 2007**
8 **In 2008 or later**
DK, RF

Note: Coverage: All respondents.

DC_D02 If HHLDNUM = 1, DT_DCFILL1 = "Are you the owner of this dwelling".
Otherwise, DT_DCFILL1 = "Is the dwelling owned by a member of this household".

DC_Q02 **^DT_DCFILL1?**

1 Yes
2 No
DK, RF

Note: Coverage: All respondents.

DC_C03 If DWELCODE = 3, 5, 6 (Townhouse, Low Rise, High Rise), go to DC_Q03.
Otherwise, go to DC_C04.

DC_Q03 **Is the dwelling part of a condominium?**

1 Yes
2 No
DK, RF

Note: Coverage: Respondents who live in a townhouse or an apartment.

DC_C04 If DC_Q02 = 1 and DC_Q03 NE 1, go to DC_D05.
Otherwise, go to DC_D04.

DC_D04 If DC_Q02 = 1, DK, RF and DC_Q03 = 1, DT_DCFILL2 = "the condominium corporation".
Otherwise, DT_DCFILL2 = "the landlord or property manager".

DC_Q04 **Is ^DT_DCFILL2 responsible for paying <u>any</u> of the energy bills for the dwelling?**

1 Yes
2 No
DK, RF

Note: Coverage: Respondents who do not own their dwelling or currently reside in a condominium.

DC_D05 If HHLDNUM = 1, DT_DCFILL3 = "have you".
Otherwise, DT_DCFILL3 = "has your household".

DC_Q05 **How long ^DT_DCFILL3 lived in this dwelling?**

INTERVIEWER: Provide best estimate in months or years. Probe for the length of time that at least one household member has lived in the current dwelling.

|_|_|
(MIN: 1) (MAX: 95)
DK, RF (Go to DC_END)

Note: Coverage: All respondents.

DC_N05 INTERVIEWER: Ask if necessary: (**Is this in months or years?**)

1 Months
2 Years

(DK, RF are not allowed)
Note: Coverage: All respondents.

DC_E05 An unusual value has been entered. Please confirm.

Note: Trigger soft edit if {(DC_Q01A ne DK,RF) and (DC_Q05 ne DK,RF) and (DC_N05=2) and (2010-DC_Q01A < DC_Q05)} or

{(DC_Q01A ne DK,RF) and (DC_Q05 ne DK,RF) and (DC_N05=1) and (2010-DC_Q01A < (DC_Q05)/12)} or

{(DC_Q01A = DK,RF) and (DC_Q05 ne DK,RF) and (DC_N05=2) and [(DC_Q01B=2 and DC_Q05>64) or (DC_Q01B=3 and DC_Q05>49) or (DC_Q01B=4 and DC_Q05>32) or (DC_Q01B=5 and DC_Q05>26) or (DC_Q01B=6 and DC_Q05>14) or (DC_Q01B=7 and DC_Q05>9) or (DC_Q01B=8 and DC_Q05>2)]} or

{(DC_Q01A = DK,RF) and (DC_Q05 ne DK,RF) and (DC_N05=1 and [(DC_Q01B=2 and DC_Q05>64*12) or (DC_Q01B=3 and DC_Q05>49*12) or (DC_Q01B=4 and DC_Q05>32*12) or (DC_Q01B=5 and DC_Q05>26*12) or (DC_Q01B=6 and C_Q05>14*12) or (DC_Q01B=7 and DC_Q05>9*12) or (DC_Q01B=8 and DC_Q05>2*12)]}

DC_END End of section

Energy Use and Home Heating (EH)

EH_BEG Beginning of section

Content block

External variables required:

HHLDNUM: number of members in household, from Demographics block.
DWELCODE: dwelling type, from Entry block.

EH_Q01 **What is your dwelling's main type of heating equipment? Is it...?**

INTERVIEWER: Read categories to respondent.

1	**A forced air furnace (hot air vents)**	
2	**Electric baseboards**	(Go to EH_C03)
3	**A heating stove**	
4	**A boiler with hot water or steam radiators**	
5	**Electric radiant heating**	(Go to EH_C03)
6	**A heat pump**	(Go to EH_C03)
7	Other - Specify	(Go to EH_S01)
	DK, RF	(Go to EH_C03)

Go to EH_D02

Note: Coverage: All respondents.

EH_S01 What is your dwelling's main type of heating equipment?

INTERVIEWER: Specify.

_____
(80 spaces)
(DK, RF are not allowed)

EH_D02 If EH_Q01 = 1, DT_FURNACE = "forced air furnace".
If EH_Q01 = 3, DT_FURNACE = "heating stove".
If EH_Q01 = 4, DT_FURNACE = "boiler with hot water or steam radiators".
Otherwise, DT_FURNACE = "^EH_S01".

EH_Q02 **What source of energy does your ^DT_FURNACE use?**

INTERVIEWER: Read categories to respondent. Mark all that apply.

1 **Electricity**
2 **Natural gas**
3 **Heating oil**
4 **Wood or wood pellets**
5 **Propane**
6 Other - Specify (Go to EH_S02)
DK, RF

Go to EH_C03

Note: Coverage: Respondents who use a forced air furnace, a heating stove or a boiler with hot water or steam radiators as the main type of heating for the dwelling.

EH_S02 What source of energy does your ^DT_FURNACE use?

INTERVIEWER: Specify.

_____
(80 spaces)
(DK, RF are not allowed)

EH_C03 If DWELCODE = 5 (Low Rise Apt.) or 6 (High Rise Apt.), go to EH_Q05.
Otherwise, go to EH_D03.

EH_D03 If HHLDNUM = 1, DT_EHFILL1 = "Do you".
Otherwise, DT_EHFILL1 = "Does your household".

EH_Q03 **^DT_EHFILL1 use any alternative energy sources in your dwelling (besides electricity, natural gas, heating oil, propane, wood or wood pellets)?**

1 Yes
2 No (Go to EH_Q05)
DK, RF (Go to EH_Q05)

Note: Coverage: Respondents who do not live in an apartment.

EH_Q04 **Which one(s)?**

INTERVIEWER: Mark all that apply.

1 Geothermal
2 Solar panels used to heat water
3 Solar panels used to generate electricity (photovoltaic)
4 Wind power
5 Biofuels (e.g., biodiesel)
6 Other - Specify (Go to EH_S04)
DK, RF

Go to EH_Q05

Note: Coverage: Respondents who do not live in an apartment and use any other energy sources besides electricity, natural gas, heating oil, propane or wood.

EH_S04 Which one(s)?

INTERVIEWER: Specify.

_____
(80 spaces)
(DK, RF are not allowed)

EH_Q05 **Does your dwelling have an air conditioner?**

1 Yes
2 No (Go to EH_Q07)
DK, RF (Go to EH_Q07)

Note: Coverage: All respondents.

EH_Q06 **Is it...?**

INTERVIEWER: Read categories to respondent. Mark all that apply.

1 **A central air system**
2 **A stand alone unit in a window or elsewhere**
3 Other - Specify (Go to EH_S06)
DK, RF

Go to EH_Q07

Note: Coverage: Respondents who have an air conditioner.

EH_S06 Is it...?

INTERVIEWER: Specify.

_____

(80 spaces)
(DK, RF are not allowed)

EH_Q07 **Do you have a thermostat?**

INTERVIEWER: If necessary, ask: (**Can you control or regulate the temperature in your dwelling?**)

1 Yes
2 No (Go to EH_C13)
DK, RF (Go to EH_C13)

Note: Coverage: All respondents.

EH_Q08 **How many thermostats do you have?**

1 One
2 More than one
DK, RF (Go to EH_Q11)

Note: Coverage: Respondents who have at least one thermostat in their dwelling.

EH_D09 If EH_Q08 = 1, DT_MAINTHERMO = "Is it".
Otherwise, DT_MAINTHERMO = "Is your main thermostat".

EH_Q09 **^DT_MAINTHERMO programmable? That is, it can be set to automatically change the temperature according to the time of day.**

1 Yes
2 No (Go to EH_Q11)
DK, RF (Go to EH_Q11)

Note: Coverage: Respondents who have at least one thermostat in their dwelling.

EH_Q10 **Is it programmed?**

1 Yes
2 No
DK, RF

Note: Coverage: Respondents who have a programmable thermostat in their dwelling.

EH_Q11 **During the winter season, at what temperature is the dwelling usually kept:**

...when you are there and awake?

INTERVIEWER: Only enter the degree. If respondent has replied 'turn it off', please enter a value of zero. If respondent provides half degrees, please round up to the nearest degree.

|_|_|
(MIN: 0) (MAX: 94)
DK, RF

Note: Coverage: Responding households that have at least one thermostat in their dwelling.

EH_E11 An unusual value has been entered. Please confirm.

Note: Trigger soft edit if 1 =< EH_Q11 < 10 or 30 < EH_Q11 < 60 or EH_Q11 > 90

EH_Q12 **(During the winter season, at what temperature is the dwelling usually kept:)**

... when you are asleep?

INTERVIEWER: Only enter the degree. If respondent has replied 'turn it off', please enter a value of zero. If respondent provides half degrees, please round up to the nearest degree.

|_|_|
(MIN: 0) (MAX: 94)
DK (Go to EH_Q12A)
RF (Go to EH_C13)
Go to EH_C13

Note: Coverage: Respondents who have at least one thermostat in their dwelling.

EH_E12 An unusual value has been entered. Please confirm.

Note: Trigger soft edit if 1 =< EH_Q12 < 10 or 30 < EH_Q12 < 60 or EH_Q12 > 90

EH_Q12A **Is it...?**

INTERVIEWER: Read categories to respondent. Determine if the night time temperature was higher, lower or the same as when they are there and awake.

1 **Higher**
2 **Lower**
3 **Same**
DK, RF

EH_C13 If EH_Q05 = 1 (air conditioner), go to EH_Q13.
Otherwise, go to EH_Q16.

EH_Q13 **When using your air conditioner during the summer season, at what temperature is the dwelling usually kept:**

... when you are there and awake?

INTERVIEWER: Only enter the degree. If respondent has replied 'turn it off', please enter a value of zero. If respondent provides half degrees, please round up to the nearest degree.

|_|_|
(MIN: 0) (MAX: 94)
DK, RF

Note: Coverage: Respondents who have an air conditioner in their dwelling.

EH_E13 An unusual value has been entered. Please confirm.

Note: Trigger soft edit if 1 =< EH_Q13 < 10 or 30 < EH_Q13 < 60 or EH_Q13 > 90

EH_Q14 **(When using your air conditioner during the summer season, at what temperature is the dwelling usually kept:)**

... when you are asleep?

INTERVIEWER: Only enter the degree. If respondent has replied 'turn it off', please enter a value of zero. If respondent provides half degrees, please round up to the nearest degree.

|_|_|
(MIN: 0) (MAX: 94)
DK (Go to EH_Q14A)
RF (Go to EH_Q15)
Go to EH_Q15

Note: Coverage: Respondents who have an air conditioner in their dwelling.

EH_E14 An unusual value has been entered. Please confirm.

Note: Trigger soft edit if 1 =< EH_Q14 < 10 or 30 < EH_Q14 < 60 or EH_Q14 > 90

EH_Q14A **Is it...?**

INTERVIEWER: Read categories to respondent. Determine if the night time temperature was higher, lower or the same as when they are there and awake.

1 **Higher**
2 **Lower**
3 **Same**
DK, RF

EH_Q15 **(When using your air conditioner during the summer season, at what temperature is the dwelling usually kept:)**

... when you are not at home?

INTERVIEWER: Only enter the degree. If respondent has replied 'turn it off', please enter a value of zero. If respondent provides half degrees, please round up to the nearest degree.

|_|_|
(MIN: 0) (MAX: 94)
DK, RF

Note: Coverage: Respondents who have an air conditioner in their dwelling.

EH_E15 An unusual value has been entered. Please confirm.

Note: Trigger soft edit if 1 =< EH_Q15 < 10 or 30 < EH_Q15 < 60 or EH_Q15 > 90

EH_Q16 **Do you have any of the following types of energy saving lights?**

INTERVIEWER: Mark all that apply. Read categories to respondent.

1 **Compact fluorescent lights (for example corkscrew or spiral)**
2 **Fluorescent tubes**
3 **Halogen lights**
4 **LED holiday lights**
5 **Other types of LED lights**
6 None of the above - Household does not have any energy saving lights
DK, RF

Note: Coverage: All respondents.

EH_E16 You cannot select "None of the above - Household does not have any energy saving lights" and another category. Please return and correct.

Note: Trigger hard edit if EH_Q16 = 6 and any other category.

EH_D17 If HHLDNUM = 1, DT_EHFILL2 = "you do".
Otherwise, DT_EHFILL2 = "anyone in your household does".

EH_Q17 **Please indicate if ^DT_EHFILL2 any of the following. Do you...?**

INTERVIEWER: Read categories to respondent. Mark all that apply.

1 **Use dimmers on household lights**
2 **Unplug electronics when away for an extended period of time**
3 **Reduce heating or cooling in certain areas of the dwelling (for example by blocking or closing vents or sealing off unused areas of the dwelling seasonally)**
4 **Use a clothesline or drying rack to dry clothing**
5 **Use fans for cooling in the summer**
6 **Close the blinds or drapes in your dwelling during the hottest part of the day**
7 **Put plastic film on the windows in the winter**
8 **Put on more clothing, such as a sweater, instead of adjusting the temperature**
9 None of the above activities
DK, RF

Note: Coverage: All respondents.

EH_E17 You cannot select "None of the above" and another category. Please return and correct.

Note: Trigger hard edit if EH_Q17 = 9 and any other category.

EH_Q18 **Has an energy audit ever been conducted for your dwelling?**

1 Yes
2 No (Go to EH_END)
DK, RF (Go to EH_END)

Note: Coverage: All respondents.

EH_Q19 **Was it conducted in the last 10 years?**

1 Yes
2 No
DK, RF

Note: Coverage: Respondents who have had an energy audit conducted for their dwelling.

EH_END End of section

Water (WA)

WA_BEG Beginning of section

Content block

External variables required:

HHLDNUM: number of members in household, from Demographics block.
DWELCODE: dwelling type, from Entry block.

WA_R01 **The next set of questions are about the use of water in your dwelling.**

INTERVIEWER: Press <1> to continue.

WA_Q01 **What is your dwelling's main source of water? Is it...?**

INTERVIEWER: Read categories to respondent.

1 **Water supplied by your city, town or municipality**
2 **Water from a private well**
3 **Water from a surface source such as a spring, lake, river, or dugout**
4 Other - Specify (Go to WA_S01)
DK, RF

Go to WA_D02

Note: Coverage: All respondents.

WA_S01 What is your dwelling's main source of water?

INTERVIEWER: Specify.

_____
(80 spaces)
(DK, RF are not allowed)

WA_D02 If HHDLNUM = 1, DT_WAFILL1 = "you".
Otherwise, DT_WAFILL1 = "your household".

WA_Q02 **During the past 12 months, what type of water did ^DT_WAFILL1 primarily use for drinking at home? Was it...?**

INTERVIEWER: Read categories to respondent.

1 **Tap water**
2 **Bottled water including purchased water in a water cooler, tank or other dispenser**
3 Both (Go to WA_Q04)
4 Other - Specify (Go to WA_S02)
DK, RF (Go to WA_Q04)

Go to WA_D03

Note: Coverage: All respondents.

WA_S02 During the past 12 months, what type of water did ^DT_WAFILL1 primarily use for drinking at home?

INTERVIEWER: Specify.

_____
(80 spaces)
(DK, RF are not allowed)

WA_D03 If WA_Q02 = 1, DT_TYPWATER = "bottled water".
If WA_Q02 = 2, DT_TYPWATER = "tap water".
Otherwise, DT_TYPWATER = "tap or bottled water".

WA_Q03 **(During the past 12 months,) did ^DT_WAFILL1 occasionally use ^DT_TYPWATER for drinking at home?**

1 Yes
2 No
DK, RF

Note: Coverage: Respondents who do not primarily use both tap water and bottled water for drinking.

WA_Q04 **During the past 12 months, did you do any of the following to the main water source? Did you...?**

INTERVIEWER: Read categories to respondent. Mark all that apply.

1 **Use a filter or purifier on the main water supply pipe**
2 **Use a filter or purifier on the taps, including built-in water dispensers in your refrigerator**
3 **Use a jug filter (for example a Brita system)**
4 **Boil water (in order to make it safe for drinking)**
5 Do nothing (Go to WA_Q08)
DK, RF (Go to WA_Q08)

Note: Coverage: All respondents.

WA_E04 You cannot select "do nothing" and another category. Please return and correct.

Note: Trigger hard edit if WA_Q04 = 5 and any other category.

WA_C05 If WA_Q04 = 1 (filter on main supply pipe), go to WA_Q05.
Otherwise, go to WA_C06.

WA_Q05 **What type of filter or purifier was used on the main water supply pipe? Was it...?**

INTERVIEWER: Read categories to respondent. Mark all that apply.

1 **An activated charcoal or carbon filter**
2 **A ceramic filter**
3 **A reverse osmosis system**
4 **An ultraviolet light system**
5 **A distilled water system**
6 Other - Specify (Go to WA_S05)
DK, RF

Go to WA_C06

Note: Coverage: Respondents who have a filter on the main supply pipe.

WA_S05 What type of filter or purifier was used on the main water supply pipe?

INTERVIEWER: Specify.

_____
(80 spaces)
(DK, RF are not allowed)

WA_C06 If WA_Q04 = 2 (filter or purifier on taps), go to WA_Q06.
Otherwise, go to WA_C07.

WA_Q06 **What type of filter or purifier was used on your taps? Was it...?**

INTERVIEWER: Read categories to respondent. Mark all that apply.

1 **An activated charcoal or carbon filter**
2 **A ceramic filter**
3 **A reverse osmosis system**
4 **An ultraviolet light system**
5 **A distilled water system**
6 Other - Specify (Go to WA_S06)
DK, RF

Go to WA_C07

Note: Coverage: Respondents who have a filter on their tap.

WA_S06 What type of filter or purifier was used on your taps?

INTERVIEWER: Specify.

_____
(80 spaces)
(DK, RF are not allowed)

WA_C07 If WA_Q04 = 1,2,3,4 (Use some type of filter or boil water), go to WA_Q07.
Otherwise, go to WA_C08.

WA_Q07 **Why did you treat the main water source? Was it...?**

INTERVIEWER: Read categories to respondent. Mark all that apply.

1 **To improve the appearance, taste or odour**
2 **To remove water treatment chemicals such as chlorine**
3 **To soften the water**
4 **To remove metals or minerals other than for hard water**
5 **To remove possible bacterial contamination**
6 **Because of an advisory to boil water**
7 Other - Specify (Go to WA_S07)
DK, RF

Go to WA_Q08

Note: Coverage: Respondents who treated their water in some form during the past 12 months.

WA_S07 Why did you treat the main water source?

INTERVIEWER: Specify.

_____

(80 spaces)
(DK, RF are not allowed)

WA_Q08 **In the past 12 months, was your water tested by a laboratory?**

1 Yes
2 No (Go to WA_Q10)
DK, RF (Go to WA_Q10)

Note: Coverage: All respondents.

WA_Q09 **Were any problems found?**

1 Yes
2 No
DK, RF

Note: Coverage: Respondents who had their water tested by a laboratory in the past 12 months.

WA_Q10 **Is your dwelling connected to...?**

INTERVIEWER: Read categories to respondent.

1 **The sewer system of your city, town or municipality**
2 **A private septic system, including holding tanks**
3 **A communal septic system**
4 Other
DK, RF

Note: Coverage: All respondents.

WA_C11 If WA_Q01 = 1 (Water from city, town or municipality), go to WA_Q11.
Otherwise, go to WA_Q12.

WA_Q11 **Do you have:**

... a meter to measure your water use?

1 Yes
2 No
DK, RF

Note: Coverage: Respondents whose main source of water is supplied by their city, town or municipality.

WA_Q12 **(Do you have:)**

... a water saving, low flow showerhead?

1 Yes
2 No
DK, RF

Note: Coverage: All respondents.

WA_Q13 **(Do you have:)**

... a low volume toilet or a toilet tank with the water volume modified for example with a bottle or a brick?

1 Yes
2 No
DK, RF

Note: Coverage: All respondents.

WA_C14 If DWELCODE= 5 or 6 (Low Rise or High Rise Apt.), go to WA_END.
Otherwise, go to WA_Q14.

WA_Q14 **Do you have a lawn or an area with grass?**

1 Yes
2 No (Go to WA_Q21)
DK, RF (Go to WA_Q21)

Note: Coverage: Respondents who do not live in an apartment.

WA_D15 If HHLDNUM = 1, DT_WAFILL2 = "you".
Otherwise, DT_WAFILL2 = "anyone in your household".

WA_Q15 **Last summer, did ^DT_WAFILL2 water your lawn? Please include automatic sprinkler and irrigation systems.**

1 Yes
2 No (Go to WA_Q21)
3 Not applicable (no lawn last summer) (Go to WA_Q21)
DK, RF (Go to WA_Q21)

Note: Coverage: Respondents who do not live in an apartment and have a lawn.

WA_Q16 **Last summer, during an average week, how many times was your lawn watered? Was it...?**

INTERVIEWER: Read categories to respondent.

1 **Less than once a week**
2 **Once a week**
3 **Twice a week**
4 **Three times or more a week**
DK, RF (Go to WA_Q18)

Note: Coverage: Respondents who do not live in an apartment, have a lawn and watered it last summer.

WA_Q17 **On average, how long was each watering session? Was it...?**

INTERVIEWER: Read categories to respondent.

1 **Less than 15 minutes**
2 **15 to less than 30 minutes**
3 **30 to less than 60 minutes**
4 **60 minutes or more**
DK, RF

Note: Coverage: Respondents who do not live in an apartment, have a lawn and watered it last summer.

WA_Q18 **At what time of the day was your lawn usually watered? Was it...?**

INTERVIEWER: Read categories to respondent.

1 **Early in the morning**
2 **During the day**
3 **In the evening or just before dusk**
4 **At various times - no usual routine**
DK, RF

Note: Coverage: Respondents who do not live in an apartment, have a lawn and watered it last summer.

WA_Q19 **How was your lawn usually watered? Was it...?**

INTERVIEWER: Read categories to respondent. Mark all that apply.

1 **By hand using a watering can or a hose (include soaker hoses)**
2 **With a sprinkler or sprinkler system**
3 Other
DK, RF

Note: Coverage: Respondents who do not live in an apartment, have a lawn and watered it last summer.

WA_C20 If WA_Q19 = 2 (use of sprinkler system), go to WA_Q20.
Otherwise, go to WA_Q21.

WA_Q20 **Was the sprinkler or sprinkler system connected to a timer?**

1 Yes
2 No
DK, RF

Note: Coverage: Respondents who do not live in an apartment, have a lawn and watered it last summer with a sprinkler system.

WA_Q21 **Do you have a garden or areas with trees, shrubs, flowers or vegetables outside?**

1 Yes
2 No (Go to WA_Q26)
DK, RF (Go to WA_Q26)

Note: Coverage: Respondents who do not live in an apartment.

WA_Q22 **Last summer, did ^DT_WAFILL2 water these areas?**

1 Yes
2 No (Go to WA_Q26)
3 Not applicable (no garden last summer) (Go to WA_Q26)
DK, RF (Go to WA_Q26)

Note: Coverage: Respondents who do not live in an apartment and have a garden.

WA_Q23 **Last summer, during an average week, how many times were these areas watered? Was it...?**

INTERVIEWER: Read categories to respondent.

1 **Less than once a week**
2 **Once a week**
3 **Twice a week**
4 **Three times or more a week**
DK, RF

Note: Coverage: Respondents who do not live in an apartment, have a garden and watered it last summer.

WA_Q24 **How were these areas usually watered? Was it...?**

INTERVIEWER: Read categories to respondent. Mark all that apply.

1 **By hand using a watering can or a hose (include soaker hoses)**
2 **With a sprinkler or sprinkler system**
3 Other
DK, RF

Note: Coverage: Respondents who do not live in an apartment, have a garden and watered it last summer.

WA_C25 If WA_Q24 = 2 (use of sprinkler system), go to WA_Q25.
Otherwise, go to WA_Q26.

WA_Q25 **Was the sprinkler or sprinkler system connected to a timer?**

1 Yes
2 No
DK, RF

Note: Coverage: Respondents who do not live in an apartment, have a garden and watered it last summer with a sprinkler system.

WA_Q26 **Do you have a barrel or cistern to collect rain water?**

1 Yes
2 No
DK, RF

Note: Coverage: Respondents who do not live in an apartment.

WA_END End of section

Fertilizer and Pesticide Use (FP)

FP_BEG Beginning of section

Content block

External variables required:

WA_Q14: presence of lawn or area with grass, from Water block.
WA_Q21: presence of garden or area with trees, from Water block.

FP_C01 If WA_Q14 = 1 or WA_Q21 = 1 (lawn or garden), go to FP_D01.
Otherwise, go to FP_END.

FP_D01 If WA_Q14 = 1 and WA_Q21 NE 1, DT_LAWNGARD = "lawn".
If WA_Q14 NE 1 and WA_Q21 = 1, DT_LAWNGARD = "garden".
Otherwise, DT_LAWNGARD = "lawn or garden".

FP_R01 **The following questions are about fertilizer and pesticide use.**

INTERVIEWER: Press <1> to continue.

FP_Q01 **In the past 12 months, were any chemical fertilizers applied to your ^DT_LAWNGARD?**

1 Yes
2 No
DK, RF

Note: Coverage: Respondents who do not live in an apartment and have a lawn or garden.

FP_Q02 **In the past 12 months, were any natural or organic fertilizers applied to your ^DT_LAWNGARD?**

1 Yes
2 No
DK, RF

Note: Coverage: Respondents who do not live in an apartment and have a lawn or garden.

FP_C03 If FP_Q01 = 1 or FP_Q02 = 1, go to FP_Q03.
Otherwise, go to FP_Q04.

FP_Q03 **Who applied the fertilizers to your ^DT_LAWNGARD in the past 12 months? Was it...?**

INTERVIEWER: Read categories to respondent. Mark all that apply.

1 **Someone in your household**
2 **A lawn care or maintenance company**
3 **Someone else (for example friend, neighbour, family)**
DK, RF

Note: Coverage: Respondents who do not live in an apartment, have a lawn or garden and applied fertilizers in the past 12 months.

FP_Q04 **In the past 12 months, were any chemical pesticides such as weed killers (herbicides), bug killers (insecticides), or fungicides applied to your ^DT_LAWNGARD? (Please include fertilizer and herbicide mixes such as 'Weed and Feed'.)**

1 Yes
2 No (Go to FP_Q06)
DK, RF (Go to FP_Q06)

Note: Coverage: Respondents who do not live in an apartment and have a lawn or garden.

FP_Q05 **What types of chemical pesticides were applied to your ^DT_LAWNGARD? Was it...?**

INTERVIEWER: Read categories to respondent. Mark all that apply.

1 **Weed killer (Herbicide)**
2 **Bug killer (Insecticide)**
3 **Fungicide**
DK, RF

Note: Coverage: Respondents who do not live in an apartment, have a lawn or garden and applied chemical pesticides in the past 12 months.

FP_Q06 **In the past 12 months, were any natural or organic pesticides applied to your ^DT_LAWNGARD?**

1 Yes
2 No
DK, RF

Note: Coverage: Respondents who do not live in an apartment and have a lawn or garden.

FP_C07 If FP_Q04 = 1 or FP_Q06 = 1, go to FP_Q07.
Otherwise, go to FP_END.

FP_Q07 **Were the pesticide products applied to your ^DT_LAWNGARD...?**

INTERVIEWER: Read categories to respondent. Mark all that apply.

1 **As part of a regular maintenance schedule (include seasonal application)**
2 **When a specific problem arose**
3 Other
DK, RF

Note: Coverage: Respondents who do not live in an apartment, have a lawn or garden and applied pesticides in the past 12 months.

FP_Q08 **Who applied the pesticides to your ^DT_LAWNGARD in the past 12 months? Was it...?**

INTERVIEWER: Read categories to respondent. Mark all that apply.

1 **Someone in your household**
2 **A lawn care or maintenance company**
3 **Someone else (for example, friend, neighbour, family)**
DK, RF

Note: Coverage: Respondents who do not live in an apartment, have a lawn or garden and applied pesticides in the past 12 months.

FP_END End of section

Recreational vehicles/Outdoor equipment (GP)

GP_BEG Beginning of section

Content block

External variables required:

HHLDNUM: number of members in household, from Demographics block.
DWELCODE: dwelling type, from Entry block.
WA_Q14: presence of lawn or area with grass, from Water block.

GP_R01 **The next set of questions are about recreational vehicles and lawn care**

INTERVIEWER: Press <1> to continue.

GP_D01 If HHLDNUM = 1, DT_GPFILL1 = "Have you".
Otherwise, DT_GPFILL1 = "Has anyone in your household".

GP_Q01 **^DT_GPFILL1 owned any of the following recreational vehicles in the last 12 months?**

INTERVIEWER: Read categories to respondent. Mark all that apply.

1 **All-terrain vehicle (ATV)**
2 **Snowmobile**
3 **Dirt bike or motocross motorcycle**
4 **Personal watercraft (for example a Sea-Doo or Jet Ski)**
5 **Motorboat (with an inboard or outboard motor)**
6 Household does not own any recreational vehicles (Go to GP_C02A)
DK, RF (Go to GP_C02A)

Note: Coverage: All respondents.

GP_E01 You cannot select "Household does not own any recreational vehicles" and another category. Please return and correct.

Note: Trigger hard edit if GP_Q01 = 6 and any other category.

GP_C02A If DWELCODE = 5 or 6 (Low rise or high rise apt.), go to GP_END.
Otherwise, go to GP_C02B.

GP_C02B If WA_Q14 = 2 (No lawn), DK, RF, go to GP_Q08.
Otherwise, go to GP_D02.

GP_D02 If HHLDNUM = 1, DT_GPFILL2 = "you".
Otherwise, DT_GPFILL2 = "anyone in your household".

GP_Q02 **In the past 12 months, did ^DT_GPFILL2:**

... use a lawnmower?

1 Yes
2 No (Go to GP_Q04)
DK, RF (Go to GP_Q04)

Note: Coverage: Respondents who do not live in an apartment and have a lawn.

GP_Q03 **What type of engine did it have?**

INTERVIEWER: Read categories to respondent. Mark all that apply.

1 **Gas**
2 **Electric**
3 **Manual (push reel)**
DK, RF

Note: Coverage: Respondents who do not live in an apartment, have a lawn and used a lawnmower in the past 12 months.

GP_Q04 **(In the past 12 months,) did ^DT_GPFILL2 use:**

... a grass trimmer?

1 Yes
2 No (Go to GP_Q06)
DK, RF (Go to GP_Q06)

Note: Coverage: Respondents who do not live in an apartment and have a lawn.

GP_Q05 **What type of engine did it have?**

INTERVIEWER: Read categories to respondent. Mark all that apply.

1 **Gas**
2 **Electric**
DK, RF

Note: Coverage: Respondents who do not live in an apartment, have a lawn and used a grass trimmer in the past 12 months.

GP_Q06 **(In the past 12 months, did ^DT_GPFILL2 use:)**

... a leaf blower?

1 Yes
2 No (Go to GP_Q08)
DK, RF (Go to GP_Q08)

Note: Coverage: Respondents who do not live in an apartment and have a lawn.

GP_Q07 **What type of engine did it have?**

INTERVIEWER: Read categories to respondent. Mark all that apply.

1 **Gas**
2 **Electric**
DK, RF

Note: Coverage: Respondents who do not live in an apartment, have a lawn and used a leaf blower in the past 12 months.

GP_Q08 **In the past 12 months, did ^DT_GPFILL2 use:**

... a chain saw?

1 Yes
2 No (Go to GP_Q10)
DK, RF (Go to GP_Q10)

Note: Coverage: Respondents who do not live in an apartment.

GP_Q09 **What type of engine did it have?**

INTERVIEWER: Read categories to respondent. Mark all that apply.

1 **Gas**
2 **Electric**
DK, RF

Note: Coverage: Respondents who do not live in an apartment and used a chain saw in the past 12 months.

GP_Q10 **(In the past 12 months, did ^DT_GPFILL2 use:)**

... a snow blower?

1 Yes
2 No (Go to GP_END)
DK, RF (Go to GP_END)

Note: Coverage: Respondents who do not live in an apartment.

GP_Q11 **What type of engine did it have?**

INTERVIEWER: Read categories to respondent. Mark all that apply.

1 **Gas**
2 **Electric**
DK, RF

Note: Coverage: Respondents who do not live in an apartment and used a snow blower in the past 12 months.

GP_END End of section

Composting (CP)

CP_BEG Beginning of section

Content block

External variables required:

WA_Q14: presence of lawn or area with grass, from Water block.
WA_Q21: presence of garden or area with trees, from Water block.
HHLDNUM: number of members in household, from Demographics block.

CP_R01 **The next questions are about composting.**

INTERVIEWER: Press <1> to continue.

CP_D01 If HHLDNUM = 1, DT_CPFILL1 = "you".
Otherwise, DT_CPFILL1 = "your household".

CP_Q01 **During the past 12 months, did ^DT_CPFILL1 separate any kitchen waste from the rest of your garbage and put it out for compost collection, take it to a depot or put it in a compost bin or pile?**

1 Yes
2 No (Go to CP_C05)
DK, RF (Go to CP_C05)

Note: Coverage: All respondents.

CP_Q02 **How was your kitchen waste composted? Was it...?**

INTERVIEWER: Read categories to respondent. Mark all that apply.

1 **Collected by your city or private company**
2 **Taken to a depot**
3 **Put in a compost bin, pile or garden**
4 Other
DK, RF

Note: Coverage: Respondents who compost any kitchen waste.

CP_Q03 **How many months a year do you compost your kitchen waste?**

INTERVIEWER: If less than 1 month, enter 1.

|_|_|
(MIN: 1) (MAX: 12)
DK, RF

Note: Coverage: Respondents who compost any kitchen waste.

CP_Q04 **Thinking of a standard plastic grocery bag as a unit of measure, on average, how many bags do you fill with kitchen waste for composting each week?**

INTERVIEWER: Obtain respondent's best estimate (Number of bags.) If less than 1 bag, enter 1.

|_|_|
(MIN: 1) (MAX: 95)
DK, RF

Note: Coverage: Respondents who compost any kitchen waste.

CP_C05 If WA_Q14 = 1 or WA_Q21 = 1, go to CP_Q05.
Otherwise, go to CP_C07.

CP_Q05 **In the past 12 months, did ^DT_CPFILL1 separate any yard waste such as leaves, plants, or grass clippings from the rest of your garbage and put it out for collection, take it to a depot or put it in a compost bin or pile?**

1 Yes
2 No (Go to CP_C07)
DK, RF (Go to CP_C07)

Note: Coverage: Respondents who do not live in an apartment and have a lawn or a garden.

CP_Q06 **How was your yard waste composted? Was it...?**

INTERVIEWER: Read categories to respondent. Mark all that apply.

1 **Collected by your city or private company**
2 **Taken to a depot**
3 **Put in a compost bin, pile or garden**
4 Other
DK, RF

Note: Coverage: Respondents who do not live in an apartment, have a lawn or garden and separated or collected any yard waste in the past 12 months.

CP_C07 If CP_Q01 = 2 or CP_Q05 = 2, go to CP_D07A.
Otherwise, go to CP_END.

CP_D07A If CP_Q01 = 2 and CP_Q05 = 1, DT_KITCHYARD = "kitchen".
If CP_Q01 = 1 and CP_Q05 = 2, DT_KITCHYARD = "yard".
If CP_Q01= 2, DK, RF and CP_Q05 = 2, DK, RF, DT_KITCHYARD = "kitchen and yard".
Otherwise, DT_KITCHYARD = "kitchen".

CP_D07B If HHLDNUM = 1, DT_CPFILL2 = "Do you".
Otherwise, DT_CPFILL2 = "Does your household".

CP_D07C (Not applicable)

CP_Q07 **^DT_CPFILL2 have access to a municipal composting or organics collection program for ^DT_KITCHYARD waste?**

1 Yes
2 No (Go to CP_END)
DK, RF (Go to CP_END)

Note: Coverage: Respondents who do not compost kitchen and/or yard waste.

CP_Q08 **What are some of the reasons that prevented ^DT_CPFILL1 from composting ^DT_KITCHYARD waste? Was it...?**

INTERVIEWER: Read categories to respondent. Mark all that apply.

01 **Too time consuming (e.g., to separate waste)**
02 **Not important**
03 **Because it takes up too much space**
04 **Because of a physical limitation or disability**
05 **You did not have a compost bin**
06 **Because you were worried that wildlife or vermin or insects may be attracted**
07 **Because of smell or hygiene reasons**
08 **Because you were unsure of what materials can be composted**
09 **Materials are not collected often enough**
10 Other
DK, RF

Note: Coverage: Respondents who do not compost kitchen and/or yard waste and have access to a municipal composting program.

CP_END End of section

Indoor environment (IE)

IE_BEG Beginning of section

Content block

External variables required:

HHLDNUM: number of members in household, from Demographics block.
DWELCODE: dwelling type, from Entry block.
EH_Q01: dwelling main heating system, from Energy Use block.
EH_Q05: presence of air conditioner in dwelling, from Energy block.

IE_R01 **The following questions are about air quality.**

INTERVIEWER: Press <1> to continue.

IE_Q01 **During the past 12 months, which of the following products were used to clean your windows?**

INTERVIEWER: Read categories to respondent. Mark all that apply.

1 **Commercial chemical cleaner (for example Windex, Mr. Clean, Bon Ami)**
2 **Other cleaners (for example vinegar or "green" or biodegradable cleaners)**
3 Did not use cleaners, did not clean or did not have windows during past 12 months
DK, RF

Note: Coverage: All respondents.

IE_E01 You cannot select "Did not use cleaners, did not clean or did not have windows during the past 12 months" and another category. Please return and correct.

Note: Trigger hard edit if IE_Q01 = 3 and any other category.

IE_Q02 **In the past 12 months, were any of the following chemical products used within your dwelling?**

INTERVIEWER: Read categories to respondent. Mark all that apply.

1 **Oven cleaners and degreasers**
2 **Solvents (for example paint thinner)**
3 **Nail polish remover or makeup remover**
4 **Indoor pesticides or insecticides (for example Raid, Ant-B-Gone)**
5 **Air fresheners (for example potpourri, essential oil dispensers or incense)**
6 **Perfumes or aftershaves**
7 None of the above
DK, RF

Note: Coverage: All respondents.

IE_E02 You cannot select "None of the above" and another category. Please return and correct.

Note: Trigger hard edit if IE_Q02 = 7 and any other category.

IE_Q03 **In the past 12 months, have you noticed any condensation on the inside surfaces of your windows other than moisture from showers or cooking?**

1 Yes
2 No
3 Dwelling does not have windows
DK, RF

Note: Coverage: All respondents.

IE_Q04 **In the past 12 months, have you noticed any mould or mildew in your dwelling?**

1 Yes
2 No
DK, RF

Note: Coverage: All respondents.

IE_C05 If EH_Q01 = 1 (forced air furnace), go to IE_Q05.
Otherwise, go to IE_Q06.

IE_Q05 **During the past 12 months, how often has the filter in your furnace been changed or cleaned?**

INTERVIEWER: Read categories to respondent.

1 **Every 3 months or more frequently**
2 **Every 6 months**
3 **Once in the past year**
4 **Did not change or clean filter in the past year**
DK, RF

Note: Coverage: Respondents who have a forced air furnace.

IE_Q06 **During the past 12 months, how would you rate the quality of the air inside your dwelling? Is it...?**

INTERVIEWER: Read categories to respondent.

1 **Excellent**
2 **Very good**
3 **Good**
4 **Fair**
5 **Poor**
DK, RF

Note: Coverage: All respondents.

IE_D07 If HHLDNUM = 1, DT_IEFILL1 = "did you".
Otherwise, DT_IEFILL1 = "did anyone in your household".

IE_Q07 **In the past 12 months, ^DT_IEFILL1 have health problems that may have been caused by the quality of the air in your dwelling?**

1 Yes
2 No
DK, RF

Note: Coverage: All respondents.

IE_D08 If HHLDNUM = 1, DT_IEFILL2 = "do you".
Otherwise, DT_IEFILL2 = "does your household".

IE_Q08 **What measures ^DT_IEFILL2 take to improve the quality of the air in your dwelling? Do you...?**

INTERVIEWER: Read categories to respondent. Mark all that apply.

01 **Open windows more often to increase air circulation**
02 **Turn on a floor or ceiling fan to increase air circulation**
03 **Use an air conditioner more frequently**
04 **Use a dehumidifier**
05 **Use a humidifier**
06 **Use an air cleaning system (excluding ionizing systems)**
07 **Use higher quality filters in the furnace**
08 **Use the furnace fan or a heat recovery ventilation (HRV) system to increase air circulation**
09 **Use air fresheners (for example potpourri, essential oil dispensers or incense)**
10 Other - Specify (Go to IE_S08)
11 None of the above
DK, RF

Go to IE_C09

Note: Coverage: All respondents.

Note: Display category 3 if EH_Q05 = 1. Display category 7 if EH_Q01 = 1.

IE_E08A You cannot enter a response that is not included in the displayed categories. Please return and correct.

Note: Trigger hard edit if (IE_Q08 = 3 and EH_Q05 NE 1) or if (IE_Q08 = 7 and EH_Q01 NE 1)

IE_E08B You cannot select "None of the above" and another category. Please return and correct.

Note: Trigger hard edit if IE_Q08 = 11 and any other category.

IE_S08 What measures ^DT_IEFILL2 take to improve the quality of the air in your dwelling?

INTERVIEWER: Specify.

_____

(80 spaces)
(DK, RF are not allowed)

IE_C09 If IE_Q08 = 1, go to IE_Q09.
Otherwise, go to IE_Q11.

IE_Q09 **During the winter season, how often do you open a window to allow fresh air into your dwelling?**

INTERVIEWER: Read categories to respondent.

1 **Every day**
2 **At least once a week**
3 **A few times during the season**
4 **Never**
DK, RF

Note: Coverage: Respondents who open windows more often to increase air circulation in their dwelling.

IE_Q10 **During the summer season, (how often do you open a window to allow fresh air into your dwelling?)**

INTERVIEWER: Read categories to respondent.

1 **Every day**
2 **At least once a week**
3 **A few times during the season**
4 **Never**
DK, RF

Note: Coverage: Respondents who open windows more often to increase air circulation in their dwelling.

IE_Q11 **Have you ever heard of radon?**

1 Yes (Go to IE_Q12)
2 No
DK, RF

Note: Coverage: All respondents.

IE_R11 INTERVIEWER: If necessary, read: (**Radon is a naturally occurring radioactive gas that is colourless, odourless and tasteless and is found in soil. When radon enters an enclosed space, such as a basement, it can accumulate to unsafe levels and may increase the chances of someone developing lung cancer.**)

Press <1> to continue.

Go to IE_END

IE_Q12 **How would you describe radon if you were asked to explain what it is?**

INTERVIEWER: Please type in respondent answer in the space provided below.

_____
(250 spaces)
DK, RF

Note: Coverage: Respondents who have knowledge of radon.

IE_Q13 **Do you consider radon to be a health hazard?**

1 Yes
2 No
DK, RF

Note: Coverage: Respondents who have knowledge of radon.

IE_C14 If DWELCODE = 5 (Low rise apt.) or 6 (High rise apt.), go to IE_END.
Otherwise, go to IE_Q14.

IE_Q14 **Has your dwelling ever been tested for radon?**

1 Yes
2 No (Go to IE_END)
DK, RF (Go to IE_END)

Note: Coverage: Respondents who do not live in an apartment and have knowledge of radon.

IE_Q15 **Was it tested in the last 10 years?**

1 Yes
2 No
DK, RF

Note: Coverage: Respondents who do not live in an apartment, have knowledge of radon and whose dwelling has been testing for radon.

IE_END End of section

Air quality (AQ)

AQ_BEG Beginning of section

Content block

External variables required:

HHLDNUM: number of members in household, from Demographics block.
DWELCODE: dwelling type, from Entry block.
EH_Q05: presence of an air conditioner in the dwelling, from Energy Use block
GP_Q03: type of engine of lawnmower, from GP block
GP_Q05: type of engine of grass trimmer, from GP block
GP_Q07: type of engine of leaf blower, from GP block
GP_Q09: type of engine of chain saw, from GP block

AQ_D01 If HHLDNUM = 1, DT_AQFILL1 = "were you".
Otherwise, DT_AQFILL1 = "was anyone in your household".

AQ_Q01 **In the past 12 months, ^DT_AQFILL1 aware of any advisories issued in your area for smog, smoke or poor air quality?**

1 Yes
2 No (Go to AQ_C04)
DK, RF (Go to AQ_C04)

Note: Coverage: All respondents.

AQ_D02 If HHLDNUM = 1, DT_AQFILL2 = "Did you change any of your".
Otherwise, DT_AQFILL2 = "Did anyone in your household change any of their".

AQ_Q02 **^DT_AQFILL2 behaviours or activities because of these air quality advisories?**

1 Yes
2 No (Go to AQ_C04)
DK, RF (Go to AQ_C04)

Note: Coverage: Respondents who were aware of advisories such as smog, smoke or poor air quality issued in their area.

AQ_Q03 **What behaviours or activities were changed?**

INTERVIEWER: Read categories to respondent. Mark all that apply.

1 **Reduced outdoor exercise**
2 **Used public transit or carpooled**
3 **Turned the air conditioning on or lowered the temperature**
4 **Stayed inside**
5 **Did not use gas powered outdoor equipment**
6 **Used car (for example as an alternative to public transit or running/walking/cycling)**
7 Other - Specify (Go to AQ_S03)
DK, RF

Go to AQ_C04

Note: Coverage: Respondents who were aware of advisories such as smog, smoke or poor air quality issued in their area and made some form of change to their behaviour.

Note: Display category 3 if EH_Q05 = 1. Display category 5 if GP_Q03 = 1 or if GP_Q05 = 1 or if GP_Q07 = 1 or if GP_Q09 = 1.

AQ_E03 You cannot enter a response that is not included in the displayed categories. Please return and correct.

Note: Trigger hard edit if (AQ_Q03 = 3 and EH_Q05 NE 1) or if (AQ_Q03 = 5 and (GP_Q03/Q05/Q07/Q09) NE 1)

AQ_S03 What behaviours or activities were changed?

INTERVIEWER: Specify.

_____
(80 spaces)
(DK, RF are not allowed)

AQ_C04 If DWELCODE = 5 (Low rise apt.) or 6 (High rise apt.), go to AQ_END. Otherwise, go to AQ_D04.

AQ_D04 If HHLDNUM = 1, DT_AQFILL3 = "did you". Otherwise, DT_AQFILL3 = "did anyone in your household".

AQ_Q04 **In the past 12 months, ^DT_AQFILL3 burn yard waste on your property?**

INTERVIEWER: Please include leaves, branches, grass clippings, etc.

1 Yes
2 No
DK, RF

Note: Coverage: Respondents who do not live in an apartment.

AQ_Q05 **(In the past 12 months,) ^DT_AQFILL3 burn household waste on your property?**

INTERVIEWER: Please include all household items that can be burned, excluding only yard waste and materials generated from the operation of a business.

1 Yes
2 No
DK, RF

Note: Coverage: Respondents who do not live in an apartment.

AQ_END End of section

Hazardous Waste (HW)

HW_BEG Beginning of section

Content block

External variables required:

HHLDNUM: number of members in household, from Demographics block.
EH_Q16: types of energy saving lights, from Energy Use block.

HW_R01 **The next set of questions are about the disposal of hazardous products.**

INTERVIEWER: Press <1> to continue.

HW_D01 If HHLDNUM = 1, DT_HWFILL1 = "you".
Otherwise, DT_HWFILL1 = "anyone in your household".

HW_Q01 **In the past 12 months, did ^DT_HWFILL1 have:**

... any leftover or expired medication to dispose of?

1 Yes
2 No (Go to HW_Q03)
DK, RF (Go to HW_Q03)

Note: Coverage: All respondents.

HW_Q02 **What did you do with them? Did you...?**

INTERVIEWER: Read categories to respondent. Mark all that apply.

1 **Put them in the garbage**
2 **Take or send them to a depot or drop off center**
3 **Return them to a supplier/retailer**
4 **Pour them down the drain, sewer, ground, toilet or sink**
5 **Still have them**
6 Other
DK, RF

Note: Coverage: Respondents who had leftover or expired medication to dispose of in the past 12 months.

HW_Q03 **(In the past 12 months,) did ^DT_HWFILL1 have:**

... any leftover paint or solvents (to dispose of?)

1 Yes
2 No (Go to HW_Q05)
DK, RF (Go to HW_Q05)

Note: Coverage: All respondents.

HW_Q04 **(What did you do with them?) Did you...?**

INTERVIEWER: Read categories to respondent. Mark all that apply.

1 **Put them in the garbage**
2 **Take or send them to a depot or drop off center**
3 **Return them to a supplier/retailer**
4 **Still have them**
5 Other
DK, RF

Note: Coverage: Respondents who had leftover paint or solvents to dispose of in the past 12 months.

HW_Q05 **(In the past 12 months,) did ^DT_HWFILL1 have:**

... any unwanted engine oil or anti-freeze (to dispose of?)

1 Yes
2 No (Go to HW_Q07)
DK, RF (Go to HW_Q07)

Note: Coverage: All respondents.

HW_Q06 **(What did you do with them?) Did you...?**

INTERVIEWER: Read categories to respondent. Mark all that apply.

1 **Put them in the garbage**
2 **Take or send them to a depot or drop off center**
3 **Return them to a supplier/retailer**
4 **Still have them**
5 Other
DK, RF

Note: Coverage: Respondents who had unwanted oils or antifreeze to dispose of in the past 12 months.

HW_Q07 **(In the past 12 months,) did ^DT_HWFILL1 have:**

... any dead or unwanted car batteries (to dispose of?)

INTERVIEWER: Include batteries used for recreational vehicles such as motorboats, all-terrain vehicles and snowmobiles.

1 Yes
2 No (Go to HW_Q09)
DK, RF (Go to HW_Q09)

Note: Coverage: All respondents.

HW_Q08 **(What did you do with them?) Did you...?**

INTERVIEWER: Read categories to respondent. Mark all that apply.

1 **Put them in the garbage**
2 **Take or send them to a depot or drop off center**
3 **Return them to a supplier/retailer**
4 **Still have them**
5 Other
DK, RF

Note: Coverage: Respondents who had unwanted or dead car batteries to dispose of in the past 12 months.

HW_Q09 **(In the past 12 months,) did ^DT_HWFILL1 have:**

... any dead or unwanted batteries (to dispose of?)

INTERVIEWER: Include general purpose batteries such as AA batteries, cellphone, PDA, laptop, computer, hearing aid and watch batteries.

Exclude car, motorcycle, boat (marine) and tractor batteries.

1 Yes
2 No (Go to HW_Q11)
DK, RF (Go to HW_Q11)

Note: Coverage: All respondents.

HW_Q10 **(What did you do with them?) Did you...?**

INTERVIEWER: Read categories to respondent. Mark all that apply.

1 **Put them in the garbage**
2 **Take or send them to a depot or drop off center**
3 **Return them to a supplier/retailer**
4 **Still have them**
5 Other
DK, RF

Note: Coverage: Respondents who had dead or unwanted general purpose batteries to dispose of in the past 12 months.

HW_Q11 **In the past 12 months, did ^DT_HWFILL1 have:**

... any unwanted electronic devices to dispose of?

INTERVIEWER: Include televisions, radios, computers, monitors, printers, keyboards, scanners, hard drives, external drives, fax machines, telephones, cell phones and pagers.

Exclude: software, floppy discs, and CD-ROMs.

1 Yes
2 No (Go to HW_C13)
DK, RF (Go to HW_C13)

Note: Coverage: All respondents.

HW_Q12 **What did you do with them? Did you...?**

INTERVIEWER: Read categories to respondent. Mark all that apply.

1 **Put them in the garbage**
2 **Take or send them to a depot or drop off center**
3 **Return them to a supplier/retailer**
4 **Donate or give them away**
5 **Still have them**
6 Other
DK, RF

Note: Coverage: Respondents who had computer or communications devices to dispose of in the past 12 months.

HW_C13 If EH_Q16 = 1 (Compact fluorescent light bulbs), go to HW_Q13.
Otherwise, go to HW_END.

HW_Q13 **(In the past 12 months,) did ^DT_HWFILL1 have:**

... any dead or unwanted compact fluorescent light bulbs (to dispose of?)

1 Yes
2 No (Go to HW_END)
DK, RF (Go to HW_END)

Note: Coverage: Repondents who have compact fluorescent light bulbs.

HW_Q14 **(What did you do with them?) Did you...?**

INTERVIEWER: Read categories to respondent. Mark all that apply.

1 **Put them in the garbage**
2 **Take or send them to a depot or drop off center**
3 **Donate or give them away**
4 **Still have them**
5 **Other**
DK, RF

Note: Coverage: Respondents who had dead or unwanted compact fluorescent light bulbs to dispose of in the past 12 months.

HW_END End of section

Purchasing decisions (PD)

PD_BEG Beginning of section

Content block

External variables required:

HHLDNUM: number of members in household, from Demographics block.

PD_R01 **The next few questions are about purchasing decisions.**

INTERVIEWER: Press <1> to continue.

PD_D01 If HHLDNUM = 1, DT_PDFILL1 = "Did you".
Otherwise, DT_PDFILL1 = "Did your household".

PD_Q01 **^DT_PDFILL1 purchase any major appliances in the last 5 years? This includes stoves, refrigerators, dishwashers, freezers, washers or dryers.**

1 Yes
2 No (Go to PD_Q03)
DK, RF (Go to PD_Q03)

Note: Coverage: All respondents.

PD_D02 If HHLDNUM = 1, DT_PDFILL2 = "you".
Otherwise, DT_PDFILL2 = "your household".

PD_Q02 **Which two of the following factors were the most important the last time ^DT_PDFILL2 purchased a major appliance? Was it...?**

INTERVIEWER: Read categories to respondent. Limit responses to two categories.

1 **Energy or water consumption**
2 **Reliability**
3 **Price**
4 **Features**
5 Other
DK, RF

Note: Coverage: Respondents who purchased major appliances in the last five years.

PD_D03 (Not applicable)

PD_Q03 **In the past 12 months, how often did ^DT_PDFILL2:**

... purchase organic foods while shopping for groceries?

INTERVIEWER: Read categories to respondent.

1 **Always**
2 **Often**
3 **Sometimes**
4 **Rarely**
5 **Never**
DK, RF

Note: Coverage: All respondents.

PD_Q04 **(In the past 12 months,) how often did ^DT_PDFILL2:**

... purchase environmentally friendly or "green" cleaning products?

INTERVIEWER: Read categories to respondent.

1 **Always**
2 **Often**
3 **Sometimes**
4 **Rarely**
5 **Never**
DK, RF

Note: Coverage: All respondents.

PD_Q05 **(In the past 12 months,) how often did ^DTPDFILL2:**

... use your own bags or containers to carry your groceries?

INTERVIEWER: Read categories to respondent.

1 **Always**
2 **Often**
3 **Sometimes**
4 **Rarely**
5 **Never**
DK, RF

Note: Coverage: All respondents.

PD_END End of section

Income (HD)

HD_BEG Beginning of section

Content block

HD_R01 **The following question deals with income. Household income is needed in order to study the relationship between economic situation and the level of participation in environmental practices by Canadian households.**

INTERVIEWER: Press <1> to continue.

HD_Q01 **What is your best estimate of the total household income received by all household members from all sources, before taxes and deductions, during the past 12 months?**

Income can come from various sources such as from work, investments, pensions or government. Include Employment Insurance, Social Assistance, Child Tax Benefit and other income such as child support, alimony and rental income.

INTERVIEWER: If necessary ask: (**Please provide your best estimate to the nearest $5,000.**)

|_|_|_|_|_|_|_|
(MIN: -999995) (MAX: 9999995)
DK, RF (Go to HD_Q02)
Go to HD_END

Note: Coverage: All respondents.

HD_Q02 **(What is your best estimate of the total household income received by all household members from all sources, before taxes and deductions, during the last 12 months?) Was it...?**

INTERVIEWER: Read categories to respondent.

1 **Less than $20,000 (includes income loss)**
2 **$20,000 to less than $40,000**
3 **$40,000 to less than $60,000**
4 **$60,000 to less than $80,000**
5 **$80,000 to less than $100,000**
6 **$100,000 to less than $150,000**
7 **$150,000 and over**
DK, RF

Note: Coverage: All respondents.

HD_END End of section