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Household Garbage Disposal and Burning

ONTARIO SURVEY

Prepared for
Environment Canada

Prepared by
Environics Research Group



March 2001

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INTRODUCTION

The survey was designed to investigate the garbage disposal habits of Ontarians living in rural areas and small villages, towns and cities, with particular attention to those who report burning garbage. The survey also focused on possible strategies for reducing the practice of burning garbage.

The survey was conducted by telephone between February 28 and March 7, 2001, among 1,516 adult Ontario residents living in detached single family houses. Residents of Barrie, the Greater Toronto Area, Guelph, Hamilton, Kingston, Kitchener-Waterloo, London, Niagara Falls, Ottawa, Peterborough, Sarnia and Windsor were excluded from the survey. The margin of error for the survey is ± 2.5 percentage points, 19 times out of 20. The margins of error for subsamples are larger.

EXECUTIVE SUMMARY

Nine in ten residents report that their home garbage is recycled or picked up by a garbage collection service; five in ten report composting, four in ten report taking their garbage to a landfill site and just over two in ten report burning their garbage. Cottage garbage is most likely to be recycled or taken to a landfill site; just three in ten say their cottage garbage is picked up by a collection service.

Residents of Central Ontario are more likely than others, especially those who live in Northeastern Ontario, to report burning their home garbage. However, residents of Northeastern Ontario are more likely than others to report burning their cottage garbage.

Almost nine in ten residents report paying for their home garbage collection through their municipal taxes, and seven in ten say the same regarding cottage garbage. Four in ten report having to pay a fee to take garbage to a landfill site.

A total of about seven in ten landfill users go to the landfill once a month or less often; fewer than two in ten go on a weekly basis. Just over five in ten say it takes them ten minutes or less to get to the landfill site; just over two in ten have a drive in excess of 15 minutes.

Just over five in ten landfill users report having a recycling depot at the landfill site where they take their garbage from home; three in ten report using the depot on a weekly or bi-weekly basis. Among those who recycle their home garbage, about eight in ten report recycling metal or tin cans, plastic items and paper items such as newspapers and magazines.

Residents of Northeastern Ontario are noticeably less likely than others to report recycling depots at their landfill sites.

Among those who report composting their home garbage, almost all report composting food scraps and eight in ten report composting yard waste.

Residents of Southwestern Ontario are somewhat less likely than others to report composting yard waste.

Wood scraps, paper and cardboard are the most reported types of burnt garbage. Seven in ten separate both non-burnable and recyclable garbage from garbage that is burnt. Four in ten (each) burn their garbage in wood stoves, open pits and burn barrels. Three-quarters burn their home garbage once a week;

one-quarter report more frequent burnings. Five in ten burn one bag or less at a time; fewer than two in ten burn three bags or more at a time. Five in ten burn their garbage loose; five in ten put the garbage to be burnt in a cardboard box or paper bag and two in ten put it in a plastic bag. Four in ten either spread the ashes or put them in the garden. Four in ten say burning garbage is a common practice in their neighbourhood.

Three in ten say they burn their garbage in order to reduce waste or save landfill space and a similar proportion say they do it for the convenience. A total of three in ten report doing it for heat or for kindling. Fewer than one in ten (each) burn their garbage to save expense, or because their local landfill restricts what it will accept.

Among those who burn their own garbage, two in ten say they would stop the practice if they had an affordable, efficient garbage collection service and one in ten say they would stop if the practice were outlawed. One-quarter say there is nothing that would make them stop burning garbage.

Eight in ten residents say the danger of pollution is the main reason people should stop burning their garbage.

The most powerful argument against burning garbage is that referring to the impact of air pollution on the environment in general: 50 percent rate this a "10" on a scale of "1-10." However, all of the arguments included in the survey elicit fairly positive reactions in terms of their perceived effectiveness.

The perceived effectiveness of the arguments regarding fire damage liability and fire safety is lower than average in Central Ontario. The perceived effectiveness of the argument that refers to possible harm to the water supply is greater than average in Northwestern Ontario.

Almost three-quarters of residents think that passing a law against burning garbage would be effective in convincing people to stop burning garbage, but just one-quarter feel it would be very effective.

The perceived effectiveness of this sort of approach is slightly greater than average in Northeastern Ontario.

METHODS OF GARBAGE DISPOSAL

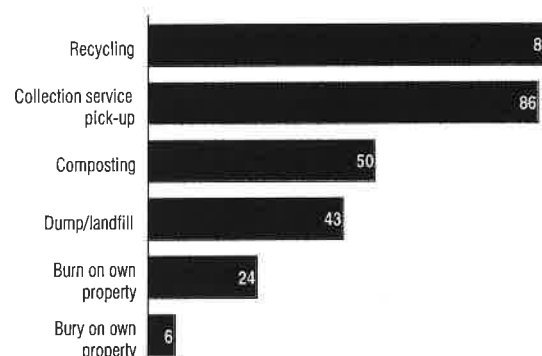
Nine in ten residents report that their home garbage is recycled or picked up by a garbage collection service; five in ten report composting, four in ten report taking their garbage to a landfill site and just over two in ten report burning their garbage. Cottage garbage is most likely to be recycled or taken to a landfill site; just three in ten say their cottage garbage is picked up by a collection service.

When residents are asked to report all the ways in which they dispose of garbage at home, nine in ten residents report using recycling (89%) and a similar proportion report their garbage is picked up by a garbage collection service (86%). About half report composting their garbage (50%) or taking their garbage to a landfill site (43%). Just one-quarter report burning their garbage on their own property (24%) and six percent report burying their garbage.

When residents are asked how they dispose of garbage at their cottage, two-thirds report using recycling (65%) and an equal proportion report taking their garbage to a landfill site (65%). Noticeably smaller proportions report composting their garbage (40%), pick-up by a garbage collection service (33%) or burning their garbage on their own property (27%). Eleven percent say they bring their garbage home with them and two percent report burying their garbage on the cottage property. A similar pattern of response is found when residents are asked about garbage disposal at their camps.

Residents of Central Ontario are more likely than others, especially those who live in Northeastern Ontario, to report burning their home garbage. However, residents of Northeastern Ontario are more likely than others to report burning their cottage garbage.

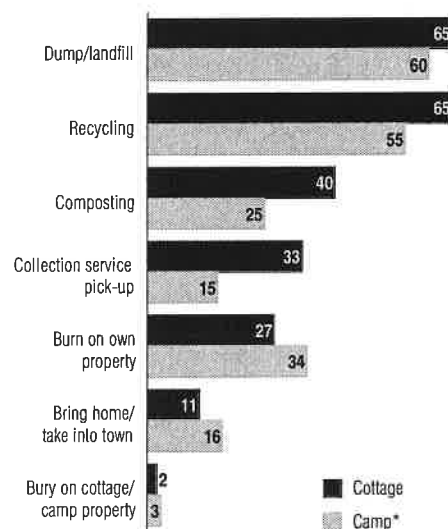
Methods of Garbage Disposal at Home



Q.1

What are all the ways in which you dispose of garbage at your home?

Methods of Garbage Disposal at Cottage or Camp



* Note small sample size

Q.4a

What are all the ways in which you dispose of garbage at your cottage?

Subsample: Respondents who have regular use of a cottage in Ontario

Q.4b

What are all the ways in which you dispose of garbage at the camp?

Subsample: Respondent who have regular use of a camp in Ontario

PAYING FOR GARBAGE DISPOSAL

Almost nine in ten residents report paying for their home garbage collection through their municipal taxes, and seven in ten say the same regarding cottage garbage. Four in ten report having to pay a fee to take garbage to a landfill site.

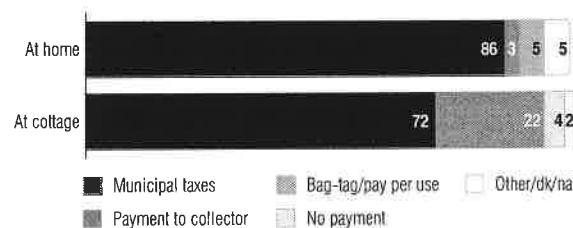
Among those who have their home garbage picked up, 86 percent report paying for this service through their municipal taxes. Very small proportions report some sort of pay-per-bag system (5%) or making direct payments to a collector (3%).

The survey finds a similar pattern of response when residents are asked about paying for garbage pickup at their cottages – 72 percent report paying through their municipal taxes – although cottagers are more likely to report having to make direct payments to a collector (22%).¹

Among residents who take their home garbage to a landfill, half say either that they pay no fee (48%) or that they never exceed the dumping limit (4%). A total of about four in ten report paying some sort of fee, with the largest proportions saying either that they pay a fee per item (12%) or that they pay up to \$50 per year (also 12%).

Among residents who take their cottage garbage to a landfill, six in ten say either that they pay no fee (59%) or that they never exceed the dumping limit (4%). A total of about two in ten report paying some sort of fee, with the largest proportion saying that they pay up to \$50 per year (10%).

Methods of Payment for Garbage Collection

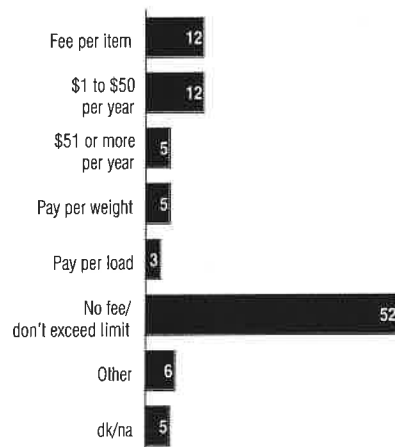


Q.5H

How do you pay for your garbage collection at home?

Subsample: Respondents who have the garbage at their home picked up by a garbage collection service

Dumping Fee



Q.6Ha

Do you pay a fee to dump the garbage from your home?

Subsample: Respondents who bring the garbage at their home to a dump or landfill

¹ The reader is cautioned to note the relatively small size of this subsample (margin of error of 12 points).

USE OF LANDFILL

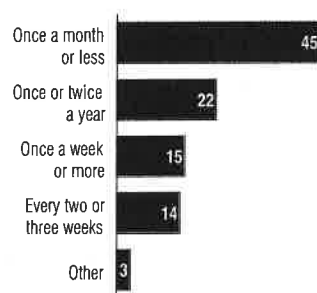
A total of about seven in ten landfill users go to the landfill once a month or less often; fewer than two in ten go on a weekly basis. Just over five in ten say it takes them ten minutes or less to get to the landfill site; just over two in ten have a drive in excess of 15 minutes.

Among residents who take their home garbage to a landfill, almost seven in ten report that they use the site one a month or less (45%), once or twice a year (22%) or less than once a year (1%). Fifteen percent report using the site once a week or more often and 14 percent report using it every two or three weeks.

Just over five in ten landfill users say it takes them either five minutes or less (25%) or between six and ten minutes (28%) to drive to the site. Another 21 percent report an 11 to 15 minute drive and 24 percent report a drive in excess of 15 minutes.

Among residents who take their cottage garbage to a landfill, five in ten report that they use the site one a month or less (47%); 26 percent report using the site once a week or more often and 16 percent report using it every two or three weeks. About five in ten cottage landfill users say it takes them either five minutes or less (21%) or between six and ten minutes (26%) to drive to the site; 13 percent report an 11 to 15 minute drive and 30 percent report a drive in excess of 15 minutes.

Dumping Frequency

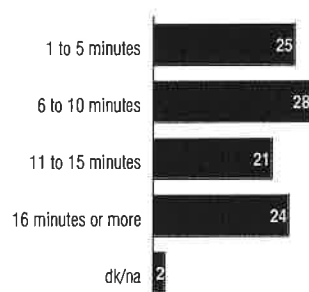


Q.6Hb

How often do you use the dump near your home?

Subsample: Respondents who bring the garbage from their home to the dump or landfill

Time to Drive to Dump



Q.6Hc

How many minutes does it take you to drive to this dump?

Subsample: Respondents who bring the garbage from their home to the dump or landfill

RECYCLING

Just over five in ten landfill users report having a recycling depot at the landfill site where they take their garbage from home; three in ten report using the depot on a weekly or bi-weekly basis. Among those who recycle their home garbage, about eight in ten report recycling metal or tin cans, plastic items and paper items such as newspapers and magazines.

Among residents who take their home garbage to a landfill, 55 percent report the presence of a recycling depot at the landfill site; 34 percent say there is no such depot and ten percent do not know if their local landfill has a recycling depot. Residents of Northeastern Ontario are noticeably less likely than others to report recycling depots at their landfill sites.

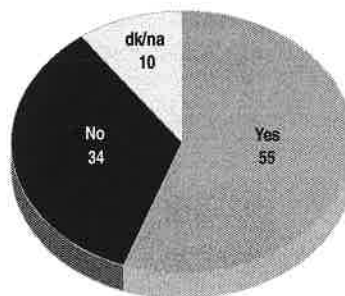
Among residents who take their home garbage to a landfill site that has a recycling depot, a total of five in ten report using the depot once a month or less (32%), once or twice a year (13%) or less than once a year (2%); another 15 percent indicate no use of the recycling depot. Three in ten say they use the depot once a week or more often (16%) or every two or three weeks (16%).

When those who recycle their home garbage are asked to specify the items that they recycle, approximately eight in ten report recycling metal or tin cans (83%),

plastic items (76%) and paper items such as newspapers and magazines (also 76%). Large majorities also report recycling glass items (69%) and cardboard packaging (60%).

Among residents who take their cottage garbage to a landfill, 47 percent report the presence of a recycling depot at the landfill site; 40 percent say there is no such depot and 13 percent do not know if their local landfill has a recycling depot.

Recycling Depot at Dump

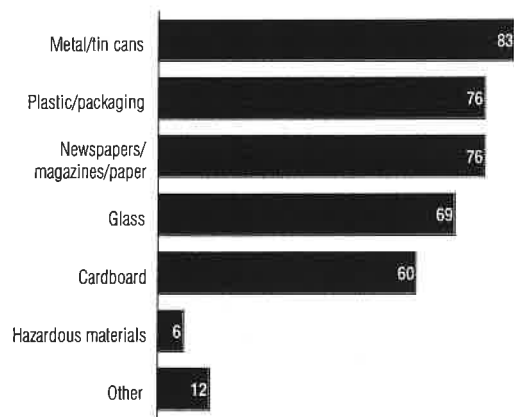


Q.6Hd

Is there a recycling depot at the dump where you take your home garbage?

Subsample: Respondents who bring the garbage from their home to the dump or landfill

Recycling

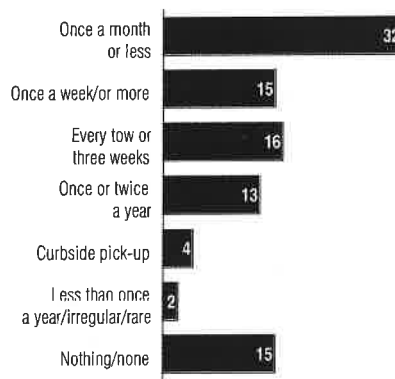


Q.10

You mentioned that you dispose of some of your garbage by recycling. What specifically do you recycle?

Subsample: Respondents who recycle some of their home garbage

Frequency of Use of Recycling Depot



Q.6He

How often do you use this recycling depot?

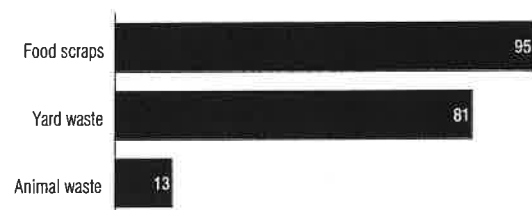
Subsample: Respondents who bring the garbage from their home to the dump or landfill and who have a recycling depot at the dump

COMPOSTING

Among those who report composting their home garbage, almost all report composting food scraps and eight in ten report composting yard waste.

Among residents who report composting their home garbage, 95 percent report composting food scraps and 81 percent report composting yard waste. Thirteen percent report composting animal waste. Residents of Southwestern Ontario are somewhat less likely than others to report composting yard waste.

Composting



Q.11

You mentioned that you dispose of some of your garbage by composting. What specifically do you compost?

Subsample: Respondents who compost some of their home garbage

BURNING GARBAGE

Reported Behaviours

Wood scraps, paper and cardboard are the most reported types of burnt garbage. Seven in ten separate both non-burnable and recyclable garbage from garbage that is burnt. Four in ten (each) burn their garbage in wood stoves, open pits and burn barrels. Three-quarters burn their home garbage once a week; one-quarter report more frequent burnings. Five in ten burn one bag or less at a time; fewer than two in ten burn three bags or more at a time. Five in ten burn their garbage loose; five in ten put the garbage to be burnt in a cardboard box or paper bag and two in ten put it in a plastic bag. Four in ten either spread the ashes or put them in the garden. Four in ten say burning garbage is a common practice in their neighbourhood.

When residents who burn garbage are asked to specify the types of garbage they burn, they are most likely to mention wood scraps (81%), paper (77%) and cardboard (69%). About half mention yard waste (54%) and one-third mention construction debris (35%). About one in ten mention plastic items (13%) and food scraps (9%).

A majority of 69 percent report separating both non-burnable items and recyclable items from garbage that is burnt; another 13 percent report separating out only non-burnable items and seven percent say they separate out only recyclable items. Just ten percent report no such sorting of garbage before burning.

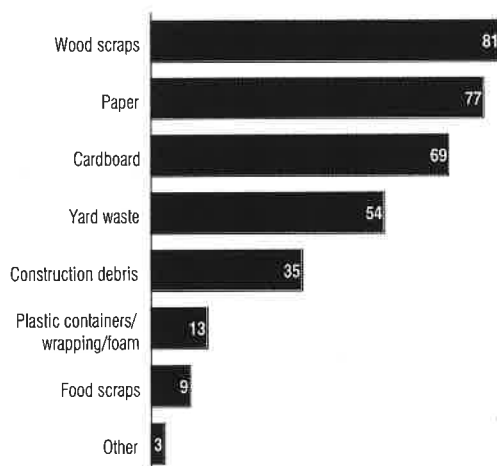
Residents are about equally likely to burn their garbage in wood stoves (41%), open pits (38%) and burn barrels (36%). Fourteen percent report burning garbage in their fireplaces.

A majority of 76 percent report that they burn their home garbage once a week. A total of 22 percent report burning garbage more frequently.

A total of five in ten report that they burn one bag (25%) or less (29%) at a time. Fourteen percent report burning two bags at a time and 17 percent say they burn three bags or more at a time. Eleven percent say there is no typical amount.

When residents who burn garbage are asked how they transport the garbage to the site where it is burnt, 49

Types of Garbage Burned



Q.7a

What type of garbage do you burn?

Subsample: Respondents who burn some of their garbage, either at home or at the cottage or camp

percent say the garbage is carried loose. A total of almost five in ten put the garbage to be burnt either in a cardboard box (31%) or in a paper bag (16%); 21 percent use a plastic bag. Just over one in ten use a wheelbarrow (6%), another kind of container (4%) or some other means of transporting the garbage to the burn site (3%).

A total of four in ten report either putting the ashes in the garden (21%) or spreading them around (19%). Another ten percent compost the ashes and seven percent say they dump them on the property. Two in ten either take the ashes to the dump (12%) or leave them for the garbage pick-up (7%). Fourteen percent leave the ashes at the burn site.

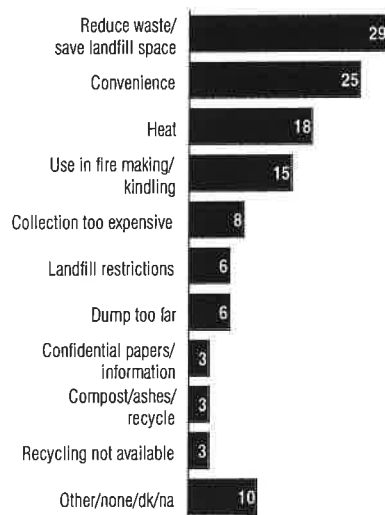
Among residents who burn their home garbage, 43 percent report that burning garbage is a common practice in their neighbourhood; 29 percent say the practice is not common and 28 percent offer no opinion on the question. Ten percent believe that up to one-quarter of their neighbours burn their garbage; 14 percent estimate the proportion at one-quarter to one-half of their neighbours and 19 percent believe that more than half of their neighbours burn garbage.

Reasons for Burning Garbage

Three in ten say they burn their garbage in order to reduce waste or save landfill space and a similar proportion say they do it for the convenience. A total of three in ten report doing it for heat or for kindling. Fewer than one in ten (each) burn their garbage to save expense, or because their local landfill restricts what it will accept.

When residents are asked the main reasons that they burn garbage, 29 percent say they do it to reduce waste or save landfill space; another three percent do it to compost the ashes. A total of three in ten say they burn garbage because it's convenient (25%) or the landfill site is too far away (6%). A total of three in ten report doing it for heat (18%) or for kindling (15%). Fewer than one in ten burn their garbage because garbage collection is too expensive (8%) or because their local landfill restricts what it will accept (6%).

Reasons for Burning Garbage



Q.7j

What are the main reasons that you burn your garbage?

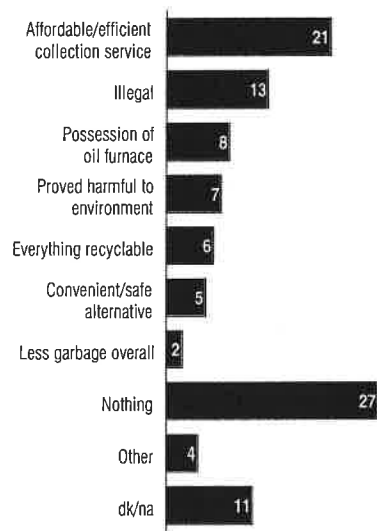
Subsample: Respondents who burn some of their garbage, either at home or at the cottage or camp

Personal Reasons to Stop Burning

Among those who burn their own garbage, two in ten say they would stop the practice if they had an affordable, efficient garbage collection service and one in ten say they would stop if the practice were outlawed. One-quarter say there is nothing that would make them stop burning garbage.

When residents who burn their garbage are asked what would make them stop the practice, 21 percent say they would stop burning garbage if they had an affordable, efficient garbage collection service and another five percent say they would stop if there were an more convenient and safe alternative. Thirteen percent would stop if the practice were outlawed. Seven percent say they would stop if it were proven to them that the practice harmed the environment. However, a significant minority of 27 percent say there is nothing that would make them stop burning garbage.

Personal Reasons to Stop Burning Garbage



Q.7n

What would make you stop burning garbage altogether?

Subsample: Respondents who burn some of their garbage, either at home or at the cottage or camp

Reasons to Stop the Practice of Garbage Burning

Eight in ten residents say the danger of pollution is the main reason people should stop burning their garbage.

When residents are asked to name the main reasons people should stop burning garbage, almost all, 80 percent, mention the pollution, or harm to the environment, caused by the practice. Eight percent overall say there is no reason why people should stop burning garbage; this proportion rises slightly, but just to 14 percent, among those who burn their home garbage.

Impact of Specific Arguments

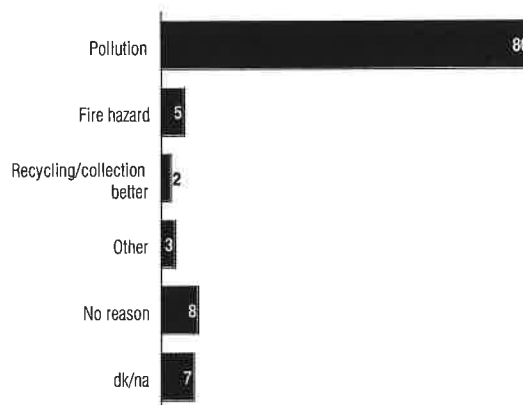
The most powerful argument against burning garbage is that referring to the impact of air pollution on the environment in general: 50 percent rate this a "10" on a scale of "1 to 10." However, all of the arguments included in the survey elicit fairly positive reactions in terms of their perceived effectiveness.

When residents are asked to rate, on a scale of one to ten, the effectiveness of a number of arguments in terms of their persuasiveness in convincing people to stop burning garbage, the highest rating goes to the statement "Burning garbage releases air pollution that can harm the environment" (50% give it a rating of 10, 37% give it a rating of 5-9, and 11% give it a rating of 4 or less).

This statement is seen to be more somewhat more effective than arguments that refer to pollution that might cause serious health problems (44%, 42% and 12% respectively), harm wildlife (40%, 44% and 14% respectively), harm the water supply (37%, 43% and 17% respectively), or harm the food supply (33%, 49% and 16% respectively). The perceived effectiveness of the argument that refers to possible harm to the water supply is greater than average in Northwestern Ontario.

The statement "Burning garbage could make one liable for fire damages" (43%, 40% and 15% respectively) is seen to be more effective than a similar statement that refers to fire safety (34%, 45% and 19% respectively). The perceived effectiveness of both these arguments is lower than average in Central Ontario.

General Reasons to Stop Burning Garbage

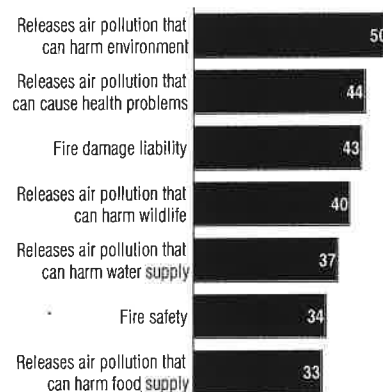


Q.7o

What do you think are the main reasons why people should try to stop burning their garbage?

Arguments Against Burning Garbage

Extremely Convincing – 10 on a Scale of 1-10



Q.8

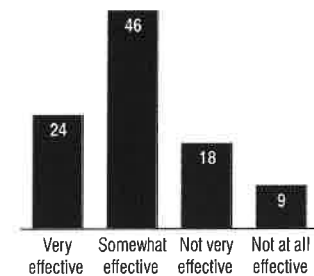
I would now like to read you some statements that might – or might not – convince individuals to stop burning household garbage. Please rate each statement on a scale of 1 to 10, where 1 means the argument is not at all convincing, 5 means it is moderately convincing, and 10 means it is extremely convincing ... Burning garbage releases air pollution that can harm wildlife ... Burning garbage releases air pollution that can harm the environment ... Burning garbage releases air pollution that can cause serious health problems ... Burning garbage releases air pollution that can harm our water supply ... Burning garbage releases air pollution that can harm our food supply ... Burning garbage is an issue of fire safety ... Burning garbage could make one liable for fire damages.

Perceived Effectiveness of By-law

Almost three-quarters of residents think that passing a law against burning garbage would be effective in convincing people to stop burning garbage, but just one-quarter feel it would be very effective.

The survey finds widespread support for a law against burning garbage. However, it should be noted that this support is somewhat less than enthusiastic. A large majority of 70 percent believe that such a law would be effective in convincing people to stop burning garbage, but just 24 feel it would be very effective, and 27 percent overall say such a law would not be effective. The perceived effectiveness of this sort of approach is slightly greater than average in Northeastern Ontario.

Effectiveness of Law Against Burning Garbage



Q.9

Whether or not you would personally agree with such a law, do you think that passing a law against burning garbage would be very effective, somewhat effective, not very effective, or not at all effective in convincing people to stop burning garbage?

METHODOLOGY

The results of the survey are based on questions asked to 1,516 Ontarians 18 years of age and older living in rural areas or small towns or cities. All respondents live in detached single-family dwellings.

The survey was conducted by telephone from February 28 to March 7, 2001. The margin of error for the survey is 2.5 percentage points, 19 times out of 20. The margins of error for regional and demographic subsamples are larger.

Sample Selection

The sampling method was designed to complete approximately 1,500 interviews within households randomly selected from among those households situated in rural areas or small towns or cities. RDD (random digit dialling) sample was used in each of five regions, defined by postal codes corresponding to non-urban areas. Only households residing within the areas delineated by the specified postal codes were included in the sample. Residents of the urban areas of Barrie, the Greater Toronto Area, Guelph, Hamilton, Kingston, Kitchener-Waterloo, London, Niagara Falls, Ottawa, Peterborough, Sarnia and Windsor were excluded from the survey by this means.

Final Sample by Region

REGION	QUOTA	WEIGHTED N	UNWEIGHTED N	MARGIN OF ERROR
Central	375	377	381	5.0
Northeastern	225	224	225	6.5
Northwestern	300	311	303	5.6
Southeastern	300	305	305	5.6
Southwestern	300	298	302	5.6

Respondents were asked three screening questions to determine eligibility. First, an attempt was made to speak to the adult in the household most familiar with how the household disposes of its garbage. If that per-

son was not available, another adult familiar with household garbage disposal was spoken with. Second, those living in dwellings other than detached single-family houses were excluded. Finally, those living in the larger urban areas or city suburbs listed above were excluded.*

In the data analysis, the results of the survey were weighted by gender.

Telephone Interviewing

Interviewing was conducted at Environics' central facilities in Toronto.

Field supervisors were present at all times to ensure accurate interviewing and recording of responses. Ten percent of each interviewer's work was unobtrusively monitored for quality control in accordance with the standards set out by the Canadian Association of Marketing Research Organizations.

A minimum of five calls were made to a household before classifying it as a "no answer."

Completion Results

A total of 1,516 interviews were completed.

The effective response rate for the survey is 23 percent: the number of completed interviews (1,516) divided by the total sample (10,392) minus the non-valid/non-residential numbers, the numbers not in service and the numbers that presented a language barrier (3,699).

The actual completion rate is 39 percent: the number of completed interviews (1,516) divided by the number of qualified respondents contacted directly (3,866).

The margin of error for a sample of 1,516 is ± 2.5 percentage points, 19 times in 20. The margins are wider for regional and demographic subsamples.

* The interview was terminated if the respondent named any of the following cities as their place of residence: Barrie, Guelph, Hamilton, Kingston, Kitchener-Waterloo, London, Niagara Falls, Ottawa, Peterborough, Sarnia, Windsor or a major city in the Greater Toronto Area such as Toronto, Mississauga, Brampton, Oshawa, Whitby, Pickering, Richmond Hill, Vaughan, Oakville or Markham

The following table presents the detailed completion results for this survey of 1,516 interviews.

	#	%
Number of calls	10,392	100
Household not eligible	1,422	14
Non-residential/not in service	2,074	20
Language barrier	203	2
Subtotal	3,699	36
New Base (10,392-3,699)	6,693	100
No answer/line busy/ respondent not available	2,827	42
Refusals	2,276	34
Mid-interview refusals	74	1
Subtotal	5,177	77
Net Completions (6,693-5,177)	1,516	23
Completion Rate (1,516/[6,693-2,827])		39

Ontario Regions

