

Washington State Litter Study



Volume Four – Telephone Survey Report



Washington State Department of Ecology
Solid Waste & Financial Assistance Program
December 1999
Publication No. 00-07-025

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Volume Four – Telephone Survey Report

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December 1999
Publication No. 00-07-025

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EXECUTIVE SUMMARY

1 OVERVIEW OF LITTER STUDY

The goal of the Washington State Litter Study is to produce unbiased information about litter in Washington State and the people who generate it. Specifically, this study provides data on:

- The distribution, amount, and composition of litter;
- Who is most likely to generate litter;
- Why those Washington residents who litter engage in this behavior; and
- What prevention strategies could be employed to reduce the amount of litter.

The current study relied on three different methods to gather data about littering:

- **Field research and sampling** to determine the generation rate and the composition of litter along roads and in selected public areas in Washington;
- **Focus groups** targeting admitted or potential litterers, designed to collect qualitative data regarding why Washington residents litter and to investigate prevention strategies; and
- **A Telephone survey** of the general population to collect quantitative data regarding the types of people and situations that create littering behavior, and to test litter prevention messages.

This report summarizes the results obtained through the telephone survey and includes a comparison of those results with the findings from the focus groups. The detailed findings of the focus groups are presented in another report, as are results from the field research and sampling plan. The key findings from all three parts of the project (focus groups, telephone survey and field research) are presented in a final report.

2 OBJECTIVES OF THE TELEPHONE SURVEY

The overall purpose of the telephone survey is to determine why Washington residents who litter engage in this behavior and what might motivate them to stop. Two focus groups conducted in February 1999 obtained information from a specific audience – young, admitted or potential litterers. The telephone survey builds upon this initial research and is a way to bring the same types of questions to a broader, randomly selected audience which is representative of the population of Washington state. In a telephone survey, people of different ages, incomes, education, and geographic distribution can be queried.

Cascadia Consulting Group designed the telephone survey and analyzed its results with assistance from FBK Research. Market Trends, a marketing firm that specializes in survey research, conducted the actual telephone interviews.

The three primary objectives of the telephone survey were:

- To test the focus group findings with a wider audience;
- To further identify the types of people and circumstances that create litter and people's perceptions of litter and littering; and
- To test general litter prevention strategies and types of preventative messages.

3 KEY FINDINGS

The data obtained in this telephone survey provide evidence that residents see litter as a significant problem facing the state of Washington, but it may not be on the top of the list of their concerns. While 79% indicated it was important, only 38% of the respondents were willing to say that litter was “very important” issue facing the state. When asked if there was more, less, or the same amount of litter in the state as compared to three years ago, only about one-third of the respondents said “more.”

Most respondents thought the act of littering was deliberate as opposed to accidental. Three-fourths of the respondents (74%) said that most of our state’s litter was deliberate, 15% thought it was accidental and 11% thought it was both deliberate and accidental. Respondents tended to agree with the statements that portray lazy or ignorant behaviors, such as people litter because “they don’t care,” “they think someone else will pick it up,” or “they don’t think their one piece of litter matters.” Respondents were less inclined to agree with the statements that portrayed accidental or unknowing behaviors such as “they don’t realize it.”

Residents typically thought driving¹ was the primary source of litter and they saw the most litter on roads, highways, and streets. However, items that are vehicle-related, such as vehicle parts, tires, motor oil containers, or lawn debris (often associated with uncovered loads), were mentioned by no more than eight percent of the respondents each. Respondents typically saw litter associated with eating, drinking, and smoking. Paper, aluminum cans, fast-food waste, and cigarettes were items frequently mentioned. This suggests that respondents may either associate litter with people deliberately throwing items out of their vehicles, or that they do not consider vehicle-related litter to be “litter.” Again, these are the respondents’ perceptions of what litter is. The actual composition of litter is reported in the field research report.

Males and young adults appeared more likely to litter than their counterparts did. Respondents who attributed littering to a specific age group cited teens and young people (ages 13-24) as those responsible for littering. And, teens and young adults appeared more likely to personally engage in littering, at least on a rare occasion, than older respondents did. Young people were also less likely to pick up litter either they or someone else dropped. Males were more likely to litter than females under all the circumstances asked in this survey, but they did not differ in their willingness to pick litter up.

Despite the fact that respondents thought driving was the primary source of litter and most litter was found on roadsides, they thought placing more trashcans in public places would be an effective strategy for curbing littering behaviors. They also thought that having educational programs in schools and enforcing fines for littering would be effective strategies for curbing littering behaviors. Survey respondents also indicated it would be effective to communicate that litter is an issue by showing a graphic picture of what litter would look like if it was not picked up and/or publicizing that certain types of litter can cause harm to the environment. One reason respondents may have seen these messages as effective is because they enabled them to dramatically visualize litter as a problem. Preventing people from littering would involve changing their behaviors, which is easier to do when people recognize the problem and understand the need for change.

¹ “Driving” refers to actions committed by drivers, passengers, or as a consequence of vehicles using the roads. The term “driving,” used throughout this report, does not necessarily imply actions committed by the driver.

The results from the telephone survey were very similar to those obtained from the focus groups. Focus group and telephone survey participants tended to agree that they generally see litter associated with eating, drinking, and smoking and that litterers are lazy and careless individuals. Young adults in both these studies showed some tendencies to litter, at least on a rare occasion. Both groups also thought that educational programs and enforcement of fines would be effective in reducing littering behaviors.

4 CONCLUSIONS

The data obtained in the telephone survey provide evidence that residents do not think litter is a huge problem in this state, although they do see it as an issue. Even though people indicated that they do not think there is “that much” litter, they think that it is being created by people with lazy, careless, ignorant behaviors. While education is viewed as important, they also believe that the way to curb this behavior is to make trashcans more available. More trashcans may be a good short-term solution, but it will take education to affect long-term behavioral change.

Behavioral change is easier to affect when people understand the need for change; therefore, the first step may be a public awareness program which concentrates on creating awareness of littering as a problem. It appears that the general population would benefit from receiving information about the extent of the litter problem. Therefore a program should appeal to everyone, possibly like the previous “Give a Hoot, Don’t Pollute” campaign, which many people of all ages seem to remember.

After creating or enhancing this awareness, further campaigns can be directed at those who seem the most likely culprits. In this study it appears that teens and males appear to be more likely to litter than their counterparts. Since the number of teens surveyed in this study was not enough to draw definite conclusions, further investigation into the teen market may be worthwhile.

MAIN REPORT

1 OVERVIEW OF LITTER STUDY

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- To test the focus group findings with a wider audience;
- To further identify the types of people and circumstances that create litter and people's perceptions of litter and littering; and
- To test general litter prevention strategies and types of preventative messages.

Section 3 of this report outlines the methodology and includes descriptions of the design and implementation, and the data analysis. Section 4 highlights the key findings, and in Section 5 the results of the telephone survey are compared to the results of the focus groups. Conclusions are highlighted in Section 6. Section 7 includes the detailed analyses. The actual telephone survey questionnaire is included in Attachment A and the results are presented in table form in Attachment B.

3 METHODOLOGY

3.1 DESIGN AND IMPLEMENTATION

The survey was designed by Cascadia Consulting Group with assistance from FBK Research and input from the Department of Ecology project team. Results from similar surveys conducted in Texas and Arizona were also used in designing this survey.²

The data was collected by Market Trends, Inc. in May 1999. A random sample of 300 people from Washington State was included. The survey was restricted to residents of Washington who were at least 15 years of age. Residents without a telephone or only a cell phone were excluded from the survey.

A sample size of 300 is sufficient to provide 95% confidence that the resulting data will be within plus or minus 5.8% of what it would be if all Washington residents at least 15 years of age were interviewed. This error range is calculated at the 50%-50% response rate to any two-part question (i.e. 50% "yes" and 50% "no") and is therefore the maximum error range that can be expected with this sample size.

Due to the sensitive nature of the topic of litter (the focus groups indicated that litter tends to be considered socially unacceptable behavior and therefore may be difficult to talk about), many of the telephone survey questions ask about respondents' perceptions of why "other people they know" litter. The survey was designed this way to de-personalize the issue and increase the propensity to understand the perceptions and profiles of litterers.

In order to achieve 300 complete surveys, a total of 2,000 phone numbers were randomly selected from all listed and unlisted numbers in Washington. Random selection ensured that a representative sample of urban and non-urban, and eastern and western Washington phone numbers, was selected. The phone numbers were selected in two stages. Calls were made weekday and Sunday evenings from 4:00 to 9:00 PM and Saturdays during the day.

² **Texas** conducted a telephone survey in 1998 with approximately 1,200 state residents. Findings indicated that the top predictors of littering behavior were: young age, smoking, eating fast-food at least twice a week, driving more than 50 miles per day, and going out to bars at least once a week. The findings also concluded that the tendency to litter is high during the teen years and tends to drop off as people move into adulthood. Young males constituted the higher percentage of "gross litterers" in comparison to young females. **Arizona** conducted a mail-in survey in 1998. Findings determined that litterers tended to be people of low income, non-recyclers, those who did not value a sense of accomplishment, and those originally from outside the state.

Phone numbers were considered incomplete, and were discarded if one of the following criteria applied:

- Disconnect/FAX blocked;
- Initial refusal;
- Business number;
- Communication barrier (language);
- Midway terminate; or
- Not a Washington State resident.

Multiple attempts were made on each number before they were considered incomplete. The average attempt rate was 3.39 calls per number. Reasons for incomplete calls included the following:

- Call back/Respondent not available;
- No answer/answering machine/voice mail; or
- Busy signal

Males and females were proportionately surveyed based on Washington State census data. Males constituted 49.6% of the population of the state, and females made up 50.4% in the 1990 census. In order to achieve a comparable ratio in the survey (147 males and 153 females), some of the last calls were terminated if the “wrong” gender was the only person available.

The survey consisted of a total of 36 questions, including questions about perceptions of litter and littering (8 questions), motivations to litter (one 8-part question), strategies to encourage people not to litter (16 questions), knowledge about having a litter bag in a vehicle (3 questions), and demographics (8 questions). Two of the 36 questions were open-ended; the other questions asked the respondent to choose an answer (prompted response) or to rate the importance or effectiveness of certain statements about littering and litter prevention. The responses to questions with prompted answers were rotated to prevent bias. The average survey length was 12 minutes. (See Attachment A for a copy of the survey instrument.)

A pre-test was administered in April 1999 to 25 people not included in the final sample population of 300. The purpose of the pre-test was to verify the clarity and validity of the questions and to make any adjustments if necessary. Representatives from Cascadia Consulting Group and the Department of Ecology attended the pre-test session and together made necessary changes to the survey.

3.2 DATA ANALYSIS

The survey data was analyzed for the entire sample of 300 respondents. Additional analyses were performed by demographic categories: gender, age, education, income, employment status, length of state residence, home ownership, and the presence of children in the household.

Where appropriate, t-tests were used to determine statistically significant differences within the various demographic categories. T-tests are a standard statistical tool used to determine differences among groups. Results that are statistically significant are highlighted in this report. Results that are not statistically significant are included in this report if they show interesting trends. In these instances, it will be mentioned in the main body of the report that the results are not statistically significant.

Tables that provide the results for the total sample and for each demographic subgroup are included in Attachment B.

4 KEY FINDINGS

The data obtained in this telephone survey provide evidence that residents see litter as a significant problem facing the state of Washington, but it may not be on the top of the list of their concerns. While 79% indicated it was important, only 38% of the respondents were willing to say that litter was “very important” issue facing the state. When asked if there was more, less, or the same amount of litter in the state as compared to three years ago, only about one-third of the respondents said “more.”

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Despite the fact that respondents thought driving was the primary source of litter and most litter was found on roadsides, they thought placing more trashcans in public places would be an effective strategy for curbing littering behaviors. They also thought that having educational programs in schools and enforcing fines for littering would be effective strategies for curbing littering behaviors. Survey respondents also indicated that it would be effective to communicate that litter is an issue by showing a graphic picture of what litter would look like if it was not picked up and/or publicizing that certain types of litter can cause harm to the environment. One reason respondents may have seen these messages as effective is because they enabled them to dramatically visualize litter as a problem. Preventing people from littering would involve

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changing their behaviors which is easier to do when people recognize the problem and understand the need for change.

5 COMPARISON TO THE FOCUS GROUPS

In general, many of the results obtained in this telephone survey support the results obtained from the focus groups. One caution when comparing these results, however, is that the respondent profiles of the two groups differed. Participants of the focus groups were all young adults (ages 18-30), had no more than a 4-year college education, and a personal income below \$75,000. By contrast, all Washington residents 15 years of age or older were eligible to participate in the telephone survey.

Most of the focus group participants agreed that food and beverage containers and cigarette butts were the primary components of litter. A few participants mentioned other items such as grass clippings, plastic containers, tires, and even appliances as being part of the litter problem. In general, this is similar to the answers provided by the respondents in the telephone survey.

The focus group participants viewed litterers as lazy, careless, inconsiderate, disrespectful, and lacking in social values and morals. Similarly, respondents of the telephone survey tended to agree with statements that implied litterers have the same characteristics. Telephone survey respondents agreed that people littered because “they don’t care,” “they think one piece of litter doesn’t matter,” or “they think someone else will pick it up.”

Because of the negative connotations associated with littering, those in the focus groups had difficulty admitting that they had recently littered. They did not want to view themselves as part of a group that would engage in socially unacceptable behavior. However, they did mention certain circumstances in which it was “okay” to litter. Respondents in the telephone survey were not asked how likely they would be to litter in a situation that they could rationalize, but the young people surveyed did show some tendencies to litter, at least on rare occasion.

The focus group participants and the telephone survey respondents were generally in agreement as to what strategies would be most effective to curb littering behaviors. Focus group participants thought public awareness campaigns aimed at all citizens, and educational programs aimed at schools, would be effective ways to remind people that littering was unacceptable. Some participants reported that they would think twice before littering if they were reminded of the negative consequences of this behavior.

The focus group participants thought a public awareness campaign should be graphic and startling in nature and send a strong message showing what would happen without citizen effort to reduce litter. Participants also remembered learning about litter during their early school years and felt it was very important to dedicate funds to the education of youngsters. Similarly, the telephone survey respondents thought educational programs would be effective to reduce littering. The messages and actions they rated highly were those that showed the negative consequences of littering or what would happen if litter was not cleaned up.

One difference between the two research groups, though, was that the teenagers in the telephone survey thought educational programs in school would not be very effective. Although the sample size of the teenagers was too small to provide statistically valid results, their responses do differ from those in the focus groups.

Both the focus group participants and the telephone survey respondents also thought it would be effective to enforce anti-littering laws and administer fines.

6 CONCLUSIONS

The data obtained in the telephone survey provide evidence that residents do not think litter is a huge problem in this state although they do see it as an issue. Even though people indicated that they do not think there is “that much” litter, they think that it is being created by people with lazy, careless, ignorant behaviors. While education is viewed as important, they also believe that the way to curb this behavior is to make trashcans more available. More trashcans may be a good short-term solution, but it will take education to affect long-term behavioral change.

Behavioral change is easier to affect when people understand the need for change; therefore, the first step may be a public awareness program which concentrates on creating awareness of littering as a problem. It appears the general population might benefit from receiving information about the extent of the litter problem. Therefore a program should appeal to everyone, possibly like the previous “Give a Hoot, Don’t Pollute” campaign, which many people of all ages seem to remember.

After creating or enhancing this awareness, further campaigns can be directed at those who seem the most likely culprits. In this study it appears that teens and males appear to be more likely to litter than their counterparts. Since the number of teens surveyed in this study was not enough to draw definite conclusions, further investigation into the teen market may be worthwhile.

7 DETAILED FINDINGS

The following sections highlight the detailed findings obtained in the telephone survey. These sections describe the demographic characteristics of the sample population and the importance of litter in the state of Washington as viewed by the respondents. These sections also provide an analysis of the respondents’ perceptions of what type of litter is seen and where it is located, the primary reasons for littering, the characteristics of those who might be littering, the effectiveness of various litter prevention strategies, and their knowledge of Washington’s litterbag requirement.

7.1 DEMOGRAPHICS

When interpreting the results of this survey, it is important to keep in mind the demographic characteristics of the 300 people who were interviewed. The proportion of males and females was even (49% and 51%, respectively.) This respondent profile was comparable to the 1990 census of Washington State residents, in which the percentages of males and females were 49.6% and 50.4%, respectively.

The largest percentage of respondents was “middle-aged” (ages 35-54). “Young adults” (ages 18-34) and “seniors” (ages 55+) accounted for similar proportions, 25% and 29%, respectively. The number of teenagers surveyed (10) was too small to be analyzed for statistical significance. However, their results do show some interesting trends, which are noted in the analysis.

Most respondents (71%) had had at least some college or technical school. A total of 36% had completed college or graduate school. The majority of the respondents were employed, either full-time or part-time (65%). Unemployed respondents (35%) included students, retired individuals, housepersons, and those on disability or leave of absence.

Most respondents had lived in Washington at least 10 years (82%). Fewer than 20% had lived in Washington less than 10 years. A majority of respondents said either they or a family member owned the home in which they lived (74%). Home ownership may indicate that respondents have a stake in their community, which might mean they take more pride in their surroundings. Most respondents (61%) had no children under 18 living in the household.

About one-third (33%) of the total respondents said their total household income was less than \$35,000 a year, roughly one-quarter (26%) said they made \$35,000-\$60,000, and roughly one-quarter (24%) said they made over \$61,000. A total of 17% refused to answer this question.

Table 7-1 illustrates the numbers and percentages of respondents in each demographic category analyzed in this report.

Table 7-1 Demographic Characteristics of the Surveyed Population

Demographic Category	# of Responses	% of Respondents
Gender		
Male	147	49%
Female	153	51%
Age		
Teenager (15-17)	10	3%
Young adult (18-34)	76	25%
Middle age (35-54)	125	42%
Senior (55+)	86	29%
Refused to respond	3	1%
Highest level of education		
High School or less/GED	88	29%
Some College/Tech school	104	35%
College graduate	66	22%
Post-grad work/degree	41	14%
Refused to respond	1	0%
Employment status		
Employed	194	65%
Unemployed	106	35%
Years of state residence		
< 10 years	54	18%
10-29 years	98	33%
30+ years	147	49%
Refused to respond	1	0%
Home ownership		
Own	223	74%
Rent	77	26%
Number of children in household < 18 years		
No children	184	61%
1 or more	114	38%
Refused to respond	2	1%
Income		
< \$35,000	100	33%
\$36,000-\$60,000	78	26%
\$61,000+	71	24%
Refused to respond	51	17%

7.2 THE IMPORTANCE OF LITTER IN THE STATE OF WASHINGTON

The total sample of 300 respondents was asked to report how they would rate the importance of litter in the state of Washington. A seven-point scale was used, where a value of seven indicated that respondents felt litter to be a “very important” issue, and a value of one indicated that respondents felt litter to be “not important at all.” An average importance rating has been calculated based on those who responded to the question.

Overall, a significant majority (79%) rated the importance of litter in Washington a value of five or higher. When looking at the extreme—only 38% of respondents rated litter a seven (meaning

that it was a “very important” issue). The data indicate that, while litter cannot be discarded as an unimportant issue, it may not be on top of the list of residents’ concerns.

Table 7-2 provides the percentage of respondents giving each rating, and the average importance rating for each group.

Table 7-2 How important is litter in the State of Washington to you?

	Total	Gender		Education				Income		
		Male	Female	HS or Less	Some College	College Grad	Post Grad	< \$35K	\$35-\$60K	\$61K or greater
(Base)	(300)	(147)	(153)	(88)	(104)	(66)	(41)	(100)	(78)	(71)
Seven – Very	38%	31%	44%	45%	36%	45%	12%	38%	44%	25%
Six	13%	14%	12%	10%	11%	14%	22%	11%	14%	15%
Five	28%	31%	26%	31%	27%	26%	32%	35%	20%	28%
Four	11%	12%	10%	8%	17%	3%	14%	12%	12%	13%
Three	7%	8%	6%	6%	6%	6%	15%	4%	8%	13%
Two	2%	3%	1%	0%	1%	5%	5%	0%	1%	3%
One – Not at all	1%	1%	1%	0%	2%	1%	0%	0%	1%	3%
Average	5.5	5.4	5.7	5.8	5.4	5.7	4.9	5.7	5.7	5.1

While there is no significant difference in the average ratings, the percentage of females who rated litter as being “very important” (a value of seven) is significantly higher than the percentage of males doing the same.

Those with post graduate degrees and those with household incomes of \$61,000 or higher were significantly less likely than their counterparts to report that litter is an important issue in the state of Washington. Respondents in these two demographic categories tended to be the same—postgraduates were more likely than others to report higher levels of household income. While this survey did not seek to address why these demographic groups may be less likely to consider litter an important issue, it may be that they are more likely than others to rate litter in comparison to other issues facing the state.

Although the sample size of teenagers is too small to draw statistically significant conclusions (10), the data indicates that this group may be less concerned about litter than those in other age groups. The average rating provided by teenagers was 4.9—the same as that provided by postgraduates. The small sample size precludes analysis; however, it may be that teenagers are less concerned about state issues in general, and litter in particular.

Respondents were asked whether they felt that there was more litter in the state of Washington today (compared to three years ago), less litter, or the same amount.

Table 7-3 provides the percentage of respondents who gave each response.

Table 7-3 Is there more, less, or the same amount of litter as compared with three years ago?

	Total	Age			
		Teens (15-17)	Young Adults (18-34)	Middle Age (35-54)	Seniors (55+)
(Base)	(300)	(10)	(76)	(125)	(86)
More	31%	70%	21%	32%	35%
Less	23%	20%	24%	26%	18%
Same Amount	35%	10%	38%	31%	41%
Don't know	11%	0%	17%	11%	6%

Roughly one-third (31%) of the total sample reported that there is more litter in Washington now than there was three years ago, and one-third (35%) reported that the amount has remained the same. Twenty-three percent (23%) reported that there is less litter, and 11% did not know how to respond.

Those who were 55 years of age or older were significantly more likely than those between 18 and 34 to report that there was more litter in Washington now compared to three years ago.

Teenagers seem the most likely to report that the amount of litter has increased. Although only 10 teenagers were interviewed, 70% reported that there is more litter now. Even though litter is not as important an issue to this age group, it may be that they are just beginning to notice litter and/or view it as important.

Considering that one-third (35%) of the total sample reported that the amount of litter has remained the same, and one quarter (23%) reported that there is less litter today, lends credence to the conclusion that litter is not perceived to be a “very important” issue in the state of Washington. It seems reasonable to conclude that if respondents were prone to seeing litter, they would be more adamant about litter as an issue.

7.3 PERCEPTIONS OF WHAT TYPE OF LITTER IS SEEN AND WHERE IT IS LOCATED

Respondents were asked to report on what types of litter they recalled seeing most. They were allowed to provide more than one answer. Paper⁴ and aluminum cans were the most frequently mentioned types of litter seen, as illustrated in Table 7-4. Respondents also noted seeing fast-food waste, which predominantly includes papers and plastics.

⁴ “Paper” includes paper beverage cups, paper bags, newspaper, cardboard and others papers.

Table 7-4 What types of litter do you recall seeing most?

	First response	Total responses⁵
Paper	33%	66%
Aluminum cans	24%	68%
Fast-food waste	14%	33%
Plastic⁶	9%	36%
Cigarette butts	7%	26%
Glass⁷	3%	18%

The “first response” column indicates what people perceive to be the most common litter item. When asked to think about what else they saw, respondents listed other items. The first response and total responses above indicate that respondents generally mentioned seeing the same types of litter. Few differences were seen between the various demographic groups.

Respondents saw litter as being associated with eating, drinking, or smoking more so than items associated with construction activities, motorized vehicles (e.g. automotive parts, motor oil containers, or tires), or uncovered loads. Only about one percent of the survey respondents mentioned litter such as lawn debris, automotive parts, or furniture/textiles as their first response. When asked to think about *all* the litter they see, seven to eight percent of the respondents said furniture/textiles, automotive parts, or tires. Two percent or less of the respondents mentioned construction debris, motor oil, appliances, or wood.

Respondents were also asked to report where they tended to see the most litter. Six statements were read to them and respondents who wanted to choose an alternate location were allowed to do so. Table 7-5 presents these results.

Table 7-5 Where do you see the most litter?

	Total	Home ownership	
		<i>Own</i>	<i>Rent</i>
(Base)	(300)	(223)	(77)
Roads or streets	37%	40%	27%
Freeways	32%	34%	27%
City sidewalks	9%	6%	18%
Parks or similar public areas	7%	6%	10%
Exit ramps	6%	6%	5%
Sports places, fairgrounds	3%	2%	4%
Other⁸	6%	6%	9%

⁵ The respondents’ first responses were recorded as well as all their additional responses. The “total” responses do not add up to 100% because respondents were allowed to say more than one answer.

⁶ “Plastic” included plastic beverage cups, plastic bags, and plastic bottles.

⁷ “Glass” included glass bottles, broken glass, and unspecific glass.

⁸ “Other” included answers such as “parking lots,” “private lands,” “can’t pick the most/evenly distributed,” and “don’t know.”

Clearly, respondents perceived that most litter is found in vehicular areas such as freeways, roads, and streets. Three-fourths of the respondents (75%) indicated that they saw the most litter on roads, streets, freeways, or exit ramps. City sidewalks and parks, which include both pedestrian and vehicular areas (streets and parking lots), were mentioned by 16% of the respondents.

Similarly, the majority of respondents (64%) considered “vehicular” related activities – driving⁹ or uncovered loads – the main source of litter, which is related to the fact that they primarily see litter on freeways, roads and streets. A total of 22% responded that the main source was pedestrian – walking or outdoor recreation. Table 7-6 illustrates their responses.

Table 7-6 What do you think is the main source of litter?

	Total	Years of residence			Home Ownership	
		< 10	10-29	30+	Own	Rent
(Base)	(300)	(54)	(98)	(147)	(223)	(77)
Driving	55%	39%	56%	61%	60%	43%
Outdoor recreation	14%	13%	15%	15%	13%	17%
Uncovered loads	9%	13%	12%	5%	8%	13%
Walking	8%	16%	9%	4%	5%	17%
Garbage collection	4%	9%	3%	2%	3%	5%
Other	10%	10%	5%	13%	11%	5%

Homeowners and those who have lived in Washington at least 10 years believed that the main source of litter is car-related (driving) more often other respondents. Homeowners also indicated that they saw more litter on other roads or streets and less litter on city sidewalks than did renters.

To conclude about perceptions of what type of litter is seen, where it is located, and what the main source of litter is, respondents appeared to associate litter with people deliberately throwing items out of vehicles. Residents typically thought driving was the primary source of litter and they saw the most litter on roads, highways, and streets. However, vehicle-related items, such as vehicle parts, tires, motor oil containers, or lawn debris (often associated with uncovered loads), were mentioned by no more than eight percent of the respondents in each category. Respondents typically saw litter as being associated with eating, drinking, and smoking. Items such as paper, aluminum cans, fast-food waste, and cigarettes were mentioned frequently. Another conclusion may be that respondents don't consider vehicle-related items to be “litter”.

7.4 PRIMARY REASONS FOR LITTERING

When respondents were asked whether they thought the act of littering was deliberate, accidental, or both, a majority (74%) believed that the act of littering was deliberate, as shown in Table 7-7.

⁹ “Driving” refers to actions committed by drivers, passengers, or as a consequence of vehicles using the roads. The term “driving” does not necessarily imply actions committed by the driver.

Table 7-7 Would you say most of our state's litter is accidental or deliberate?

	Total
(Base)	(300)
Deliberate	74%
Accidental	15%
Both	11%

Respondents were asked how much they agreed or disagreed with six statements that explored perceptions about why people might litter. A seven-point scale was used with the value of one being "strongly disagree" and a value of seven being "strongly agree." For the analysis, a response of one, two or three indicated general disagreement; a response of four indicated neutrality; and a response of five, six, or seven indicated general agreement. Average ratings were calculated from those who responded to the question with a rating.

Table 7-8 shows the percentage of people who agreed with each statement (rating of five or above) and the average rating for each statement.

Table 7-8 To what extent do you agree with the following statements about why people litter?

	% who agree with statement about why people litter	Average Rating
They don't care	86%	5.9
They don't think their one piece of litter matters	81%	5.7
They think someone else will pick it up	66%	5.0
There isn't a trash can or bag nearby	40%	3.7
They don't realize it	34%	3.4
They don't have time to dispose of it properly	32%	3.2

The reasons, or statements, can be grouped into categories that correspond with littering being deliberate or accidental.

- *Deliberate* statements: "They don't care," "They think someone else will pick it up," and "They don't think their one piece of litter matters."
- *Deliberate but rationalized* statements: "They don't have time to dispose of it properly" and "There isn't a trash can or bag nearby."
- *Unknowing* statement: "They don't realize it". (*Unknowing* can be equated with *accidental*.)

Based on percentages, respondents tended to agree with the statements that characterized littering as a deliberate action more than they agreed with the statements that rationalized littering. Average ratings of 5.0 or above were calculated for the following statements: "They don't care," "They think someone else will pick it up" and "They don't think their one piece of litter matters." Those statements that indicate rationalized littering were behaviors had average ratings between 3.2 and 3.7. The average ratings for the statements, "there isn't a trashcan or

bag nearby,” “they don’t realize it,” and “they don’t have time to dispose of it properly” were 3.7, 3.4, and 3.2, respectively.

As shown in Table 7-9, a few differences existed between the demographic groups with respect to the average ratings calculated for each statement. Homeowners agreed with the statement, “they don’t care,” more than renters did.

Females were more likely to agree with the statements, “they think someone else will pick it up” and “they don’t think their one piece of litter matters” more than males did. Teens tended to disagree with the statement, “they think someone else will pick it up” more than the other age groups, although the sample size was too small to provide statistically valid results.

Based on the average ratings, seniors agreed with the statement that litterers “don’t realize it” more than young adults and middle-aged respondents. Also, those with no children in the household tended to agree with this statement more than those with children.

Table 7-9 Average ratings of agreement with statements about why people litter, by demographic

	Total	Gender		Age				Home ownership		Children	
		Male	Female	Teens (15-17)	Young Adults (18-34)	Mid. Age (35-54)	Seniors (55+)	Own	Rent	With	Without
(Base)	(300)	(147)	(153)	(10)	(76)	(125)	(86)	(223)	(77)	(184)	(114)
They don't care	5.9	5.9	5.9	5.6	5.8	5.9	6.0	6.0	5.5	5.9	5.9
They don't think there one piece of litter matters	5.7	5.4	6.0	5.6	5.8	5.7	5.5	5.8	5.3	5.6	5.7
They think someone else will pick it up	5.0	4.7	5.2	3.4	5.0	5.1	5.2	5.0	5.0	5.1	4.8
They don't realize it	3.4	3.3	3.5	2.9	3.1	3.2	4.0	3.3	3.5	3.6	3.0

group

7.5 CHARACTERISTICS OF THOSE WHO MIGHT BE LITTERING

Respondents were asked to rate how likely they would be to litter in various situations. A seven-point scale was used where one equaled “not at all likely” to litter and seven equaled “very likely” to litter. For the analysis, it was assumed that a value of one indicated that the respondent would never litter and a value higher than one (two to seven) indicated that the respondent might, at least on a rare occasion, engage in littering behavior. Table 7-10 illustrates the percentages of respondents who would not litter (those who answered “one”) under the following circumstances.

Table 7-10 Percentage of respondents who would not litter under the following circumstances

Respondents who would not litter...	Total	Gender		Age			
		Male	Female	Teens (15-17)	Young Adults (18-34)	Mid. Age (35- 54)	Seniors (55+)
(Base)	(300)	(147)	(153)	(10)	(76)	(125)	(86)
In an area that is clean	89%	85%	94%	60%	88%	90%	92%
When holding an empty beverage cup and there are no trash cans available	78%	73%	84%	40%	66%	85%	84%
When holding a gum wrapper and there are no trash cans available	77%	71%	82%	30%	70%	79%	85%
In general	76%	68%	84%	40%	71%	77%	84%
When they know a cleanup crew will be coming to the area to pick it up	75%	68%	82%	20%	71%	81%	77%
When no one else is around so nobody sees them do it	74%	65%	82%	30%	70%	77%	77%

Respondents showed a greater tendency not to litter in an area that was clean.¹⁰ Respondents also did not appear to distinguish a difference between littering a beverage cup or a gum wrapper.

The data show that males, teens, and young adults may be more inclined to litter, at least on a rare occasion, than their counterparts. Females were less likely to litter than males under all the circumstances mentioned above. A greater percentage of seniors reported that they would not litter an empty beverage can or a gum wrapper when there are no trashcans available compared to young adults.

Although the number of teens was too small to provide statistically valid results, teens showed a tendency to litter more than the older respondents. Teens may be more likely than others to litter a gum wrapper when there is no trash can available, to litter when nobody sees them do it, and to litter when they know a cleanup crew will be coming to the area. Teens also showed a greater tendency to litter an empty beverage can when there are no trashcans available and to litter in general than did respondents older than 35 years. Teens also appear to be more willing than seniors to litter in an area that is clean.

Respondents were asked to rate how likely they would be to pick up litter that either they or someone else dropped. The same seven-point scale was used in which a value of one meant that they were “not at all likely” and a seven meant that were “very likely.” Table 7-11 illustrates the percentage of respondents who are very likely (responded with a “seven”) to pick up a piece of paper that was dropped.

Table 7-11 Respondents who are very likely to pick up litter

Respondents that are very likely to...	Total	Age				Years of Residence		
		Teens (15-17)	Young Adults (18-34)	Mid. Age (35- 54)	Seniors (55+)	< 10	10-29	30+
(Base)	(300)	(10)	(76)	(125)	(86)	(54)	(98)	(147)
Pick up a piece of scrap paper that they accidentally dropped	53%	20%	42%	62%	52%	46%	50%	57%
Pick up a piece of scrap paper that someone else dropped	21%	10%	16%	21%	29%	9%	27%	23%

¹⁰ No statistical tests were performed between the different circumstances on the percentage of respondents who are likely to litter. Thus, the similarities and differences outlined in this paragraph are not necessarily significant.

Again, it is the younger respondents who appear less likely to pick up litter either they or someone else dropped. Although the percentage of teens in the survey population was too small to show statistically valid results, teens appear to be less willing to pick up a piece of scrap paper they dropped than middle-aged respondents or seniors. Young adults were also less likely than middle aged respondents to pick up a piece of paper they dropped and they were less likely than seniors to pick up litter someone else dropped.

Males and females did not differ significantly in their willingness to pick up litter, which differs from their tendencies to litter. Those who have lived in Washington less than ten years were less likely to pick up litter someone else dropped than those who have lived in Washington longer. This suggests that having a stake in the community or sense of ownership may impact a person’s littering behavior.

Respondents were also asked which age group they thought was most responsible for littering. As shown in Table 7-12, respondents typically thought young people, teenagers (15-17 years) and young adults (18-24 years), were most responsible for creating litter. Almost one-third of the respondents (27%) did not think there was a particular age group responsible for creating litter and 13% did not know.

Those with less than a 4-year college degree thought teens were more likely to be responsible for littering than did those with higher education. Those with a household income below \$35,000 thought teens were more likely to be responsible than did those with higher incomes.

In general, respondents who attributed littering to a specific age group cited young people as those responsible for creating litter. And younger people seemed more likely to admit to littering, at least on occasion. Although the sample size of teens was too small to provide statistically reliable results, teens tended to blame themselves for creating litter more often than did the other age groups.

Table 7-12 What age group is most responsible for littering?

	Total	Age				Education				Income		
		Teens (15-17)	Young Adults (18-34)	Mid. Age (35-54)	Seniors (55+)	HS or Less	Some College	College Grad	Post Grad	< \$35K	\$35- \$60K	\$61K or greater
(Base)	(300)	(10)	(76)	(125)	(86)	(88)	(104)	(66)	(41)	(100)	(78)	(71)
13-17 (teenagers)	20%	60%	24%	15%	19%	29%	24%	7%	12%	29%	15%	16%
18-24 (college age)	26%	20%	32%	27%	21%	28%	24%	26%	27%	30%	32%	21%
25-34 (young adults)	12%	0%	7%	15%	14%	9%	11%	14%	15%	10%	11%	14%
35+ (mid. age, seniors)	2%	10%	1%	3%	1%	2%	4%	0%	2%	0%	3%	5%
No special age group	27%	10%	26%	30%	25%	25%	28%	29%	29%	23%	27%	30%
Don't know	13%	0%	10%	10%	20%	8%	11%	20%	15%	8%	12%	14%

7.6 EFFECTIVENESS OF LITTER PREVENTION STRATEGIES

Respondents were asked to rate the effectiveness of various litter prevention strategies. A seven-point scale was used where a value of one indicated that the respondent thought the strategy was “not very effective” and a value of seven indicated that the respondent thought the strategy was “very effective.” For this analysis, responses of five, six, or seven have been

grouped and indicate that the respondent thought the strategy was at least somewhat effective. An average rating was calculated for those who were able to respond to the question.

Table 7-13 shows the percentage of respondents who thought the strategy was effective (those rating it with a five, six or seven). The table also shows the average ratings for each strategy.

Table 7-13 How effective would the strategies be to discourage people from littering?

	% who think method would be effective	Average rating
More trash cans in public places	81%	5.6
School educational programs	74%	5.3
Enforcement of fines for littering	74%	5.4
Public awareness campaigns	57%	4.7
Giving away free car litter bags	51%	4.4

No one strategy stood out above the others as very effective or not very effective. People tended to rate all the strategies as somewhat effective, with averages ranging from 4.4 to 5.6. The three strategies given the highest ratings were having more trashcans in public places, enforcement of fines for littering, and educational programs in schools.¹¹

Among those strategies included in the survey, respondents rated “more trash cans in public places” as an effective strategy to curb littering. Table 7-10 indicates that littering does occur, at least occasionally, when there are no trashcans available. Therefore, while increasing the number of trashcans in public places may decrease the amount of litter in the state, it probably will not significantly impact the total amount since most of the litter was seen on roads (see Table 7-5) and was vehicle-related (see Table 7-6).

School educational programs were also rated as an effective method to discourage people from littering, perhaps because they see young people as the most responsible for creating litter. Teens, however, the age group that would probably be most affected by these educational programs, did not appear to think educational programs would be effective. The average rating among teens for this strategy was 3.9, noticeably lower than the average rating calculated among the other age groups.

On the same scale from one to seven, respondents were also asked to rate the effectiveness of various messages or actions in convincing either themselves or people they know not to litter. Again, responses did not indicate a strong preference for any one message or action. People tended to rate all the messages as somewhat effective. In general, the responses indicated that concrete and visual messages showing litter as a problem would be most effective¹². Having a graphic picture of litter and publicizing that litter may cause harm to the environment were rated highly. Telling people that littering is not the right thing to do was not rated highly.

Table 7-14 shows the percentage of respondents who thought that each message or action would be effective (a rating of five, six or seven). The table also shows the average ratings for respondents.

¹¹ No statistical tests were performed between the different strategies on the percentage who thought the strategies would be effective. Thus, the conclusions made in this paragraph are not necessarily statistically significant.

¹² No statistical tests were performed between the different strategies on the percentage who thought the messages or actions would be effective. Thus, the conclusions made in this paragraph are not necessarily statistically significant.

Table 7-14 Respondents’ opinions about the effectiveness of certain litter prevention messages or actions

	% Who think method would be effective	Average Rating
Show a graphic picture of what litter would look like if it weren't cleaned up	82%	5.6
Publicize that certain types of litter cause harm to the environment	71%	5.3
Remind people there is a fine for littering	63%	4.9
Have a slogan that evokes pride in your community	62%	4.7
Inform people that it costs \$2.5 million/year to pick it up	61%	4.8
Remind people that even small items are litter problems	57%	4.6
Tell people there is a toll-free hotline that others can use to report litterers	56%	4.6
Have a famous person sponsor an anti-litter campaign	53%	4.4
Tell people that littering is not the "right thing to do"	42%	4.1

All the respondents were asked which enforcement mechanism they preferred for people who litter: fines, community service, or both. The majority of respondents supported both fines and community service (64%). Twenty-seven percent (27%) said only community service, 8% said only fines, and 1% said neither. Middle-aged respondents and seniors supported community service more than young adults, who were more supportive of fines. Post-graduates were more likely to support community service and less likely to support both fines and community service than all other respondents. Those who have lived in Washington less than 10 years support fines more than those who have live here more than 10 years. Table 7-15 summarizes the results to this question.

Table 7-15 For people who litter, which would you most likely support- fines, community service,

	Total	Age				Education				Years of residence		
		Teens (15-17)	Young Adults (18-34)	Mid. Age (35-54)	Seniors (55+)	HS or Less	Some College	College Grad	Post Grad	< 10	10-29	30+
(Base)	(300)	(10)	(76)	(125)	(86)	(88)	(104)	(66)	(41)	(54)	(98)	(147)
Fines	8%	20%	10%	9%	2%	5%	9%	14%	2%	18%	4%	6%
Community service	27%	20%	16%	28%	36%	19%	24%	24%	54%	30%	20%	31%
Both	64%	60%	74%	62%	62%	75%	67%	62%	39%	50%	74%	63%
Neither	1%	0%	0%	1%	0%	1%	0%	0%	5%	2%	2%	0%

or both?

Those who responded “both” or “fines” to the previous question were asked what level of fine they supported. Responses ranged from less than \$50 to more than \$1000, but \$100 was the response most often given. Teens and unemployed respondents tended to support a lower fine of \$50 more than their counterparts did.

7.7 KNOWLEDGE OF LITTER BAG REQUIREMENT

The vast majority (95%) of the respondents have regular use of a vehicle as shown in Table 7-16.

Table 7-16 Do you own or have regular use of a vehicle?

	Total	Age				Education				Income			Home ownership	
		Teens (15-17)	Young Adults (18-34)	Mid. Age (35-54)	Seniors (55+)	HS or Less	Some College	College Grad	Post Grad	< \$35 K	\$35- \$60K	\$61K or greater	Own	Rent
(Base)	(300)	(10)	(76)	(125)	(86)	(88)	(104)	(66)	(41)	(100)	(78)	(71)	(223)	(77)
Yes	95%	50%	96%	99%	92%	89%	95%	98%	100%	94%	97%	100%	97%	88%
No	5%	50%	4%	1%	8%	11%	5%	2%	0%	6%	3%	0%	3%	12%

Teens and seniors were less likely to have regular use of a vehicle than young adults or middle-aged respondents. Those with a high school education or less were also less likely to have a vehicle than those who had completed college or graduate school. Respondents in the lowest income range were less likely to have use of a vehicle than those in the highest. Homeowners were also more likely to have regular use of a vehicle than renters.

Those who had regular use of a vehicle were asked whether or not their vehicle had a litterbag. As shown in Table 7-17, a majority (76%) responded that they do have a litterbag in this vehicle. Females responded affirmatively more often than males. Also, those who have lived in Washington for at least 30 years were more likely to have a litterbag in their vehicle more than those who have live in the state less than 10 years.

Table 7-17 Is there a litter bag in your vehicle?

	Total	Gender		Years of Residence		
		Males	Females	< 10	10-29	30+
(Base)	(284)	(140)	(144)	(50)	(92)	(141)
Yes	76%	69%	83%	62%	77%	80%
No	24%	31%	17%	38%	23%	20%

All 300 respondents were asked, to the best of their knowledge, if Washington State required that vehicle owners carry a litterbag in their vehicle. Many respondents (55%) did not have the right answer (31% responded no, and 24% responded don't know); only 45% answered affirmatively. Respondents who had lived in this state longer than 10 years were more likely to report the correct answer than those who have lived in Washington fewer years. The results are shown in Table 7-18.

Table 7-18 Does Washington require that vehicle owners carry a litterbag in their vehicle?

	Total	Years of Residence		
		< 10	10-29	30+
(Base)	(30)	(54)	(98)	(147)
Yes	45%	26%	42%	52%
No	31%	54%	32%	23%
Don't know	24%	20%	26%	25%

Even though the majority of respondents seemed unaware of this law, they still tended to carry a bag in their vehicle, as indicated in Table 7-17 above.

Appendix A: Phone Survey Questionnaire

SECTION I: INTRODUCTION

Hello, this is _____ with Market Trends, an independent market research firm in Seattle. Today/Tonight we are conducting a survey about an issue facing our state. This is not a sales call. For this interview, I need to speak with someone who lives in this household and is 15 years of age or older. I would sincerely appreciate your participation.

[Say only if the respondent expresses a concern about confidentiality:] This survey is being conducted for research purposes only, and everything you say will remain strictly confidential. Neither your name nor telephone number will be sold or placed on any mailing list as a result of your participation. Your number has been randomly selected.

[Ask] Are you a resident of Washington State?
[If YES, continue.]
[If NO:] Thank you anyway. *[Hang up.]*

[For all questions below, mark 999 for “no response” or “refuses to answer.”]

SECTION 2: PERCEPTIONS

1. On a scale of 1-7, with 1 being “Not Important At All” and 7 being “Very Important,” how important an issue is litter in the state of Washington to you? You may use any number from 1 to 7.

1 2 3 4 5 6 7

2. I’m going to ask you about litter and littering. When I say “litter” I’m referring to materials on the ground or in the water that should have been disposed of properly, in a trash can or other garbage collection system. With that in mind, what types of litter do you recall seeing most? **[OPEN-ENDED]**

2.1 1st response _____

2.2 2nd response _____

2.3 Other responses **[PROMPT after 2nd response]**

[Responses should later be coded into the following categories]

	<u>2.1. 1st resp.</u>	<u>2.2. 2nd resp.</u>	<u>2.3. Other resp.</u>
a) Bottles, plastic	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Bottles, glass	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Bottles, unspecific	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d) Aluminum cans, alcoholic	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e) Aluminum cans, non-alcoholic	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
f) Aluminum cans, unspecific	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
g) Beverage cups, paper	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

h) Beverage cups, plastic	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
i) Beverage cups, unspecific	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
j) Bags, paper	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
k) Bags, plastic	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
l) Fast-food waste	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
m) Paper, unspecific	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
n) Cardboard	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
o) Glass, broken	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
p) Glass, unspecific	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
q) Cigarette butts	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
r) Tires	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
s) Automotive parts, unspecific	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
t) Wood (lumber, window panes)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
u) Construction debris, unspecific	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
v) Lawn debris (yard waste)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
w) Appliances (refrigerators, etc.)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
x) Cleaning agents	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
y) Motor oil	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
z) Paint, solvent	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
aa) Disposable diapers	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
bb) Condoms	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
cc) Needles/syringes	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
dd) Food	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
ee) Carpet, furniture, mattresses, clothes, shoes, other textiles	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
ff) Other, specify _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

3. Where do you think you see the most litter? **[PROMPT]**

**** (Rotate list to prevent bias)****

- Freeways
- City sidewalks
- Other roads or streets
- Exit ramps
- Parks or other similar public areas
- Sports places, fairgrounds
- Other _____

4. What do you think is the main source of litter in our state? **[PROMPT]**

**** (Rotate list to prevent bias)****

- Driving
- Walking
- Construction projects
- Uncovered loads
- Garbage collection
- Outdoor recreation or some
- Other activity (specify) _____

5. Thinking about the amount of litter in the state, would you say there is more litter, less litter or the same amount of litter today compared with 3 years ago?
 - a) More
 - b) Less
 - c) Same amount
 - d) Don't know

6. Would you say that most of our state's litter is accidental or deliberate?
 - a) Accidental
 - b) Deliberate
 - c) Both

7. What age group do you think is most responsible for creating litter?
 - a) Less than 13 years
 - b) 13-17 (teenagers)
 - c) 18-24 (college age)
 - d) 25-34 (young adults)
 - e) 35-44 (mid-aged)
 - f) 45-54
 - g) 55+
 - h) No special age group
 - i) Don't know

8. I'm going to read you 6 statements. Please tell me to what extent you agree or disagree with the following statements about why people litter, with 1 being "Strongly Disagree" and 7 being "Strongly Agree." You may use any number from 1 to 7.

**** (Rotate list to prevent bias) ****

To what extent do you agree or disagree that people litter because...

- | | | | | | | | | | | |
|--|---|---|---|---|---|---|---|---|---|---|
| 8.1. They don't realize it. | 1 | 2 | 3 | 4 | 5 | 6 | 7 | | | |
| 8.2. They don't care. | 1 | 2 | 3 | 4 | 5 | 6 | 7 | | | |
| 8.3. They think someone else will pick it up. | 1 | 2 | 3 | 4 | 5 | 6 | 7 | | | |
| 8.4. They don't have time to dispose of it properly. | 1 | 2 | 3 | 4 | 5 | 6 | 7 | | | |
| 8.5. There isn't a trashcan or bag nearby. | | | | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 8.6. They don't think their one piece of litter matters. | 1 | 2 | 3 | 4 | 5 | 6 | 7 | | | |

SECTION 3: LITTERING BACKGROUND

9. On a scale of 1-7, with 1 being "Not at all Likely" and 7 being "Very Likely", I'm going to read you a few scenarios, and want you to tell me how likely YOU PERSONALLY would be to do the following: You may use any number from 1 to 7.

**** (Rotate list to prevent bias) ****

9.1 To litter when you are holding an empty beverage container and there are no trashcans available.

1 2 3 4 5 6 7

9.2 To litter when you are holding a gum wrapper and there are no trashcans available.

1 2 3 4 5 6 7

9.3 To pick up a piece of scrap paper that you accidentally dropped.

1 2 3 4 5 6 7

9.4 To pick up a piece of litter someone else drops.

1 2 3 4 5 6 7

9.5 To litter when no one else is around, in other words, so nobody sees you do it.

1 2 3 4 5 6 7

9.6 To litter in an area that is clean.

1 2 3 4 5 6 7

9.7 To litter when you think a litter cleanup crew will be coming to the area to pick up litter.

1 2 3 4 5 6 7

9.8 To litter in general.

1 2 3 4 5 6 7

SECTION 4: LITTER PREVENTION STRATEGIES

Thinking of yourself or people you know, I want to ask you about ways to discourage people from littering. On a scale of 1-7, with 1 being "Not Very Effective" and 7 being "Very Effective," please rate the following strategies to discourage littering. You may use any number from 1 to 7.

**** (Rotate list to prevent bias) ****

10. How effective do you think educational programs in elementary, middle and high schools would be to discourage people from littering?

1 2 3 4 5 6 7

11. How about print, radio and television public awareness campaigns talking about litter prevention?

1 2 3 4 5 6 7

12. How about the enforcement of fines for littering?

1 2 3 4 5 6 7

13. How about having more trash cans in public places?

1 2 3 4 5 6 7

14. How about giving away free car litterbags when people renew their drivers' license?
1 2 3 4 5 6 7

Thinking of yourself or people you know, on a scale of 1 to 7, how effective would the following messages or actions be to convince you and people you know not to litter? You may use any number from 1 to 7. How effective would it be to...

****(Rotate list to prevent bias)****

15. Inform you and people you know that it costs \$2.5 million a year to pick up litter?
1 2 3 4 5 6 7

16. Tell you and people you know that littering is "not the right thing to do?"
1 2 3 4 5 6 7

17. Remind you and people you know that there is a fine for littering?
1 2 3 4 5 6 7

18. Let you know that there is a toll-free hotline others could use to report you for littering?
1 2 3 4 5 6 7

19. Have a well-known or famous person, such as an athlete, sponsor a public anti-litter campaign?
1 2 3 4 5 6 7

20. Remind you and people you know that even small items like cigarette butts and candy wrappers are litter problems?
1 2 3 4 5 6 7

21. Publicize that certain types of litter may cause harm to the environment (such as animals, fish or water)?
1 2 3 4 5 6 7

22. Show a graphic picture of what it would look like if litter wasn't cleaned up?
1 2 3 4 5 6 7

23. Have a slogan that evokes pride in your community, for example, "Keep Such-and-such Community Clean"?
1 2 3 4 5 6 7

24. For people who litter, which would you most likely support for enforcement – fines, community service, or both?
- a) Fines
 - b) Community service **[SKIP TO #26]**
 - c) Both
 - d) Neither **[SKIP TO #26]**

25. What level of fine do you think would be most appropriate? **[PROMPT.]**
- a) \$50
 - b) \$100
 - c) \$250
 - d) \$500
 - e) \$1,000 or some
 - f) Other amount (specify) _____

SECTION 5: LITTER BAG REQUIREMENT

26. Do you own or have regular use of a vehicle?
- a) Yes
 - b) No **[SKIP TO #28]**
 - c) Don't know **[SKIP TO #28]**
27. Is there a litterbag in this vehicle?
- a) Yes
 - b) No
 - c) Don't know
28. To the best of your knowledge, does Washington State require that vehicle owners carry a litterbag in their vehicle?
- a) Yes
 - b) No
 - c) Don't know

SECTION 6: DEMOGRAPHICS

We're almost done. I have just a few questions for classification purposes.

28. What is your age, please? Are you: **[PROMPT]**
- a) 13-17
 - b) 18-24
 - c) 25-34
 - d) 35-44
 - e) 45-54
 - f) 55+
29. What was the last level of education you had the opportunity to complete? **[MARK RESPONSE]**
- a) High school or less/ GED
 - b) Some college/Tech school
 - c) College grad
 - d) Post-graduate work/degree

30. What is your current employment status? **[PROMPT if necessary]**
- a) Full-time
 - b) Part-time
 - c) Student
 - d) Retired
 - e) Houseperson
 - f) Unemployed
 - g) Unemployed but looking
 - h) On disability, leave of absence
 - i) Other _____
31. How long have you been a Washington state resident? (# years) _____
[WRITE RESPONSE]
32. Do you or does a family member own or rent the home you currently live in?
- a) Own
 - b) Rent
 - c) Other _____
 - d) Don't know
33. How many children under 18 years of age live in this household? **[MARK RESPONSE]**
- a) 0
 - b) 1
 - c) 2-3
 - d) 4+
34. I'm going to read you some income ranges. Please tell me your household income range before taxes for 1998? Was it: **[PROMPT]**
- a) Under \$20,000
 - b) \$21,000-\$35,000
 - c) \$36,000-\$45,000
 - d) \$46,000-\$60,000
 - e) \$61,000-\$75,000
 - f) \$75,000 +
36. Gender: Male Female **[RECORD ONLY. Do not ask.]**

Thank you very much for your time. Have a good day.

Appendix B: Data Analysis Tables

For those accessing this report electronically, Appendix B is only available in hard copy. Please call the Dept. of Ecology Solid Waste & Financial Assistance Program at (360) 407-6900.