

REPORT

King County
Department of Natural Resources and Parks:
Environmental Behavior Index Survey
FINAL DRAFT

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EXECUTIVE SUMMARY

In 2005, King County developed a comprehensive index of people's behaviors that programs run by the Department of Natural Resources and Parks seek to impact. Dubbed the "Environmental Behavior Index" (EBI), the measures were designed to inform programs by tracking program effectiveness, helping with planning and prioritizing and creating information that could be used for education and outreach in the programs themselves.

The 2008 Environmental Behavior Index Survey builds on the prior years' research. It better assesses behavior of selected segments of the residential population. It adds items that address emerging areas of concern and eliminates or improves upon prior measures that needed modification.

THE ENVIRONMENTAL BEHAVIOR INDEX

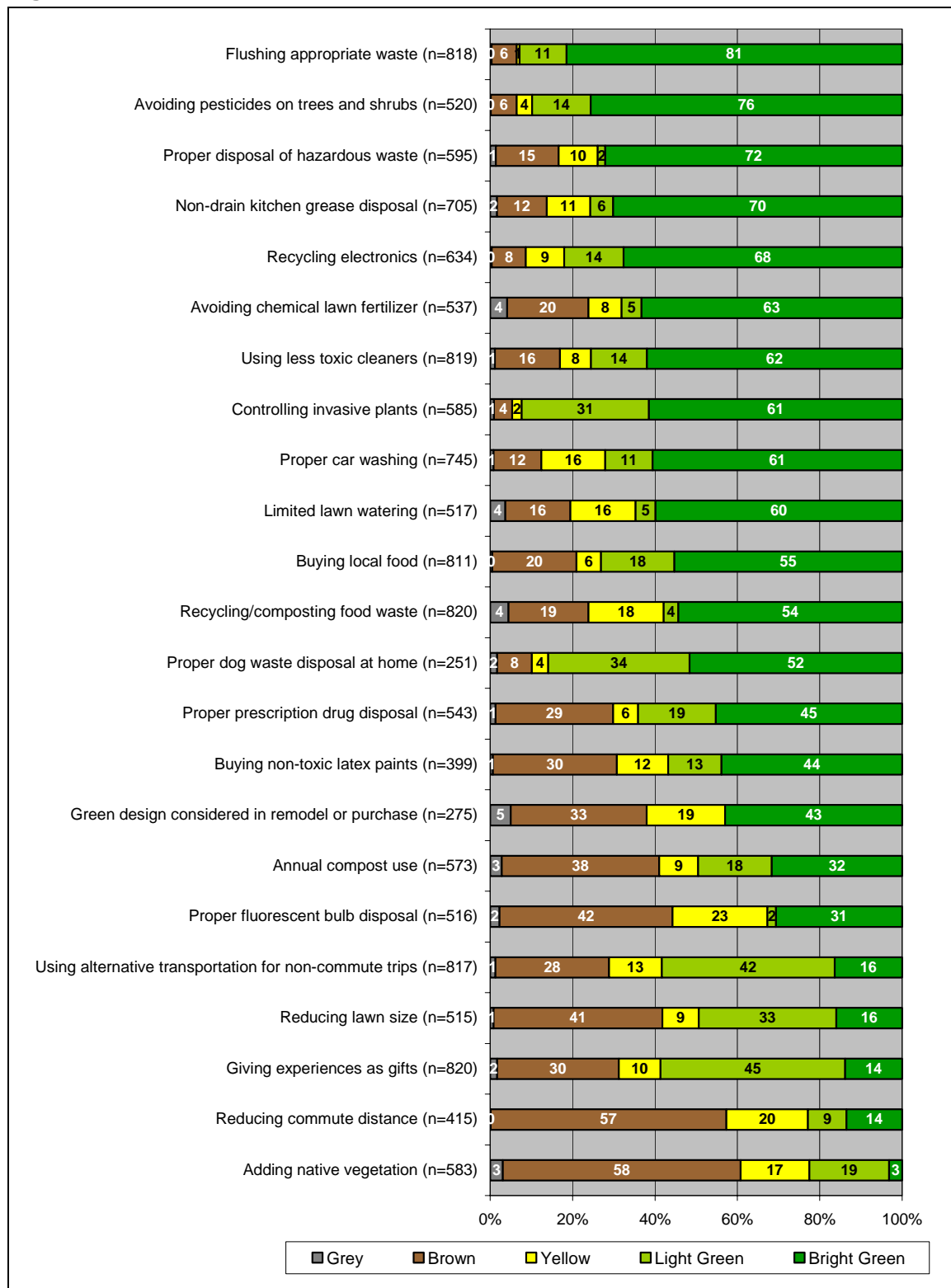
The 2008 Environmental Behavior Index is comprised of 24 behaviors (down from 30 in 2006). For each behavior, people were generally asked three questions:

1. What do you do? (Both improper and proper behaviors are provided as options)
2. How often do you do it that way? (Most of the time/some of the time)
3. Have you ever considered doing it differently? (Describe the proper behavior)

People's responses to these questions about each behavior provide information that classifies them into one of four categories:

- Bright Green – people who are consistently engaging in the desired behavior.
- Light Green – people who sometimes do the desired behavior, but sometimes do not.
- Yellow – people who do not do the desired behavior, but are considering doing it.
- Brown – people who do not do the desired behavior and who are not considering doing it.
- Grey – people who are unfamiliar enough with the behavior or their own household's practices that they couldn't respond to the questions.

The purpose of this classification is both to track change and to identify opportunities for creating change. Figure 1 shows all 24 behaviors from the 2008 EBI, sorted according to those that are being done consistently (Bright Green) for the 821 respondents.

Figure 1. The Environmental Behavior Index 2008

Bright Green – consistently performs preferred behavior; Light Green – inconsistently performs preferred behavior; Yellow – Considering preferred behavior; Brown – not considering/discussing preferred behavior; Grey – don't know/unfamiliar with topic

The greatest opportunities are contained in the behaviors that have at least 15% of people who are either considering the behavior (Yellow) or doing the behavior inconsistently (Light Green). There are many clear opportunities for addressing change in people's behaviors as all but three items show more than 15% of people are considering the appropriate behavior or engaging in the behavior inconsistently (Yellow and Light Green).

CONCLUSIONS AND RECOMMENDATIONS

The 2008 EBI offers opportunities for King County to explore how ongoing use of a powerful survey tool can inform programs and track change.

Choosing target Behaviors and audiences

A great deal of the report is dedicated to describing the willingness of segments of the population with regard to each behavior. There is no hard and fast rule to decide upon a target audience, but willingness to engage in the behavior is the most important of many dimensions to take into account. People who will not consider a behavior take far more resources to convince than people who are already open to learning more about an issue.

Table 1 includes the ten composite behaviors with the highest proportion of Light Green and Yellow categories. These are the behaviors that have the largest group of people who are already doing the behavior inconsistently or who are considering engaging in the behavior. Efforts may be most fruitful when the willingness to change is coupled with an established norm and low levels of resistance. The ten behaviors presented in Table 1 were evaluated for higher levels of Bright Green and corresponding lower levels of Brown. Behaviors where there is a favorable ratio of Light Green/Yellow to Brown are shaded. These are behaviors that may present the best opportunities for change.

Table 1. Composite behaviors ranked by willingness to change

	% Light Green and Yellow
Giving experiences as gifts	55%
Using alternative transportation for non-commute trips	55%
Reducing lawn size	42%
Proper dog waste disposal at home	38%
Adding native vegetation	36%
Controlling invasive plants	33%
Reducing commute distance	29%
Annual compost use	27%
Proper car washing	27%

Buying non-toxic latex paints	25%
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Table 1 suggests some areas to concentrate on programmatically. However the size of the target audience is another dimension to consider. If there are very few people who make up the sub group, focusing a program's resources on them could result in little measurable change. In addition, they may be hard to find or hard to reach. Resident segmentation should add to the insights program managers gain from the findings, and can begin to steer them toward the best opportunities to have an impact on large portions of the population.

In addition to willingness and size of the segments, three other variables should be considered when choosing target populations for Social Marketing approaches.

1. The prevalence of the behavior within a specific segment
2. Whether or not the segment is easy to identify
3. How reachable that segment is

The prevalence of the behavior may be higher in certain segments, suggesting programmatic focus. For example, if men are more likely than women to be a decision maker about yard care issues, then the impact of targeting men may be more substantial than targeting women.

The second two variables listed above are often related. For example, does the target population tend to live in distinct areas that could give a geographically-resourced program an edge? Do they tend to engage in similar activities? Do they trust information and seek it out from similar sources? Are there databases of contact information that are readily available? If so, that segment becomes one that programs could select for a focus.

Future Research and Additional analysis

It will be useful to explore how changes to the survey affect program information. We believe that measures of behaviors that show high levels of adoption and low levels of willingness to change could be rotated out of the EBI. These items could be revisited with periodic inclusion in the full survey to make sure ground is not lost.

As described in the report, many measures suggest a need for additional research to clarify the barriers and motivators for engaging people in the desired behaviors. These investigations will be most productive if they are audience specific – identifying key

characteristics of people in the population and customizing the investigations to address the subgroup's specific needs.

Expensive research is not required. A great deal can be learned from informal discussions if they are entered into with a spirit of real inquiry and facilitator judgments and bias are kept carefully in check. Learning what people think about the topic -- whether they are well informed or not, and whether their view is considered appropriate or not -- is critical so that programs can appropriately speak to their target audiences. Programs that do not speak to the key concerns of the audience will see limited change compared to those that do.

Additional analysis could help reveal stronger profiles of residents that engage in sets of behaviors. If so, programs can strategize to leverage each others resources and together create more change.

The addition of the EBI scale to this year's work is valuable. Additional analysis could indicate where the key drivers are to engaging in desirable behaviors or creating a willingness to do so, and thereby help bring into focus the most robust target audience.

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INTRODUCTION

In 2005, King County developed a comprehensive index of people's behaviors that programs run by the Department of Natural Resources and Parks seek to impact. Dubbed the "Environmental Behavior Index" (EBI), the measures were designed to inform programs by tracking program effectiveness, helping with planning and prioritizing and creating information that could be used for education and outreach in the programs themselves.

The 2008 Environmental Behavior Index Survey builds on the prior years' research in several ways. Each of the following changes takes into consideration the usefulness of the index to program managers as well as the need to track change over time.

- The 2008 EBI is more audience-specific, focusing on people living in apartments, those in rural areas, and people who did not attend college. This enables program managers to learn where the hot spots are for certain behaviors and augment their programs to better meet people's needs.
- The survey was modified to address emerging areas of concern including climate change-related behavior, purchase of local foods and picking up pet waste at home.
- Behaviors that had already been adopted by a substantial majority of households were dropped and items that were poor functioning, upon which programs could have little impact, or that didn't apply to many people were removed or improved.

The EBI is organized according to four broad areas of interest:

1. Waste avoidance, disposal and recycling behavior
2. Disposal down indoor drains – flushing and other behaviors that impact water quality and water treatment
3. Yard care, biodiversity and water quality
4. Environmentally conscientious lifestyle choices

This report is organized to address the index overall, then delves into the details of each set of items.

In all, 821 surveys were completed. A complete description of the methods used in the research is included in Appendix A (under separate cover). The actual telephone script used can be found in Appendix B. The verbatim responses given to the open-ended questions can be found in Appendix C.

This report uses the convention of *italicizing* any verbatim response option from the survey in an effort to fully convey the voice of the residents' survey responses.

FINDINGS

This section describes the findings for each environmental behavior and makes comparisons (where possible) to the 2005-06 findings. Each behavior is presented with four sections: item summary, composite summary, resident segmentation, and key recommendations. Some notes on reading these sections are included here.

Item summary

Each environmental behavior in the index is constructed from several survey items. An item summary is presented for each behavior in order to show how respondents answered these individual questions. For consistency throughout the report, percentages for individual items are based on all people who were asked the question, even if they answered *don't know* or *other*. In many cases these are meaningful responses, though the numbers are small and generally would not influence the totals in a substantial way. The figures within the item summary represent all the individuals who answered the questions.

Composite summary

The composite measure illustrates what proportion of the respondents fall into the five EBI categories (described in detail in the following section). The figures in the composite summary represent all the respondents who have an opportunity to engage in the behavior. This is often a subset of the respondents who answered the individual questions. For example, not all respondents use hazardous products (like drain cleaner or insecticides). Those who don't use hazardous products were not included in that composite measure. Because this changes the total number used to calculate the percentage, the figures in the composite measure do not always align with the item summary.

Resident segmentation and key recommendations

The resident segmentation shows the distribution of the composite measure for particular subgroups based on:

- Age
- Education
- Income
- Ethnicity
- Type of residence (apartments, single family)
- Sex
- Place of residence (rural or suburban/urban)

- Marital status
- Presence of children in the household

Resident segmentation is followed by key recommendations which are based on the composite measure and the segmentation.

THE ENVIRONMENTAL BEHAVIOR INDEX

The 2008 Environmental Behavior Index is comprised of 24 behaviors (down from 30 in 2006). Of the 24, 14 were also in the 2006 survey, and several more were modified between 2006 and 2008. For each behavior, people were generally asked three questions:

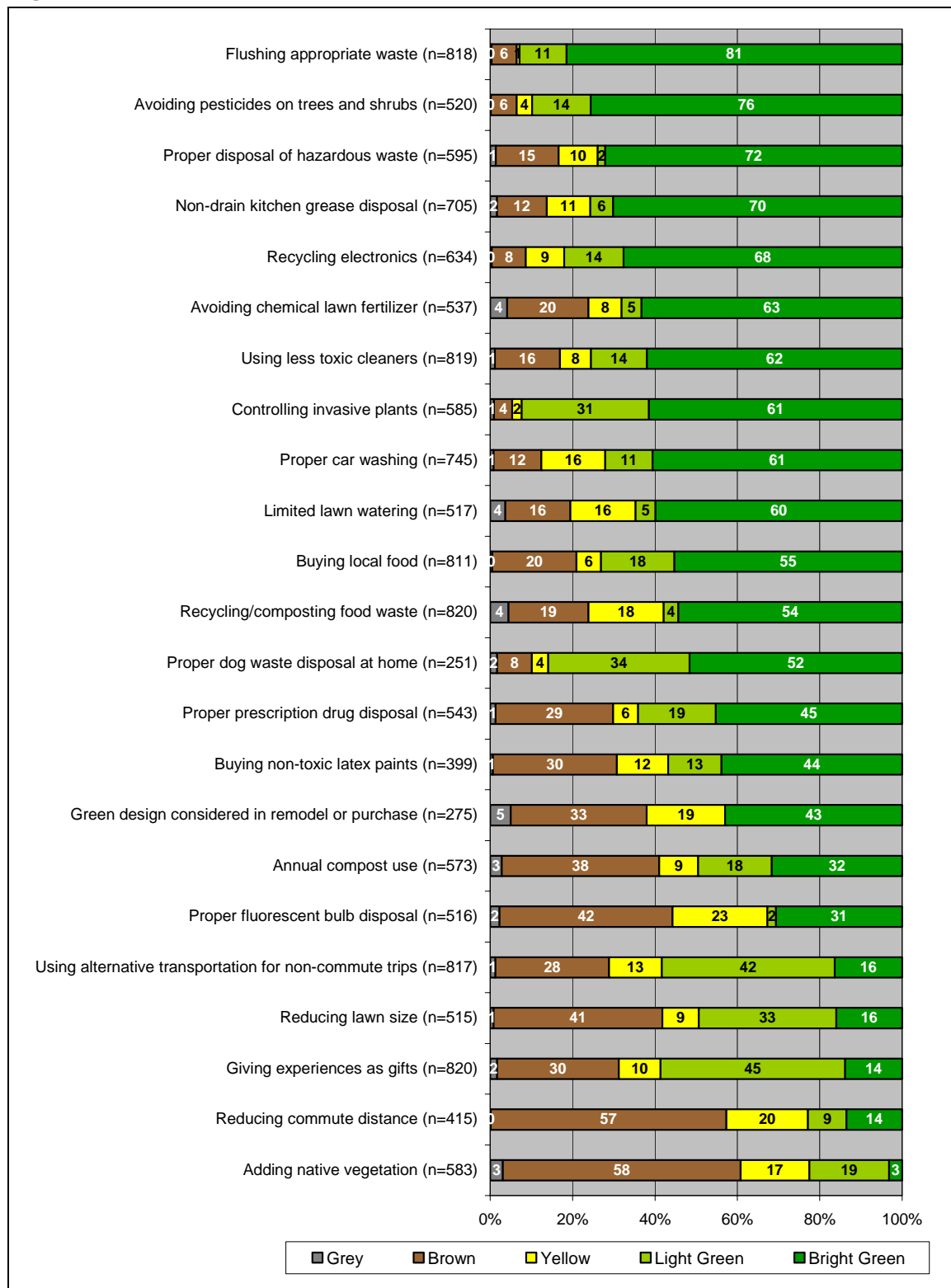
1. What do you do? (Both improper and proper behaviors are provided as options)
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3. Have you ever considered doing it differently? (Describe the proper behavior)

People's responses to these questions about each behavior provide information that classifies them into one of four categories:

- Bright Green – people who are consistently engaging in the desired behavior.
- Light Green – people who sometimes do the desired behavior, but sometimes do not.
- Yellow – people who do not do the desired behavior, but are considering doing it.
- Brown – people who do not do the desired behavior and who are not considering doing it.
- Grey – people who are unfamiliar enough with the behavior or their own household's practices that they couldn't respond to the questions.

The purpose of this classification is both to track change and to identify opportunities for creating change. The greatest opportunities are contained in the behaviors that have at least 15% of people who are either considering the behavior (Yellow) or doing the behavior inconsistently (Light Green). Generally, these are households that are aware of the issues that undesirable behaviors create, but something is keeping them from doing the more desirable behavior. Typical culprits are personal motivation, remembering to do it, added cost in terms of time, money or effort (in some cases simple inconvenience), missing knowledge or information, a lack of familiarity with the behavior (skills and experience), or having the right tools and materials and knowing where to get them.

Figure 1 shows all 24 behaviors from the 2008 EBI, sorted according to those that are being done consistently (Bright Green).

Figure 1. The Environmental Behavior Index 2008

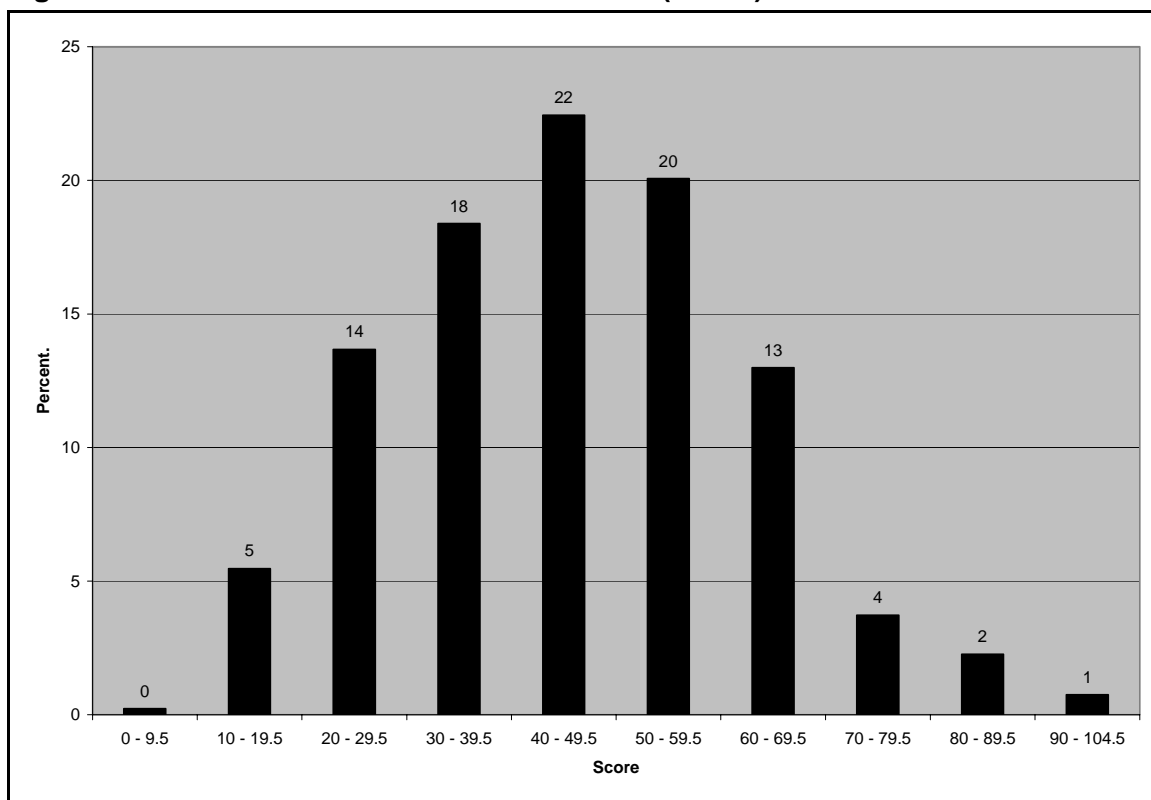
Bright Green – consistently performs preferred behavior; Light Green – inconsistently performs preferred behavior; Yellow – Considering preferred behavior; Brown – not considering/discussing preferred behavior; Grey – don't know/unfamiliar with topic

There are many clear opportunities for addressing change in people's behaviors as nearly every item shows more than 15% of people are considering the appropriate behavior or engaging in the behavior inconsistently (Yellow and Light Green).

THE ENVIRONMENTAL BEHAVIOR INDEX SCALE

In the interest of creating a single, summative measure of all these behaviors, managers at King County assigned a value to each improper behavior that would estimate the impact of each behavior on the local environment and community – impacts such as prevention of water and air pollution, impacts to human health as well as plants and other animals (see Appendix A for a complete description of the measures). Figure 2 illustrates the total EBI score for all respondents. The resulting scale ranges from 0 to 105 with a peak at about 45 points.

Figure 2. Environmental Behavior Index Scale (n=821)

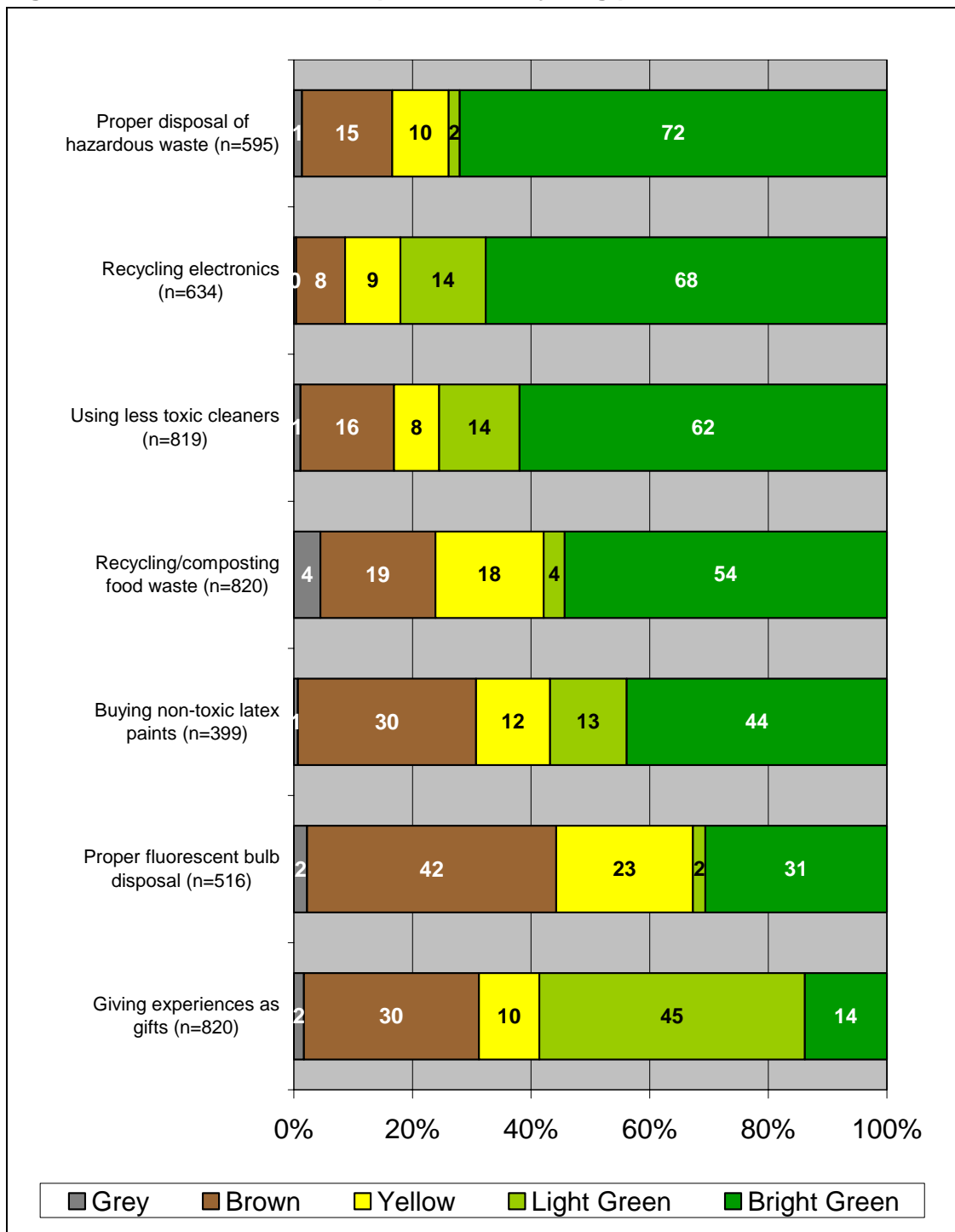


The scores show that while most residents (60%) fall on the lower end of the scale (fewer negative impacts), there are some households that are contributing to a number of problems in the area (7% of those surveyed scored at 70 points or higher on the scale). This scale will allow for future research to conduct comparisons of overall impact across time or within particular segments.

WASTE AVOIDANCE, DISPOSAL AND RECYCLING PRACTICES

Seven items from the 2008 EBI relate to problems of solid waste disposal.

Figure 3. Waste avoidance, disposal and recycling practices



Bright Green – consistently performs preferred behavior; Light Green – inconsistently performs preferred behavior; Yellow – Considering preferred behavior; Brown – not considering/discussing preferred behavior; Grey – don't know/unfamiliar with topic.

Proper disposal of hazardous waste

The individual survey items regarding the disposal of hazardous waste are discussed below followed by a summary of the composite measure, resident segmentation of this measure and key recommendations.

Item summary

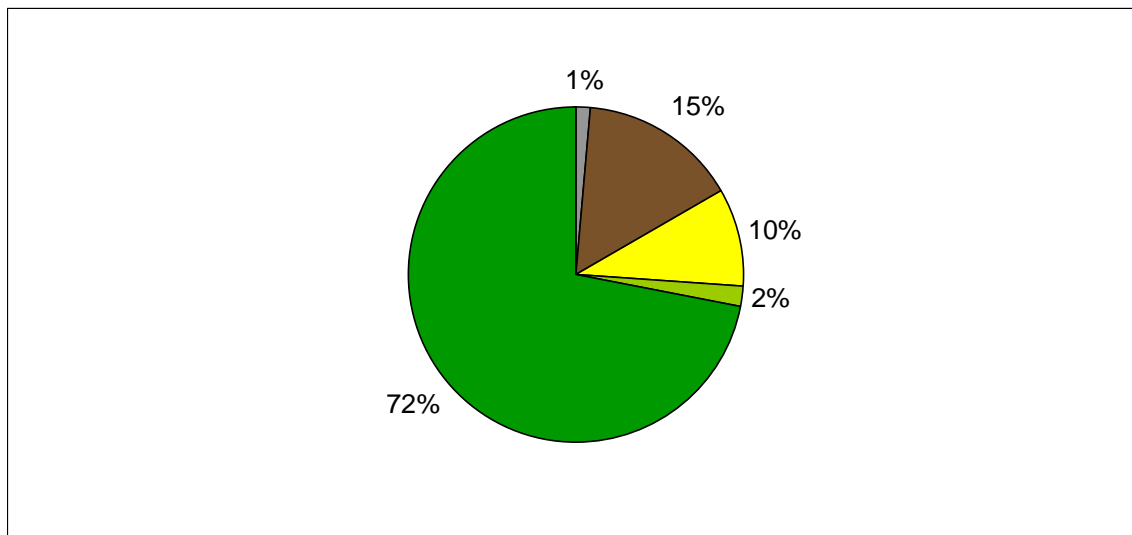
Respondents were asked how they dispose of hazardous products (like drain cleaner or insecticides). Just over one-quarter said they *do not ever use either type of product* (27%). One-fifth of respondents use them up so there was nothing needing disposal (18%). Others take their leftover products to a hazardous waste collection site (24%), or special recycling services or events (11%). All together, 12% of respondents dispose of the products improperly by throwing them in the trash or flushing them down the drain.

Since nearly one-quarter of respondents don't use products like these, they are not able to dispose of such products and are therefore left out of the indicator. However, readers should note that this is a desirable behavior since it also prevents any negative impact from disposing of hazardous products.

Composite summary

Of the 595 respondents who use hazardous products, 72% dispose of them properly *all or most* of the time. Among those who do not dispose of them properly, most are not considering doing so (15%).

Figure 4. Proper disposal of hazardous waste (n=595)



Bright Green – consistently performs preferred behavior; Light Green – inconsistently performs preferred behavior; Yellow – Considering preferred behavior; Brown – not considering/discussing preferred behavior; Grey – don't know/unfamiliar with topic.

The pattern in this indicator suggests several things about hazardous waste disposal. First, awareness is relatively high. Only two other behaviors in the EBI did better (see Figure 1). Second, it appears that there are not many barriers to proper disposal. For the most part, people either do not use the products or consistently dispose of them properly. Only 12% of those who have such products to dispose of, few are doing so inconsistently (2% - Light Green) or considering proper disposal (10% - Yellow). The fact that 15% are not considering proper disposal may suggest a lack of awareness about the issues. Further exploration is needed. They may be unaware of the hazard, or aware of the hazard, but unaware that the products should not go in the trash or down the drain. Campaigns should continue to reward the behaviors and also continue to at least raise awareness among the Brown folks who are not considering proper disposal.

Resident segmentation

Below is a table showing the willingness of each segment of the population to engage in proper hazardous waste disposal.

Note on table interpretation

Throughout this findings section, resident segmentation is presented for each behavior with a table illustrating the proportion of particular segments that fall into the categories of doing the behavior (Bright Green), willing to do the behavior (Light Green or Yellow), and unwilling to do the behavior (Brown or Grey).

Segments in which 15% or more are willing (shaded above) suggest areas where the program may be most productive. When that is coupled with a relatively large portion of people who are Bright Green, it suggests that there may be stronger norms among that population for the behavior than where there are few who are Bright Green. Considering the proportion that is categorized as Brown will give managers a sense of how often they will encounter disinterest or resistance within that population.

In addition, managers can consider how large the population is, and the size of the willing population (the final columns of the table). The larger the size of the willing population, the more opportunity there is for substantial net effects of behavior change.

Table 1. Proper hazardous waste disposal within resident segments

	Doing (Bright Green)	Willing (Light Green or Yellow)	Unwilling (Brown or Grey)	Size of segment	Size of willing population
Apartment	55%	12%	33%	23%	3%
Non-apartment	76%	11%	13%	76%	9%
College	78%	10%	12%	74%	8%

No college	52%	15%	33%	26%	4%
Lower income (<\$50K/yr)	58%	15%	27%	40%	6%
Moderate income (\$50-75K/yr)	79%	7%	14%	17%	1%
High income (>\$75k/yr)	80%	10%	10%	43%	4%
Younger (<35)	65%	9%	25%	10%	1%
Middle aged	70%	14%	16%	61%	9%
Older (65+)	81%	5%	14%	29%	1%
Female	70%	15%	15%	60%	9%
Male	75%	7%	18%	40%	3%
Rural	80%	10%	10%	6%	1%
Non-rural	72%	11%	17%	94%	11%
Married	76%	11%	14%	63%	7%
Unmarried	65%	13%	22%	37%	5%
Parenting	65%	16%	19%	26%	4%
Non-parent	75%	10%	16%	74%	7%
White	77%	9%	14%	82%	7%
Non-white	50%	23%	27%	18%	4%

As mentioned previously, a large proportion of residents indicated consistency in this behavior. A fairly small proportion of the population is willing, and there are few differences among the resident segments. There are four segments that were strongly differentiated in terms of being Bright Green or Brown, they are:

- Apartment dwellers
- Lower income households
- Residents without a college education
- Non-white residents

In all these segments, far fewer households were Bright Green (52-58%), and substantially more were Brown (27-33%).

Key recommendations

The segments that met or exceeded the threshold of 15% being willing (shaded above) are relatively small segments; translating to a fairly small impact. If there are readily available or existing channels for reaching these subgroups of the population, program efforts could work to remove barriers and provide incentives for these groups. If there are not ready channels to reach these residents, it is recommended that messaging be universal, emphasizing education about disposal methods.

Recycling electronics

The individual survey items regarding the recycling electronics are discussed below followed by a summary of the composite measure, resident segmentation of this measure and key recommendations.

Item summary

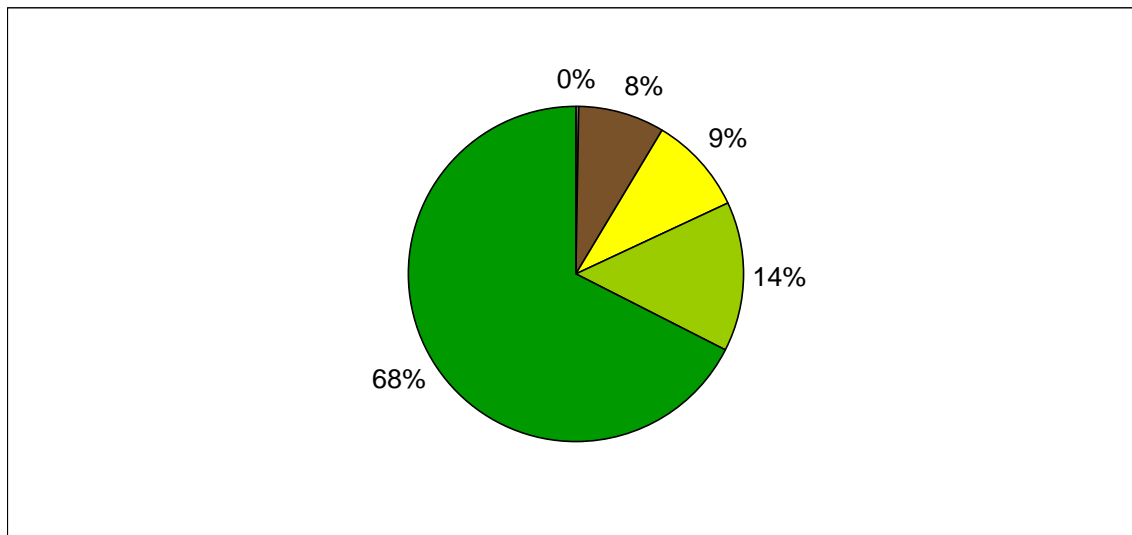
Respondent were asked what they do with “electronics you no longer want, including computers, computer monitors and television sets.” These devices can contain a wide variety of toxic materials that if disposed of improperly can cause harm. Recycling could be done in several ways. Most respondents either give their electronics away (21%) or take them to a special recycling event (28%). Another 20% said they have never had electronics like those to dispose of (and so are not included in the overall indicator). Five percent (5%) say they put it in the trash or take it to the dump.

Among those who mentioned recycling in some form, 79% said they do this all or most of the time. Among those who do not recycle their electronics, methods were evenly split between those who were considering or talking about recycling (9%) and those who were not (8%).

Composite summary

The composite measure is based on the respondents who have had electronics to dispose of. Although a high portion of these people are disposing of electronics properly and consistently (68% Bright Green), 23% are either doing so inconsistently or are only considering doing so (Light Green and Yellow). Recycling electronics is a behavior that is ripe for on-going efforts to produce more consistent outcomes.

Figure 5. Recycling electronics (n=634)



Bright Green – consistently performs preferred behavior; Light Green – inconsistently performs preferred behavior; Yellow – Considering preferred behavior; Brown – not considering/discussing preferred behavior; Grey – don't know/unfamiliar with topic.

Resident segmentation

Below is a table showing the willingness of each segment of the population to engage in proper electronics disposal. For assistance on reading this table, see the note on table interpretation preceding Table 1.

Table 2. Recycling electronics within resident segments

	Doing (Bright Green)	Willing (Light Green or Yellow)	Unwilling (Brown or Grey)	Size of segment	Size of willing population
Apartment	55%	28%	17%	23%	6%
Non-apartment	71%	23%	7%	76%	17%
College	68%	26%	7%	74%	19%
No college	67%	18%	15%	26%	5%
Lower income (<\$50K/yr)	63%	20%	17%	40%	8%
Moderate income (\$50-75K/yr)	59%	35%	6%	17%	6%
High income (>\$75k/yr)	76%	21%	3%	43%	9%
Younger (<35)	58%	40%	1%	10%	4%
Middle aged	68%	25%	8%	61%	15%
Older (65+)	72%	13%	15%	29%	4%
Female	70%	22%	8%	60%	13%
Male	65%	26%	9%	40%	10%
Rural	76%	20%	5%	6%	1%
Non-rural	67%	24%	9%	94%	23%
Married	71%	23%	5%	63%	15%
Unmarried	61%	24%	15%	37%	9%
Parenting	72%	20%	8%	26%	5%
Non-parent	66%	25%	9%	74%	19%
White	69%	23%	8%	82%	19%
Non-white	60%	26%	14%	18%	5%

It is interesting to note that those in apartments are least likely to be Bright Green (55%). Younger residents are as well (58%) though a very high proportion is willing to recycle electronics (40%).

Key recommendations

Most segments indicate an adequate level of willingness (more than 15%) to merit addressing programmatically. However, some of the most willing populations are also relatively small (for example, those under age 35). All shaded rows represent groups that have more than 15% willing and more than 15% of the population. Clearer understanding of what prevents each of these sub groups from consistently recycling electronics could substantially inform programs.

Using less toxic cleaners

The individual survey items regarding the use of less toxic cleaners are discussed below followed by a summary of the composite measure, resident segmentation of this measure and key recommendations.

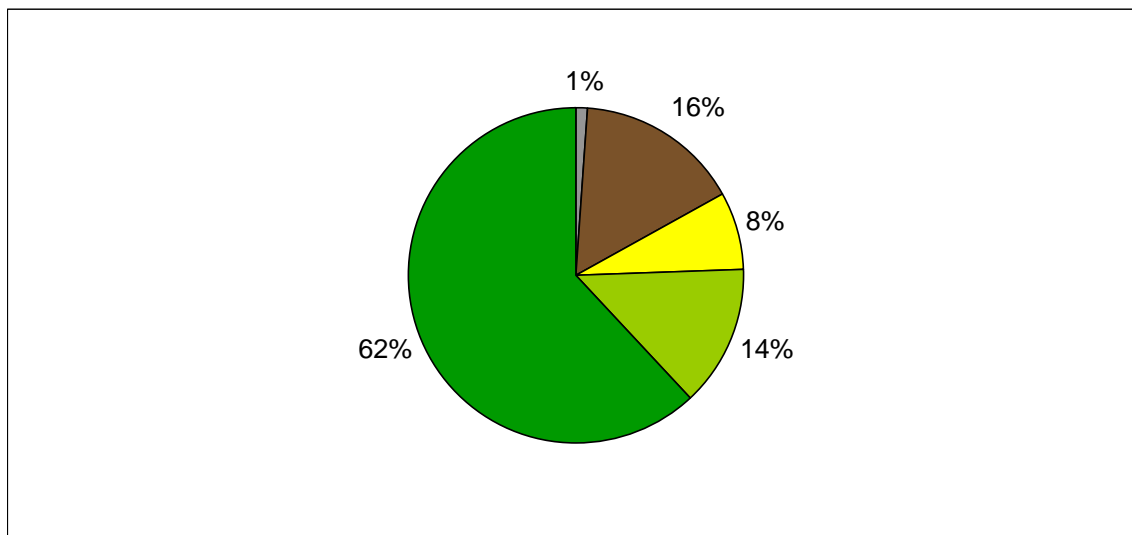
Item summary

Respondents were asked “Do you make a point of choosing household cleaning products that are said to be less toxic?”¹ and 76% said they do. Among those who do not choose less toxic cleaners, one third are considering it. These items applied to everyone so the composite measure reflects all respondents who answered the questions.

Composite summary

Most choose less toxic cleaning products consistently (62%), though a substantial minority does so inconsistently (14%). Eight percent of respondents were classified as Yellow because they are considering or discussing doing choosing these types of products.

Figure 6. Using less toxic cleaners (n=819)



Bright Green – consistently performs preferred behavior; Light Green – inconsistently performs preferred behavior; Yellow – Considering preferred behavior; Brown – not considering/discussing preferred behavior; Grey – don't know/unfamiliar with topic.

¹ If a cleaning service was mentioned, respondents were asked if they had asked the service to use less toxic cleaners.

Resident segmentation

Below is a table showing the willingness of each segment of the population to choose less toxic cleaning products. For assistance on reading this table, see the note on table interpretation leading up to Table 1.

Table 3. Using less toxic cleaners within resident segments

	Doing (Bright Green)	Willing (Light Green or Yellow)	Unwilling (Brown or Grey)	Size of segment	Size of willing population
Apartment	60%	23%	17%	23%	5%
Non-apartment	62%	21%	17%	76%	16%
College	64%	22%	14%	74%	17%
No college	57%	18%	25%	26%	5%
Lower income (<\$50K/yr)	59%	20%	21%	40%	8%
Moderate income (\$50-75K/yr)	63%	23%	13%	17%	4%
High income (>\$75k/yr)	63%	23%	14%	43%	10%
Younger (<35)	57%	31%	12%	10%	3%
Middle aged	62%	22%	16%	61%	14%
Older (65+)	64%	15%	21%	29%	4%
Female	65%	22%	13%	60%	13%
Male	58%	20%	23%	40%	8%
Rural	63%	17%	21%	6%	1%
Non-rural	62%	21%	17%	94%	20%
Married	60%	23%	16%	63%	15%
Unmarried	64%	17%	18%	37%	6%
Parenting	64%	21%	15%	26%	6%
Non-parent	61%	21%	17%	74%	16%
White	61%	22%	17%	82%	18%
Non-white	65%	19%	15%	18%	4%

Respondents without a college education are more likely to be unwilling (25%) than those with a college education (14%). Males are similarly unlikely to be considering change, though not entirely unreceptive (23% unwilling compared to 13% of females).

It is interesting that parenting respondents are so similar to non-parenting respondents since parents are generally believed to be more proactive about keeping hazardous chemicals from their children. In this case, they were not.

Key recommendations

All segments indicate an adequate level of willingness (more than 15%) to merit addressing programmatically, though some of the most willing populations are relatively small (e.g. those under 35).

The relatively large portion of people who choose less toxic cleaners inconsistently (14% compared to 8% who are considering doing so) suggests an opportunity for further research. It may be that they are inconsistent because they consider certain types of cleaners ineffective. For example, a less toxic floor cleaner or clothing detergent may be considered as effective as the more conventional cleaner, but for dishes or the bathroom, more conventional cleaners may be seen as more effective (in dealing with grime or removing germs). Identifying which types of conventional cleaners tend to be preferred could provide useful information for further discussions with people who are not consistently choosing less toxic cleaners.

Parents may have specific aspects of cleaning that they focus on. For example they may be considering the effectiveness of non-toxic cleaners and the impact of germs on human health. If germs are considered more of a hazard to the children than the chemicals, they may choose chemicals over non-toxic cleaners.

Recycling/composting food waste

The individual survey items regarding the recycling and composting of food waste are discussed below followed by a summary of the composite measure, resident segmentation of this measure and key recommendations.

Item summary

Respondents were asked how they dispose of food waste, including waste from food preparation, as well as table scraps. The responses to this item are summarized in Table 4. The most common response was to put it in the trash or take it to the dump (37%).

Table 4. How do you dispose of food waste?		
	<u>n</u>	<u>%</u>
In the household garbage/trash - take to dump/transfer station	300	37
In the garbage disposal (sink)	194	24
Yard waste containers for curbside collection	142	17
Compost at home/compost pile, food cone, bury, worm bin	122	15
Other	38	5
Feed to pet, livestock or birds	19	2
Don't know/refused to answer	5	1
Total	821	100

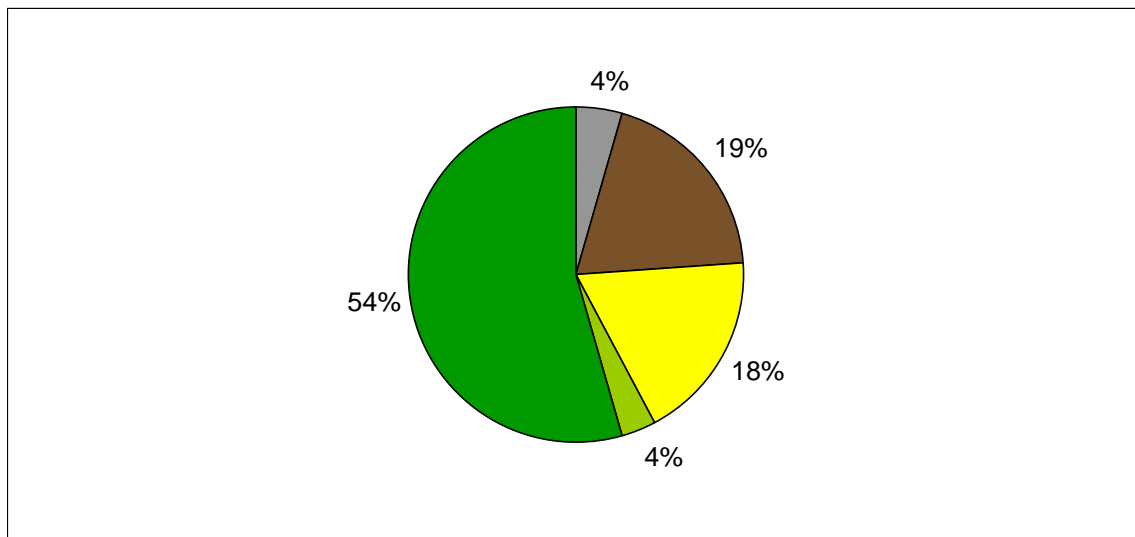
Of those who use composting, yard waste containers, feed the waste to pets or use the garbage disposal, almost all of them (94%) say this is their *usual practice*. Those who

do not put food waste into a bin for curbside pick up were asked if they ever do so. About one in four (25%) said they do, while a similar portion said they do not have yard waste curbside pick up service (21%).

Composite summary

The findings from the individual survey questions translate into an indicator (below) with three substantial categories – Bright Green (54%), Yellow (18%) and Brown (19%). The majority are already performing the desired behavior, though a substantial percentage is inconsistent but willing to make changes in their recycling/composting behavior (22% Light Green and Yellow).

Figure 7. Recycling/composting food waste (n=820)



Bright Green – consistently performs preferred behavior; Light Green – inconsistently performs preferred behavior; Yellow – Considering preferred behavior; Brown – not considering/discussing preferred behavior; Grey – don't know/unfamiliar with topic.

Resident segmentation

Below is a table showing the willingness of each segment of the population to engage in proper food waste disposal. For assistance on reading this table, see the note on table interpretation leading up to Table 1.

Table 4. Food waste disposal within resident segments

	Doing (Bright Green)	Willing (Light Green or Yellow)	Unwilling (Brown or Grey)	Size of segment	Size of willing population
Apartment	31%	21%	47%	23%	5%
Non-apartment	61%	22%	17%	76%	17%
College	56%	22%	21%	74%	17%

No college	49%	20%	32%	26%	5%
Lower income (<\$50K/yr)	48%	22%	30%	40%	9%
Moderate income (\$50-75K/yr)	53%	16%	30%	17%	3%
High income (>\$75k/yr)	57%	28%	14%	43%	12%
Younger (<35)	38%	36%	26%	10%	4%
Middle aged	54%	24%	22%	61%	14%
Older (65+)	60%	14%	26%	29%	4%
Female	57%	23%	20%	60%	14%
Male	51%	20%	29%	40%	8%
Rural	52%	25%	23%	6%	2%
Non-rural	55%	22%	24%	94%	20%
Married	59%	21%	19%	63%	13%
Unmarried	46%	23%	32%	37%	8%
Parenting	54%	27%	19%	26%	7%
Non-parent	55%	20%	26%	74%	15%
White	57%	22%	21%	82%	18%
Non-white	44%	20%	36%	18%	4%

The largest differences are seen among younger respondents (<35) compared to other age groups. Those living in apartments are very unwilling (47% Brown or Grey) and may have the most significant barriers to overcome.

Key recommendations

Since more than 15% of all groups are willing, those that are largest in the King County population represent good targets for programs. These groups are shaded in the table. Most segments indicate an adequate level of willingness (more than 15%) to merit addressing programmatically. However, the segments with higher levels of willingness are not the largest.

The survey addressed on two barriers to this behavior – a lack of curbside yard waste pick up and having yard waste pick up but having a contractor who doesn't allow food to be included. Among those who had curbside yard waste pick up, 27% said they are not allowed to dispose of food waste with their yard waste. Another 39% said they do not know if they are allowed to or not. It may be useful for King County to target solid waste haulers to be sure they are carrying food waste if they can, and to promote the use of yard waste containers for food waste, since awareness seems to be low.

Buying non-toxic latex paints

The individual survey items regarding the purchase of non-toxic latex paints are discussed below, followed by a summary of the composite measure, resident segmentation of this measure and key recommendations.

Item summary

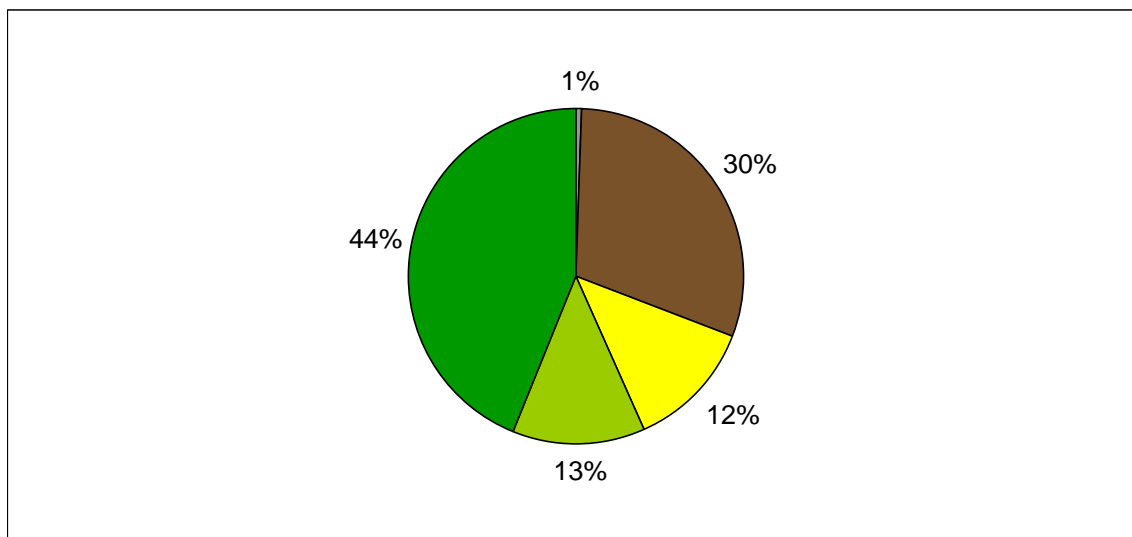
Respondents were asked “Do you make a point of buying latex or water-based paint, stains or sealers instead of oil-based ones for projects such as walls, ceilings, window trim, decks or siding?” and 65% said they do. Another 26% said they never buy or use paints, stains or sealers (and so are not included in the indicator). Among those who do buy latex paints, 86% said they do so *always* or *usually*. Because these numbers are relatively high, this year’s survey focused on low-toxicity and low-VOC latex paint purchases – a more challenging behavior to adopt.

Forty percent (40%) of latex paint users answered yes when asked “Do you make a point of purchasing ones that are classified as low toxic or low VOC (volatile organic compounds)?” Among those who do buy non-toxic latex paints, most (78%) said they do so *always* or *usually* (44% of all latex paint users).

Composite summary

Among those who buy latex paint, just under half (44%) buy a non-toxic product all the time. Figure 8 shows that a relatively large portion is not considering the behavior (30%). The remainder is split between those who are buying non-toxic latex paints inconsistently (13%) or considering doing so (12%).

Figure 8. Buying non-toxic latex paints (n=399)



Bright Green – consistently performs preferred behavior; Light Green – inconsistently performs preferred behavior; Yellow – Considering preferred behavior; Brown – not considering/discussing preferred behavior; Grey – don't know/unfamiliar with topic.

Resident segmentation

Below is a table showing the willingness of each segment of the population to choose low non-toxic paints. For assistance on reading this table, see the note on table interpretation leading up to Table 1. Shaded rows indicate good opportunities for change.

Table 5. Buying non-toxic latex paints within resident segments

	Doing (Bright Green)	Willing (Light Green or Yellow)	Unwilling (Brown or Grey)	Size of segment	Size of willing population
Apartment	50%	25%	25%	23%	6%
Non-apartment	43%	25%	31%	76%	19%
College	43%	29%	29%	74%	21%
No college	51%	7%	42%	26%	2%
Lower income (<\$50K/yr)	56%	13%	31%	40%	5%
Moderate income (\$50-75K/yr)	45%	27%	27%	17%	5%
High income (>\$75k/yr)	35%	32%	33%	43%	14%
Younger (<35)	66%	20%	14%	10%	2%
Middle aged	40%	30%	30%	61%	18%
Older (65+)	46%	13%	41%	29%	4%
Female	46%	29%	25%	60%	17%
Male	41%	21%	38%	40%	8%
Rural	29%	16%	55%	6%	1%
Non-rural	45%	26%	29%	94%	25%
Married	41%	28%	31%	63%	18%
Unmarried	52%	17%	31%	37%	6%
Parenting	45%	30%	25%	26%	8%
Non-parent	44%	23%	33%	74%	17%
White	42%	24%	34%	82%	19%
Non-white	53%	33%	14%	18%	6%

Several segments are evenly split between Bright Green and Brown/Grey (with low levels of willingness). They are respondents without college education, older respondents and those with lower income levels. This kind of polarization is interesting to note. There may be further subgroups within them that explain why some members fully adopt the behavior while others are not even considering it.

Respondents living in rural areas are very unlikely to use low toxic or low VOC paints consistently (29% Bright Green versus 45% of others). They are also much more likely to be unwilling (52% versus 28% of others).

This is also a subject that seems to have penetrated diverse ethnic communities effectively with 53% of non-white respondents being Bright Green and another 33%

being Light Green or Yellow. Only 14% of the non-white respondents are classified as unwilling (Brown/Grey), while 34% of white respondents are.

Key recommendations

With 25% of all respondents considering or inconsistently buying low-VOC and less toxic paints, there is a lot of opportunity indicated by this measure. Large portions of the segments highlighted above are willing, and the impact could be strong considering their representation in the population. In particular, these segments suggest good targets:

- Married
- College educated
- Female
- Middle aged
- Single-family homeowner

Marketing programs designed specifically to match the interests and needs of these subgroups should prove to be effective.

Proper fluorescent bulb disposal

The individual survey items regarding the disposal of fluorescent bulbs are discussed below, followed by a summary of the composite measure, resident segmentation of this measure and key recommendations.

Item summary

Respondents were asked “Do you currently use any energy-saving light bulbs in your home? These are also known as compact fluorescent light bulbs, and many of them are curly shaped.” Most respondents said yes (86%). While use of these energy-saving bulbs is encouraged, improper disposal can be problematic. When thrown in the trash, the bulbs may break. When they break, they release mercury into the air, producing a health hazard in homes and for waste disposal workers.

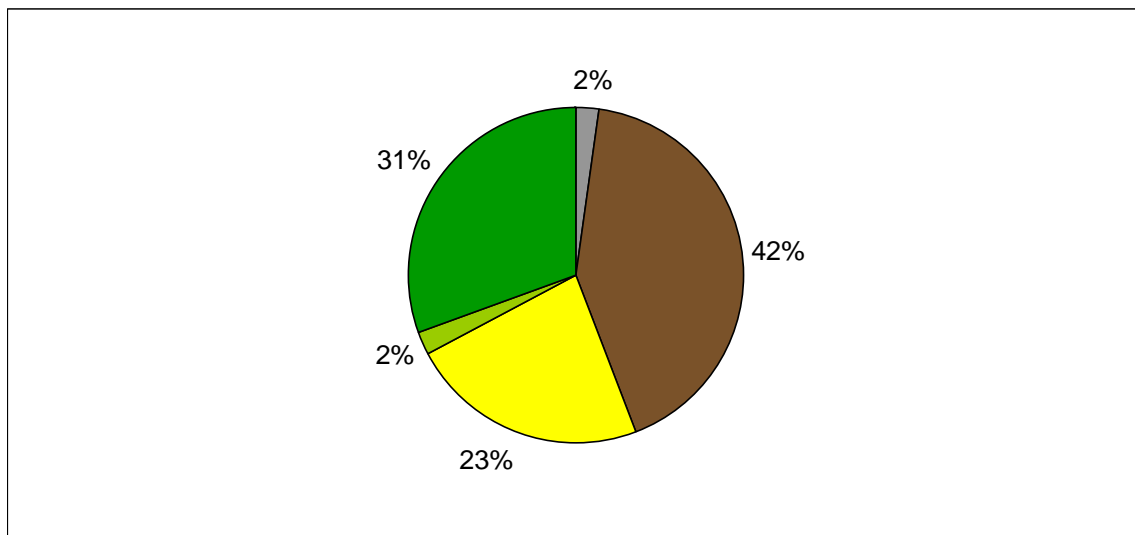
When asked how they dispose of burned out fluorescent light tubes or compact fluorescent bulbs, the most common response was that they put them in the garbage or took them to the dump (29%). Another large portion said that it does not apply – that although they use the bulbs, they have never had to dispose of them (28%).

Table 6. How do you dispose of fluorescent bulbs?

	<u>n</u>	<u>%</u>
Put in household garbage/trash/take to dump	234	29
Doesn't apply - Have never disposed of any	230	28
Take to special recycling services or events (EcoLights, city/county)	89	11
Doesn't apply - don't use	74	9
Take to hazardous waste collection site (Wastemobile, haz-mat)	59	7
Don't know	64	7
Other	49	6
Take back to a store	24	3
	824	100

Composite summary

Nearly one-third of respondents who dispose of fluorescent bulbs were classified as Bright Green because they indicated proper disposal methods. Among those who do not dispose of the bulbs properly, most are not considering or talking about taking them to a disposal of toxics facility (42% of all respondents).

Figure 9. Proper fluorescent bulb disposal (n=516)

Bright Green – consistently performs preferred behavior; Light Green – inconsistently performs preferred behavior; Yellow – Considering preferred behavior; Brown – not considering/discussing preferred behavior; Grey – don't know/unfamiliar with topic.

Resident segmentation

Below is a table showing the willingness of each segment of the population to engage in proper bulb disposal. For assistance on reading this table, see the note on table interpretation leading up to Table 1.

Table 7. Fluorescent bulb disposal within resident segments

	Doing (Bright Green)	Willing (Light Green or Yellow)	Unwilling (Brown or Grey)	Size of segment	Size of willing population
Apartment	12%	21%	67%	23%	5%
Non-apartment	35%	26%	38%	76%	20%
College	37%	27%	36%	74%	20%
No college	12%	18%	70%	26%	5%
Lower income (<\$50K/yr)	21%	21%	59%	40%	8%
Moderate income (\$50-75K/yr)	18%	30%	51%	17%	5%
High income (>\$75k/yr)	35%	30%	35%	43%	13%
Younger (<35)	4%	40%	56%	10%	4%
Middle aged	35%	23%	41%	61%	14%
Older (65+)	28%	25%	47%	29%	7%
Female	32%	24%	44%	60%	14%
Male	28%	27%	44%	40%	11%
Rural	33%	28%	39%	6%	2%
Non-rural	30%	25%	45%	94%	23%
Married	35%	31%	35%	63%	19%
Unmarried	22%	15%	63%	37%	5%
Parenting	26%	27%	47%	26%	7%
Non-parent	33%	25%	43%	74%	18%
White	33%	25%	42%	82%	21%
Non-white	23%	24%	53%	18%	4%

Key recommendations

The fact that so few residents are Light Green suggests that people's understanding of the problem caused by improper disposal of fluorescent bulbs is quite compelling, causing them to almost always dispose of them properly. In addition, the high portion of respondents who are considering proper disposal (23% Yellow) suggests that this may be a high-barrier behavior. For those who overcome the barriers, they are able to do so consistently. For others, there may be significant barriers that prevent them from disposing of the bulbs properly, even a portion of the time. Shaded areas above show large segments of the population that could be targeted for disposal programming. Identifying the specific barriers that prevent each group from properly disposing of the bulbs and the proper incentives to motivate them would be useful.

A relatively large portion of people (28%) is inexperienced at disposing of fluorescent light bulbs. These people will need to be aware of the hazard prior to their bulbs burning out. Other targets for this indicator each make up 20% or more of King County's population and at least 1 in 4 of the households are willing to dispose of bulbs properly (Yellow or Light Green). They are:

- Non-rural

- White
- College educated
- Single family residences

Although they make up a smaller portion of the population, younger respondents are least likely to be disposing of their bulbs properly (4% of those under 35), but 40% are willing – the largest age-group portion considering proper disposal.

Giving experiences as gifts

The individual survey items regarding giving experiences as gifts are discussed below, followed by a summary of the composite measure, resident segmentation of this measure and key recommendations.

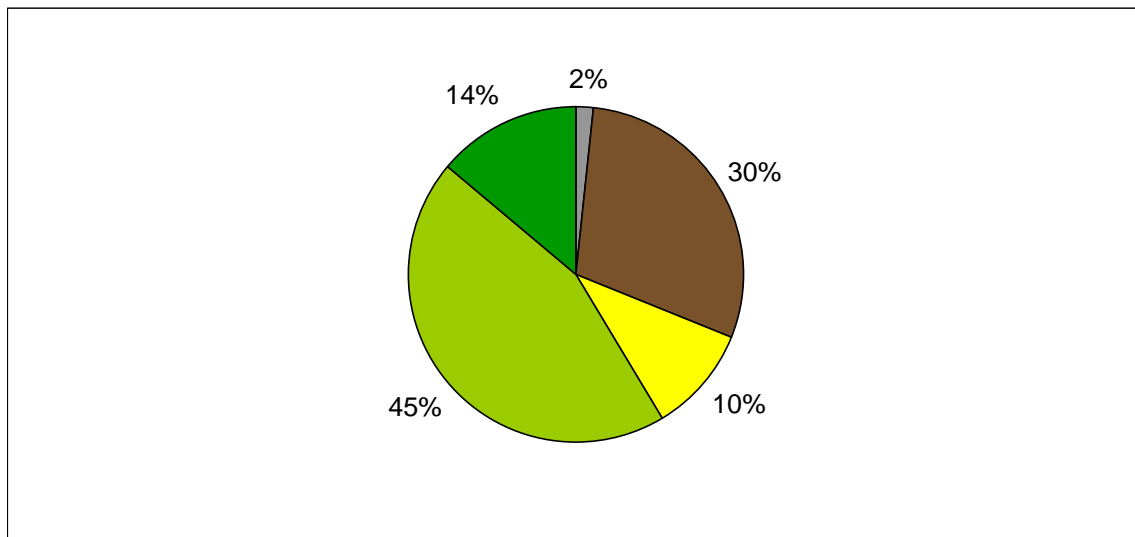
Item summary

Respondents were asked if they decided to “give an experience, such as tickets to a theater or sports event, or a membership or coupon for video rentals rather than giving an object” in the past year, and 59% said they did. In addition, 24% of those said they did so for *most* or *all* of their giving (14% of all respondents).

Respondents were also asked if they gave experiences because they wanted to reduce waste, and 42% said that reducing waste was part of the reason. Unlike prior years, this year’s measure takes into account only the behavior, and not the intention behind it. Waste is reduced by such giving, regardless of the intent, so promoting giving experiences may or may not be helped by tying it to waste reduction.

Composite summary

Only 14% of respondents fell into the Bright Green category, however over half (55%) indicate that they inconsistently give experiences as gifts or are willing to do so (Light Green and Yellow). One-third (30%) are not considering this as a way to give gifts.

Figure 10. Giving experiences as gifts (n=820)

Bright Green – consistently performs preferred behavior; Light Green – inconsistently performs preferred behavior; Yellow – Considering preferred behavior; Brown – not considering/discussing preferred behavior; Grey – don't know/unfamiliar with topic.

Resident segmentation

Below is a table showing the willingness of each segment of the population to engage in regular giving of experiences rather than things. For assistance on reading this table, see the note on table interpretation leading up to Table 1.

Table 8. Giving experiences within resident segments

	Doing (Bright Green)	Willing (Light Green or Yellow)	Unwilling (Brown or Grey)	Size of segment	Size of willing population
Apartment	11%	39%	49%	23%	9%
Non-apartment	15%	60%	26%	76%	45%
College	16%	60%	24%	74%	44%
No college	8%	42%	50%	26%	11%
Lower income (<\$50K/yr)	14%	38%	48%	40%	15%
Moderate income (\$50-75K/yr)	17%	53%	31%	17%	9%
High income (>\$75k/yr)	13%	71%	17%	43%	30%
Younger (<35)	8%	64%	27%	10%	6%
Middle aged	14%	61%	24%	61%	37%
Older (65+)	15%	39%	46%	29%	11%
Female	16%	58%	27%	60%	35%
Male	11%	51%	38%	40%	20%
Rural	16%	54%	30%	6%	3%
Non-rural	14%	55%	31%	94%	52%
Married	13%	66%	20%	63%	42%
Unmarried	15%	35%	50%	37%	13%
Parenting	9%	68%	23%	26%	18%

Non-parent	16%	50%	34%	74%	37%
White	15%	56%	29%	82%	46%
Non-white	8%	51%	41%	18%	9%

Key recommendations

Additional research might be fruitful for work relating to this measure. It would be useful to know what kinds of experiences or non-waste-producing gifts people are giving (for example, gifts of air miles and charitable giving might have been overlooked by people). Finding out what kinds of experiential gifts are most popular and promoting them, or finding motivators for helping people to commit to giving experiential gifts more often could produce changes in this indicator.

Some of the sub groups most willing to consider giving experiences as gifts are also the largest. For the greatest impact, managers should target the following audiences:

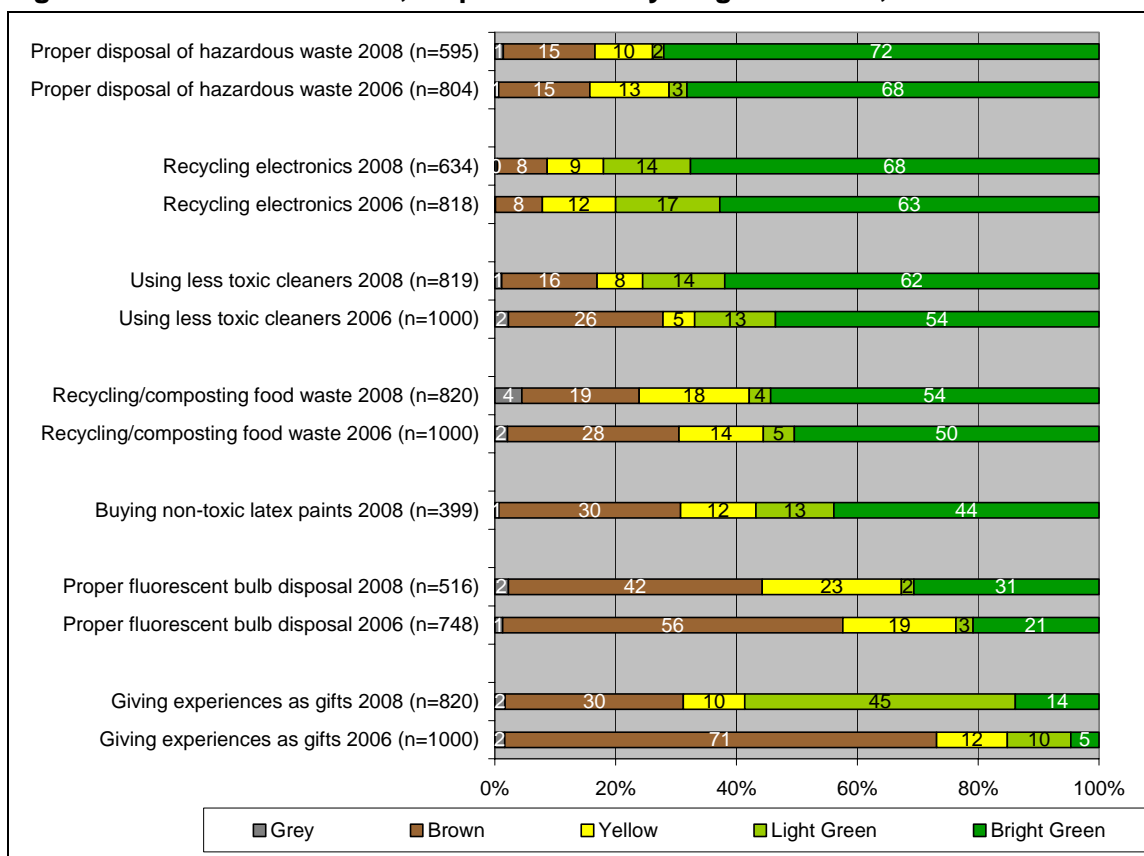
- People living in single family residences
- Those who've been to college
- High income (>\$75k/yr) people
- Those under age 65
- Married people
- Those living in non-rural areas
- White residents

Also very willing, but making up smaller segments of the population were parents (68% willing but making up only 18% of the population) and non-white residents (51% willing but making up only 9% of the population).

Waste avoidance, recycling and disposal behaviors, 2006-2008

The figure below compares items relating to waste avoidance, recycling and disposal from the 2006 survey to 2008. This comparison should be considered with care since the research methods employed in each year were not identical. All of the measures show change in the desired direction.

Figure 11. Waste avoidance, disposal and recycling behaviors, 2006-2008



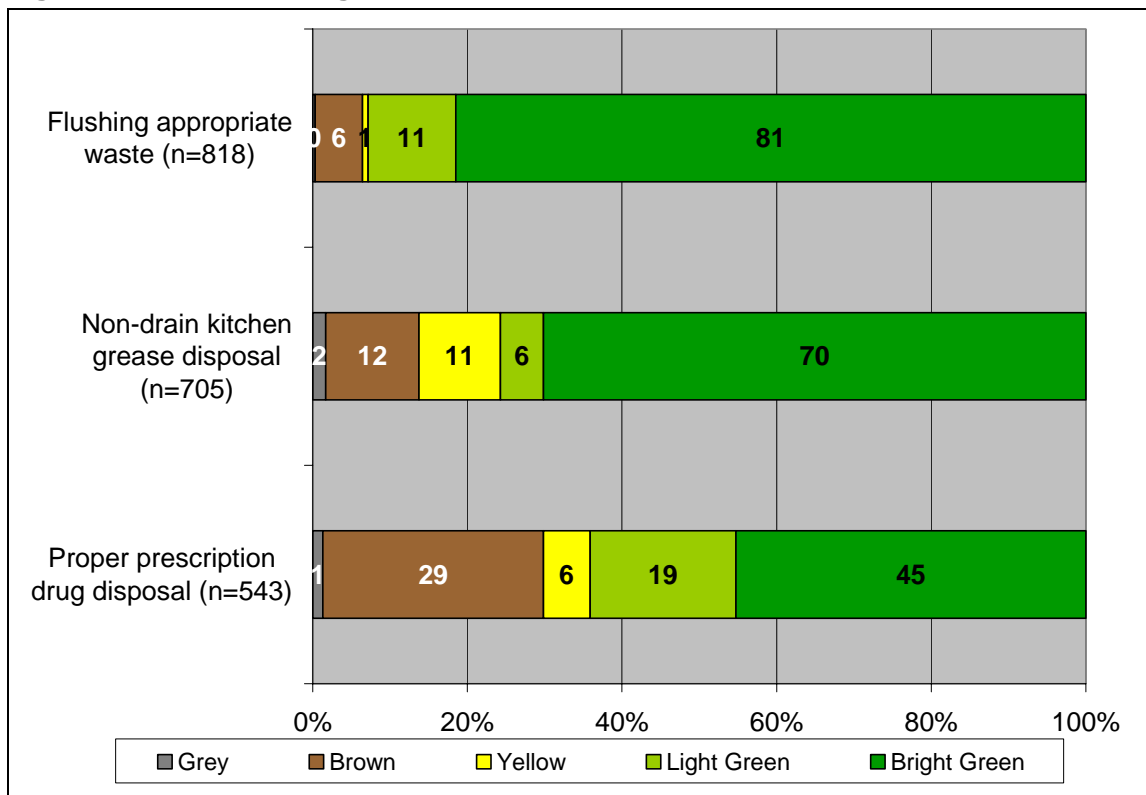
Bright Green – consistently performs preferred behavior; Light Green – inconsistently performs preferred behavior; Yellow – Considering preferred behavior; Brown – not considering/discussing preferred behavior; Grey – don't know/unfamiliar with topic.

Buying non-toxic latex paints was a new item in 2008 and refined the item regarding the purchase of latex paints. In 2006, giving experiences as gifts was only considered if the intent of the purchase was to reduce waste. In 2008, that was changed to reflect only the behavior, not the intent, since the outcome is the same – reduced amounts of solid waste.

FLUSHING BEHAVIOR AND WATER QUALITY

Three items in the 2008 EBI address water quality issues.

Figure 12. Items relating to water



Bright Green – consistently performs preferred behavior; Light Green – inconsistently performs preferred behavior; Yellow – Considering preferred behavior; Brown – not considering/discussing preferred behavior; Grey – don't know/unfamiliar with topic.

Flushing appropriate waste

The individual survey items regarding flushing are discussed below, followed by a summary of the composite measure, resident segmentation of this measure and key recommendations.

Item summary

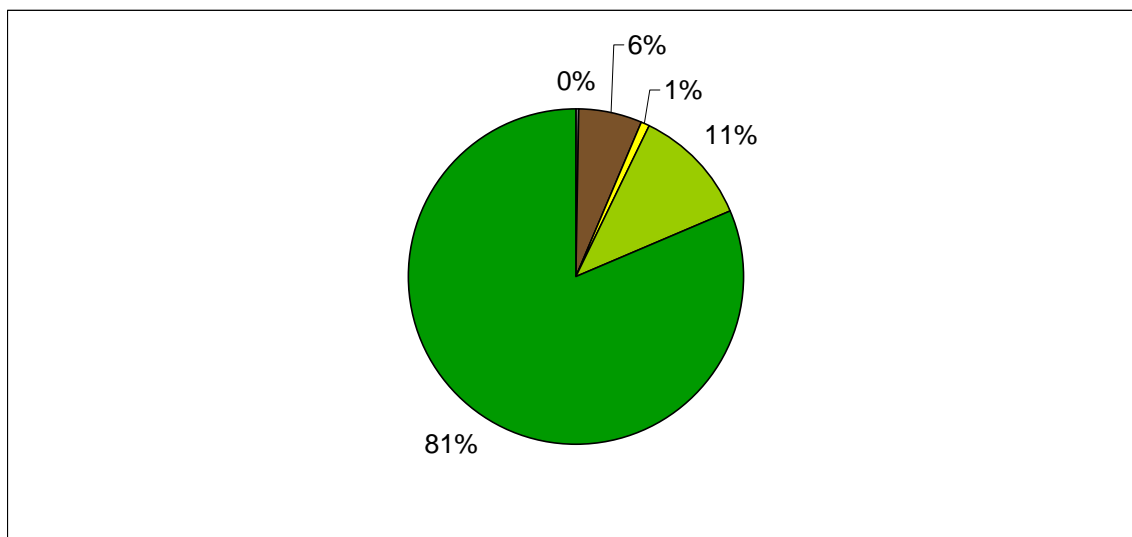
Flushing anything other than human waste and toilet paper can be troublesome for water treatment. Eighteen percent of respondents indicated that they dispose of things other than human waste and toilet paper by flushing it down the toilet. When asked if they ever put the items they flushed in the trash rather than flushing them, 39% said *no*. Of those respondents, the majority (85%) said that they are not considered throwing such items in the trash instead of flushing them.

Among respondents who sometimes or always flush something improperly, many mentioned medication and pills (28%). Others mentioned food (12%), Kleenex and other tissues (12%), as well as pet waste, hair, and feminine hygiene products (6% each). For a complete description of what respondents said, please see Appendix C.

Composite summary

The large majority of people consistently flush only appropriate waste (81%) and another 11% say they are doing this most of the time. Among the respondents who are flushing inappropriate materials, most say they are not considering a change to this behavior, translating to a very small portion of Yellow (1%).

Figure 13. Flushing appropriate waste (n=818)



Bright Green – consistently performs preferred behavior; Light Green – inconsistently performs preferred behavior; Yellow – Considering preferred behavior; Brown – not considering/discussing preferred behavior; Grey – don't know/unfamiliar with topic.

Resident segmentation

Below is a table showing the willingness of each segment of the population to engage in proper flushing behavior.

Note on table interpretation

Throughout this findings section, resident segmentation is presented for each behavior with a table illustrating the proportion of particular segments that fall into the categories of doing the behavior (Bright Green), willing to do the behavior (Light Green or Yellow), and unwilling to do the behavior (Brown or Grey).

Segments in which 15% or more are willing (shaded) suggest areas where the program may be most productive. When that is coupled with a relatively large portion of people who are Bright Green, it suggests that there may be stronger norms among that population for the behavior than where there are few who are Bright Green. Considering the proportion that is categorized as Brown will give managers a sense of how often they will encounter disinterest or resistance within that population.

In addition, managers can consider how large the population is, and the size of the willing population (the final columns of the table). The larger the size of the willing population, the more opportunity there is for substantial net effects of behavior change.

Table 9. Flushing appropriate waste within resident segments

	Doing (Bright Green)	Willing (Light Green or Yellow)	Unwilling (Brown or Grey)	Size of segment	Size of willing population
Apartment	73%	16%	10%	23%	4%
Non-apartment	84%	11%	5%	76%	8%
College	83%	12%	5%	74%	9%
No college	78%	12%	10%	26%	3%
Lower income (<\$50K/yr)	76%	15%	9%	40%	6%
Moderate income (\$50-75K/yr)	80%	9%	11%	17%	2%
High income (>\$75k/yr)	87%	9%	4%	43%	4%
Younger (<35)	89%	8%	2%	10%	1%
Middle aged	79%	15%	6%	61%	9%
Older (65+)	84%	9%	8%	29%	2%
Female	79%	14%	7%	60%	9%
Male	85%	9%	6%	40%	3%
Rural	88%	8%	4%	6%	0%
Non-rural	81%	12%	7%	94%	12%
Married	82%	13%	5%	63%	8%
Unmarried	80%	11%	9%	37%	4%
Parenting	83%	13%	4%	26%	3%
Non-parent	81%	12%	7%	74%	9%
White	82%	12%	7%	82%	10%
Non-white	80%	14%	6%	18%	2%

Key recommendations

With 80% of respondents saying they consistently flush only appropriate waste, this indicator has very little room to improve. In addition, only 12% are willing to make a change. Just three subgroups have 15% or more people willing to make changes: those who are middle aged, apartment dwellers and lower income people (shaded above). Even such small portions of the population can create major challenges for water treatment, but it is difficult to obtain higher compliance without formal mandates.

Non-drain kitchen grease disposal

The individual survey items regarding kitchen grease disposal are discussed below, followed by a summary of the composite measure, resident segmentation of this measure and key recommendations.

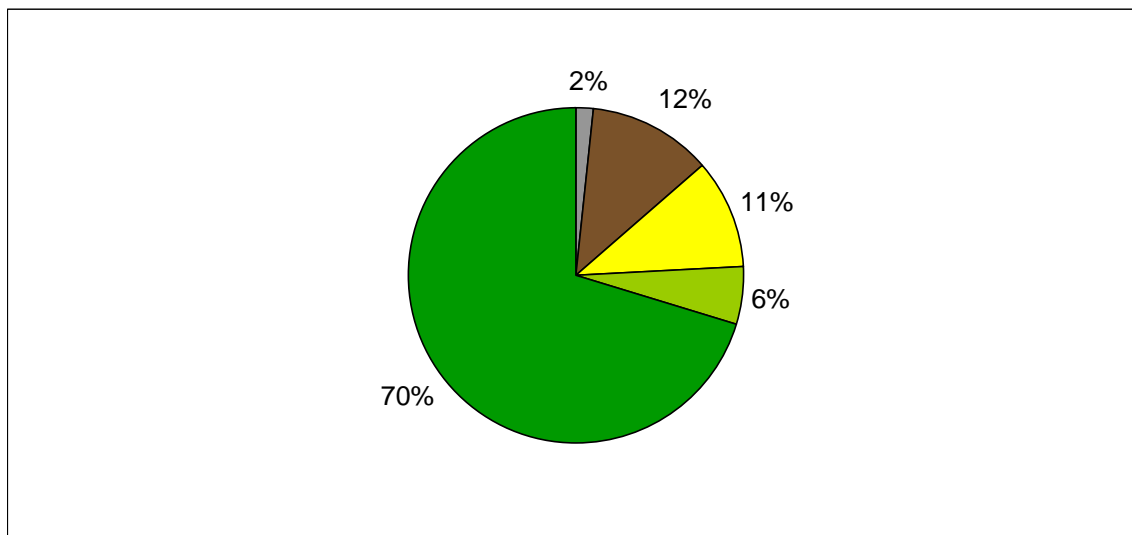
Item summary

Respondents were asked how they generally dispose of kitchen grease, including unwanted vegetable oil as well as fat from poultry and meat products. Most (64%) said they put it in the household garbage or take it to the dump. A portion (13%) said they never have grease to dispose of and are not included in the overall composite measure, though it should be understood that they are not contributing to the problem. The problematic sector – those who pour it down the sink – make up 9% of all respondents.

Composite summary

The composite summary is based on respondents who have grease to dispose of. All together, 70% of these consistently dispose of kitchen grease properly and are classified as Bright Green. Another 6% do so some of the time and 11% are considering doing so.

Figure 14. Non-drain kitchen grease disposal (n=705)



Bright Green – consistently performs preferred behavior; Light Green – inconsistently performs preferred behavior; Yellow – Considering preferred behavior; Brown – not considering/discussing preferred behavior; Grey – don't know/unfamiliar with topic.

Resident segmentation

Below is a table showing the willingness of each segment of the population to conduct proper disposal of kitchen grease. For assistance on reading this table, see the note on table interpretation leading up to Table 9.

Table 10. Non-drain kitchen grease disposal within resident segments

	Doing (Bright Green)	Willing (Light Green or Yellow)	Unwilling (Brown or Grey)	Size of segment	Size of willing population
Apartment	77%	14%	9%	23%	3%
Non-apartment	68%	17%	15%	76%	13%
College	71%	15%	14%	74%	11%
No college	67%	20%	13%	26%	5%
Lower income (<\$50K/yr)	68%	19%	13%	40%	8%
Moderate income (\$50-75K/yr)	78%	7%	15%	17%	1%
High income (>\$75k/yr)	69%	18%	13%	43%	8%
Younger (<35)	78%	13%	9%	10%	1%
Middle aged	73%	14%	13%	61%	9%
Older (65+)	61%	23%	16%	29%	7%
Female	77%	13%	10%	60%	8%
Male	61%	21%	19%	40%	8%
Rural	69%	13%	18%	6%	1%
Non-rural	70%	16%	13%	94%	15%
Married	71%	15%	14%	63%	9%
Unmarried	68%	19%	13%	37%	7%
Parenting	65%	21%	14%	26%	5%
Non-parent	72%	15%	14%	74%	11%
White	72%	14%	14%	82%	12%
Non-white	61%	25%	15%	18%	4%

Key recommendations

Many subgroups include more than 15% who are willing to dispose of kitchen grease appropriately, but the larger of these tend to be smaller populations (e.g. those over 65 years old and non-white people), translating into a fairly small impact.

If there are readily available or existing channels for reaching these subgroups of the population, program efforts could work to remove barriers and provide incentives for these groups. If there are not ready channels to reach these residents, it is recommended that messaging be universal, emphasizing awareness of the relevant impacts of pouring grease down the drain.

Proper prescription drug disposal

The individual survey items regarding prescription drug disposal are discussed below, followed by a summary of the composite measure, resident segmentation of this measure and key recommendations.

Item summary

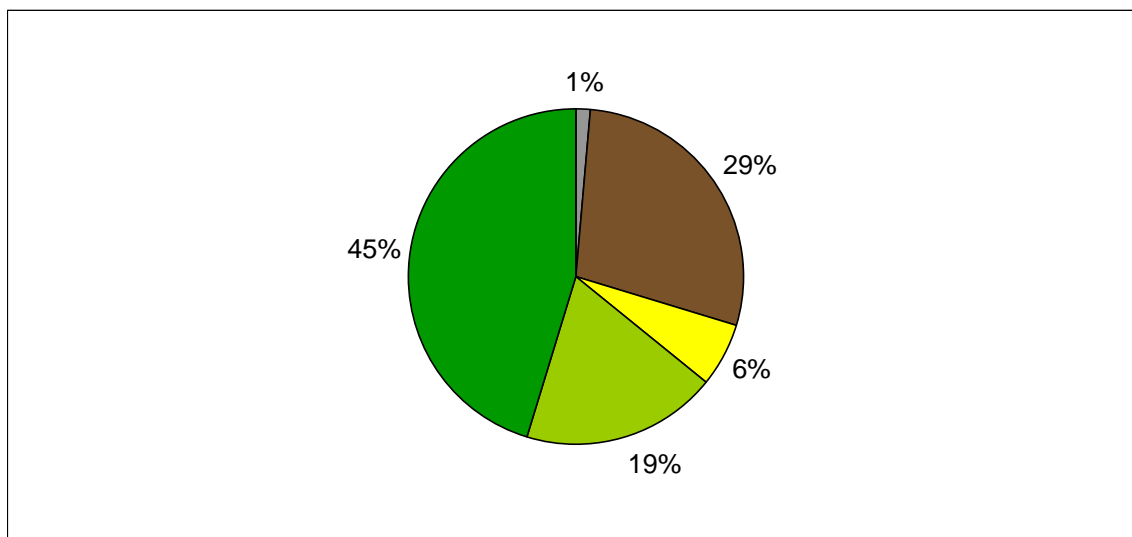
Of particular concern is the increasing detection of prescription drugs in water bodies that receive waste water. Prescription drugs can contain endocrine disrupting compounds that affect the growth, development and reproduction of already threatened and endangered species. Still, many people believe that disposing of drugs by flushing them down the toilet or sink drain is a safe and effective means of disposal, when in fact it is not.

Among all respondents, 36% properly dispose of drugs by throwing them out with the trash. Another 7% said they return them to the pharmacy for proper disposal. A third (33%) said they never have any to throw away – that they always used them up. This last group of respondents is not included in composite measure, though it should be understood that they are not contributing to the problem. Those who are contributing are comprised of the 16% who say they dispose of leftover prescription medications by flushing them down the toilet or the sink drain. Six percent (6%) dispose of medications in some other improper way.

Composite summary

All together, 45% of people who have prescription drugs to dispose of do so properly and consistently. Another 19% are classified as Light Green because they do so inconsistently and 6% are considering proper drug disposal. A large portion – 29% - are not considering proper prescription drug disposal, perhaps pointing to a lack of awareness about the harmful nature of flushing drugs down the drain.

Figure 15. Proper prescription drug disposal (n=543)



Bright Green – consistently performs preferred behavior; Light Green – inconsistently performs preferred behavior; Yellow – Considering preferred behavior; Brown – not considering/discussing preferred behavior; Grey – don't know/unfamiliar with topic.

Resident segmentation

Below is a table showing the willingness of each segment of the population to conduct proper disposal of prescription drugs. For assistance on reading this table, see the note on table interpretation leading up to Table 9.

Table 11. Proper prescription drug disposal

	Doing (Bright Green)	Willing (Light Green or Yellow)	Unwilling (Brown or Grey)	Size of segment	Size of willing population
Apartment	37%	25%	38%	23%	6%
Non-apartment	48%	25%	27%	76%	19%
College	47%	25%	28%	74%	19%
No college	40%	24%	36%	26%	6%
Lower income (<\$50K/yr)	34%	28%	39%	40%	11%
Moderate income (\$50-75K/yr)	52%	16%	32%	17%	3%
High income (>\$75k/yr)	53%	27%	20%	43%	11%
Younger (<35)	72%	9%	18%	10%	1%
Middle aged	44%	29%	26%	61%	18%
Older (65+)	34%	21%	45%	29%	6%
Female	47%	25%	28%	60%	15%
Male	42%	25%	33%	40%	10%
Rural	53%	15%	32%	6%	1%
Non-rural	45%	26%	30%	94%	24%
Married	48%	28%	24%	63%	18%
Unmarried	40%	19%	41%	37%	7%
Parenting	58%	25%	17%	26%	7%
Non-parent	41%	25%	34%	74%	18%
White	44%	25%	32%	82%	20%
Non-white	53%	27%	20%	18%	5%

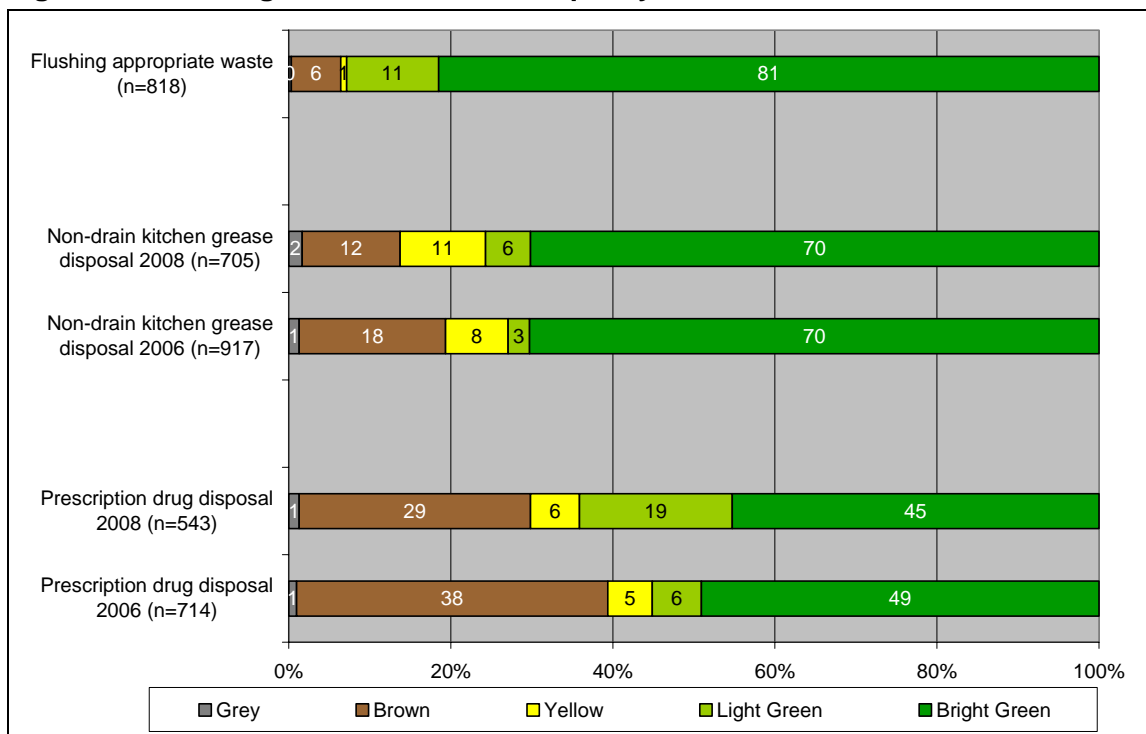
Key recommendations

Almost every segment has sufficient numbers to warrant program managers' attention. The largest are shaded above. The puzzle for this item is why so many people are not considering proper disposal. They may believe that putting drugs in the trash is more problematic than flushing them. Or they may simply be unaware of the problem caused by prescription drug disposal. Additional research is needed to find out what people think and do in order to appropriately target the program.

Flushing behavior and water quality, 2006-2008

The figure below compares items relating to flushing behavior and water quality from the 2006 survey to 2008. This comparison should be considered with care since the research methods employed in each year were not identical. All of the measures show change in the desired direction.

Figure 16. Flushing behavior and water quality, 2006-2008



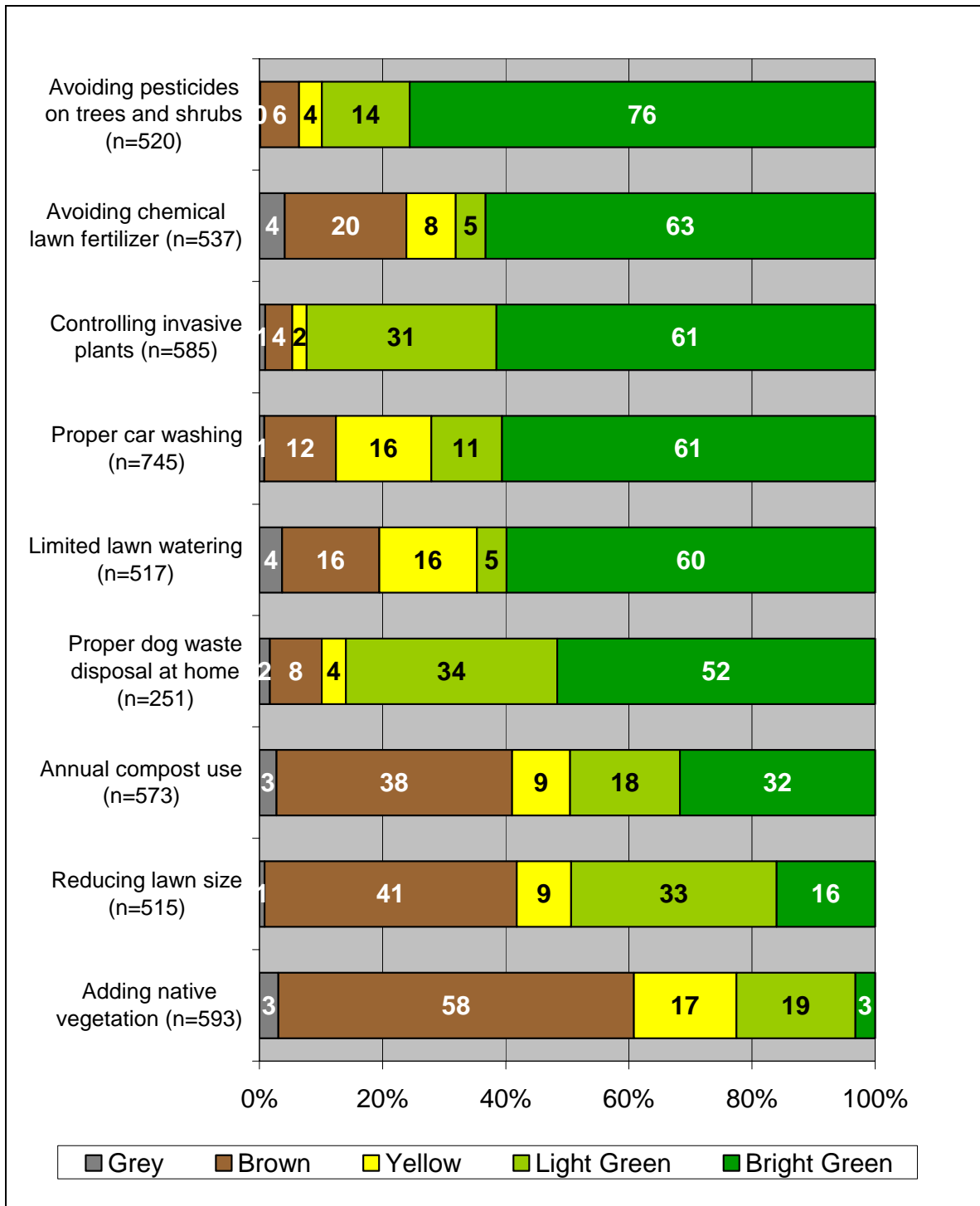
Bright Green – consistently performs preferred behavior; Light Green – inconsistently performs preferred behavior; Yellow – Considering preferred behavior; Brown – not considering/discussing preferred behavior; Grey – don't know/unfamiliar with topic.

In 2006, items relating to improper flushing of waste were specific to condoms and feminine hygiene products, both of which were rare and with smaller relevant populations. They are not comparable to the 2008 item.

YARD CARE

Nine items in the 2008 EBI survey target yard care behaviors.

Figure 17. Items relating to yard care



Bright Green – consistently performs preferred behavior; Light Green – inconsistently performs preferred behavior; Yellow – Considering preferred behavior; Brown – not considering/discussing preferred behavior; Grey – don't know/unfamiliar with topic.

Avoiding pesticides on trees and shrubs

The individual survey items regarding use of pesticide on trees and shrubs are discussed below, followed by a summary of the composite measure, resident segmentation of this measure and key recommendations.

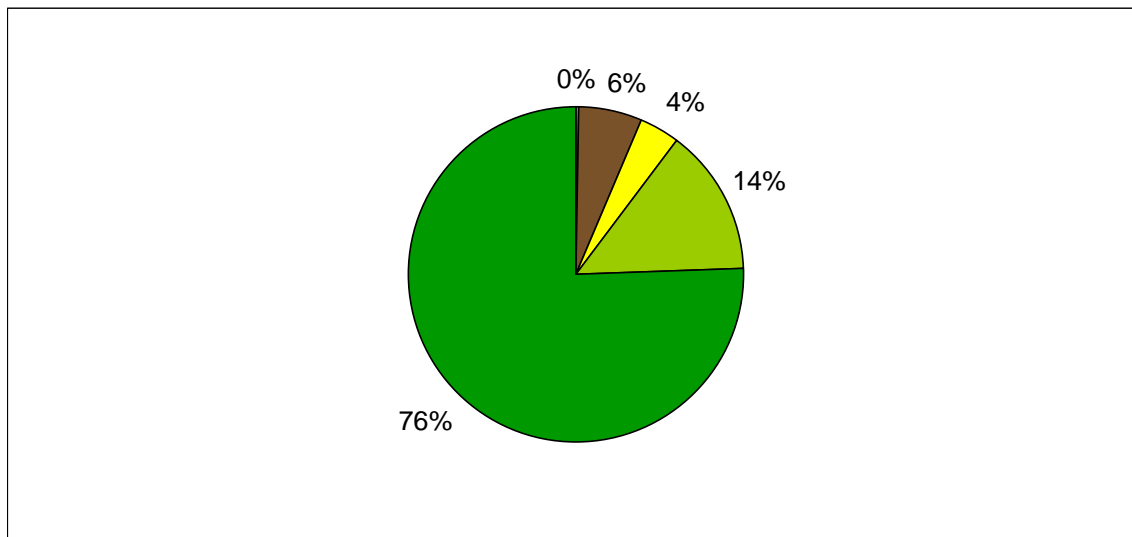
Item summary

Of the 821 survey respondents, 71% have yards for which they have complete or partial responsibility. Respondents with yards they care for were asked how they treat trees and shrubs for diseases or insects. The most common response is to do nothing (39%), followed by using a natural organic solution, such as insecticidal soap, neem oil, water spray, boric acid or ammonia (28%). The remainder use a pesticide spray or some combination of pesticides and natural methods (22%), or did not know what they were using (9%).

Composite summary

All together, 76% of respondents with yards consistently avoid using pesticides on trees and shrubs. A portion use chemical pesticides part of the time (14%) and a small group is considering using natural or organic solutions (4%).

Figure 18. Avoiding pesticides on trees and shrubs (n=520)



Bright Green – consistently performs preferred behavior; Light Green – inconsistently performs preferred behavior; Yellow – Considering preferred behavior; Brown – not considering/discussing preferred behavior; Grey – don't know/unfamiliar with topic.

Resident segmentation

Below is a table showing the willingness of each segment of the population to use natural or organic solutions to diseases and insects on trees and shrubs.

[Note on table interpretation](#)

Throughout this findings section, resident segmentation is presented for each behavior with a table illustrating the proportion of particular segments that fall into the categories of doing the behavior (Bright Green), willing to do the behavior (Light Green or Yellow), and unwilling to do the behavior (Brown or Grey).

Segments in which 15% or more are willing (shaded) suggest areas where the program may be most productive. When that is coupled with a relatively large portion of people who are Bright Green, it suggests that there may be stronger norms among that population for the behavior than where there are few who are Bright Green. Considering the proportion that is categorized as Brown will give managers a sense of how often they will encounter disinterest or resistance within that population.

In addition, managers can consider how large the population is, and the size of the willing population (the final columns of the table). The larger the size of the willing population, the more opportunity there is for substantial net effects of behavior change.

Table 12. Avoiding pesticides on trees and shrubs

	Doing (Bright Green)	Willing (Light Green or Yellow)	Unwilling (Brown or Grey)	Size of segment	Size of willing population
Non-apartment	76%	18%	6%	76%	14%
College	75%	19%	6%	74%	14%
No college	76%	14%	10%	26%	4%
Lower income (<\$50K/yr)	78%	9%	13%	40%	4%
Moderate income (\$50-75K/yr)	75%	23%	3%	17%	4%
High income (>\$75k/yr)	74%	21%	5%	43%	9%
Younger (<35)	82%	10%	8%	10%	1%
Middle aged	74%	21%	6%	61%	13%
Older (65+)	79%	13%	8%	29%	4%
Female	75%	19%	6%	60%	12%
Male	77%	16%	7%	40%	6%
Rural	77%	16%	7%	6%	1%
Non-rural	75%	18%	7%	94%	17%
Married	75%	21%	4%	63%	13%
Unmarried	79%	8%	13%	37%	3%
Parenting	76%	19%	5%	26%	5%
Non-parent	75%	17%	7%	74%	13%
White	77%	16%	7%	82%	13%
Non-white	70%	27%	3%	18%	5%

*apartments and others who did not have yards to care for were omitted from this series of questions.

Key recommendations

A substantial portion of nearly all segments of the resident population are willing to avoid pesticides on trees and shrubs, and the vast majority already does so. The above shaded rows highlight subgroups where more than 20% are willing, though in some cases they make up a relatively small portion of the population. Further research could reveal why people sometimes choose chemical solutions to disease and insect problems for their trees and shrubs. For example, a particular pest may be more difficult to manage with natural, organic solutions, or the effectiveness of natural remedies may be questioned for certain types of problems. People may also have certain products they are familiar with and trust, and do not change because of their lack of familiarity with an alternative.

Avoiding chemical lawn fertilizer

The individual survey items regarding use of chemical lawn fertilizer are discussed below, followed by a summary of the composite measure, resident segmentation of this measure and key recommendations.

Item summary

Respondents were asked about their use of fertilizers on their lawn. Of the 581 who have yards they cared for, 25 do not have a lawn (4%). Others were split evenly between those who do not use any fertilizer on their lawn (46%) and those who do (47%). Some do not know if fertilizer is used (3%).

Table 13a shows that among those who use fertilizer, the most commonly used is weed and feed (56%). Organic and slow-release fertilizers are also popular (43%) followed by chemical fertilizers (24%). It is useful to note that a substantial portion are not aware of the type of fertilizer they are using (12-19% answered *don't know* to these items). This is in spite of the fact that the respondents were asked if they were the person in the household with primary responsibility for the yard.

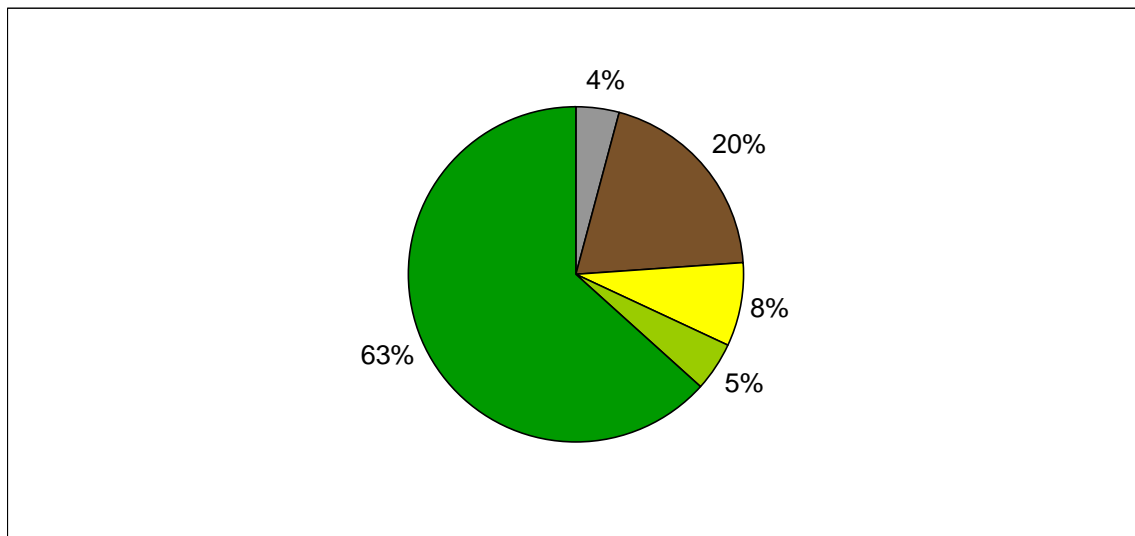
Table 13a. Fertilizer use among those with yards they care for			
	<u>Yes</u>	<u>No</u>	<u>Don't know/No answer</u>
Use any fertilizer on your lawn (n=581)*	47%	46%	3%
Use chemical fertilizers (n=273)	24%	59%	17%
Use organic or slow-release fertilizers (n=273)	43%	39%	19%
Use weed and feed (n=273)	56%	32%	12%

*not applicable, no lawn=4%

Composite summary

The majority of respondents do not use lawn fertilizers or they use fertilizers that are not harmful to the environment (63% Bright Green). Twenty-eight percent use chemical lawn fertilizer, but some (8%) were categorized as Yellow because they indicated that they may be willing to change their fertilization behavior.

Figure 19. Avoiding chemical lawn fertilizer (n=537)



Bright Green – consistently performs preferred behavior; Light Green – inconsistently performs preferred behavior; Yellow – Considering preferred behavior; Brown – not considering/discussing preferred behavior; Grey – don't know/unfamiliar with topic.

Resident segmentation

Below is a table showing the willingness of each segment of the population to avoid the use of chemical lawn fertilizer. For assistance on reading this table, see the note on table interpretation leading up to Table 12.

Table 13b. Avoiding chemical lawn fertilizer

	Doing (Bright Green)	Willing (Light Green or Yellow)	Unwilling (Brown or Grey)	Size of segment	Size of willing population
Apartment	60%	0%	40%	23%	0%
Non-apartment	63%	13%	24%	76%	10%
College	64%	14%	23%	74%	10%
No college	62%	9%	29%	26%	2%
Lower income (<\$50K/yr)	73%	7%	20%	40%	3%
Moderate income (\$50-75K/yr)	54%	10%	36%	17%	2%
High income (>\$75k/yr)	64%	16%	20%	43%	7%
Younger (<35)	60%	14%	26%	10%	1%
Middle aged	66%	15%	20%	61%	9%

Older (65+)	56%	7%	37%	29%	2%
Female	63%	12%	25%	60%	7%
Male	64%	14%	23%	40%	6%
Rural	66%	14%	20%	6%	1%
Non-rural	63%	13%	24%	94%	12%
Married	63%	15%	22%	63%	9%
Unmarried	64%	7%	29%	37%	3%
Parenting	61%	20%	19%	26%	5%
Non-parent	64%	10%	26%	74%	7%
White	65%	13%	22%	82%	11%
Non-white	55%	12%	34%	18%	2%

Key recommendations

Although there is room for improvement on this measure (with 63% avoiding chemical fertilizers) there are only a few segments with sufficient numbers willing to adopt it as a new behavior. This is good news in that program managers can tailor their work to very specific audiences. For example, parents can likely be motivated by health-related messaging.

It is interesting to note that weed and feed is such a common product to use (56% of those who fertilize use it). Program managers may want to consider targeting the use of this product in particular, especially among the segments shaded above. Another approach is to work to manage the behavior rather than eliminate it. For example, in the Chesapeake Bay area, programs have focused on getting people who use fertilizer to avoid doing so during the time of year that young crabs are hatching.

Controlling invasive plants

The individual survey items regarding invasive plants are discussed below, followed by a summary of the composite measure, resident segmentation of this measure and key recommendations.

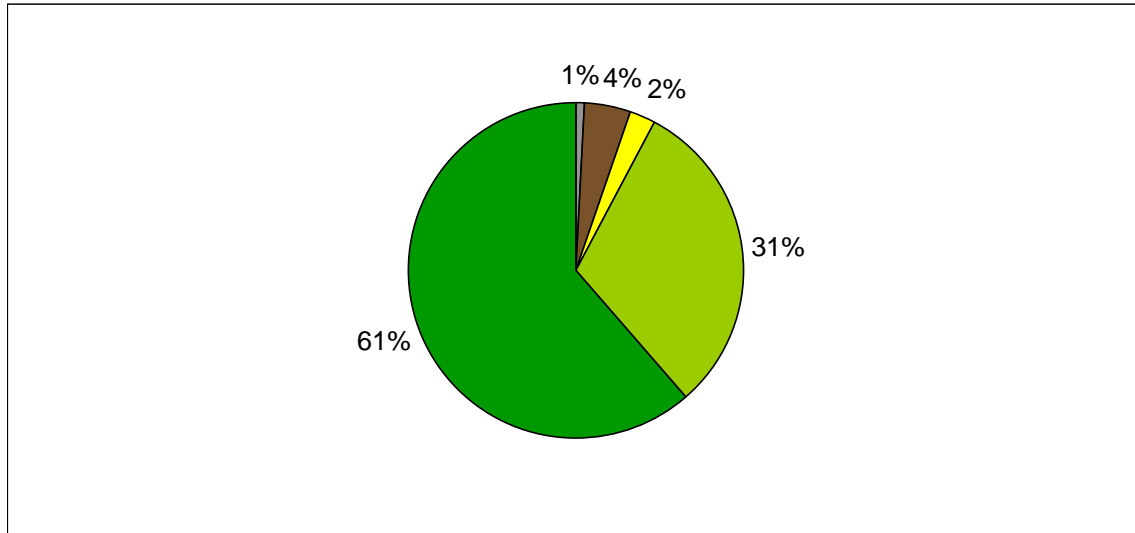
Item summary

The majority of respondents indicated that they make an effort to control or remove invasive plant or weed species from their yard (79%). Thirteen percent said that they don't have any invasive species or have them under control. Among those who do not make any efforts, 30% said that they have considered doing so.

Composite summary

All together, 61% of respondents with yards consistently make efforts to control or remove invasive plant or weed species from their yard. A portion make these efforts part of the time (31%) and a small group (2%) say they are considering doing this. Only a very small proportion (4%) do not make efforts to control invasive plants and have not considered doing so.

Figure 20. Controlling invasive plants (n=585)



Bright Green – consistently performs preferred behavior; Light Green – inconsistently performs preferred behavior; Yellow – Considering preferred behavior; Brown – not considering/discussing preferred behavior; Grey – don't know/unfamiliar with topic.

Resident segmentation

Below is a table showing the willingness of each segment of the population to make efforts toward controlling invasive plants. For assistance on reading this table, see the note on table interpretation preceding Table 12.

Table 14. Controlling invasive plants

	Doing (Bright Green)	Willing (Light Green or Yellow)	Unwilling (Brown or Grey)	Size of segment	Size of willing population
Non-apartment	62%	33%	5%	76%	25%
College	65%	30%	5%	74%	22%
No college	47%	49%	5%	26%	13%
Lower income (<\$50K/yr)	60%	37%	4%	40%	15%
Moderate income (\$50-75K/yr)	51%	41%	9%	17%	7%
High income (>\$75k/yr)	65%	32%	3%	43%	14%
Younger (<35)	38%	43%	19%	10%	4%
Middle aged	65%	32%	3%	61%	20%
Older (65+)	59%	33%	7%	29%	10%

Female	62%	33%	5%	60%	20%
Male	61%	33%	6%	40%	13%
Rural	53%	43%	4%	6%	3%
Non-rural	62%	32%	5%	94%	30%
Married	63%	33%	4%	63%	21%
Unmarried	56%	34%	9%	37%	13%
Parenting	57%	38%	4%	26%	10%
Non-parent	63%	31%	6%	74%	23%
White	64%	31%	5%	82%	26%
Non-white	51%	41%	8%	18%	7%

*apartments and others who did not have yards to care for were omitted from this series of questions.

Key recommendations

A large portion of all the subgroups are willing to remove some of the invasive plants in their yards, but not all or most. It is likely that they either like certain plants, or find some of them too much trouble to remove. Learning what the barriers and motivators are for removing specific invasive species would be worthwhile.

The above shaded rows highlight groups where more than 40% are willing to remove invasive plants, though any of these groups could be a target. For example, program managers may want to target non-college educated folks who are the segment most likely to consider changing their behavior (49%). Another segment to consider is rural residents. Though rural respondents do not translate into a large population segment, they show high rates of willingness (43%) with a very low proportion of unwilling (Brown). Further research could also explore why younger respondents are the least likely to be engaged in this behavior and show the greatest resistance (19% Brown). It is possible that this segment is not as aware of the reasons why it is important to control invasive plant species and could be a key audience for raising awareness.

Proper car washing

The individual survey items regarding car washing are discussed below, followed by a summary of the composite measure, resident segmentation of this measure and key recommendations.

Item summary

Respondents were asked to describe where they generally wash their vehicle. A majority (69%) said that they wash their car at a commercial car wash, use some other environmentally appropriate method or simply do not wash their car at all. One-quarter (25%) wash their car improperly by doing so in their driveway or on another impervious surface. Wastewater from impervious surfaces can carry cleaning products and other

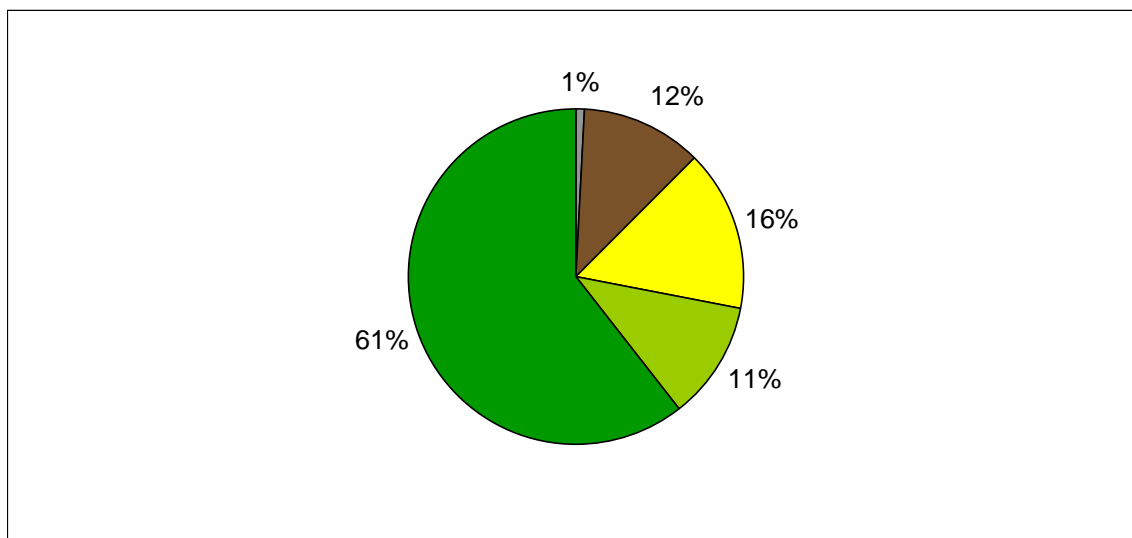
road pollution directly into storm water systems that empty into streams and other waterways rather than being filtered through soil or being treated, as in a commercial car wash.

Six percent of respondents said they do not have a vehicle. This segment is not included in the composite measure, but it should be noted that this is also a desirable behavior because it does not result in negative environmental effects. Also, it should be noted that among those who said they wash their car on the grass or a gravel surface, most (69%) said that they always choose non-toxic cleaning products.

Composite Measure

All together, 61% of respondents who have vehicles are categorized as Bright Green for engaging in proper car washing every time with another 11% using proper methods at least some of the time. Among those who use improper methods of car washing, just over half say they have considered using a commercial carwash, resulting in 16% classified as Yellow. Figure 21 shows that 12% are not considering changing their methods (Brown).

Figure 21. Proper car washing (n=776)



Bright Green – consistently performs preferred behavior; Light Green – inconsistently performs preferred behavior; Yellow – Considering preferred behavior; Brown – not considering/discussing preferred behavior; Grey – don't know/unfamiliar with topic.

Resident segmentation

Below is a table showing the willingness of each segment of the population to engage in proper car washing methods. For assistance on reading this table, see the note on table interpretation preceding Table 12.

Table 15. Proper car washing

	Doing (Bright Green)	Willing (Light Green or Yellow)	Unwilling (Brown or Grey)	Size of segment	Size of willing population
Apartment	76%	17%	7%	23%	4%
Non-apartment	57%	29%	14%	76%	22%
College	63%	25%	12%	74%	19%
No college	52%	32%	15%	26%	8%
Lower income (<\$50K/yr)	55%	30%	15%	40%	12%
Moderate income (\$50-75K/yr)	66%	24%	9%	17%	4%
High income (>\$75k/yr)	62%	28%	10%	43%	12%
Younger (<35)	63%	26%	11%	10%	3%
Middle aged	62%	28%	10%	61%	17%
Older (65+)	58%	26%	16%	29%	7%
Female	61%	27%	12%	60%	16%
Male	60%	27%	13%	40%	11%
Rural	65%	19%	17%	6%	1%
Non-rural	60%	28%	12%	94%	26%
Married	60%	30%	11%	63%	19%
Unmarried	62%	22%	16%	37%	8%
Parenting	62%	31%	7%	26%	8%
Non-parent	60%	25%	14%	74%	19%
White	60%	27%	13%	82%	22%
Non-white	63%	28%	9%	18%	5%

Key recommendations

All segments have a relatively high level of willingness offering many opportunities for program managers to choose their focus. The segments with the highest proportion of willing respondents are shaded in Table 15. The lowest level of willingness is demonstrated by apartment dwellers. This is likely due to a corresponding high proportion of Bright Green respondents because apartment dwellers likely have few options for washing a car at home. Parents have the highest level of willingness and a corresponding low proportion of unwilling respondents, indicating a good target group.

Limited lawn watering

The individual survey items regarding lawn watering are discussed below, followed by a summary of the composite measure, resident segmentation of this measure and key recommendations.

Item summary

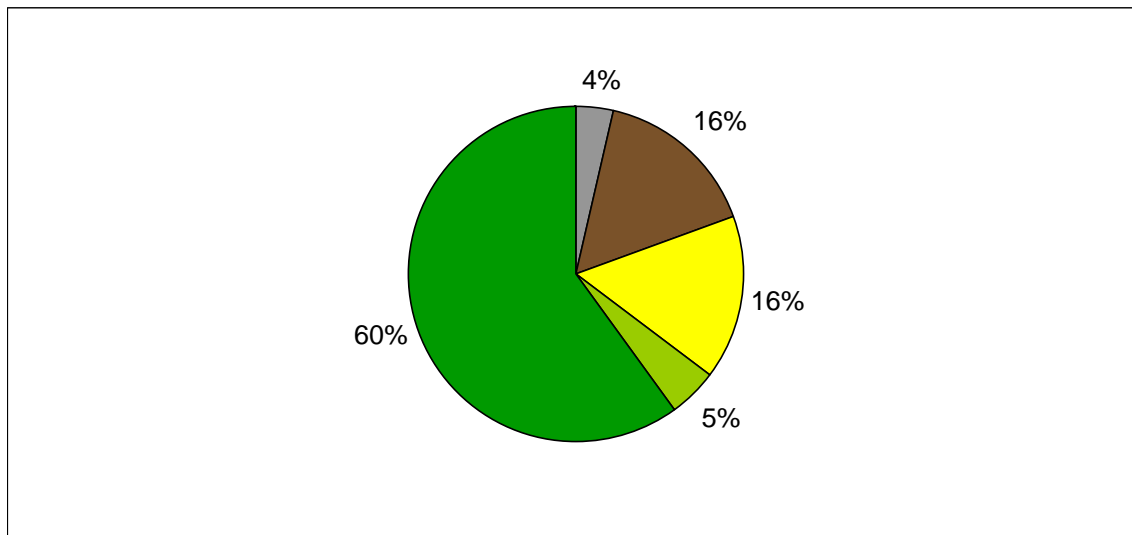
When asked to describe lawn watering habits, 33% of respondents indicated that they do not water their lawn even in the summer months, while 31% said they water deeply and only once a week. The remainder fell into other categories, including inconsistent watering (6%), watering at least twice a week (5%) and watering everyday (1%). Twenty-one percent described their watering habits in some other way, including using a sprinkler or irrigation system, watering less than once per week, and watering as needed.

The majority of those that said they do not water or water deeply once a week also indicated that they care for their lawn in this way all or most of the time (93)%. Seven percent (7%) said they do this only some of the time (5% of all respondents with lawns). People who water more frequently were then asked if they considered not watering their lawn at all, or watering deeply once a week. The response to this question was split with 45% answering yes and 45% saying no (16% of all respondents with lawns).

Composite summary

Of those with lawns to water, the majority fall into the Bright Green category (60%). There is still ample room for improvement, however, with 21% belonging to the Light Green and Yellow categories.

Figure 22. Limited lawn watering (n=517)



Bright Green – consistently performs preferred behavior; Light Green – inconsistently performs preferred behavior; Yellow – Considering preferred behavior; Brown – not considering/discussing preferred behavior; Grey – don't know/unfamiliar with topic.

Resident segmentation

Below is a table showing the willingness of each segment of the population limit lawn watering. For assistance on reading this table, see the note on table interpretation preceding Table 12.

Table 16. Limited lawn watering within segments

	Doing (Bright Green)	Willing (Light Green or Yellow)	Unwilling (Brown or Grey)	Size of segment	Size of willing population
Non-apartment	60%	20%	19%	76%	15%
College	61%	19%	20%	74%	14%
No college	52%	29%	19%	26%	7%
Lower income (<\$50K/yr)	64%	16%	20%	40%	6%
Moderate income (\$50-75K/yr)	60%	20%	20%	17%	3%
High income (>\$75k/yr)	59%	25%	16%	43%	11%
Younger (<35)	50%	26%	24%	10%	3%
Middle aged	59%	23%	17%	61%	14%
Older (65+)	65%	13%	22%	29%	4%
Female	60%	21%	19%	60%	13%
Male	59%	20%	21%	40%	8%
Rural	65%	14%	21%	6%	1%
Non-rural	59%	21%	19%	94%	20%
Married	60%	23%	17%	63%	14%
Unmarried	60%	14%	26%	37%	5%
Parenting	48%	31%	21%	26%	8%
Non-parent	65%	16%	19%	74%	12%
White	61%	19%	20%	82%	16%
Non-white	56%	27%	18%	18%	5%

*apartments and others who did not have yards to care for were omitted from this series of questions.

Key recommendations

Most segments show high levels of willingness to engage in limited lawn watering. Segments with the highest levels of willingness are shaded in Table 16. This includes respondents with no college, respondents under 35, non-parents and non-whites. Most of these are not large segments, so the impact of bringing these groups into Bright Green is somewhat low. However, it is noted that respondents with no college have a low proportion of Bright Green (52%) and also a low proportion of Brown (19%), indicating that they are not doing the behavior but are not opposed to it. This may be a group that isn't aware of the reasons to water deep but with less frequency.

Proper dog waste disposal at home

The individual survey items regarding dog waste disposal are discussed below, followed by a summary of the composite measure, resident segmentation of this measure and key recommendations.

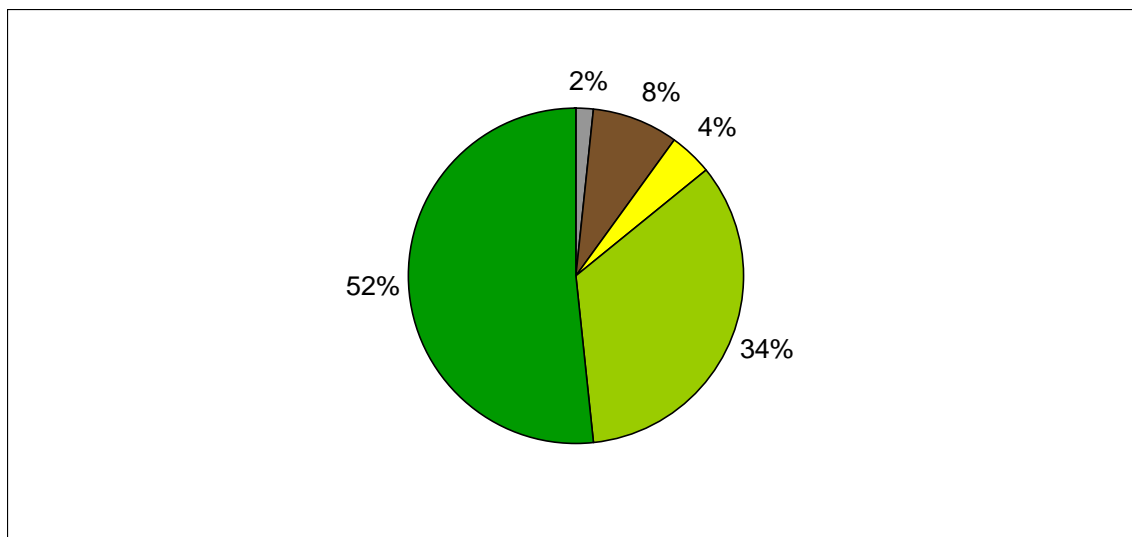
Item summary

Nearly one-third (31%) of respondents said that they have a dog. The majority of these dog-owners (86%) said that they pick up the waste that is left in their yard, with most of those respondents (87%) saying they pick up most of the waste most of the time. Most of those who pick up the waste said that they bag the waste and throw it in the trash (70%). The vast majority (98%) who bag the waste said they are doing it consistently (all or most of the time). Over half of dog owners (60%) who do not pick up after their pets at all said that they are not considering it.

Composite summary

All together, 52% of dog owners consistently dispose of dog waste with the proper method (bagging and putting in the trash). A fairly large proportion (34%) are doing some part of this method, but not all of it and not consistently. A slight majority of dog owners who do not properly dispose of dog waste are unlikely to change, translating to 8% of all dog owners.

Figure 23. Proper dog waste disposal at home (n=251)



Bright Green – consistently performs preferred behavior; Light Green – inconsistently performs preferred behavior; Yellow – Considering preferred behavior; Brown – not considering/discussing preferred behavior; Grey – don't know/unfamiliar with topic.

Resident segmentation

Below is a table showing the willingness of each segment of the population to dispose of dog waste properly. For assistance on reading this table, see the note on table interpretation preceding Table 12.

Table 17. Proper dog waste disposal at home within resident segments

	Doing (Bright Green)	Willing (Light Green or Yellow)	Unwilling (Brown or Grey)	Size of segment	Size of willing population
Non-apartment	50%	41%	9%	76%	31%
College	58%	37%	6%	74%	27%
No college	33%	43%	24%	26%	11%
Lower income (<\$50K/yr)	45%	43%	12%	40%	17%
Moderate income (\$50-75K/yr)	37%	46%	17%	17%	8%
High income (>\$75k/yr)	60%	31%	8%	43%	14%
Younger (<35)	61%	39%	0%	10%	4%
Middle aged	53%	35%	12%	61%	22%
Older (65+)	36%	56%	8%	29%	16%
Female	55%	38%	7%	60%	23%
Male	47%	38%	15%	40%	15%
Rural	19%	62%	19%	6%	4%
Non-rural	55%	36%	9%	94%	34%
Married	53%	38%	9%	63%	24%
Unmarried	44%	42%	15%	37%	15%
Parenting	40%	45%	15%	26%	12%
Non-parent	58%	35%	7%	74%	26%
White	52%	38%	11%	82%	31%
Non-white	50%	43%	7%	18%	8%

*apartments and others who did not have yards to care for were omitted from this series of questions.

Key recommendations

All segments have a relatively high level of willingness due to the large proportion of respondents who are already engaged in the proper behavior to at least some degree. The two groups with the highest levels of willingness include older respondents (65+) and rural residents. Rural respondents do not translate to a large impact because of population size. Another limitation to targeting this segment is the noted low proportion of Bright Green and high proportion of Brown, indicating there would be marginal existing norms to support the behavior and could be notable resistance. Program managers may want to look at targeting older respondents, of whom over one-third are already engaged in the behavior.

Annual compost use

The individual survey items regarding annual compost use are discussed below, followed by a summary of the composite measure, resident segmentation of this measure and key recommendations.

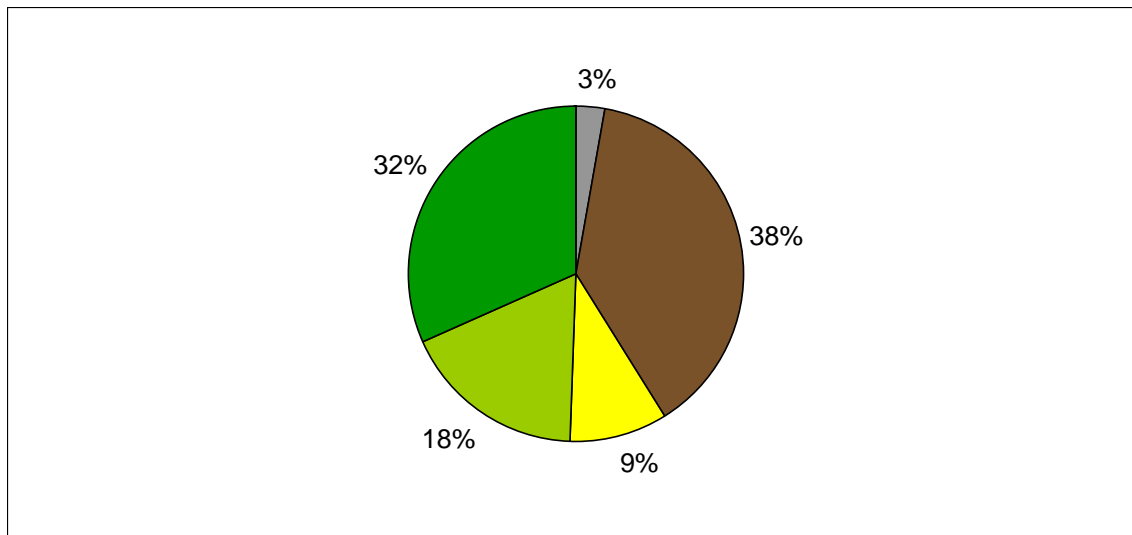
Item summary

Using compost on the lawn and garden helps feed the soil, prevent weed growth and fertilize plants. It is promoted as a best practice in avoiding the use of chemical fertilizers and weed killers. Half of respondents who have a yard (50%) said that they spread or use compost on their lawn or garden. Sixty-four percent of those who use compost said they do it every year or more often. Of those who do not use compost, 19% said that they are considering it (9% of all respondents who have a lawn or garden). The remainder who are not considering annual compost translates to 38% overall.

Composite summary

The responses to the survey items translate to nearly one-third in the Bright Green category (following best practices all the time). While half of the respondents with a yard do not spread or use compost, a small proportion (9%) are considering doing so. Thirty-eight percent of respondents with yards were classified as Brown because they do not spread compost and are not considering it.

Figure 24. Annual compost use (n=573)



Bright Green – consistently performs preferred behavior; Light Green – inconsistently performs preferred behavior; Yellow – Considering preferred behavior; Brown – not considering/discussing preferred behavior; Grey – don't know/unfamiliar with topic.

Resident segmentation

Below is a table showing the willingness of each segment of the population to engage in annual composting for their lawns and gardens. For assistance on reading this table, see the note on table interpretation preceding Table 12.

Table 18. Annual compost use

	Doing (Bright Green)	Willing (Light Green or Yellow)	Unwilling (Brown or Grey)	Size of segment	Size of willing population
Non-apartment	31%	28%	41%	76%	21%
College	34%	28%	38%	74%	21%
No college	21%	25%	54%	26%	7%
Lower income (<\$50K/yr)	27%	28%	45%	40%	11%
Moderate income (\$50-75K/yr)	34%	30%	35%	17%	5%
High income (>\$75k/yr)	35%	27%	38%	43%	11%
Younger (<35)	10%	35%	55%	10%	4%
Middle aged	34%	31%	35%	61%	19%
Older (65+)	32%	17%	51%	29%	5%
Female	32%	29%	39%	60%	17%
Male	31%	25%	44%	40%	10%
Rural	47%	26%	28%	6%	2%
Non-rural	30%	28%	42%	94%	26%
Married	35%	27%	37%	63%	17%
Unmarried	22%	27%	51%	37%	10%
Parenting	30%	38%	32%	26%	10%
Non-parent	32%	23%	45%	74%	17%
White	32%	26%	42%	82%	21%
Non-white	29%	36%	36%	18%	6%

*apartments and others who did not have yards to care for were omitted from this series of questions.

Key recommendations

Although most segments have high portions of willing respondents, almost every segment has a higher proportion of unwilling than either doing or willing. There are two exceptions to this, shaded in Table 18. Rural residents have the highest rate of consistent annual composting (47%), indicating established norms within this segment. One-quarter (26%) of this segment is willing to engage. While the rural segment does not translate to a large portion of the willing population, there could be a larger impact with this segment due to the potential size of the land in question in rural areas.

Parents are the only segment where the proportion of willing respondents outnumbers the proportion of unwilling respondents. Further research into the barriers for younger respondents may help to shed light on their particularly low engagement rate (10%)

Bright Green) and high portion of unwilling respondents (55%). Barriers and incentives need to be well understood to move this measure.

Reducing lawn size

The individual survey items regarding reduction in lawn size use are discussed below, followed by a summary of the composite measure, resident segmentation of this measure and key recommendations.

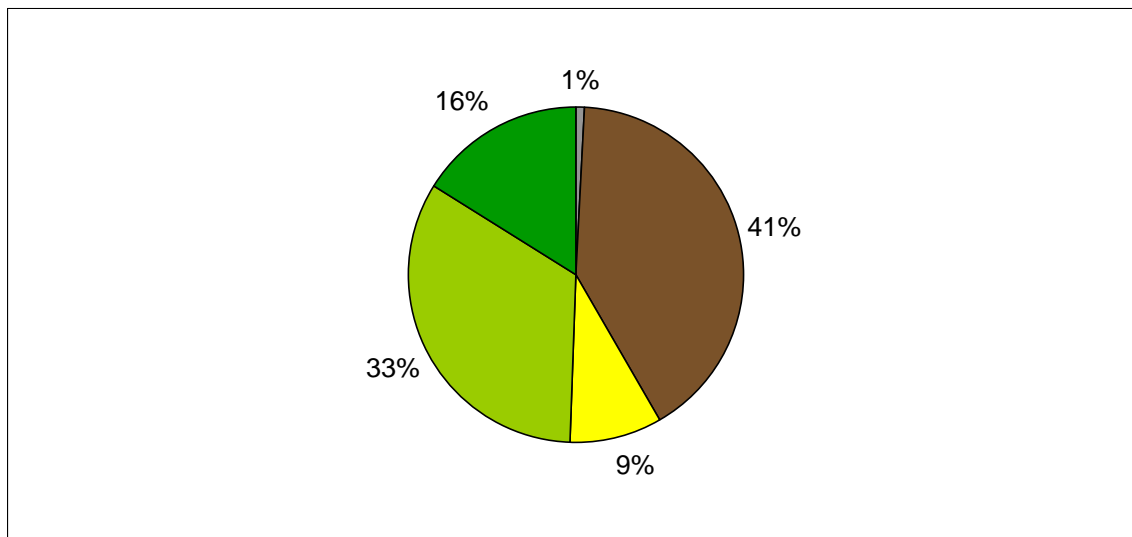
Item summary

Nearly half of respondents indicated that they have taken steps to reduce the size of their lawn by replacing grass with plants or ground cover (49% yes). Nearly one-third of this group reduced their lawn size by at least half (32%). Most of the respondents who have not reduced their lawn (81%) said that this was not something they have considered.

Composite summary

In this composite behavior, Bright Green represents those respondents with lawns who have reduced their lawn size by at least half (16%). Light Green represents those who have reduced their lawn, but by less than half (33%). Respondents who have not taken these actions but have considered it comprise the Yellow portion (9%). A sizeable minority (41%) have not taken steps to reduce their lawn size and have not considered such actions.

Figure 25. Reducing lawn size (n=515)



Bright Green – consistently performs preferred behavior; Light Green – inconsistently performs preferred behavior; Yellow – Considering preferred behavior; Brown – not considering/discussing preferred behavior; Grey – don't know/unfamiliar with topic.

Resident segmentation

Below is a table showing the willingness of each segment of the population to take steps to reduce their lawn size. For assistance on reading this table, see the note on table interpretation preceding Table 12.

Table 19. Reducing lawn size

	Doing (Bright Green)	Willing (Light Green or Yellow)	Unwilling (Brown or Grey)	Size of segment	Size of willing population
Non-apartment	16%	43%	41%	76%	32%
College	17%	43%	39%	74%	32%
No college	9%	36%	55%	26%	9%
Lower income (<\$50K/yr)	11%	27%	62%	40%	11%
Moderate income (\$50-75K/yr)	15%	44%	41%	17%	7%
High income (>\$75k/yr)	19%	50%	32%	43%	21%
Younger (<35)	12%	50%	38%	10%	5%
Middle aged	17%	44%	39%	61%	27%
Older (65+)	15%	35%	50%	29%	10%
Female	20%	38%	43%	60%	23%
Male	11%	49%	40%	40%	20%
Rural	9%	39%	52%	6%	2%
Non-rural	17%	42%	41%	94%	40%
Married	18%	47%	35%	63%	30%
Unmarried	10%	28%	62%	37%	10%
Parenting	14%	48%	38%	26%	12%
Non-parent	17%	40%	43%	74%	29%
White	16%	43%	41%	82%	36%
Non-white	19%	37%	44%	18%	7%

*apartments and others who did not have yards to care for were omitted from this series of questions.

The proportion of willing respondents is fairly high across most segments. Two segments stand out as having particularly low levels of willing respondents and show corresponding high levels of unwilling members: unmarried and lower income segments. Segments with the highest proportions of willing people include those with higher income, younger respondents, males, married folks and parents (shaded grey in Table 19). Higher income segments and married people show particular promise because they have higher rates of engagement within the segment, showing some established norms.

Key recommendations

Messaging for this measure may need to re-engage the people who have already made some change and encourage them to remove more of their lawn. Learning the barriers and incentives for doing so within any of the subgroups would be beneficial.

Adding native vegetation

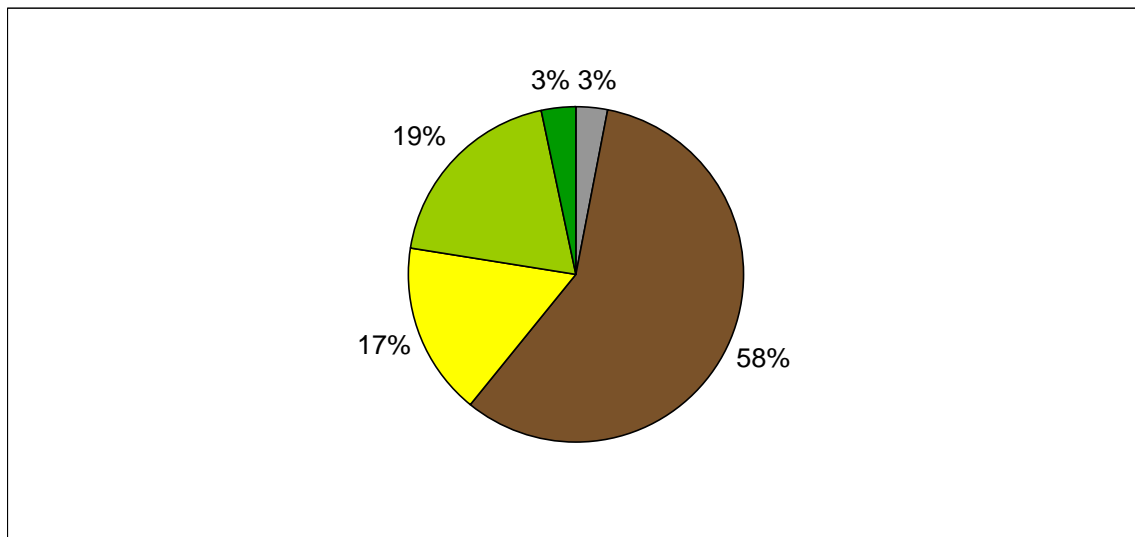
The individual survey items regarding native plants are discussed below, followed by a summary of the composite measure, resident segmentation of this measure and key recommendations.

Item summary

Respondents were asked if they have restored or planted any native vegetation in the past year. Twenty-three percent said that they have. Within this group who have added native vegetation, a minority (14%) said that they have done this on most their property. Among those respondents who have not added native vegetation in the past year, 22% said that they have discussed or considered such actions but the majority (75%) has not.

Composite summary

For this composite measure, Bright Green represents those who have planted native vegetation on most of their property (3%). Light Green (19%) represents those who have planted it on some of their property while Yellow shows those who have considered such actions (17%). This measure is the lowest ranked on the entire EBI (see Figure 1) with a largest proportion who are unwilling to engage (58%). It should be noted that this is one of the few items on the EBI that has a specified time frame, which may need to be reconsidered. The Brown portion may include respondents who have already converted to native vegetation in the past.

Figure 26. Adding native vegetation (n=583)

Bright Green – consistently performs preferred behavior; Light Green – inconsistently performs preferred behavior; Yellow – Considering preferred behavior; Brown – not considering/discussing preferred behavior; Grey – don't know/unfamiliar with topic.

Resident segmentation

Below is a table showing the willingness of each segment of the population to add native vegetation to their garden. For assistance on reading this table, see the note on table interpretation preceding Table 12.

Table 20. Adding native vegetation

	Doing (Bright Green)	Willing (Light Green or Yellow)	Unwilling (Brown or Grey)	Size of segment	Size of willing population
Non-apartment	3%	36%	60%	76%	28%
College	4%	40%	56%	74%	30%
No college	1%	17%	82%	26%	5%
Lower income (<\$50K/yr)	2%	20%	78%	40%	8%
Moderate income (\$50-75K/yr)	3%	34%	64%	17%	6%
High income (>\$75k/yr)	4%	47%	49%	43%	20%
Younger (<35)	0%	37%	63%	10%	4%
Middle aged	3%	41%	56%	61%	25%
Older (65+)	3%	24%	73%	29%	7%
Female	3%	35%	63%	60%	21%
Male	4%	38%	58%	40%	15%
Rural	9%	38%	53%	6%	2%
Non-rural	3%	36%	61%	94%	34%
Married	4%	43%	54%	63%	27%
Unmarried	1%	18%	81%	37%	7%
Parenting	2%	40%	58%	26%	10%
Non-parent	4%	34%	62%	74%	25%

White	3%	38%	59%	82%	31%
Non-white	4%	28%	68%	18%	5%

*apartments and others who did not have yards to care for were omitted from this series of questions.

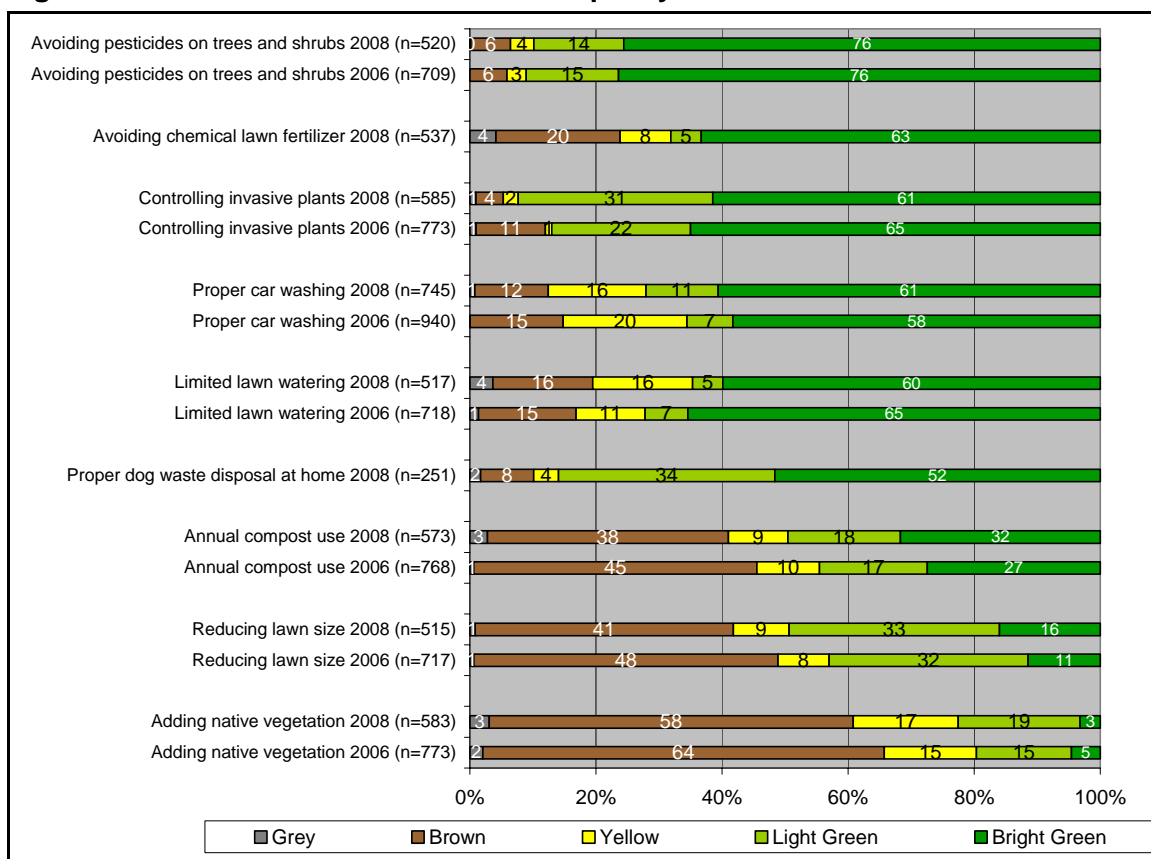
Key recommendations

The segments with the highest levels of willingness include the college educated, those with high income, middle-aged people, married people and parents (shaded grey in Table 20). College educated segment appears the most ripe for targeting because of the relatively low unwilling proportion and the population size.

Across the board, this appears to be a behavior that is difficult to execute with few pockets where engagement norms have been established. One segment where there are higher levels of Bright Green is the rural segment (9%). Further research might explore what has promoted this behavior within rural residences that has not been present in the non-rural segment. It may be that Bright Green is a function of property size, indicating that larger land owners would be a preferred target.

Yard care behavior and water quality, 2006-2008

The figure below compares items relating to yard care behavior and water quality from the 2006 survey to 2008. This comparison should be considered with care since the research methods employed in each year were not identical. Almost all of the measures show change in the desired direction. The exception is avoiding pesticide use on trees and shrubs (little or no change) and limiting lawn watering.

Figure 27. Yard care behavior and water quality 2006-2008

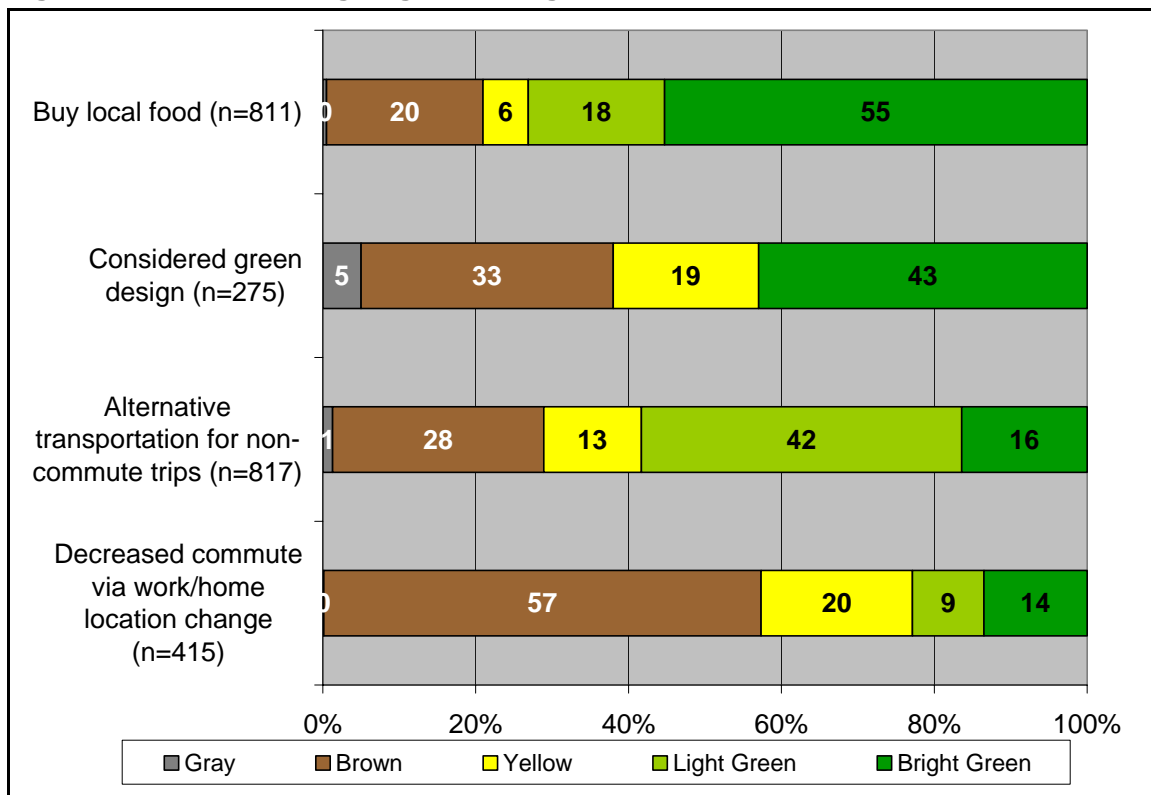
Bright Green – consistently performs preferred behavior; Light Green – inconsistently performs preferred behavior; Yellow – Considering preferred behavior; Brown – not considering/discussing preferred behavior; Grey – don't know/unfamiliar with topic.

NOTE: in 2005-06 people who did not use any fertilizer were asked if they'd considered using organic, slow release fertilizer. The program goal that this measure speaks to is avoiding chemical lawn fertilizer, not the application of organic fertilizers. As a result, the prior measure labeled people Brown if they did not fertilize and were not considering fertilizing with organic or slow release products. The 2008 measure classifies those respondents Bright Green. The 2006 findings are omitted from the figure to avoid confusion. This should be revised in future iterations of the survey.

GREEN LIVING

Four items were added to the survey this year to capture emerging programs and issues (see Figure 28).

Figure 28. Items relating to green living



Bright Green – consistently performs preferred behavior; Light Green – inconsistently performs preferred behavior; Yellow – Considering preferred behavior; Brown – not considering/discussing preferred behavior; Grey – don't know/unfamiliar with topic.

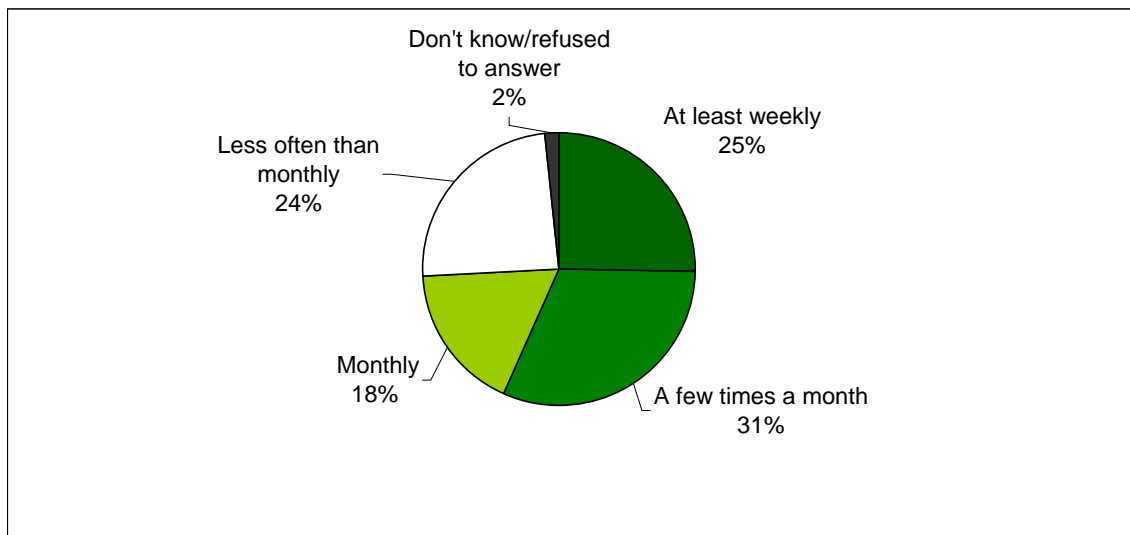
Buying local food

The individual survey items regarding local food are discussed below, followed by a summary of the composite measure, resident segmentation of this measure and key recommendations.

Item summary

Nearly three fourths of respondents said that they have bought food or other farm products directly from farms in the Puget Sound Region (74%). Of these respondents, 25% are doing this at least weekly and another 31% said they do this a few times a month (see Figure 29). Since this is the first year this question has been asked, it effectively sets the baseline for subsequent years.

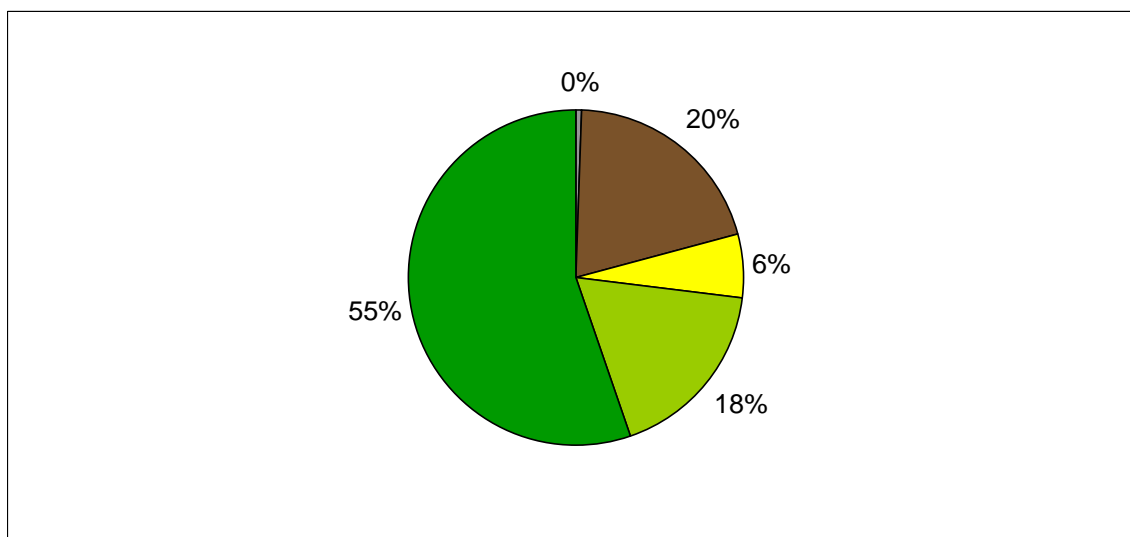
Figure 29. How often have you bought food directly from farms in the Puget Sound Region? (n=604)



Composite summary

Figure 30 shows the composite measure for buying local food. Over half of the 811 respondents are consistently buying local food items. Nearly a quarter are willing to alter their behavior (18% Light Green and 6% Yellow). Of those that said they have not bought local foods in the past year, only 22% indicated that they had considered changing their behavior (6% of all respondents).

Figure 30. Buying local food (n=811)



Bright Green – consistently performs preferred behavior; Light Green – inconsistently performs preferred behavior; Yellow – Considering preferred behavior; Brown – not considering/discussing preferred behavior; Grey – don't know/unfamiliar with topic.

Resident segmentation

Below is a table showing the willingness of each segment of the population to buy local food.

Note on table interpretation

Throughout this findings section, resident segmentation is presented for each behavior with a table illustrating the proportion of particular segments that fall into the categories of doing the behavior (Bright Green), willing to do the behavior (Light Green or Yellow), and unwilling to do the behavior (Brown or Grey).

Segments in which 15% or more are willing suggest areas where the program may be most productive. When that is coupled with a relatively large portion of people who are Bright Green, it suggests that there may be stronger norms among that population for the behavior than where there are few who are Bright Green. Considering the proportion that is categorized as Brown will give managers a sense of how often they will encounter disinterest or resistance within that population.

In addition, managers can consider how large the population is, and the size of the willing population (the final columns of the table). The larger the size of the willing population, the more opportunity there is for substantial net effects of behavior change.

Table 21. Buying local food

	Doing (Bright Green)	Willing (Light Green or Yellow)	Unwilling (Brown or Grey)	Size of segment	Size of willing population
Apartment	44%	24%	32%	23%	6%
Non-apartment	59%	23%	18%	76%	18%
College	59%	22%	19%	74%	16%
No college	43%	28%	28%	26%	7%
Lower income (<\$50K/yr)	42%	27%	31%	40%	11%
Moderate income (\$50-75K/yr)	54%	31%	15%	17%	5%
High income (>\$75k/yr)	66%	19%	14%	43%	8%
Younger (<35)	58%	21%	20%	10%	2%
Middle aged	61%	23%	16%	61%	14%
Older (65+)	42%	26%	31%	29%	8%
Female	57%	26%	17%	60%	16%
Male	53%	20%	27%	40%	8%
Rural	59%	24%	16%	6%	1%
Non-rural	55%	24%	21%	94%	22%
Married	63%	24%	13%	63%	15%
Unmarried	42%	24%	34%	37%	9%
Parenting	60%	26%	14%	26%	7%

Non-parent	54%	23%	23%	74%	17%
White	58%	22%	20%	82%	18%
Non-white	44%	30%	26%	18%	5%

Key recommendations

All segments show good opportunities for change. Segments with the highest levels of willingness include non-white and moderate income groups. However, these do not translate to the highest impact because of the relative size of those populations. Program managers may want to target willing segments that have relatively larger proportions (higher impact) and also have a favorable ratio of willing to unwilling (indicating less resistance within the segment). For this behavior, these targets include:

- Females
- Married people

Using alternative transportation for non-commute trips

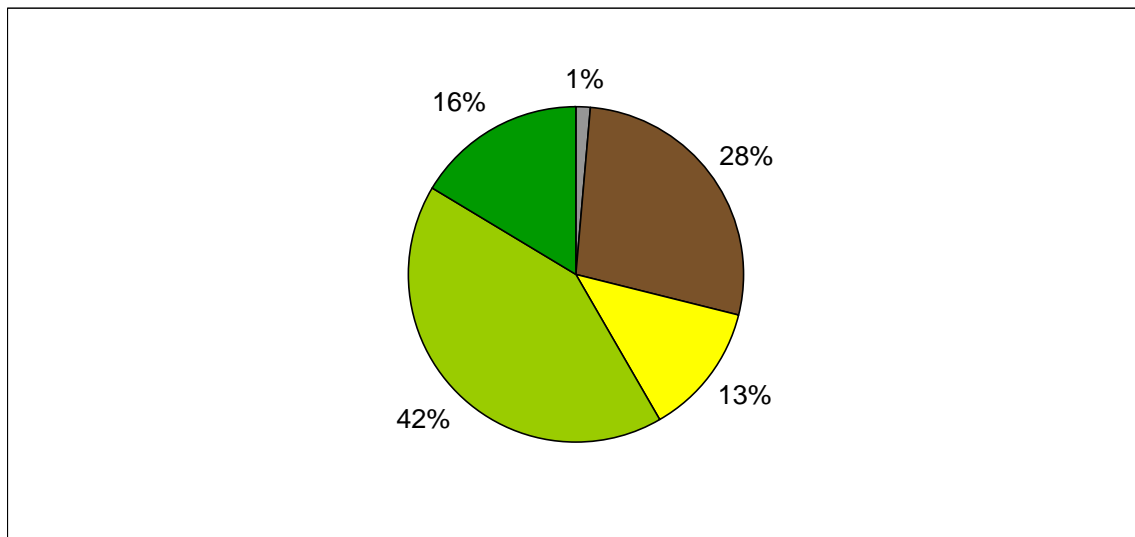
The individual survey items regarding alternative transportation for non-commute trips are discussed below, followed by a summary of the composite measure, resident segmentation of this measure and key recommendations.

Item summary

Respondents were asked if they use alternative transportation, such as walking, biking or busing, in order to get somewhere other than work or school. Fifty-nine percent of all respondents indicated that they do perform this behavior. Of those, 28% do this most or all of the time, whereas 71% do this some of the time. Only 31% of people who do not use alternative transportation for non-commute trips are considering doing so.

Composite summary

Overall this behavior has a small proportion of Bright Green (16%) respondents who are consistently using alternative transportation for non-commute trips. A larger proportion of respondents (28%) were classified as Brown because they never use alternative transportation and are not considering changing. However, when compared to all other behaviors in the EBI, this is the behavior with the largest proportion of Light Green/Yellow respondents, indicating a behavior ripe for change.

Figure 31. Using alternative transportation for non-commute trips (n=817)

Bright Green – consistently performs preferred behavior; Light Green – inconsistently performs preferred behavior; Yellow – Considering preferred behavior; Brown – not considering/discussing preferred behavior; Grey – don't know/unfamiliar with topic.

Resident segmentation

Below is a table showing the willingness of each segment of the population to use alternative transportation for non-commute trips. For assistance on reading this table, see the note on table interpretation above Table 21.

Table 22. Using alternative transportation for non-commute trips within resident segments.

	Doing (Bright Green)	Willing (Light Green or Yellow)	Unwilling (Brown or Grey)	Size of segment	Size of willing population
Apartment	29%	46%	25%	23%	10%
Non-apartment	12%	58%	30%	76%	44%
College	16%	59%	25%	74%	44%
No college	18%	41%	41%	26%	11%
Lower income (<\$50K/yr)	24%	43%	33%	40%	17%
Moderate income (\$50-75K/yr)	9%	63%	28%	17%	11%
High income (>\$75k/yr)	14%	62%	24%	43%	27%
Younger (<35)	14%	65%	20%	10%	7%
Middle aged	17%	61%	22%	61%	37%
Older (65+)	16%	37%	47%	29%	11%
Female	17%	55%	28%	60%	33%
Male	15%	55%	30%	40%	22%
Rural	8%	41%	51%	6%	2%
Non-rural	17%	56%	27%	94%	52%
Married	13%	60%	27%	63%	38%
Unmarried	22%	46%	32%	37%	17%

Parenting	10%	67%	23%	26%	17%
Non-parent	19%	50%	31%	74%	37%
White	17%	53%	30%	82%	43%
Non-white	13%	64%	22%	18%	12%

Key recommendations

Overall, this is an area with high levels of willingness, especially among parents, married people, non-whites, moderate and higher income and younger age groups (shaded in Table 23). Rural residents and older respondents (65+) are particularly unwilling, likely due to barriers of distance and physical abilities. The two segments that are both highly willing and relatively large are married people and the middle-aged segment, indicating prime targets for program managers.

Reducing commute distance

The individual survey items regarding reduction in commute distance trips are discussed below, followed by a summary of the composite measure, resident segmentation of this measure and key recommendations.

Item summary

Respondents that go to work or school outside their home were asked about their transportation habits. Most said they get to work or school by driving alone (69%), and 14% use some form of public transportation. A total of 4% use a non-motorized form of transportation (walking or biking).

Table 23. How do you usually get to and from work or school?		
	<u>n</u>	<u>%</u>
In a car by yourself	302	69
Using public transportation, such as Metro or Sound Transit	62	14
In a carpool or vanpool	35	8
Other	19	4
Walking	14	3
Motorcycle	3	1
A bicycle	2	0
	437	100

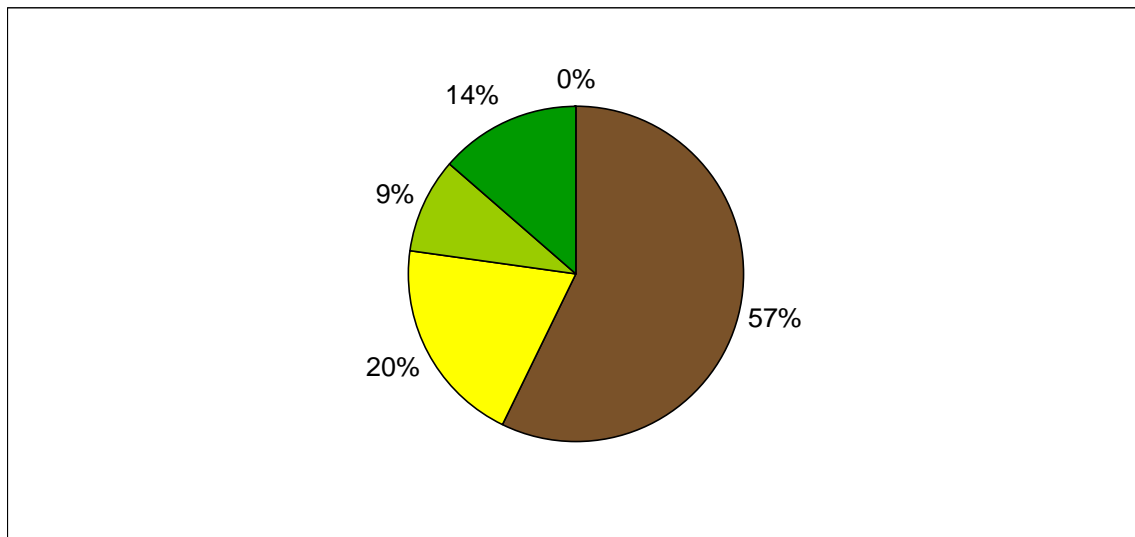
When asked to compare their current commute to their commute distance four years ago, 19% reported an increase, 23% experienced a decrease, while 56% said their travel time stayed the same. Of those who indicated a decrease in commute time, 58% said their decision to move or change jobs was influenced by their interest in a shorter commute (14% of all respondents). Just over a quarter of respondents who said their

commute increased or stayed the same indicated that they have considered moving or changing jobs to reduce their trip distance.

Composite summary

Reducing commute distance ranked near the bottom of the EBI list in terms of behavior engagement (see Figure 1). Though this behavior has the second to largest proportion of Brown respondents (57%), it also has a relatively large proportion of Yellow -- people considering reducing their commute distance (20%).

Figure 32. Reducing commute distance (n=415)



Resident segmentation

Below is a table showing the willingness of each segment of the population to reduce their commute distance. For assistance on reading this table, see the note on table interpretation above Table 21.

Table 24. Reducing commute distance

	Doing (Bright Green)	Willing (Light Green or Yellow)	Unwilling (Brown or Grey)	Size of segment	Size of willing population
Apartment	20%	24%	56%	23%	5%
Non-apartment	12%	30%	58%	76%	23%
College	14%	31%	55%	74%	23%
No college	12%	22%	66%	26%	6%
Lower income (<\$50K/yr)	18%	23%	59%	40%	9%
Moderate income (\$50-75K/yr)	17%	30%	53%	17%	5%
High income (>\$75k/yr)	10%	29%	61%	43%	13%
Younger (<35)	31%	33%	36%	10%	3%

Middle aged	11%	29%	60%	61%	18%
Older (65+)	7%	28%	66%	29%	8%
Female	14%	25%	61%	60%	15%
Male	13%	34%	53%	40%	14%
Rural	8%	21%	71%	6%	1%
Non-rural	14%	30%	57%	94%	28%
Married	15%	30%	55%	63%	19%
Unmarried	9%	28%	63%	37%	10%
Parenting	17%	30%	53%	26%	8%
Non-parent	12%	29%	60%	74%	21%
White	12%	32%	56%	82%	26%
Non-white	18%	19%	63%	18%	3%

Key recommendations

All segments show good opportunity for change. The highest levels of willingness are demonstrated by males, the younger segment, and white people (shaded). Although the younger segment doesn't translate into a large proportion of the overall population, they are the most receptive group with, by far, the smallest proportion of unwilling members. This segment will be middle-aged in the future and setting examples for the next segment of young commuters. Further research into the discrepancy of willingness between males and females may identify barriers specific to females. It is possible that issues of safety could be addressed to bring more of the females from willing over to doing.

Considering green design

The individual survey items regarding green design are discussed below, followed by a summary of the composite measure, resident segmentation of this measure and key recommendations.

Item summary

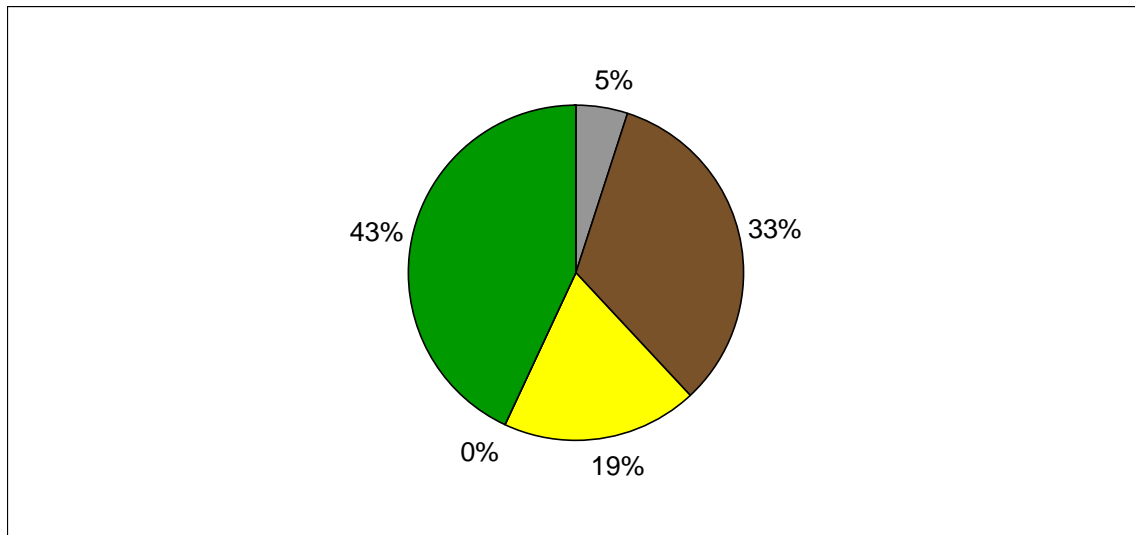
Homeowners were asked if they had bought, built or remodeled their home within the past five years. Nearly half (47%) said they have. Among these respondents, 43% said that green design or construction features were a part of the project or reason for purchase. Among those who did not include green design, most (59%) did not consider it. Note that there is no Light Green category for this measure.

Composite summary

Forty-three percent of those who had the opportunity to use green design features did so. Among those who did not, a majority didn't consider it, translating to 33% Brown.

Nearly one fifth (19%) were classified as Yellow because they thought about using green design.

Figure 33. Considering green design (n=275)



Bright Green – consistently performs preferred behavior; Light Green – inconsistently performs preferred behavior; Yellow – Considering preferred behavior; Brown – not considering/discussing preferred behavior; Grey – don't know/unfamiliar with topic.

Resident segmentation

Below is a table showing the willingness of each segment of the population to consider green design. For assistance on reading this table, see the note on table interpretation above Table 21.

Table 25. Considering green design

	Doing (Bright Green)	Willing (Light Green or Yellow)	Unwilling (Brown or Grey)	Size of segment	Size of willing population
Apartment	43%	19%	38%	23%	4%
Non-apartment	43%	19%	38%	76%	14%
College	43%	21%	36%	74%	15%
No college	45%	5%	50%	26%	1%
Lower income (<\$50K/yr)	40%	4%	55%	40%	2%
Moderate income (\$50-75K/yr)	45%	12%	42%	17%	2%
High income (>\$75k/yr)	45%	26%	30%	43%	11%
Younger (under 35)	35%	35%	31%	10%	3%
Middle aged	44%	20%	37%	61%	12%
Older (65+)	47%	6%	47%	29%	2%
Female	43%	20%	37%	60%	12%
Male	44%	17%	39%	40%	7%
Rural	37%	21%	42%	6%	1%

Non-rural	44%	18%	38%	94%	17%
Married	45%	20%	35%	63%	13%
Unmarried	38%	13%	49%	37%	5%
Parenting	41%	25%	34%	26%	6%
Non-parent	45%	15%	40%	74%	11%
White	42%	19%	39%	82%	15%
Non-white	48%	17%	35%	18%	3%

It is interesting to note that those without a college education and older respondents were very unlikely to be willing to consider green design. However, they are evenly split between those who did consider green design and those who did not.

Key recommendations

There is a great deal of variability in willingness to consider green design aspects in a home purchase or remodel. The most willing segment is the youngest respondents (35%), though overall impact of targeting this segment would be small (3%). Since remodeling or home purchasing is an infrequent behavior, barriers and incentives need to be addressed at the key moment when the audience is preparing to make a purchase or remodel a home. The shaded segments represent the larger portions of the populations who are also reasonably willing to consider green design.

Green Living, 2006-2008

The Green Living section of the EBI consists of all new items that were not measured in 2006. In future cycles of this survey, comparisons will show whether and where there is change in these behaviors.

CONCLUSION

The 2008 EBI offers opportunities for King County to explore how ongoing use of a powerful survey tool can inform programs and track change.

CHOOSING TARGET BEHAVIORS AND AUDIENCES

A great deal of the report is dedicated to describing the willingness of sub groups of the population with regard to each behavior. There is no hard and fast rule to decide upon a target audience, but willingness to engage in the behavior is the most important of many dimensions to take into account. People who will not consider a behavior take far more resources to convince than people who are already open to learning more about an issue.

Table 25 includes the ten composite behaviors with the highest proportion of Light Green and Yellow categories. These are the behaviors that have the largest group of people who are already doing the behavior inconsistently or who are considering engaging in the behavior. Efforts may be most fruitful when the willingness to change is coupled with an established norm and low levels of resistance. The ten behaviors presented in Table 25 were evaluated for higher levels of Bright Green and corresponding lower levels of Brown. Behaviors where there is a favorable ratio of Light Green/Yellow to Brown are shaded. These are behaviors that may present the opportunities for change.

Table 25. Composite behaviors ranked by willingness to change	
	% Light Green and Yellow
Giving experiences as gifts	55%
Using alternative transportation for non-commute trips	55%
Reducing lawn size	42%
Proper dog waste disposal at home	38%
Adding native vegetation	36%
Controlling invasive plants	33%
Reducing commute distance	29%
Annual compost use	27%
Proper car washing	27%
Buying non-toxic latex paints	25%

Table 25 suggests some areas to concentrate on programmatically. However the size of the target audience is another dimension to consider. If there are very few people who make up the sub group, focusing a program's resources on them could result in little measurable change. In addition, they may be hard to find or hard to reach. Resident segmentation should add to the insights program managers gain from the findings, and

can begin to steer them toward the best opportunities to have an impact on large portions of the population.

In addition to willingness and size of the segments, three other variables should be considered when choosing target populations for Social Marketing approaches.

1. The prevalence of the behavior within a specific segment
2. Whether or not the segment is easy to identify
3. How reachable that segment is

The prevalence of the behavior may be higher in certain segments, suggesting programmatic focus. For example, if men are more likely than women to be a decision maker about yard care issues, then the impact of targeting men may be more substantial than targeting women.

The second two variables listed above are often related. For example, does the target population tend to live in distinct areas that could give a geographically-resourced program an edge? Do they tend to engage in similar activities? Do they trust information and seek it out from similar sources? Are there databases of contact information that are readily available? If so, that segment becomes one that programs could select for a focus.

FUTURE RESEARCH AND ADDITIONAL ANALYSIS

It will be useful to explore how changes to the survey affect program information. We believe that measures of behaviors that show high levels of adoption and low levels of willingness to change could be rotated out of the EBI. These items could be revisited with periodic inclusion in the full survey to make sure ground is not lost.

As described in the report, many measures suggest a need for additional research to clarify the barriers and motivators for engaging people in the desired behaviors. These investigations will be most productive if they are audience specific – identifying key characteristics of people in the population and customizing the investigations to address the subgroup's specific needs.

Expensive research is not required. A great deal can be learned from informal discussions if they are entered into with a spirit of real inquiry and facilitator judgments and bias are kept carefully in check. Learning what people think about the topic -- whether they are well informed or not, and whether their view is considered appropriate

or not -- is critical so that programs can appropriately speak to their target audiences. Programs that do not speak to the key concerns of the audience will see limited change compared to those that do.

Additional analysis could help reveal stronger profiles of residents that engage in sets of behaviors. If so, programs can strategize to leverage each others resources and together create more change.

The addition of the EBI scale to this year's work is valuable. Additional analysis could indicate where the key drivers are to engaging in desirable behaviors or creating a willingness to do so, and thereby help bring into focus the most robust target audience.

APPENDIX A: RESEARCH METHODS AND DATA QUALITY

The survey was administered by telephone during the period from May 14th, 2008 to August 11th, 2008 to residents of King County, Washington.

Phone numbers were supplied by a reputable survey sampling organization, Survey Sampling International. The bulk of the phone numbers (73%) were random digit dialing. Additional listed phone numbers were provided to target apartments (8%). A third sample was provided using reverse directory look-up to target rural residents (19%).

A total of 821 surveys were completed with qualified respondents. Six attempts were made to contact eligible respondents within each household, including at least one attempt on a weekend day and at least one attempt during business hours.

Because stratified sampling was used, weights were applied to the data to approximate the actual distribution of residents across rural, suburban, urban areas. Those weights were applied and reported in the findings of this report.

Call Disposition Tables

The following table details the final calling dispositions of the King County Environmental Behavior Index Survey.

Table A1. Call result summary	
Result	N
Completed	821
Partial Completes	31
Soft Refusal *	443
Refused	617
No Answer/Machine/Busy	2004
Callback	8
Total Valid Contact	3924
Bad number	4663
Unable - Language	244
Unable - Physical/Mental	96
Not Qualified	747
Already Responded	1
Max Attempts	2459
Total Invalid Contacts	8210
Total	12134
Response Rate (completes/valid)	21%
Average Length of Survey	13:46

*When a respondent terminates a call prior to establishing eligibility, the call is coded "Soft Refusal." Qualified respondents informed of the intent of the survey who refuse to participate are coded "refused."

Descriptive Characteristics Table

Below are the characteristics of survey respondents:

Table A2. Demographics	
Demographics	%
Age	
18 to 24	1
25 to 34	10
35 to 44	16
45 to 54	22
55 to 64	22
65 to 74	14
Or 75 or older	14
Total	100
Sex	
Male	40
Female	60
Total	100
Marital Status	
Not married	35
Married	56
Or a member of an unmarried couple	9
Total	100
Education	
Less than High school	5
High school (GED)	19
Some college or vocational	19
College degree	31
Beyond college	27
Total	100
Race/Ethnicity	
White/Caucasian	86
African American/Black	2
Asian/Pacific Islander	4
Hispanic origin	1
Native American/Indian	2
Something else	5
Total	100
Market Area	
No children	75
Children in the HH	19
Total	100

Comparison to 2005-06

In 2008, the Department asked to create a survey methodology that would enable more strategic application of the findings. Primarily, there was interest in oversampling key subgroups in the population including those in rural areas, people living in apartments, and those without a college education. As a result, the survey methodology was quite different from that used in 2005-06. Random residential telephone samples dominated the data collection, but targeted geographic samples were drawn and listed household telephone numbers used to reach a variety of subgroups in the population. Because of this, not every household in King County had an equal probability of being selected into the sample. The weighted data helps approximate the distribution of behaviors in the population, but it is likely that there is some bias in the estimates and some error that is unaccounted for in the data.

Nevertheless, the correspondence between the 2005 and 2006 measures suggests that the impact of these changes in survey methodology may be small. Readers should understand that while these data are very useful, care should be taken in describing their generalizability to King County population overall.

APPENDIX B: SURVEY SCRIPT

INTRO:

2008/06/30 09:36

Hello, this is \$I calling on behalf of King County agencies with a survey for King County residents. Are you a member of the household age 18 or older? [IF NO] May I speak to a member of the household age 18 or older? [IF NO arrange a call-back time] [NOTE:The survey is being conducted in order to help guide local governments on how to best improve environmental behaviors and practices of King County residents.]

Able to continue01
Not able to continue.....02 => INT

INT03:

2008/05/08 09:56

Have I reached a private residence in King County? [IF R is not in King County or doesn't know then say "Ok, thank you for your time. Have a good day/evening"]
Rebuttal for refused

=> +1

si BORD=2

Yes- Continue.....01
Not in King County02 => INT98
DON'T KNOW03 => INT98
REFUSED04 => INT

QB:

2008/05/06 15:05

This is a survey about various things people do around their homes and yards. Do you live in a...

Single-family dwelling1
Duplex or triplex2
Condo3
Apartment4
Or mobile home5
Don't know (DON'T READ)6
Refused (DON'T READ).....7

QC:

2008/05/30 09:18

Do you own or rent?

Own1
Rent2
DON'T KNOW (DON'T READ).....3
REFUSED/MISSING (DON'T READ).....4

QD:

2008/05/30 09:18

Does your household have responsibility for any yard or garden with your home, or does the landlord/owners association take care of all that?

=> +1

si NOT QC=2 AND NOT QB=3

I/We have responsibility for some/all.....1
 Landlord/association does it all2
 Have no yard/garden.....3
 DON'T KNOW (DON'T READ).....4
 REFUSED (DON'T READ)5

INT04:

2008/05/08 19:55

For this survey I'd like to speak to the person in your household who is most responsible for your yard and/or household maintenance, or who shares equally in that responsibility. Would that be you? [IF NO, ASK TO SPEAK TO THAT PERSON. REINTRODUCE IF NEEDED:] Hello, this is \$I calling on behalf of King County agencies with a survey for King County residents. King County agencies are gathering information to better understand what county residents are currently doing and planning around their homes. The information will be used for planning and service development. This survey takes about 10 to 15 minutes depending on your answers, and all information obtained in this study will be confidential. [IF NEEDED: We do not have your name or address and your phone number will be removed from the data that is provided to the county]

Able to continue01

Unable to continue.....02 => INT

QF1:

2008/05/14 13:01

Just to be sure that I ask questions that are right for your household, please tell me which of these you have with your home... Do you have a grass lawn?

=> +4

si QC=2 AND QD=2-5

Yes - A grass lawn.....1
 No2
 DON'T KNOW (DON'T READ).....3
 REFUSED (DON'T READ)4

QF2:

2008/05/30 09:19

A vegetable or flower garden or plant landscaping of any size? (NOT potted plants)

YES- Vegetable or flower garden or plant landscaping of any size (NOT potted plants) 1

NO2

DON'T KNOW (DON'T READ).....3

REFUSED (DON'T READ)4

QF3:

2008/05/30 09:19

Any yard space or acreage other than lawn or gardens?

YES- Any yard space or acreage other than lawn or gardens.....1

No2

DON'T KNOW (DON'T READ).....3

REFUSED (DON'T READ)4

QF4:

2008/05/30 09:19

Or any wetland, lake, pond, stream or river on, or bordering directly on your property?

YES - any wetland, lake, pond, stream or river on, or bordering directly on your property 1

No2

DON'T KNOW (DON'T READ).....3

REFUSED (DON'T READ)4

Q1A:

2008/05/30 09:20

This first set of questions is about things you have done or have been thinking about doing in and around your house. If any do not apply to you, just let me know. Throughout, when I refer to YOU this really means your whole household. Do you currently use any energy-saving light bulbs in your home? These are also known as compact fluorescent light bulbs and many of them are curly shaped.

Yes.....1

No2

DON'T KNOW (DON'T READ).....3

REFUSED (DON'T READ)4

WORD:

2008/05/08 10:10

=> *

si IF ((Q1A=1),1,2)

How do you dispose of burned out fluorescent light tubes or compact fluorescent light bulbs? 1

If you use any of the long fluorescent light tubes, how do you dispose of them when they burn out? 2

Q2A:

2008/05/30 09:20

<word> IF MORE THAN ONE, ASK: Which one do you do most? IF STORE THEM, PROBE: What will you eventually do, when you're ready to get rid of them? IF THROW AWAY, PROBE: Where would you throw them away? [DO NOT READ RESPONSES, PROBE TO FIT]

Take to hazardous waste collection site (Wastemobile, haz-mat)01
 Take to special recycling services or events (EcoLights, city/county) ..02
 Take back to a store.....03
 Put in household garbage/trash.....04
 Take to trash transfer station/the dump05
 Someone else does it/don't know what they do06
 Other (SPECIFY)96 O
 Doesn't apply - Have never disposed of any/Don't use this type (DON'T READ) 97
 Don't know (DON'T READ)98
 Refused (DON'T READ).....99

WORD1:

2008/05/08 10:13

=> *

si IF ((Q1A=1),1,2)

Do1
 Will.....2

Q2B:

2008/05/30 09:21

You <word1> do that most of the time or some of the time when you have these types of bulbs to dispose of?

=> +1

si NOT Q2A=01-03

Most/all.....1
 Some.....2
 DON'T KNOW (DON'T READ).....3
 REFUSED (DON'T READ)4

Q2C:

2008/05/30 09:21

Have you or anyone in your household talked about taking these types of bulbs to a county hazardous waste collection site, returning them to a store, or trying to recycle them in some way? [PROBE TO FIT]

=> +1

si Q2A=01-03,97

Yes, thought/talked about/plan to1
 Yes, but don't know where to do that2
 No3
 DON'T KNOW (DON'T READ).....4
 REFUSED (DON'T READ)5

Q4A:

2008/05/30 09:21

Many people have prescription drugs and other medications in their homes that have expired or are no longer wanted. How does your household typically dispose of expired or unwanted drugs and medications? IF MORE THAN ONE, ASK: Which one do you do most? IF STORE THEM, PROBE: What will you eventually do, when you're ready to get rid of them? IF THROW AWAY, PROBE: How would you throw them away? [DO NOT READ, PROBE TO FIT]

Put in household garbage/trash.....	01
Return to pharmacist, or try to.....	02
Toilet or sink	03
Give to someone else who will use them.....	04
Other (SPECIFY)	96 O
Doesn't apply/ never have any/always use them up.....	97
DON'T KNOW.....	98
REFUSED	99

Q4B:

2008/05/30 09:22

Would you say you do that most of the time with your unwanted and expired medications or only some of the time?

=> +1

si NOT Q4A=01,02

Most/all.....	1
Some.....	2
DON'T KNOW (DON'T READ).....	3
REFUSED (DON'T READ)	4

Q4C:

2008/05/30 09:22

Have you or anyone else in your household talked about or been considering putting unwanted medications into your household garbage for disposal, or taking them back to the pharmacy?

=> +1

si Q4A=01,02,97

Yes.....	1
No.....	2
DON'T KNOW (DON'T READ).....	3
REFUSED (DON'T READ)	4

Q5A:

2008/05/30 09:22

This next question is about electronics that you no longer want, including computers, computer monitors and television sets. What do you eventually do with these types of electronic devices that you no longer want? IF MORE THAN ONE, ASK: Which one do you do most? IF STORE THEM, PROBE: What will you eventually do, when you're ready to get rid of them? IF THROW AWAY, PROBE: How would you throw them away? [DO NOT READ, PROBE TO FIT]

Take it to an electronics store or collection center	01
Computer repair or resale shop.....	02
Take it to special recycling services or events (city/county)	03
Mail/take back to the manufacturer for recycling (private).....	04
Put it with regular recycling pick-up	05
Sell it	06
Donate/give it away: charity, school or family/friends.....	07
Put in household garbage/trash.....	08
Take to trash transfer station/the dump	09
Other (SPECIFY)	96 O
Doesn't apply/ Have never thrown any out/ don't have such things	97
Don't know	98
Refused.....	99

Q5B:

2008/05/30 09:22

Are you now doing this for all your electronics that you no longer want or for some of them?

=> +1

si NOT Q5A=01-07

All/Most	1
Some.....	2
DON'T KNOW (DON'T READ).....	3
REFUSED (DON'T READ)	4

Q5C:

2008/05/30 09:22

Some disposal options now available for electronics include taking the item to certain electronics, computer repair or resale shops, shipping it back to the manufacturer, taking to a public recycling event, giving it away or selling it. Have you or anyone in your household discussed or considered any of these options? [PROBE TO FIT]

=> +1

si Q5A=01-07,97

Yes, thought/talked about/plan to.....	1
Yes, but don't know where to do that	2
No	3
DON'T KNOW (DON'T READ).....	4
REFUSED (DON'T READ)	5

INFO:

2008/05/14 12:53

These next few questions are about your lawn.

=> Q9A

si NOT QF1=1

Press enter to continue.....1 D

Q7A:

2008/05/13 15:07

Which of the following best describes how you water your lawn, would you say...

[Definition: To water deeply is about one inch of water. One inch is about 40 minutes of watering. This can be measured with a tuna can.]

One, you do not water grass, even in dry summer months01

Two, when you do water, you water deeply, but only once a week or less 02

Or three, would you describe your lawn watering habits in some other way (SPECIFY) 97 O

Everyday (DON'T READ)03

less than everyday but at least twice per week (DON'T READ)04

Random, it varies (DON'T READ).....05

Don't know (DON'T READ)98

Refused (DON'T READ).....99

Q7B:

2008/05/30 09:23

Is this how you handle lawn-watering most of the time, most years, or sometimes?

=> +1

si NOT Q7A=01-02

All/Most1

Some.....2

DON'T KNOW (DON'T READ).....3

REFUSED (DON'T READ)4

Q7C:

2008/06/02 09:56

Have you or anyone in your household been considering not watering your lawn at all, or watering deeply, but only once a week? [Definition: To water deeply is about one inch of water. One inch is about 40 minutes of watering. This can be measured with a tuna can.]

[Definition: To water deeply is about one inch of water. One inch is about 40 minutes of watering. This can be measured with a tuna can.]

=> +1

si Q7A=01-02

Yes.....1

No.....2

DON'T KNOW (DON'T READ).....3

REFUSED (DON'T READ)4

Q8A:

2008/05/30 09:23

Have you ever taken steps to reduce the size of your lawn, by replacing grass with planting beds or other ground cover?

Yes.....1
 No.....2
 DON'T KNOW (DON'T READ).....3
 REFUSED (DON'T READ).....4

Q8B:

2008/05/30 09:23

Is the reduction more than half or less than half of what the lawn area used to be?

=> +1

si NOT Q8A=1

Lawn reduced by half/ more than half.....1
 Lawn reduced by less than half.....2
 DON'T KNOW (DON'T READ).....3
 REFUSED (DON'T READ).....4

Q8C:

2008/05/08 10:58

Is this something you or anyone in your household have been talking about or considering?

=> +1

si Q8A=1,4

Yes.....1
 No.....2
 DON'T KNOW (DON'T READ).....3
 REFUSED (DON'T READ).....4

Q9A:

2008/05/30 09:24

Next, I have some questions about fertilizing. Do you use a fertilizer on your lawn? [If they only have a garden then code as not applicable]

=> Q12A

si NOT QF1=1 AND NOT QF2=1

Yes.....1
 No.....2
 DON'T KNOW (DON'T READ).....3
 REFUSED (DON'T READ).....4
 NOT APPLICABLE (DON'T READ).....5

Q9B:

2008/05/08 20:07

We are interested in three different types of fertilizer that people typically use. One is chemical, which has a fast release of nutrients. Another is labeled "natural organic" or "slow release." And another type of fertilizer is commonly called "weed and feed," which means it has a weed control product in it. Which of these types do you use on your lawn... Do you use chemical fertilizer?

=> Q9D

si NOT Q9A=1

Yes.....	1
No.....	2
DON'T KNOW (DON'T READ).....	3
REFUSED (DON'T READ).....	4

Q9B1:

2008/05/06 16:32

Do you use natural organic or slow release (on your lawn)?

Yes.....	1
No.....	2
DON'T KNOW (DON'T READ).....	3
REFUSED (DON'T READ).....	4

Q9B2:

2008/05/06 16:32

Do you use any type of weed and feed (on your lawn)? IF NEEDED: Contains a weed and control product

Yes.....	1
No.....	2
DON'T KNOW (DON'T READ).....	3
REFUSED (DON'T READ).....	4

Q9C:

2008/05/30 09:24

Would you say you use "natural organic" or "slow release" fertilizers most of the time when you fertilize your lawn, or only some of the time?

=> +1

si NOT Q9B1=1

All/Most of the time	1	=> Q9E
Some of the time.....	2	=> Q9E
DON'T KNOW (DON'T READ).....	3	=> Q9E
REFUSED (DON'T READ).....	4	=> Q9E

Q9D:

2008/05/08 20:04

Have you or anyone in your household discussed or considered using lawn fertilizers that are only natural organic or slow release?

=> +1

si NOT Q9A=1,2,3 AND NOT Q9B1=1

Yes.....1
 No.....2
 DON'T KNOW (DON'T READ).....3
 REFUSED (DON'T READ).....4

Q9E:

2008/05/08 11:17

Which of the following describes how you treat trees or shrubs for disease or insects...

One, use a pesticide spray01
 Two, use a natural organic solution such as insecticidal soap, neem oil, forced water spray, boric acid or ammonia02
 Or three, do you do a combination of one and two.....03
 Don't use anything (DON'T READ).....04
 Don't know (DON'T READ)05
 Refused (DON'T READ).....06

Q9F:

2008/05/08 11:17

Have you or anyone in your household discussed or considered using only natural or organic solutions for trees or shrubs?

=> +1

si NOT Q9E=01,03

Yes.....1
 No.....2
 DON'T KNOW (DON'T READ).....3
 REFUSED (DON'T READ).....4

Q10A:

2008/05/06 16:38

What about compost; do you spread or use compost on your lawn or garden?

Yes.....1
 No.....2
 DON'T KNOW (DON'T READ).....3
 REFUSED (DON'T READ).....4

Q10B:

2008/05/30 09:24

Do you tend to do that every year or just in some years?

=> +1

si NOT Q10A=1

Every year, at least once or more	1
Just in some years	2
DON'T KNOW (DON'T READ)	3
REFUSED (DON'T READ)	4

Q10C:

2008/05/08 11:21

Is anyone in the household, including yourself, talking or thinking about using compost on your lawn or garden at least once a year?

=> +1

si Q10A=1,4

Yes	1
No	2
DON'T KNOW (DON'T READ)	3
REFUSED (DON'T READ)	4

Q12A:

2008/05/30 09:25

These next questions are about plants in your yard. Do you remove or make efforts to control invasive plants and weeds on your property such as English ivy, blackberry, scotchbroom or butterfly bush?

=> Q15A

si NOT QF1=1 AND NOT QF2=1 AND NOT QF3=1

Yes	1
No	2
Don't have any/Already well controlled	3
DON'T KNOW (DON'T READ)	4
REFUSED (DON'T READ)	5

Q12B:

2008/05/30 09:25

Do you remove or control most of these types of invasive plants most of the time or some of these plants some of the time? [PROBE TO FIT]

=> +1

si NOT Q12A=1

All/Most plants, all/most of the time	1
All/Most plants, some of the time	2
Some plants, all/most of the time	3
Some plants, some the time/varies	4
DON'T KNOW (DON'T READ)	5
REFUSED (DON'T READ)	6

Q12C:

2008/05/08 11:30

Have you or anyone in your household been talking or thinking about removing these types of invasive plants?

=> +1

si Q12A=1,3,5

Yes.....	1
No	2
DON'T KNOW (DON'T READ).....	3
REFUSED (DON'T READ)	4

Q14A:

2008/05/06 16:45

In the past year, have you restored or planted any native vegetation on your property with plants such as Oregon grape, sword fern, vine maple or snowberry?

Yes.....	1
No	2
DON'T KNOW (DON'T READ).....	3
REFUSED (DON'T READ)	4

Q14B:

2008/05/30 09:25

Would you say that you've planted native vegetation on most of your property, or on some of your property?

=> +1

si NOT Q14A=1

All/Nearly all	1
Some	2
DON'T KNOW (DON'T READ).....	3
REFUSED (DON'T READ)	4

Q14C:

2008/05/08 11:32

Have you or anyone in your household discussed or considered adding native vegetation to your existing gardens or elsewhere on your property?

=> +1

si Q14A=1

Yes.....	1
No	2
DON'T KNOW (DON'T READ).....	3
REFUSED (DON'T READ)	4

Q15A:

2008/05/13 14:11

Do you have a dog?

Yes.....	1	
No	2	=> Q16A
DON'T KNOW (DON'T READ).....	3	=> Q16A
REFUSED (DON'T READ)	4	=> Q16A

Q15B:

2008/05/15 14:09

Do you pick up any of the waste your dog leaves in your yard?

=> Q16A

si QD=3 AND NOT QF1=1 AND NOT QF2=2 AND NOT QF3=3 AND NOT QF4=4

Yes.....	1
No	2
DON'T KNOW (DON'T READ).....	3
REFUSED (DON'T READ)	4

Q15C:

2008/05/30 09:25

Would you say you pick up most of the waste or some of it?

=> Q15F

si NOT Q15B=1

Most/All	1
Some	2
DON'T KNOW (DON'T READ).....	3
REFUSED (DON'T READ)	4

Q15D:

2008/05/06 16:50

When you pick up the waste, do you ever bag it and put it in the trash?

Yes.....	1
No	2
DON'T KNOW (DON'T READ).....	3
REFUSED (DON'T READ)	4

Q15E:

2008/05/08 20:10

Would you say you bag it and put it in the trash most of the time or some of the time?

=> Q16A

si NOT Q15D=1

Most/All	1	=> Q16A
Some.....	2	=> Q16A
DON'T KNOW (DON'T READ).....	3	=> Q16A
REFUSED (DON'T READ).....	4	=> Q16A

Q15F:

2008/05/13 14:46

Are you or anyone in your household discussing or considering picking up the waste your dog leaves in your yard?

Yes.....	1
No.....	2
DON'T KNOW (DON'T READ).....	3
REFUSED (DON'T READ).....	4

Q16A:

2008/05/30 09:26

These next questions are specific to practices regarding your kitchen area, as well as several other household areas. First, how do you dispose of food waste, including waste from food preparation as well as table scraps? IF MORE THAN ONE, ASK: Which one do you do most? [PROBE TO FIT- DO NOT READ]

Compost at home/compost pile, food cone, bury, worm bin	01
Yard waste containers for curbside collection	02
In the garbage disposal (sink).....	03
Feed to pet, livestock or birds.....	04
In the household garbage/trash.....	05
Take to a trash transfer station/dump.....	06
Other (SPECIFY)	97 O
DON'T KNOW.....	98
REFUSED	99

Q16B:

2008/05/30 09:26

Is this your usual practice, or something you do just some of the time?

=> +1

si NOT Q16A=01-04

Usual/Always do	1
Sometimes do	2
DON'T KNOW (DON'T READ).....	3
REFUSED (DON'T READ)	4

Q16B1:

2008/05/30 09:26

Do you ever put any food waste into your yardwaste container for curbside pickup?

=> Q16C

si Q16A=02

Yes.....1
 No.....2
 DON'T KNOW (DON'T READ).....3
 REFUSED (DON'T READ).....4
 NOT APPLICABLE (DON'T READ)5

Q16B2:

2008/05/30 09:26

In your area, are you allowed to dispose of food waste with your yard waste?

=> +1

si Q16B1=1

Yes.....1
 No.....2
 DON'T KNOW (DON'T READ).....3
 REFUSED (DON'T READ).....4
 NOT APPLICABLE (DON'T READ)5

Q16C:

2008/05/08 12:08

Have you or anyone in your household discussed or considered composting your food wastes or adding them to yard waste for curbside collection, if that option is available?

=> +1

si Q16A=01-04

Yes.....1
 No.....2
 No longer needed (DON'T READ)3
 DON'T KNOW (DON'T READ).....4
 REFUSED (DON'T READ)5

Q17A:

2008/05/30 09:27

How do you generally dispose of kitchen grease, including unwanted vegetable oil, as well as fat from poultry and meat products? IF MORE THAN ONE, ASK: Which one do you do most? IF STORE THEM/ LET THEM HARDEN, PROBE: What will you eventually do, when you're ready to get rid of it? IF THROW AWAY, PROBE: How would you throw them away? [PROBE TO FIT- DO NOT READ]

In the household garbage/Trash.....	01
Take to trash transfer station/Dump	02
Compost at home/compost pile	03
In the garbage disposal (sink).....	04
Flush down toilet	05
Other (SPECIFY)	96 O
Don't have any/ use everything up.....	97
DON'T KNOW	98
REFUSED	99

Q17B:

2008/05/30 09:27

Is that what you usually do or do you do that sometimes?

=> +1

si NOT Q17A=01,02

Always/Usual	1
Sometimes	2
Don't Know (DON'T READ)	3
Refused (DON'T READ).....	4

Q17C:

2008/05/08 12:10

Have you or anyone in your household considered putting those types of items into the trash for regular pick-up?

=> +1

si Q17A=01,02,97

Yes.....	1
No	2
DON'T KNOW (DON'T READ).....	3
REFUSED (DON'T READ)	4

Q18A:

2008/05/30 09:27

Thinking of any leftover or unused products that may be hazardous, such as drain cleaner or insecticides, how do you generally dispose of them? IF MORE THAN ONE, ASK: Which one do you do most? IF STORE THEM/ LET THEM HARDEN, PROBE: What will you eventually do, when you're ready to get rid of it? IF THROW AWAY, PROBE: How would you throw them away?

[PROBE TO FIT- DO NOT READ]

Take to hazardous waste collection site (Wastemobile, haz-mat)	01
Take to special recycling services or events	02
Use it up, never have any leftover	03
Give it away to someone who will use it up	04
Put in household garbage/trash.....	05
Take to a trash transfer station/the dump.....	06
Pour it down the drain	07
Other (SPECIFY)	96 O
Do not ever use either type of product.....	97
DON'T KNOW	98
REFUSED	99

Q18B:

2008/05/30 09:27

Would you say you do this most of the time with these types of products or some of the time?

=> +1

si NOT Q18A=01-04

Most/all.....	1
Some.....	2
DON'T KNOW (DON'T READ).....	3
REFUSED (DON'T READ)	4

Q18C:

2008/05/21 12:22

Have you or anyone in your household talked about or considered taking any of these leftover products to a county hazardous waste collection site or to a recycling event? [IF R indicates that the transfer station/dump hosts a recycling or hazardous waste site then clarify an appropriate code on question 18A-- you will need to go back to 18A and chose 01 or 02.]

=> +1

si Q18A=01-04,97

Yes.....	1
No	2
DON'T KNOW (DON'T READ).....	3
REFUSED (DON'T READ)	4

Q19A:

2008/05/06 17:15

Do you make a point of choosing household cleaning products that are said to be less toxic? IF USE A HOUSECLEANING SERVICE, SAY: Have you asked them to use cleaning products that are said to be less toxic?

Yes.....1
 No.....2
 DON'T KNOW (DON'T READ).....3
 REFUSED (DON'T READ).....4

Q19B:

2008/05/30 09:27

Would you say you try to do that most of the time when buying cleaning products, or some of the time? IF USE CLEANING SERVICE: Do they use those types of products most of the time or some of the time?

=> +1

si NOT Q19A=1

All of the time/usually.....1
 Some of the time.....2
 DON'T KNOW (DON'T READ).....3
 REFUSED (DON'T READ).....4

Q19C:

2008/05/08 12:13

Have you or anyone in your household talked about making an effort to buy and use household cleaning products that are labeled or known to be less toxic?

=> +1

si Q19A=1

Yes.....1
 No.....2
 DON'T KNOW (DON'T READ).....3
 REFUSED (DON'T READ).....4

Q20A:

2008/05/08 20:13

This next question is about paint and stain for your home. Do you make a point of buying latex or water based paint, stains or sealers instead of oil-based ones for projects such as walls, ceilings, window trim, decks or siding?

Yes.....1
 Yes, depends on project.....2
 No.....3
 Doesn't apply/Never buy or use -DON'T READ.....4
 Don't know DON'T READ.....5
 Refused DON'T READ.....6

Q20B:

2008/05/30 09:28

Do you almost always make a point of buying latex or water-based products for these types of projects or do you do that some of the time?

=> Q20C

si NOT Q20A=1,2

Always/Usually1
 Sometimes; depends on project2
 DON'T KNOW (DON'T READ).....3
 REFUSED (DON'T READ)4

Q20B1:

2008/05/30 09:29

When you purchase latex or water based paints, do you make a point of purchasing ones that are classified as low toxic or low VOC (volatile organic compounds)?

=> Q20C

si NOT Q20B=1,2

Yes.....1
 Yes, depends on project.....2
 No3
 Doesn't apply/Never buy or use.....4
 Don't know (DON'T READ)5
 Refused (DON'T READ).....6

Q20B2:

2008/05/08 12:16

Do you always make a point of purchasing latex or water based paints that are low toxic or low VOC or do you do that just some of the time?

=> +1

si NOT Q20B1=1,2

Always/Usually1
 Sometimes; depends on project2
 DON'T KNOW (DON'T READ).....3
 REFUSED (DON'T READ)4

Q20B3:

2008/05/08 12:17

Have you or anyone in your household talked about or considered purchasing latex or water based paints that are classified as low toxic or low VOC?

=> +1

si NOT Q20B1=3-4

Yes.....1
 No2
 DON'T KNOW (DON'T READ).....3
 REFUSED (DON'T READ)4

Q20C:

2008/05/30 09:29

Have you or anyone in your household considered buying only latex or water-based paint or stain products?

=> +1

si Q20A=1,2,4

Yes/when appropriate for project1
 No2
 DON'T KNOW (DON'T READ).....3
 REFUSED (DON'T READ)4
 NOT APPLICABLE (DON'T READ)5

Q24A:

2008/05/30 09:29

In the past five years, have you bought, built or remodeled your home? [IF BOTH, ask "which was most recent?" and have them answer questions based on their answer]

=> Q22A8

si QB=4 OR QC=2

Yes, bought.....1
 Yes, built or remodeled2
 No3
 DON'T KNOW (DON'T READ).....4
 REFUSED (DON'T READ)5

Q24B:

2008/05/30 09:29

When you did, were green design or construction features a consideration in your purchase?

=> +1

si NOT Q24A=1

Yes.....1
 No2
 DON'T KNOW (DON'T READ).....3
 REFUSED (DON'T READ)4

Q24C:

2008/05/08 12:50

When you did, were green design or construction features a part of it?

=> +1

si NOT Q24A=2

Yes.....1
 No2
 DON'T KNOW (DON'T READ).....3
 REFUSED (DON'T READ)4

Q24D:

2008/05/08 17:07

Have you or anyone in your household discussed or considered green design or construction features as part of a purchase/project?

=> +1

si Q24B=1 OR Q24C=1 OR NOT Q24A=1,2

Yes.....	1
No	2
DON'T KNOW (DON'T READ).....	3
REFUSED (DON'T READ)	4

Q22A8:

2008/05/30 09:30

This next question is about personal behavior. Besides toilet paper, do you ever throw anything away by flushing it down the toilet? [IF YES ask, "what things?"]

Yes (specify).....1 O

No

DON'T KNOW (DON'T READ).....3

REFUSED (DON'T READ)

Q22B8:

2008/05/30 09:30

When you need to throw those kinds of things away, do you ever put them in the trash rather than flushing them?

=> +1

si NOT Q22A8=1

Yes.....	1
No	2
DON'T KNOW (DON'T READ).....	3
REFUSED (DON'T READ)	4

Q22C8:

2008/05/08 12:57

Have you ever considered throwing them in the trash rather than flushing them?

=> +1

si NOT Q22B8=2

Yes.....	1
No	2
DON'T KNOW (DON'T READ).....	3
REFUSED (DON'T READ)	4

Q23A:

2008/06/04 11:38

The next question asks about washing your primary vehicle. Generally where do you wash your primary vehicle? IF MORE THAN ONE, ASK: Where do you wash your vehicle most often? IF DRIVEWAY, ASK: What type of surface is that? IF CAR WASH, ASK: Would you say commercial car wash or a coin-operated car wash? [PROBE TO FIT- DO NOT READ OPTIONS] [DO NOT READ!! DEFINITION FOR INTERVIEWER: A waterless car wash or dry was is a technique used to wash a vehicle without the use of water. This technique uses a specific product that contains a wetting agent]

At home with a waterless car wash product	00
Commercial car wash (automatic or attendant hand wash)	01
Coin-operated self-serve handwash (do it yourself)	02
On lawn, grass or gravel surface	03
Driveway, on street, or other paved surface	04
Don't wash it/ have a vehicle, but do not wash.....	05
Other (SPECIFY)	96 O
Doesn't apply/No vehicle.....	97
Don't know	98
Refused.....	99

Q23B:

2008/05/30 09:30

Is this your usual practice, or something you do only sometimes?

=> +1

si NOT Q23A=00-03,05

Always/Usual	1
Sometimes	2
DON'T KNOW (DON'T READ).....	3
REFUSED (DON'T READ)	4

Q23C:

2008/05/16 10:34

Have you or anyone in your household talked about or considered taking your vehicle to a carwash when it needs washing?

=> +1

si Q23A=00-03,05,97

Yes.....	1
No	2
DON'T KNOW (DON'T READ).....	3
REFUSED (DON'T READ)	4

Q23D:

2008/05/30 09:31

Do you make a point of using soap or cleaners that are labeled as being free of toxic substances? [PROBE FOR WHICH]

=> +1

si NOT Q23A=03

Always/usually do use non-toxic.....1
 Sometimes use them.....2
 Don't know/Don't pay any attention to what the labels say (DON'T READ) 3
 Refused (DON'T READ).....4

Q26A1:

2008/05/07 12:12

Think of the times over the past year when you have selected a gift to give to someone. In the past year, did you decide to give an EXPERIENCE, such as tickets to a theater or sports event, or a membership or a coupon for video rentals, rather than giving an object?

Yes.....1
 No.....2
 DON'T KNOW (DON'T READ).....3
 REFUSED (DON'T READ).....4

Q26B:

2008/05/30 09:31

Did you do that for most or part of your gift giving?

=> Q26C

si NOT Q26A1=1

Most/all.....1
 Part.....2
 DON'T KNOW (DON'T READ).....3
 REFUSED (DON'T READ).....4

Q26A2:

2008/05/30 09:32

Did you make that choice, at least in part, because you wanted to reduce waste?
 IF NEEDED: "Waste" such as garbage or wrapping paper, or the clutter of objects that people don't want or need?

Yes.....1
 No.....2
 DON'T KNOW (DON'T READ).....3
 REFUSED (DON'T READ).....4

Q26C:

2008/05/08 17:11

Have you or anyone in your household talked about or considered giving the gift of an experience?

=> +1

si Q26A1=1

Yes.....1
 No.....2
 DON'T KNOW (DON'T READ).....3
 REFUSED (DON'T READ).....4

Q27A:

2008/05/30 09:32

In the past year, have you bought any food or other farm products directly from farms in the Puget Sound Region? This can include farm products bought at farms, Farmers Markets, roadside stands, U-pick farms, CSAs and other ways. [Definition: CSA stands for Community Supported Agriculture] (NOTE to interviewer: Farm products can include produce, eggs, dairy, meat, flowers, plants or other nursery products)

Yes.....1
 No.....2
 DON'T KNOW (DON'T READ).....3
 REFUSED (DON'T READ).....4

Q27B:

2008/05/30 09:32

When in season, how often have you bought food directly from farms in the Puget Sound Region? Would you say at least weekly, a few times a month, monthly, or less often than that? [This can include food bought at farms, Farmers Markets, roadside stands, U-pick farms, CSAs and other ways.] (NOTE to interviewer: Farm products can include produce, eggs, dairy, meat, flowers, plants or other nursery products)

=> +1

si NOT Q27A=1

At least weekly1
 A few times a month.....2
 Monthly3
 Less often than monthly4
 DON'T KNOW (DON'T READ).....5
 REFUSED (DON'T READ).....6

Q27C:

2008/05/08 17:17

have you or anyone in your household considered or discussed buying food directly from farms in your area?

=> +1

si Q27A=1

Yes.....1

No.....2

DON'T KNOW (DON'T READ).....3

REFUSED (DON'T READ).....4

Q28A:

2008/05/07 12:40

When you need to go somewhere other than work or school, do you ever walk, bike or take a bus to get there? [If asked for clarification: For example, for appointments, errands, entertainment or recreation]

Yes.....1

No.....2

DON'T KNOW (DON'T READ).....3

REFUSED (DON'T READ).....4

Q28B:

2008/05/30 09:32

Do you do this most of the time or some of the time?

=> +1

si NOT Q28A=1

Most/all.....1

Some.....2

DON'T KNOW (DON'T READ).....3

REFUSED (DON'T READ).....4

Q28C:

2008/05/08 17:17

Have you or anyone in your family considered or discussed walking, biking, or taking a bus when you need to go somewhere other than work or school?

=> +1

si Q28A=1

Yes.....1

No.....2

DON'T KNOW (DON'T READ).....3

REFUSED (DON'T READ).....4

Q33:

2008/05/30 09:33

Do you work or go to school outside the home? [Probe to fit]

Yes- Work	1	
Yes- School	2	
Both work and school.....	3	
No	4	=> Q29A
DON'T KNOW (DON'T READ).....	5	=> Q29A
REFUSED (DON'T READ)	6	=> Q29A

Q33A:

2008/05/30 09:33

How do you usually get to and from work or school? [IF MORE THAN ONE, ASK; Which is the most often?] [IF STILL MORE THAN ONE, ASK: On which do you go the longest distance?] [PROBE TO FIT, DON'T READ]

In a car by yourself	01	
In a carpool or vanpool.....	02	
Using public transportation, such as Metro or Sound Transit	03	
A bicycle	04	
Motorcycle.....	05	
Walking	06	
Or something else (SPECIFY)	97	O
Don't know - DON'T READ.....	98	
Refused - DON'T READ	99	

Q28D:

2008/05/30 09:34

Compared to four years ago, has your commute from home to work increased, decreased or stayed the same?

=> +3

si Q33=2

Increased.....	1
Decreased	2
Stayed the same	3
NOT APPLICABLE - does not work, does not school (DON'T READ)4	
DON'T KNOW (DON'T READ).....	5
REFUSED (DON'T READ)	6

Q28E:

2008/05/14 13:22

Was the reason for moving or changing jobs influenced by your interest in a shorter commute to work or school?

=> +1

si NOT Q28D=2

Yes.....	1
No	2
DON'T KNOW (DON'T READ).....	3
REFUSED (DON'T READ)	4

Q28F:

2008/05/08 20:21

Have you, or has anyone in your household, talked about or considered moving or changing jobs in order to decrease the trip distance?

=> +1

si Q28E=1 OR Q28D=2,4

Yes.....1
 No.....2
 DON'T KNOW (DON'T READ).....3
 REFUSED (DON'T READ).....4

Q29A:

2008/05/08 13:34

When it comes to the environment, which of the following 5 statements best describes you, personally...

=> +1

si SEL29=2

One, I try to do all the things I've heard about or read about that I should do to protect the environment 1
 Two, I try to do most of the things2
 Three, I do some of the things3
 Four, I only do a few things.....4
 Or five, I don't go out of my way to do anything special to protect the environment 5
 Don't know - DO NOT READ6
 refused - DO NOT READ7

Q29B:

2008/05/08 13:36

When it comes to the environment, which of the following 5 statements best describes you, personally...

=> Q30

si SEL29=1

One, I don't go out of my way to do anything special to protect the environment 1
 Two, I only do a few of the things that I've heard or read about to protect the environment 2
 Three, I do some of the things3
 Four, I try to do most of the things4
 Or five, I try to do all the things I've heard about or read about that I should do to protect the environment 5
 Don't know - DO NOT READ6
 Refused - DO NOT READ7

Q30:

2008/05/07 13:15

Finally, I have these last questions to help us group your answers with others. Are you currently...

Married.....1
 Not married.....2
 Or a member of an unmarried couple3
 Refused- DO NOT READ.....4

Q31:

2008/05/07 13:16

How many children less than 18 years old live in your household?

None00
 REFUSED99

Q31A:

2008/05/08 13:42

How many are 6 years old or younger?

=> +1 si Q31=00,99

None00
 Refused.....99

Q32B:

2008/05/30 09:34

Do you have one or more household pets that spend some of the time outdoors, as well as inside your home?

Yes, pet indoors and outdoors1
 No, no pet/Pet always indoors/always outdoors2
 DON'T KNOW (DON'T READ).....3
 REFUSED (DON'T READ)4

Q32:

2008/05/08 13:43

What is the highest grade of school you completed? [Read options only if needed]

Less than high school1
 High school graduate or GED2
 Some college or technical school3
 College graduate.....4
 Or beyond college5
 Refused - DO NOT READ6

Q21A:

2008/05/08 20:26

What, may I ask is your age?

REFUSED99

Q21B:

2008/05/08 13:39

In which of these age categories do you belong...

=> +1

si NOT Q21A=99

18 to 24.....	1
25 to 34.....	2
35 to 44.....	3
45 to 54.....	4
55 to 64.....	5
65 to 74.....	6
Or 75 or over	7
Refused - DO NOT READ	8

Q21C:

2008/05/08 13:41

Combined age groups

=> *

si IF ((Q21B>0), Q21B,RNG(Q21A,18,25,35,45,55,65,75))

18 to 24.....	1
25 to 34.....	2
35 to 44.....	3
45 to 54.....	4
55 to 64.....	5
65 to 74.....	6
Or 75 or over	7
Refused - DO NOT READ	8

GENDR:

2008/05/08 13:41

RECORD GENDER [DON'T ASK]

Male.....	1
Female	2

Q24:

2008/05/07 13:33

Which of these categories best fits your annual household income from all sources...

Under \$25,000	1
\$25,000 to less than \$35,000	2
\$35,000 to less than \$50,000	3
\$50,000 to less than \$75,000	4
\$75,000 to less than \$100,000	5
Or \$100,000 or over	6
Don't know - DO NOT READ	7
Refused - DO NOT READ	8

ETHNC:

2008/05/07 13:35

How would you describe your race or ethnic origin? IF WHITE/CAUCASIAN,

ASK: Is that Hispanic?

White/Caucasian.....	01
African American/Black.....	02
Asian/Pacific Islander.....	03
Hispanic origin (any race)	04
Native American/Indian	05
Or something else? (SPECIFY).....	97 O
Refused - DO NOT READ	99

QSEA:

2008/05/30 09:35

Do you live in Seattle or elsewhere in King County?

=> INT99

si SEA=1

Yes, in Seattle.....	1	=> INT99
No, elsewhere in KC.....	2	=> INT99
DON'T KNOW (DON'T READ).....	3	=> INT99
REFUSED (DON'T READ)	4	=> INT99

INT98:

2008/05/07 14:05

I'm sorry, but you are not qualified to do this survey. Thank you for your time and have a good day/night.

Not Qualified.....19 D => /END

INT99:

2008/05/07 13:55

That's the end of the survey. Thank you for your time, and have a good evening.]

Complete08 D => /END

F8:

2008/05/14 13:29

Who are you? Where are you calling from? Applied Research Northwest is a privately owned social research firm in Bellingham. How did you get my number? We got a random set of phone numbers with King county prefixes from a national sampling company. What is the survey about? The survey is being conducted in order to help guide local governments on how to best improve environmental behaviors and practices of King County residents. How long will the survey take? The survey should take about 10 to 15 minutes, depending on how you answer the questions. Contact Info: If you have any questions about this survey you may contact Richard Gelb at 206-296-8374. Source of funds: This study is funded by State grant funds in combination with evaluation funds from county and city governments.

APPENDIX C: VERBATIM OPEN-ENDED COMMENTS

Q2A: How do you dispose of burned out fluorescent light tubes or compact fluorescent light bulbs? [IF MORE THAN ONE, ASK: Which one do you do most? IF STORE THEM, PROBE: What will you eventually do, when you're ready to get rid of them? IF THROW AWAY, PROBE: Where would you throw them away?]

Q2A Response: Other

- Contact landlord.
- Dumpster at work.
- Give them to apartment maintenance.
- I have a place at work that I take them to.
- I have saved them until now. I have not found a place to toss them.
- I have several sitting in my garage and I don't know what to do with them.
- I put it in a special bag, and then on top of my garbage pick-up.
- I put them in my regular recycling.
- I put them in the recycling bin.
- I store them.
- I take them downstairs and the management takes care of that.
- I take them to work and dispose of them with their bulbs.
- I throw them in my recycling.
- I usually take them to work.
- I wrap it in a plastic or paper bag, and put into glass recycling.
- In the recycling.
- My husband takes care of it.
- My husband's work, we take them there.
- Not sure yet, but I would call the county about hazardous waste disposal.
- Not too sure, I think my husband recycles them.
- Put in regular recycling pick-up.
- Put it in the apartment recycling bin.
- Regular recycling.
- Save them up and take them to the school. Basically for recycling.
- Save them.
- Special container for light bulbs.
- Storing them, because I don't know what to do with them.
- Take it to the apartment owners, and they take care of it.
- The apartment management takes them and recycles them.
- The landlord takes care of that.
- The landlord takes them.
- They are sitting in my house till I know where I can dispose of them.
- They have not burnt out yet.
- They have not burnt out, so I have not had to dispose of them yet.
- They have this recycle bin at work.
- We leave them outside the garbage and walk away. I don't know what to do with them.
- What you're supposed to do.

Q4A: Many people have prescription drugs and other medications in their homes that have expired or are no longer wanted. How does your household typically dispose of expired or unwanted drugs and medications? [IF MORE THAN ONE, ASK: Which one do you do most? IF STORE THEM, PROBE: What will you eventually do, when you're ready to get rid of them? IF THROW AWAY, PROBE: How would you throw them away?]

Q4A Response: Other

- A disposal place.
- Back to the doctor.
- Burn them in the stove.
- Compost it and maybe dissolve it down first, so it did not poison wildlife.
- Don't know what to do with them. The questions are not refined enough.
- Donate it.
- Don't throw them away. They pile up.
- Down into the septic [sic]. I am on a septic. I am not on a sewer line, I have my own septic system.
- Give them to the doctor.
- Group Health.
- I burn them in the fireplace.
- I don't do anything right now.
- I don't do anything with them.
- I hold onto them.
- I put them in my biohazard bin at my work.
- I return them to the doctor who prescribed them.
- I take them to a nursing home, where they are disposed of with other hazardous wastes.
- I take them to a recycling program.
- I throw them in the fireplace, or flush them down the toilet.
- I work at a Franciscan medical group, so I have access to take them and have them disposed of.
- Just keep them until I find out.
- Just keep them.
- Leave them in medicine cabinet.
- My medical provider. We take them to them and they get rid of them for us, and that is Group Health.
- Occasionally the waste products get picked up.
- Privacy issue.
- Put them in potted plants.
- Return them to Group Health.
- Return them to the vet.
- Take it to the hospital.
- Take them to Group Health and dispose of them there.
- Take them to Group Health.
- Take them to recycling events.
- They take them to Group Health.
- They usually get burned.
- Throw them in the fireplace.
- We are now taking them to Group Health.
- We have learned of a place where we can take them now. That was a great concern to us. We asked at Costco, and they told us where we can take them to have them disposed of properly. Well, it is the medical center, in Issaquah, can take them [sic].
- We put them in the woodstove.
- We take it to the recycling event.

- We take them to a small family clinic.
- We take them to the Group Health pharmacy at Northgate, and they have a bin that we dump pills into that you don't want to use.
- Works in a medical center, and takes it to work to dispose of with medical waste [sic].

Q5A: This next question is about electronics that you no longer want, including computers, computer monitors and television sets. What do you eventually do with these types of electronic devices that you no longer want? [IF MORE THAN ONE, ASK: Which one do you do most? IF STORE THEM, PROBE: What will you eventually do, when you're ready to get rid of them? IF THROW AWAY, PROBE: How would you throw them away?]

Q5A Response: Other

- Apartment dumpster.
- Call to have it picked up by the contractor, when they bring the new one.
- Call Waste Management, and they come to pick it up.
- Contact the landlord and he helps me dispose of them.
- Daughter takes care of it.
- Donate or give it away.
- Donate them, or collection events.
- Donate them, or use E-way centers [sic].
- Donate to daughter, and she takes it to a store in Everett.
- Donate, or curbside recycling. If it is a bigger object, then I take it to the recycling center and I pay the fee.
- Give them away, or take them to a recycling center.
- Gives it to her employer who takes care of it [sic].
- Have someone haul them away.
- I called and prearranged a pick-up of electronics, through the city. I have also, in the past, taken them to King County recycling events.
- I have a separated pile of stuff.
- I leave them sitting around, because you can't take them anywhere. I don't know what to do with them.
- I put it in storage.
- I take them to work. We have a means of doing that at work.
- I use them for target practice.
- I would throw it in the trash compactor that the apartment provides.
- It has been one thing, once.
- Just keep in the garage, not sure what to do.
- My husband would find out where the proper place to dispose them would be.
- Put it out with the garbage. Was told it was going to another special place, not at a landfill.
- Sell it or, if they can't be sold, recycle them.
- Sold television set.
- Special waste management comes and takes it.
- Stack them up in my garage.
- Store them until I can get rid of them, starting January 1st.
- That is a privacy issue.
- The places that you can take them to are usually open limited hours on weekdays, which is difficult if you work. And it's getting very expensive to take them there. It's irritating me that if anything is organic, it's becoming a marketing ploy.
- They are sitting in my basement. I haven't disposed of any.

- They are stuck in my garage.
- They take it away when I buy a new one. But I pay a fee for that, so I am sure when they take it away, they dispose of it properly.
- We have it picked up.
- We paid for Trashbusters to come take it from the house [sic], and they took it to a hazardous waste site for us.
- We put them in the basement and forget about them.
- We take it to a guy who owns the Auburn TV and he recycles it.
- We take it to the school for recycling. A community event. A city-sponsored event.
- We're storing them in the attic.

Q7A: Which of the following best describes how you water your lawn, would you say...?

Q7A Response: Other

- Automatic water sprinkler system.
- Deeply once every few weeks.
- Early in the morning, through a sprinkler system, every other day - but only when it's hot.
- Every couple of days, I will water for a half hour and then move it.
- Every other day, when it is hot.
- Every other day, when it is hot.
- Every other day.
- First of all, we are on a well and I water it deeply when it needs it, but we are not on city water. We don't have a routine watering plan.
- Follow King County schedule for yard, and different watering in the greenhouse. No more than 2 quarts once a day. There need to be more options.
- Here, where we live, we can only water every third day, only when needed.
- I do both one and two, equally.
- I do not water, because I have poor water pressure. And I water when it is really dry, just to keep it from catching on fire.
- I do water the lawn, but not heavy.
- I have a sprinkling system that comes on for five minutes every day.
- I have a sprinkling system that I turn on once daily.
- I have a sprinkling system, which waters three times a week.
- I have an automatic watering system that goes on two or three times a week.
- I just put the sprinkler on for twenty minutes or a half an hour.
- I know we have a sprinkler system, and it automatically goes off. I don't know how often. Once or twice a week.
- I only water in the middle of August, when it's really dry, and I do it at night.
- I probably do two to three times deeply in the summer months.
- I probably water the lawn once every three days when it's hot, in the summer. This time of the year, I don't have to water at all. I monitor my water usage with an Excel spreadsheet, and it's gone down monthly over the last three years.
- I redid my lawn and we have to water frequently, because of the soil. It has not taken yet.
- I use a computerized system that turns the water on twice a week.
- I usually try not to water, but when I do it is very light. I don't waste water.
- I water about once every two weeks, if it's really bad.
- I water deep, but I water twice a week - when I water.
- I water it until the dry months, and then I stop.
- I water only when it is dry.
- I water three days a week.
- I water when it gets dry, and I'll run the sprinkler in the evening for thirty minutes in the one spot.

- I water when it looks dry, maybe two or three days. I let it get dry, so I don't use much water.
- If it's hot, two or three times a week.
- Irrigation system on a timer.
- Irrigation system.
- It is a sprinkler system, and it waters once a week when it is working.
- It is when it is really, really dry.
- It tends to be every other day in the hot months.
- It's an automatic system.
- It's based on how much sun and rain has been falling; it's not standard - it's adjustable.
- It's watered two times to three times a week, with an automatic sprinkler.
- Just a shallow irrigation system. Like 10 minutes per station, per week.
- Landscaping company does that.
- Last year I didn't water my lawn at all, but I watered my rhodie beds with a soaker hose [sic].
- Lightly every day.
- Lightly, but only twice a week.
- More infrequent.
- On an automatic thing that goes off every other day. That is only when it is needed. We probably only do that three months a year.
- Once a week on a drip during summer months. Twice a week on a sprinkler system that gets most on lawn and shrubs.
- Once a week or less. In August, we let it go.
- Once a week, in the summer.
- Once or twice a summer.
- Once weekly, but not very much.
- One or two, depending on the summer.
- Only if needed.
- Only in the dry season. Sometimes more than once a week.
- Only when needed.
- Probably water twice a week for twenty minutes, in the front and sides.
- Shallow, three times a week.
- Sporadically.
- Sprinkler irrigation system.
- Sprinkler system goes every three days in the morning, I think for 20 minutes.
- Sprinkler system run by the association (controls it).
- Sprinkler system, but I don't how often it turns on or long it lasts.
- Sprinkler system.
- Sprinkler system.
- Sprinklers every morning.
- Sprinklers, just put water on it.
- That is a privacy issue.
- That is a question that may not apply to us, because we are not on city water. We are on a well water system.
- The backyard, I do not water at all. The front yard is on a sprinkler system, automatic, and it goes off three times a weeks, for ten minutes each.
- The condo has a sprinkling system.
- The front yard: I let it go dry in the summertime, and let the rain take care of it the rest of the time. The backyard: I water it once a week, very heavy.
- The sprinkler system is regulated by Northwest Nursery.
- There is very little lawn or grass. And when it has been raining, I turn my sprinklers off. I only turn them on when it really needs them.
- They get light sprinkling at night.
- Three of four days a week.
- Three times a week, 20 minutes per lawn.
- Three times a week, when it is hot and dry.
- Three times a week.

- Three times a week. I don't know, because it is on a system that knows when it needs to be watered.
- Through the rain barrel.
- Twice a week, when it's dry.
- Water it probably once every other day in the summer, in the evening.
- We do water, but we do it early in the morning. Just a little for 15 to 20 minute sessions, 3 to 4 times per week. We don't start that until it's brown.
- We have a pump system that pulls the water out of the lake. So, we would water, probably, several times a week.
- We have a sprinkler connected to the hose.
- We have a sprinkler system that goes on twice a week.
- We have a sprinkler system that runs early in the morning that pumps it from the lake.
- We have a sprinkler system that waters it every 3 days.
- We have a sprinkler system, and it is set to efficiency standards.
- We have a sprinkler system, and we water it every other day.
- We have a well, so we water in the morning for about two hours.
- We have a well, that we share with our neighbor that is not potable water. But we do not water too often - once a week, maybe.
- We have an automatic sprinkler system.
- We have an automatic sprinkler system. It is underground, and is set with a timer.
- We have an automatic sprinkler that waters about three times a week, for about ten minutes or so.
- We have an irrigation system, so it gets watered every other day.
- We have an irrigation system.
- We have not been here that long. We have only a little bit of lawn in the back. We are going to tear it down and compost it, and make it deeper because right now it is too shallow. There is not a lot of rooting for it, and we have to add new soil.
- We have rainwater barrels that we water from.
- We have sprinkler systems that come on at night for about three months out of the year. They're set for eight minutes.
- We have sprinklers.
- We just have automatic sprinklers that go off once every night.
- We just let it go brown. But if it goes really bad, we'll keep it real short around the house and go out and water it when we wash the car.
- We just water occasionally, as it's needed.
- We pump out of Lake Sammamish to water our lawn.
- We rarely water the yard. Mostly natural rainfall.
- We reach a point where we just stop watering the lawn in the summer.
- We solely water if it's not raining and the yard absolutely has to have it.
- We use a soaker.
- We water a couple times a week.
- We water a small amount a couple times a week.
- We water daily for a short period.
- We water very little.
- We'll water it if it needs it. We have a sprinkler installed, and a big lawn. It's always rained enough since I've moved in, so we haven't needed it, and it's a well with a lot of water-flow. But if the sprinkler system needs to be turned on, I'll turn it on.
- We'll water when it's really bad. We just rarely water.
- When it gets dry, I water it just enough to keep the roots dry.
- When it's needed, it's about twice a week.
- When we water, we just water the dry parts of the lawn.
- Whenever it needs it. You never know what the weather is like.
- Whenever the grass looks like it needs it, but I don't know the quantity of water.

Q16A: These next questions are specific to practices regarding your kitchen area, as well as several other household areas. First, how do you dispose of food waste, including waste from food preparation as well as table scraps? [IF MORE THAN ONE, ASK: Which one do you do most?]

Q16A Response: Other

- Appropriate things go in the yard waste bin, and inappropriate things go in the garbage.
- Burn it in my woodstove.
- Compost or garbage disposal.
- Don't have any.
- Feed them to pets.
- For table scraps, it goes into the disposal and the rest go to yard waste. Especially if it's fruits and vegetables, or anything like a banana.
- Garbage disposal or trash.
- Garbage and garbage disposal.
- Give it to the dog, put it in food disposal, and put it outside.
- Half of it goes down the garbage disposal, and the other half goes in the yard waste container.
- Half to the disposal, and the other to composting.
- He takes it to son's house.
- I bring my compost to my work.
- I compost, and use the disposal, and use the trash.
- I do not cook anymore. Everything I cook, I make in the microwave, and I eat it all.
- I have an outdoor composter.
- I recycle it.
- If it's not cooked, it goes into the compost - and if it is, it goes into the trash.
- In the yard waste container, or in the garbage.
- It goes in the compost or yard waste.
- Put it in the garbage, or feed it to the ducks.
- Put outside for the wild animals.
- Some in the compost, and some in the trash.
- Sometimes put on lawn. But not all the time.
- The recycle bin.
- The recycling.
- Throw it outside for animals to eat.
- We hardly have food waste. It is usually taken to work or given away.
- We have a specific food-waste trashcan that they pick up once a week.
- Yard waste, and garbage disposal.

Q17A: How do you generally dispose of kitchen grease, including unwanted vegetable oil, as well as fat from poultry and meat products? [IF MORE THAN ONE, ASK: Which one do you do most? IF STORE THEM/ LET THEM HARDEN, PROBE: What will you eventually do, when you're ready to get rid of it? IF THROW AWAY, PROBE: How would you throw them away?]

Q17A Response: Other

- Burn it in my woodstove.
- Burn it.
- Burn it.

- Dig a hole in the backyard, pour it in, and cover it with dirt.
- Down the drain.
- Dump it in the field; dump it in the manure box.
- Feed to chickens.
- Feed to dogs.
- Feed to my dog.
- Garbage disposal and dumpster.
- Give it to the dog.
- Give to the pets.
- Goes to the animals.
- Grease goes in the garbage and oil to hazardous waste.
- Hot water down the sink drain. Or, if coagulated, I put in the trash.
- I burn it in my burning grill.
- I feed that to my dog.
- I put it in a can, but have not disposed of any yet.
- I put it in a jar, and put it in the trash.
- I put it in an old coffee can.
- I put it over the bird food that I give to the wildlife.
- I rinse it down the drain, with hot water and soap.
- I run it down the sink.
- I save it.
- I take it to the auto parts store. I mix it with other oil.
- I want to take it to a Biodiesel place.
- If I have any left, I make gravy.
- If it's liquid, we put it into the compost, which goes into the curbside collection for pick-up. If it's solid, we let it congeal in cans and it goes in the garbage.
- In the garbage, or down the toilet.
- In the mobile home park, everything is separated. And the food waste has one area of the mobile park and it is labeled - and bottles go into one bin, paper in another. And garbage comes and takes it every Monday.
- In the yard waste recycle.
- In the yard waste.
- In trash, or in the disposal.
- Into the yard waste container.
- Keep it and add it to the dog food.
- Make starter fuel out of it.
- Most of it goes down the drain, I guess.
- Pour out by the side of the house.
- Put in a coffee can till the can gets full, then I put in the trash.
- Put it in a jar.
- Put it in the yard; distribute it over a wide area. There is not a lot of it.
- Put it in yard waste bin.
- Put it on the bonfire.
- Put it on the dog food.
- Refine it and use it for soap.
- Save it in a can, and wait until they have an event where they take it.
- Septic system.
- Some grease I make into a suet for food for the birds, and the rest I put in the garbage with the can.
- Some, we take it to where it's allowed to be disposed of.
- Take it to a community event.
- Take it to collection.
- Take it to my dad's yard waste bin.
- Take to Hazardous Wastemobile.
- To the chickens.
- Trash compactor.

- We give it to our neighbor, and he puts it in his car.
- We have a grease hole, and we put it in there. When we build fires outside, sometimes we'll put the fat or grease on the firewood and just burn it off that way.
- We put it in a fire pit.
- We put it in our dog's food, and get rid of it in that way.
- We try to recycle it.
- We try to re-use, or it goes down the drain.
- What little we do have, I usually burn it. But it's very little, because I don't have bacon grease or anything like that. I don't use it.
- When we do have it, we usually put in the fire pit and it burns up.
- Yard waste container allowed.
- Yard waste container.
- Yard waste.
- Yard waste.

Q18A: Thinking of any leftover or unused products that may be hazardous, such as drain cleaner or insecticides, how do you generally dispose of them? [IF MORE THAN ONE, ASK: Which one do you do most? IF STORE THEM/ LET THEM HARDEN, PROBE: What will you eventually do, when you're ready to get rid of it? IF THROW AWAY, PROBE: How would you throw them away?]

Q18A Response: Other

- Call the fire department and ask them about who to call.
- Doesn't think they had to ever disposed of such products. Usually ends up using what they've had. Husband might have taken care of them. But she doesn't recall.
- Down the toilet.
- Flush it.
- Haven't had a chance to throw it away yet.
- I always use it up, and just throw away the bottle when I'm done with it.
- I don't use that kind of product. I use all-natural products.
- I give them to my landlord, and he recycles them.
- I have bottles and bottles stacked up, and I don't know what to do with them. We need to have more places to take these items.
- I have someone else take them to a disposal unit that takes hazardous waste.
- I make sure it is all gone, and then I rinse it and then recycle it.
- I read the label.
- I talk to my son and he takes care of that.
- It hasn't come up.
- Not applicable.
- Office supply.
- Pour baking soda over it, and then throw it away.
- Pour into the soil.
- Pour it down the toilet.
- Probably down the toilet.
- Put them in the basement and forget about them. But, in general, we try to use them up. And if we don't like them, we don't buy them again.
- Stored, and have used the waste sites occasionally. I usually try to follow the EPA suggestions, and use it till it's gone.
- Tend to stock them up. We're starting to glow.
- Usually go down to Home Depot and ask them what to do with it.
- We have a special bin for that.

- We have not yet had to use them.
- We just keep it stored in the shed.
- We just store it until it is used up.

Q22A8: This next question is about personal behavior. Besides toilet paper, do you ever throw anything away by flushing it down the toilet? [IF YES ask, "what things?"]

Q22A8 Response: Open Ended

- Baby wipes.
- Bugs and stuff like that, like spiders.
- Carpenter ants. Because I have been told not to flush them down, because they release pheromones that attract other carpenter ants.
- Cat and dog waste.
- Cat feces.
- Cat litter scoop product.
- Cat up [sic]. When the cat gets sick.
- Certain food scraps, you know, leftover soup. Very seldom, but once in a while.
- Certain medications go down the toilet.
- Cotton balls. Or anything we can flush, we try and do it that way.
- Dead insects.
- Dead insects.
- Dental floss.
- Dental floss.
- Dental floss.
- Disposable wipes.
- Dog poop.
- Dog stuff.
- Dog waste and cat puke.
- Drugs.
- Dust from the vacuum.
- Expired drugs.
- Expired medication only.
- Feminine products.
- Feminine products.
- Feminine products.
- Flushable soft wipes.
- Food, probably.
- Food-related items, like soup that has spoiled.
- Garbage.
- Goldfish.
- Hair and fingernails occasionally.
- Hair clippings.
- Hair from shower.
- Hair from the shower, pills.
- Hair.
- Hair.
- Hair.
- I flush bad stuff that's been sitting around too long - like milk, bad soup. Stuff like that.
- I sometimes empty the mop bucket down the toilet.
- I throw hair from the trap.

- I'd rather not say.
- If I know that it's flushable.
- If I mop the floor, I'll dump the dirty mop water down.
- It just depends on what I have that I need to throw away. I have done it. It's generally just a food item I don't want in the garbage.
- It would be natural items, bunch of food stuffs that went bad.
- Just drugs that are expired.
- Just expired medications.
- Just floor-washing water.
- Just if we have prescription drugs that are old.
- Just leftover medicines.
- Just medicines.
- Just old medicine. I have a septic system.
- Just some pills once in a while, but that is very rarely.
- Just tampons.
- Just the old medicines.
- Just the pills.
- Kitty waste and cat litter.
- Kleenex, dental floss.
- Kleenex, letters.
- Kleenex, sometimes.
- Kleenex, sometimes.
- Kleenex.
- Kleenex.
- Kleenex.
- Kleenex.
- Kleenex.
- Kleenex.
- Kleenex.
- Kleenex.
- Kleenex.
- Leaves from plants.
- Leftover stew, or chili, or soup.
- Medication.
- Medication.
- Medications, leftover food.
- Medications.
- Medications.
- Medicine.
- Medicine.
- Mouthwash. Something that I do not want, that would make a nice smell in the toilet bowl.
- My non-filtered cigarette butts. And sometimes hair.
- My old medicine sometimes, but that is very seldom. Or, some dirty mopping-up water, when I mop the floor.
- Nothing, other than medicines.
- Occasionally medications, but I would like to add that we are on a septic system.
- Occasionally, biodegradable medication.
- Occasionally, if I had gravy or something like that, but otherwise no.
- Occasionally, it might be some vegetable waste. We have a septic system, not a sewer.
- Old medications, cigarette butts.
- Old medications.
- Old medicine. Expired medicine.
- Old medicines and anything that is poison.
- Old prescription drugs.
- Once in awhile a Q-tip might get flushed.

- Once in awhile I throw away things (into the toilet) that are too wet to go in the garbage. Or too solid, like leftover rice with too much liquid.
- Only dirty mop water.
- Only drugs.
- Only other types of personal products.
- Only pills.
- Other than prescriptions, no, I don't think so.
- Other than the pharmaceutical pills, no.
- Other than those pills, no, and that is pretty rare.
- Paper towels, and sometimes grease.
- Personal hygiene products, or a cleaner for the toilet
- Pills, when they expire.
- Pills.
- Prescription drugs.
- Prescription drugs.
- Q-tips.
- Q-tips.
- Rarely, we might flush a specific drug that we don't want to be accessed in any way, but we hardly ever do that.
- Some food items, hair, and some medicine.
- Some food, like soup. Or leftovers, like soup. It's too runny - if you put in the trash, it will leak all over.
- Some of the chemicals there from that other question.
- Some pills I want to make sure no one gets a hold of.
- Sometimes Kleenex and cigarette butts.
- Sometimes, leftover fluid, and things small enough to flush.
- Sometimes, leftover food.
- Sometimes medication.
- Sometimes spoiled food.
- Sometimes, maybe, cereal or oatmeal.
- Spiders or bugs.
- Spiders.
- Spiders.
- Tampax.
- Tampons, cat poop, Kleenex.
- Tampons.
- Tampons.
- Tampons.
- The feces from the cat box.
- Those wipes.
- Those wipes.
- Throw condoms down the toilet.
- Tissues, Kleenex sometimes, and the leftover wet cat food in the morning that they haven't eaten overnight.
- Tissues.
- Tissues.
- Vegetable broth.

Q23A: The next question asks about washing your primary vehicle. Generally where do you wash your primary vehicle? [IF MORE THAN ONE, ASK: Where do you wash your vehicle most often? IF DRIVEWAY, ASK: What type of surface is

that? IF CAR WASH, ASK: Would you say commercial car wash or a coin-operated car wash?]

Q23A Response: Other

- 50-50, carwash and hand wash.
- A car wash or at home, equally. It's about 50-50.
- At my children's home.
- Both coin-operated self-serve hand wash and automatic. When my husband takes the car, he wants to do it himself. When I do, I take it through the automatic one.
- Both commercial and coin-operated.
- Both self-serve and commercial carwash.
- Car dealership gave free car washes for life.
- Car dealership where she bought the car, because they offer free washing [sic].
- Carwash for a fundraiser for kids.
- Charity car wash.
- Commercial carwash (automatic) and I wash it myself (paved surface).
- Dealership washes my car.
- Either coin-operated car wash or commercial carwash.
- Half in the driveway and half at the commercial carwash.
- I go to where they have the people in the parking lot area who are recovering alcoholics.
- I have it washed at the dealership, when I have it serviced.
- I live in a complex, so there is a parking area that has a drain.
- In the garage. I have a small car.
- In the parking lot.
- My car dealer does it.
- The residents volunteer every four months, and we just wash your car.
- We wash it in our shop, which has a concrete floor.
- When I get my oil-change, I have them wash my car by hand.
- When it rains.

Q33A: How do you usually get to and from work or school? [IF MORE THAN ONE, ASK; Which is the most often?] [IF STILL MORE THAN ONE, ASK: On which do you go the longest distance?]

Q33A Response: Other

- A combination of driving and buses.
- A short car, a bus, a ferry, and then walk.
- Airplane.
- Car and bus, in same day.
- Car and ferry.
- Carpool, and by himself, and from home once a week [sic].
- Drive to the Park-and-Ride and take the bus. Halfway between taking the bus and not.
- Half the time, we carpool.
- I commute by plane.
- I fly to work.
- I walk to the bus stop, take a bus to the ferry, and then take a vanpool - once I'm off the ferry.
- I work in Olympia, so I drive down there and stay for the week.
- Most often is a home office, so I walk to work.
- One of us takes the car, and one of us takes the bus.
- Plane.

- Usually bus or walking.
- Walk and drive.
- Walk.
- Walk.

ETHNIC: How would you describe your race or ethnic origin? IF WHITE /CAUCASIAN, ASK: Is that Hispanic?

ETHNIC Response: Other

- American mutt.
- American.
- Asian-Anglo.
- Bi-racial.
- Catholic.
- Euro-American.
- Euro-Asian.
- European.
- Everything, except Hispanic.
- French Canadian, American.
- From India.
- Half-black and half-white.
- Human.
- I am mixed between black and white.
- I'm Italian, you figure that one out.
- I'm part Native American, and the rest: French, German, Scotch-Irish, and Pennsylvania Dutch.
- I'm white, my husband is Hispanic.
- Indian.
- Indian.
- It's a combination of Hispanic and Anglo.
- Latin.
- Middle Eastern.
- Mixed Asian and white.
- Mixed race.
- Mixed.
- Mixed.
- Mixed.
- Mixed.
- Southeast Asian.
- Spanish, Irish, and German-Dutch.