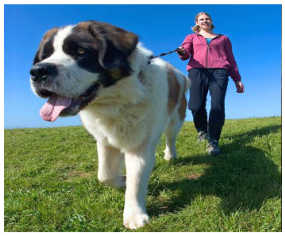

Residential Stormwater Survey Public Attitudes, Awareness and Behavior

Prepared for
Kitsap Peninsula Clean Runoff Collaborative

Project Partners
Kitsap County
City of Bainbridge Island
City of Bremerton
City of Gig Harbor
City of Port Orchard
City of Poulsbo

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Bainbridge Island, WA

December 2011

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Executive Summary

A phone survey was conducted in October 2011 of the attitudes and behaviors of 802 Kitsap Peninsula residents. The purpose of the survey was to track changes made since the 2008 benchmark survey and gain a better understanding of how local and regional stormwater outreach programs influence residential awareness, activities and behaviors.

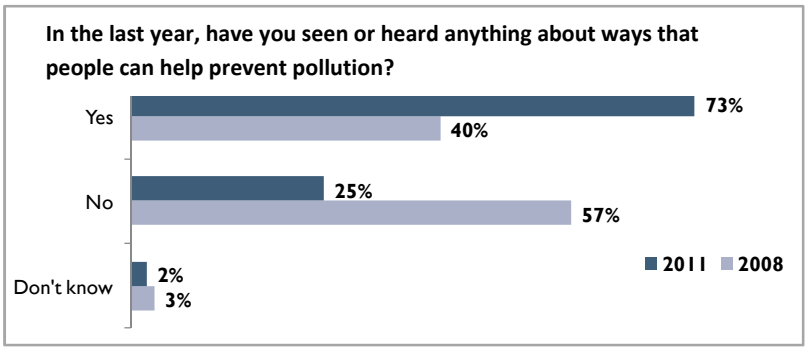
Milestones Achieved

Increased awareness and changes in attitudes and behaviors among the Kitsap Peninsula residents occurred in areas targeted by recent stormwater outreach programs, as highlighted below.

- **Increased awareness of stormwater messages**

  Residential awareness about messages explaining the effects of daily activities on stormwater runoff increased significantly in 2011. Nearly 75% were aware of stormwater messages in the last year, up from 40% in 2008. The most commonly heard or read messages related to runoff and proper waste disposal, including:

  - Don't dump in storm drains.
  - Clean up spills and leaks.
  - Proper car washing.
  - Proper dog waste disposal.
  - Proper household hazardous waste disposal.



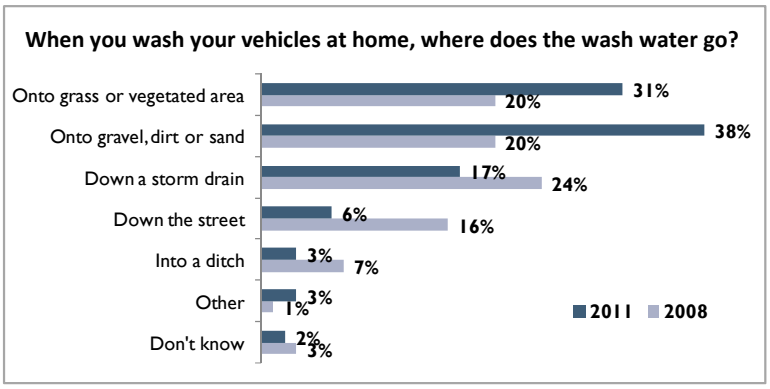
- **Increased recognition of the Puget Sound Starts Here campaign**

  Nearly 30% had heard or seen the phrase "Puget Sound Starts Here". According to marketing experts, these are very promising results for a two year old campaign.

- **Increased pet waste pickup and disposal by targeted dog owners**

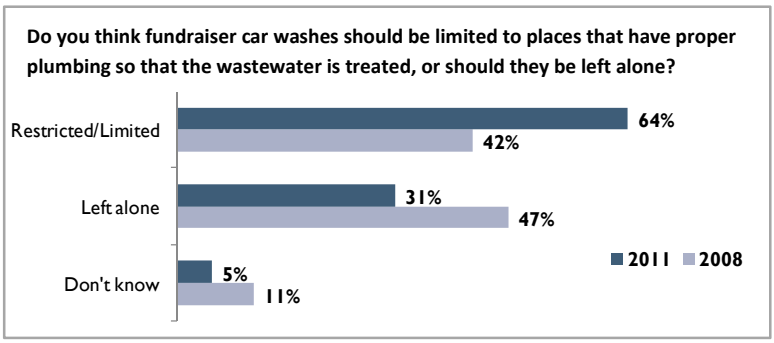
  Dog owners living on small lots of 0.5 acres or less, which were targeted in the Kitsap regional pet waste campaign, were more likely to pick up pet waste in their yard more frequently **and** pick up the waste every time while dog walking than were residents living on larger lots. Those who lived on small lots and picked up waste either daily or weekly were also more likely to dispose of pet waste properly, placing it in the trash.

- **Improved home car washing behaviors**
  Residents changed their behavior to wash cars on grass, gravel or other permeable surfaces. There was a dramatic reduction in the wash water going down streets, into ditches, and storm drains.



- **Increased awareness about who to call about a spill**
  40% knew to call either the Kitsap 1 Spill Hotline, local government, or 911 if they witnessed a spill or suspicious substance in a local water body. More educational outreach is needed since about 25% would either do nothing or not know where to report the spill.

- **Changed attitudes towards fundraiser car washes**
  More than half (58%) were aware that the wash water from fundraiser car washes does not always go into the sewer system to get treated. The opinion that fundraiser car washes should be limited to areas with plumbing that diverts wash water to a treatment plant increased significantly from 42% in 2008 to 64% in 2011.



Recommendations for Future Outreach Programs

The survey shows that the public can easily grasp stormwater concepts within the context of specific actions, whereas concepts alone get lost. This is evidenced by increased audience receptivity to messages about reporting spills and limiting fundraiser carwashes, both of which rely on the public's understanding that stormwater flows to waterways untreated. Yet when asked where stormwater flows, outside the context of a tangible behavior, the surveys performed in 2008 and 2011 resulted in the same level of conceptual awareness at slightly over 50%. These results indicate that efforts focusing on simple actions are more effective in changing behavior than attempting to educate residents about the fate of stormwater runoff.

1. Project Overview

Background and Purpose of the Survey

This report describes the results of a survey of the attitudes and behaviors of residents of Kitsap Peninsula, which includes all of Kitsap County and the City of Gig Harbor. The survey results are to serve three purposes: 1. track changes made since the 2008 survey; 2. gain a better understanding of which educational outreach programs would be the biggest change agents, and; 3. provide the individual jurisdictions with information about their residents compared to the study area and among each other.

Since this was a tracking study, every attempt was made to keep the questionnaire consistent with the 2008 questionnaire. Minor wording changes were made to reduce response bias and a few questions were added that were not in the 2008 survey.

The survey report consists of three main sections. The first section provides an analysis of the results of the 802 completed interviews for the study area. The second section highlights the differences between the 2008 and 2011 survey results. The final section presents jurisdictional comparisons of the results.

Survey Methodology

Method: Pacific Market Research used a computer assisted telephone interview (CATI) system for the landline portion of the telephone survey. Respondents received up to 10 call attempts with an average of four call attempts. Cell phones were dialed manually in accordance with Federal Communications Commission regulations and respondents were screened to ensure they were not engaged in any dangerous activities. Cell phone respondents received a $5 honorarium.

Timeframe: October 10 – 26, 2011

Results: 802 completed telephone interviews were obtained from a starting sample of 19,204 registered voters. Of the completed interviews, 75% (602) were landline and 25% (200) were cell phones. The average length of the interview was 13.96 minutes. The response rate was 5.2% and the cooperation rate was 25.3%.

Margin of Error:	All Respondents: ±3.5%
	Respondents with Yards: ±3.7%
	Respondents with Dogs: ±4.6%
	All margin of errors are at the 95% confidence interval.
Deliverables:	Data files in SPSS and excel formats, 46 banner points, 2008 and 2011 merged data banners.

Sample Weights

The final proportions of certain groups, such as age and geographic area, did not match the actual proportions of these segments as reported by the 2010 Census. The reason for this was two-fold: 1) although efforts were made to include the hard-to-reach younger residents by including cell phones, they were ultimately under-represented in the study, and 2) a stratified sampling methodology was employed for this study. In stratified sampling, smaller areas, such as Gig Harbor, are over-represented in the survey so as to ensure that adequate numbers are present in each segment to allow for a meaningful understanding of each individual area.

The data were weighted by age and geographic subarea in order for the survey results to be projectable to the Kitsap Peninsula population and accurately reflect the makeup of the residents in the study area. Weighting is a sample balancing technique that adjusts the 'weight' given to each respondent's answers, so that the results match the actual population of the sample frame. For example, although only 11 percent of the surveys were completed with adults 18 to 35 years old, this age group makes up 24 percent of the Kitsap Peninsula population. In order to achieve projectable and accurate results, we balanced the results by giving under-represented segments a higher weight and conversely giving over-represented segments a corresponding lower weight.

It is important to note that weighting does not change the overall sample size or confidence interval of the study. When calculating the weights, an iterative process was used, commonly known as RIM weighting and data proportions were matched to the 2010 Census projections.

The tables below show the weighted and un-weighted number of responses and percentages for both geographic area and age.

Age	Weighted		Un-weighted	
	Number of Responses	% of Total	Number of Responses	% of Total
18 - 35	233	29%	90	11%
35-50	204	25%	216	27%
51-64	225	28%	394	49%
65 Plus	140	17%	85	11%
No Answer	0	0%	17	2%

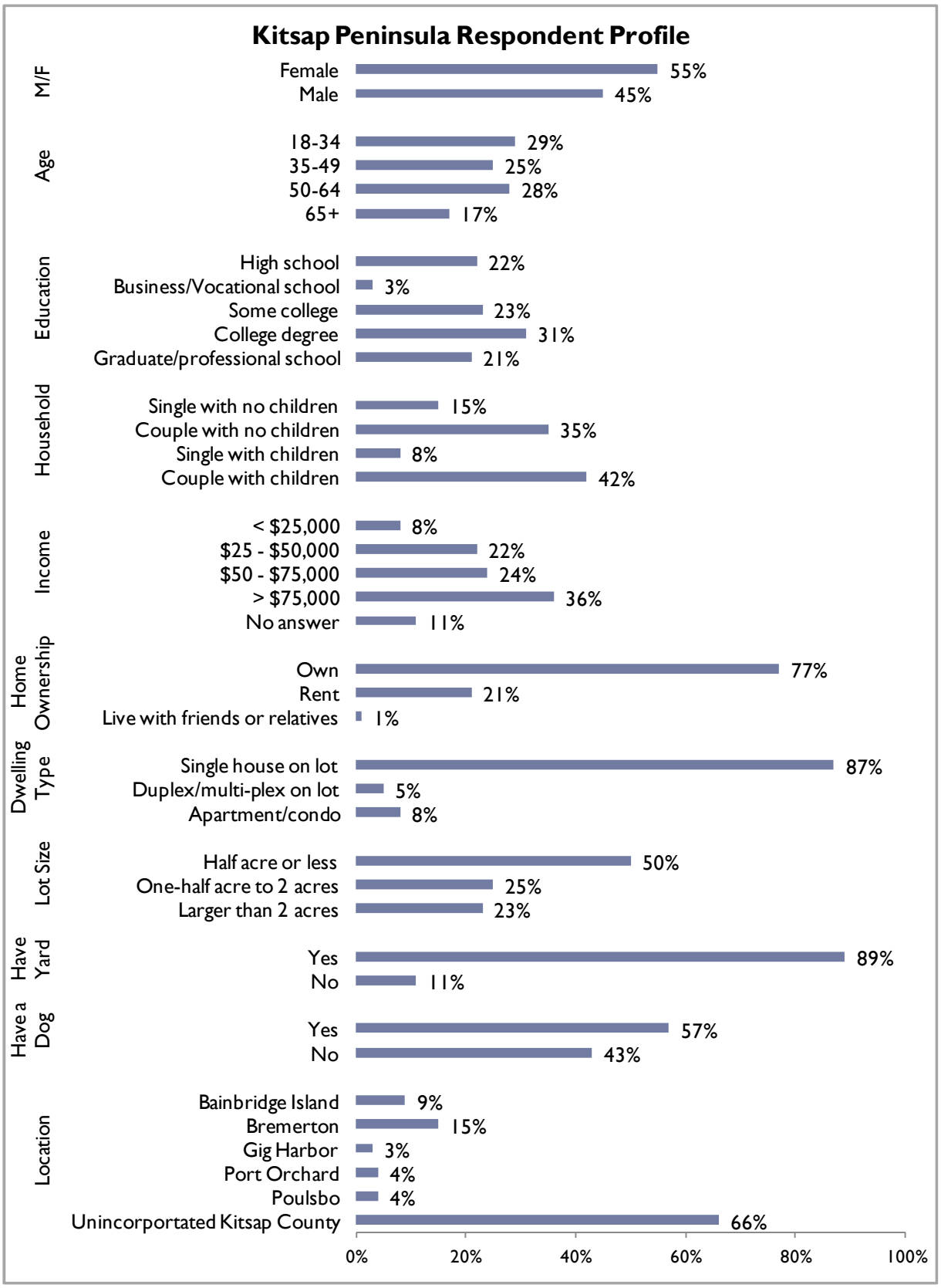
Jurisdiction	Weighted		Un-weighted	
	Number of Responses	% of Total	Number of Responses	% of Total
Bainbridge Island	70	9%	111	14%
Bremerton	109	14%	103	13%
Port Orchard	42	5%	89	11%
Poulsbo	30	4%	92	12%
Gig Harbor	23	3%	36	5%
Unincorporated	528	66%	371	46%

Data Analysis

Data analysis was conducted with SPSS (Statistical Package for the Social Sciences). A t-test was used to identify statistically significant differences between the sample means of two subgroups to see if there is sufficient evidence to infer that the means of the corresponding population also differ. A z-test was performed to identify statistically significant differences between percentages. In this report, statistical significance is reported at the $p<.05$, or 95% confidence level, which is when there is less than 1 in 20 probability that a certain outcome occurred by chance. Results at the 90% confidence level are described as *marginally* significant.

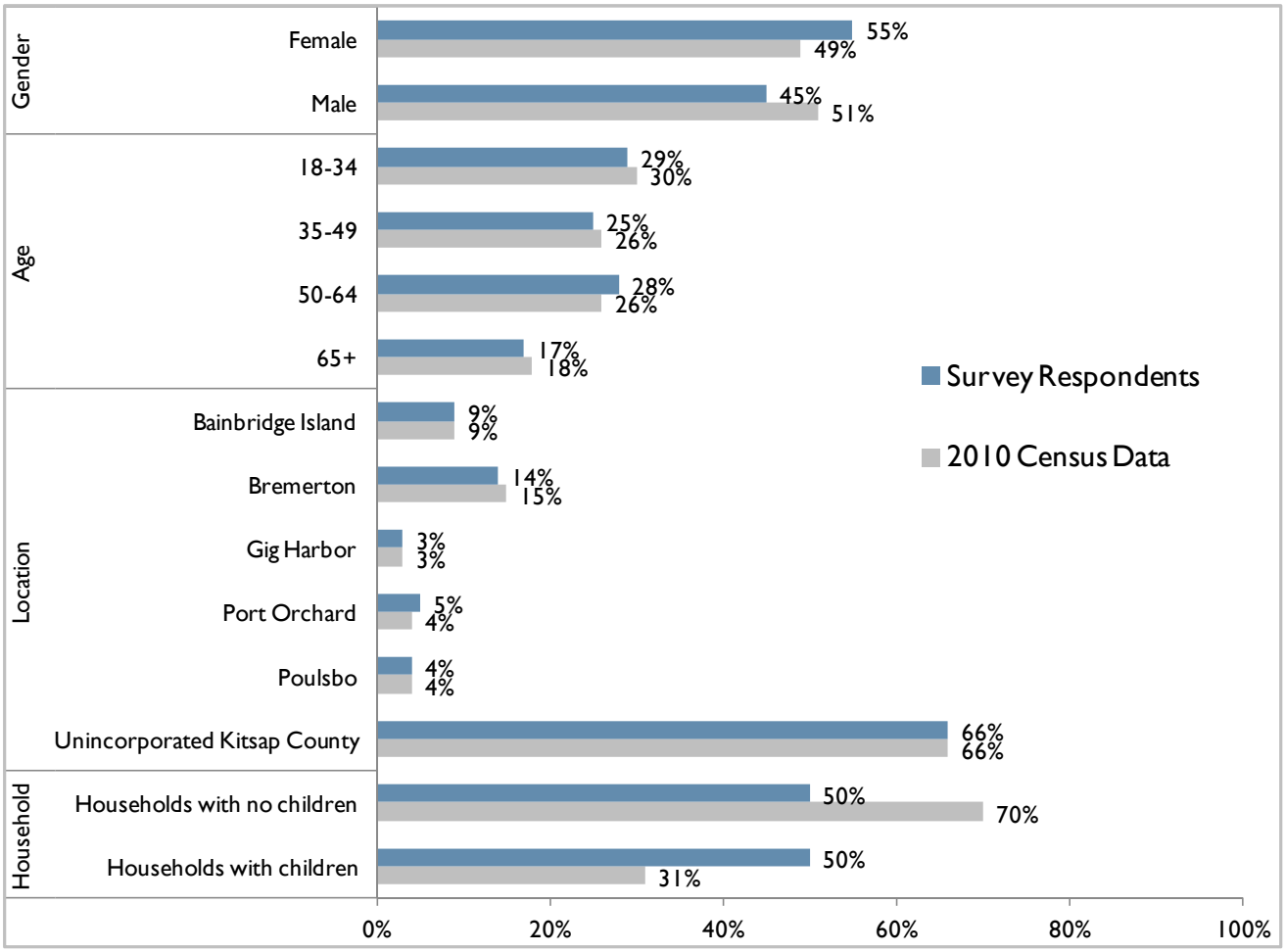
Respondent Profile

The bar chart presents the demographic, economic and social characteristics of the 802 survey respondents. The profile takes into account the weighting for jurisdiction and age, which more accurately reflects the study area population.


Kitsap Peninsula Respondent Profile
M/F
Female 55%
Male 45%
Age
18-34 29%
35-49 25%
50-64 28%
65+ 17%
Education
High school 22%
Business/Vocational school 3%
Some college 23%
College degree 31%
Graduate/professional school 21%
Household
Single with no children 15%
Couple with no children 35%
Single with children 8%
Couple with children 42%
Income
< $25,000 8%
$25 - $50,000 22%
$50 - $75,000 24%
> $75,000 36%
No answer 11%
Home Ownership
Own 77%
Rent 21%
Live with friends or relatives 1%
Dwelling Type
Single house on lot 87%
Duplex/multi-plex on lot 5%
Apartment/condo 8%
Lot Size
Half acre or less 50%
One-half acre to 2 acres 25%
Larger than 2 acres 23%
Have Yard
Yes 89%
No 11%
Have a Dog
Yes 57%
No 43%
Location
Bainbridge Island 9%
Bremerton 15%
Gig Harbor 3%
Port Orchard 4%
Poulsbo 4%
Unincorportated Kitsap County 66%
0%
20%
40%
60%
80%
100%

The next two charts show the demographic, economic and social characteristics of the survey respondents compared to the Kitsap Peninsula population, which includes Kitsap County and the City of Gig Harbor. The Census Bureau had not yet compiled the 2010 data on education, household income and home ownership. The second chart presents 2009 estimates, and includes Kitsap County only, as estimates were not made for cities under 20,000 in population.

Comparison of Survey Respondents to Kitsap Peninsula 2010 Census Data

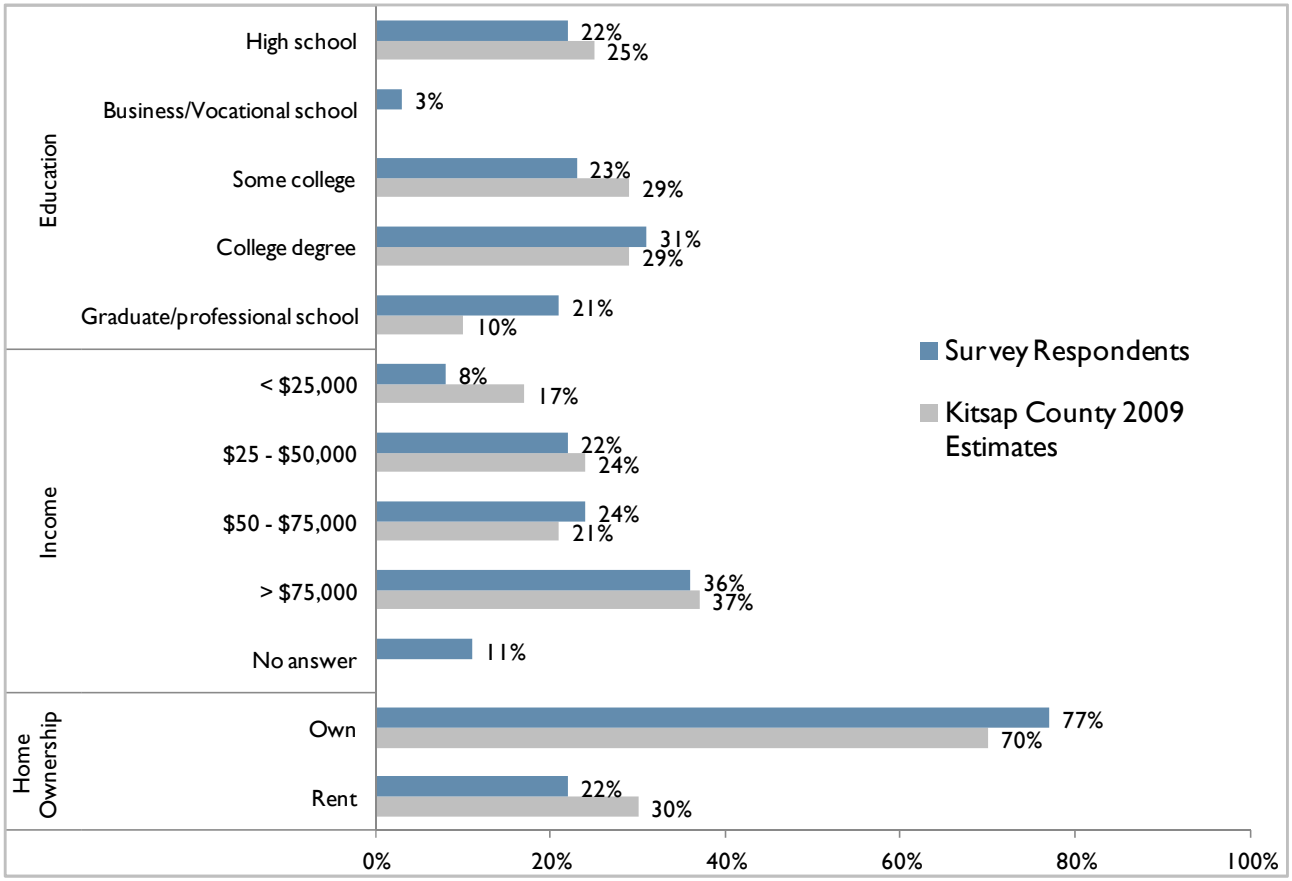


Source: U.S. Census Bureau. 2010. Summary File 1. http://www.ofm.wa.gov/pop/census2010/data.asp#data2.

In comparison to the study area population, the survey respondents were:

- More female – 55% compared to 49% in the study area.
- More households with children – 50% compared to 31% in the study area.
- Better educated – 52% with a college degree or more compared to 39% in the study area.
- More homeowners – 77% compared to 70% in the study area.

Comparison of Survey Respondents to Kitsap County 2009 Estimates



Source: U.S. Census Bureau. American Community Survey 5-Year Estimates. Kitsap County Selected Economic Characteristics: 2005-2009.

Note about Percentage Totals

Throughout the report some of the charts do not always total to 100%. There are two reasons for this. One is due to rounding where the total may add up to 99% or 101%. The other reason is that for several questions, some respondents did not know the answer or did not provide one, and these responses fall into the "Don't know/No response category". In questions where there were only handful of these responses (fewer than 6), they were omitted from the chart.

2. Key Findings

Study Area Lifestyles

- **The lifestyles of study area respondents help contribute to pollution of runoff.**
  - Nearly 9 in 10 lived in single family house on its own yard.
  - Nearly 8 in 10 were homeowners.
  - About half live on lots of 0.5 acre or more.
  - More than half of the respondents had a least 1 pet dog.

Yard Care Practices

- **More than half of the respondents reported never using each of the 5 yard products listed (chemical fertilizer, organic fertilizer, Round-Up, Weed and Feed, and pesticides).**
  - 1 in 4 never uses **any** of the 5 yard products.
  - Renters with annual household incomes of $50,000 or less, and those with less than a college education were most likely to never use any lawn and garden products.

- **Lawn and garden products are primarily used by homeowners with annual household income of $50,000+.**
  - 4 in 5 (80%) of the respondents take care of their yard without the assistance of outside help.
  - Round-Up was the most commonly used lawn and garden practice mentioned by nearly half (47%) of the respondents.
  - Weed and Feed was used by 40% of the respondents.
  - Organic fertilizer was used by nearly twice as many respondents (40%) than who used chemical fertilizer (21%).
  - The most common application timeframe for lawn and garden products was 1-2 times a year.

- **The majority of respondents either composted their yard waste or put it in the yard waste curbside collection bin.**
  - More than half (55%) composted yard waste on their property, which was more likely to be lots of 0.5 acres or more.
  - About 1 in 10 (13%) used the curbside yard waste pickup service and were more likely to live on small lots.
  - Nearly 2 in 10 (19%) participate in practices not endorsed by jurisdictions, including burning yard waste or putting it in the trash.

- **The majority used water to clean paved areas and decking in the yard.**
  - About 1 in 4 (23%) sweeps exclusively to clean paved areas and decking. Those who sweep only were more likely to live on small lots.
  - 3 in 5 (60%) use a pressure washer and/or a hose to clean at their home. Pressure washers were more likely to be couples with no children and live on mid to large sized lots of more than 0.5 acres.
  - Less than 1 in 5 (17%) use blower or combine that with sweeping to clean driveways and other hard surfaces.

Pet Waste Disposal

- **The prime dog owning years were ages 36-50, in households with children, and average annual income of $75,000+.**
  - More than half (57%) of respondents owned at least 1 pet dog.
  - The number of dogs owned equated to 0.93 dogs per all households in the study area.

- **Pet waste is not perceived as much of a threat to water quality as other activities.**
  - Pet waste ranked last in a list of 7 possible contributors to pollution. Less than a third thought that pet waste left on the ground made a significant contribution to pollution.
  - When asked about a list of 8 possible activities that could help protect water quality, disposing of pet waste in the garbage ranked 7th, with 35% thinking proper disposal would be “very effective” and 25% saying it was “not very effective”.

- **While half pick up waste in their yards either daily or weekly, still 1 in 5 never pick it up.**
  - About 1 in 4 (26%) reported picking up dog waste in the yard daily.
  - Those living on small lots and with an annual household income (<$25,000) reported more frequent pickup of dog waste.
  - Respondents on large lots were more likely to always leave the waste on the ground.

- **Those who live on small lots and pick waste either daily or weekly are also more likely to dispose of the waste in the trash.**
  - Half report disposing dog waste in the trash in accordance with the message in the KPCRC pet waste campaign.
  - Nearly 1 in 5 (18%) put the waste in a compost pile. Respondents living on lots of 0.5 acres or more were more likely to use this method.

- **Half of the respondents report they pick up waste every time when out walking the dog.**
  - Women, those with graduate or professional degrees, and respondents with small to mid-sized lots are most likely to pick up dog waste every time when out walking.
  - Half of all respondents said they picked up the waste every time when out walking the dog.
  - About 1 in 10 said they never pick up waste while walking their dog. They were more likely to be men and live on large lots of 2 acres or more.

Vehicle Maintenance

- **1 in 3 change their oil and other auto fluids at home, either exclusively (19%) or in combination with taking their car to a service shop (13%).**
  - The vast majority (86%) either recycles oil and other automotive fluids or takes it to a collection facility.
  - Men, those living in Poulsbo or unincorporated Kitsap County, and with less than a college education were more likely to change auto fluids at home.

- **About 2 in 5 regularly check for oil leaks in their vehicles.**
  - Men and respondents who change oil at home were more likely to check regularly.
  - Respondents who did not check for leaks but would notice if there was one were more likely to live in a single family house and have an annual household income of $75,000+.

- **3 in 4 would use an absorbent pad or material to clean up spilled oil or antifreeze on pavement.**
  - 1 in 20 (5%) would use water to clean up a spill.
  - About 1 in 10 (13%) would do nothing.

Car Washing

- **Most respondents wash their cars in multiple ways and wash frequently.**
  - Frequency of car washing was highest at home with 1 in 3 washing their cars at home at least once a month.
  - Half of those washing their cars at home directed the wash water onto grass, gravel or other permeable surfaces.
  - Half of the respondents used a fundraiser car wash with the most common frequency of 1 to 2 times per year.
  - More than half (58%) were aware that in some cases the wash water at fundraiser car washes flows to water bodies untreated.

- About 2 in 3 thought that fundraiser car washes should be limited to areas with proper plumbing.

Attitudes and Awareness of Educational Outreach

- **Awareness that stormwater flows to water bodies untreated has not changed significantly since the 2008 survey.**
  - Respondents who were aware of this fact were more likely to be men, hold a graduate or professional degree, live on a large lot and have an upper household income of $75,000+.
  - Those who were more aware of this fact were also more aware of stormwater messaging in general and know that fundraiser car washes do not always have proper plumbing.

- **The majority thought that 4 of the 7 listed practices were a significant contribution to water pollution.**
  - Practices of most concern were dumping household hazardous waste into storm drains, pesticides and fertilizers from yards, oil leaks from vehicles and leaking septic systems.
  - Women consistently were more likely than men to think that all 7 activities posed a significant contribution to water quality.

- **2 in 3 have been aware of messages about stormwater pollution.**
  - About 3 in 10 of all respondents have heard or seen the phrase “Puget Sound Starts Here”.
  - Only 1 in 5 knew to call Kitsap 1 or their local government to report a spill.
  - Respondents mentioned 911 and the EPA more often as where they would report a spill.

- **More than half thought that 6 of 8 listed activities would be very effective in protecting water quality.**
  - The top 3 activities for protecting water quality were regular septic system maintenance, fixing vehicle leaks, and reporting pollution to a hotline.
  - Women were more likely to think all 8 activities would be very effective.

3. Detailed Findings

Environmental Behavior Index Results

The Environmental Behavior Index (EBI) was constructed based on practices and attitudes of the survey respondents. The purpose is to identify the behaviors that could be causing stormwater pollution and focus where the outreach should be targeted. The Green bars show that respondents are already doing the desired behavior. Yellows are on the right track but could benefit from further outreach and education. Browns are engaged behaviors that could be detrimental to the quality of surface runoff. A table showing how the EBI was constructed is included in the appendix to this report.

The results show that over half of the indices have 50% or more green behaviors. Although that is laudable, some of the practices with a high percentage of green behaviors also exhibit practices that could adversely affect the quality of stormwater runoff.

The outreach efforts can focus on the "yellow" or "brown" respondents. Throughout the report, the demographic characteristics of the respondents engaged in the various practices are highlighted.

The most "green" behaviors are:

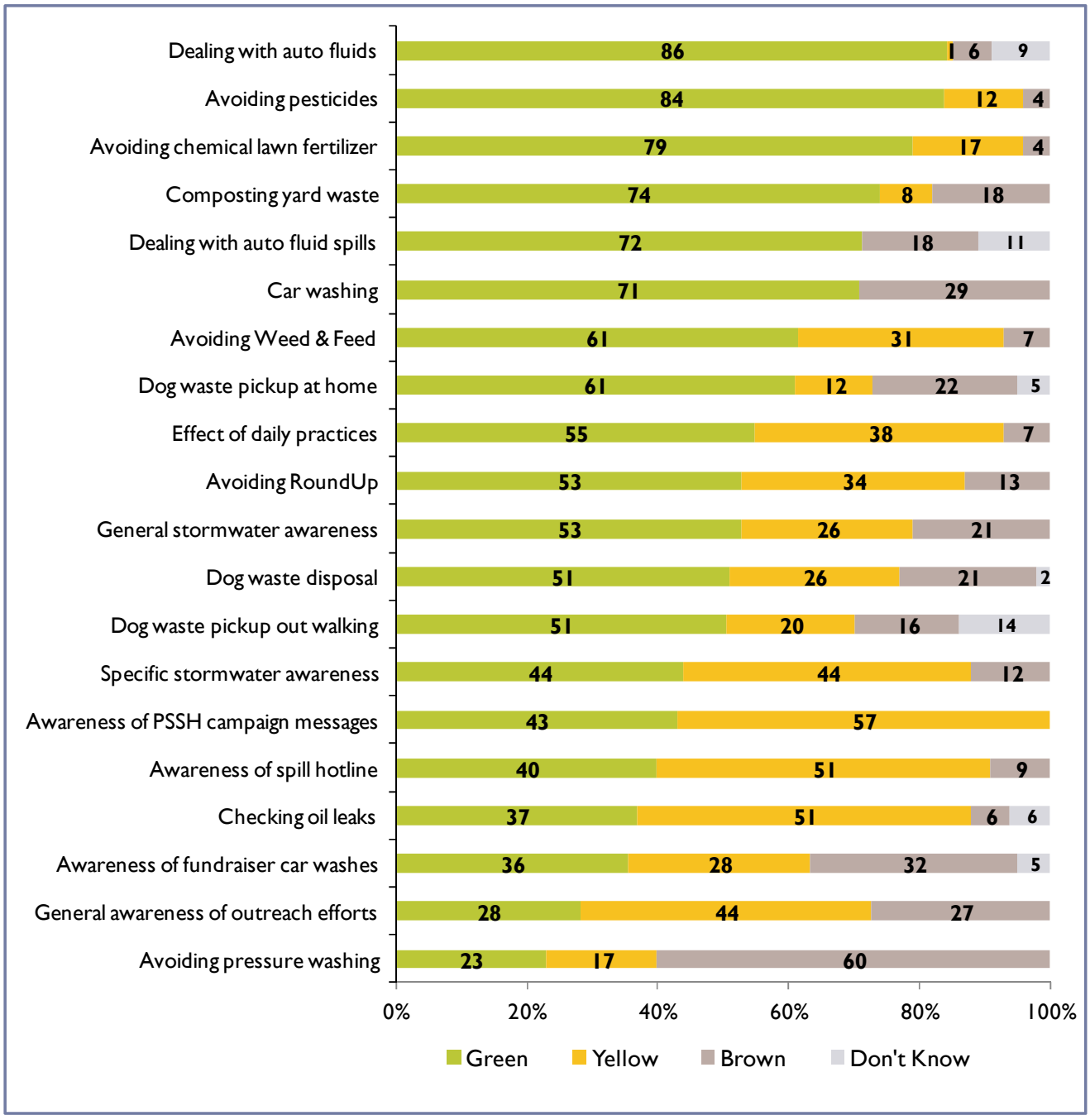
- Recycling or taking used motor oil to a collection facility.
- Not using pesticides.
- Not using chemical lawn fertilizers.
- Composting yard waste.
- Cleaning up oil and other auto fluid spills.
- Washing cars at home so that the wash water drains to grass, gravel or other permeable surfaces.
- Picking up dog waste at home on a regular basis.

The areas with "yellow" and "brown" responses that stand out most are:

- The prevalence of pressure washing and hosing down paved surfaces.
- Use of Round Up and Weed and Feed.
- Neglecting to pick up dog waste while walking and proper disposal.
- Lack of awareness about educational outreach and the effect of daily activities on water pollution.
- Lack of awareness about fundraiser car washes.

- Lack of awareness about the spill hotline and where to call in the event of a spill.
- Burning yard waste.

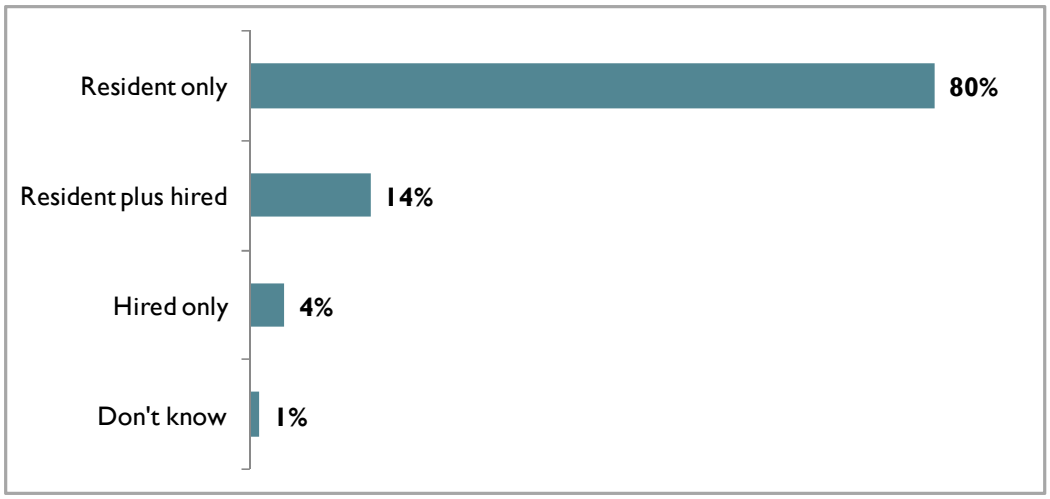
Behaviors of Survey Respondents Base = 802



Yard Care Practices

Four in 5 (80%) said they take care of their yard themselves, while 20% either hire gardeners occasionally (14%) or exclusively (4%).

Do you or someone in your household maintain the yard yourself? Or do you hire someone to take care of it? Or both? Base = 717



Respondents who were more likely to hire a gardener or landscaper to take care of their yard were:

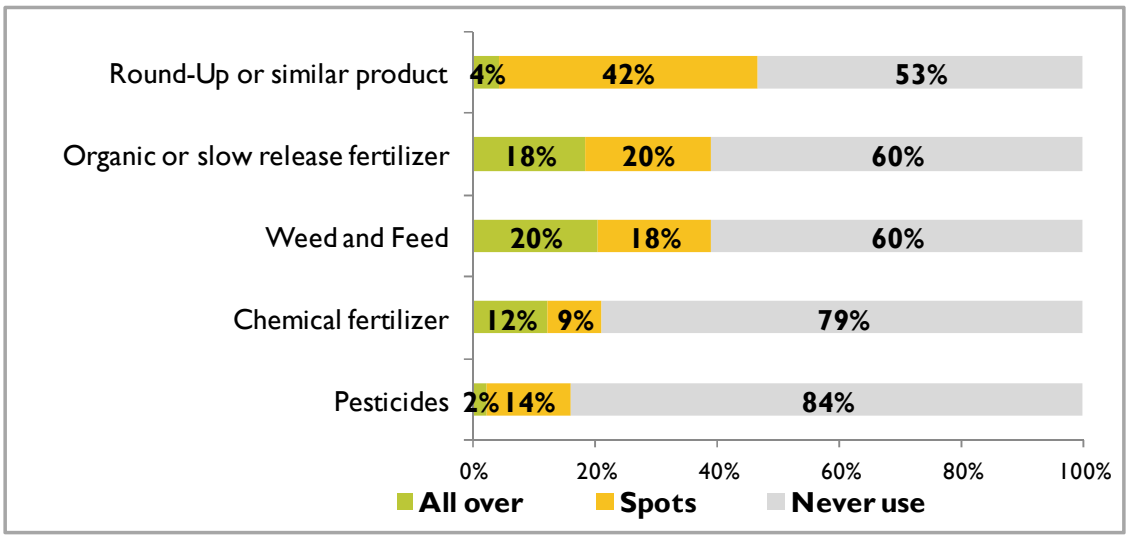
- Bainbridge Island residents.
- Age 51+.
- Had a graduate or professional degree.
- Single household, with or without children at home.

Use of Lawn and Garden Products

Three in 4 (75%) use at least 1 of the 5 lawn and garden products listed while 25% never use any of the lawn and garden products listed in the survey. The most commonly used products in the yard were Round-Up or similar product, organic or slow-release fertilizer, and Weed and Feed. Round-Up was the most commonly used lawn and garden product reported by nearly half (47%) of the respondents. Organic fertilizer and Weed and Feed were each used by 40% of the respondents.

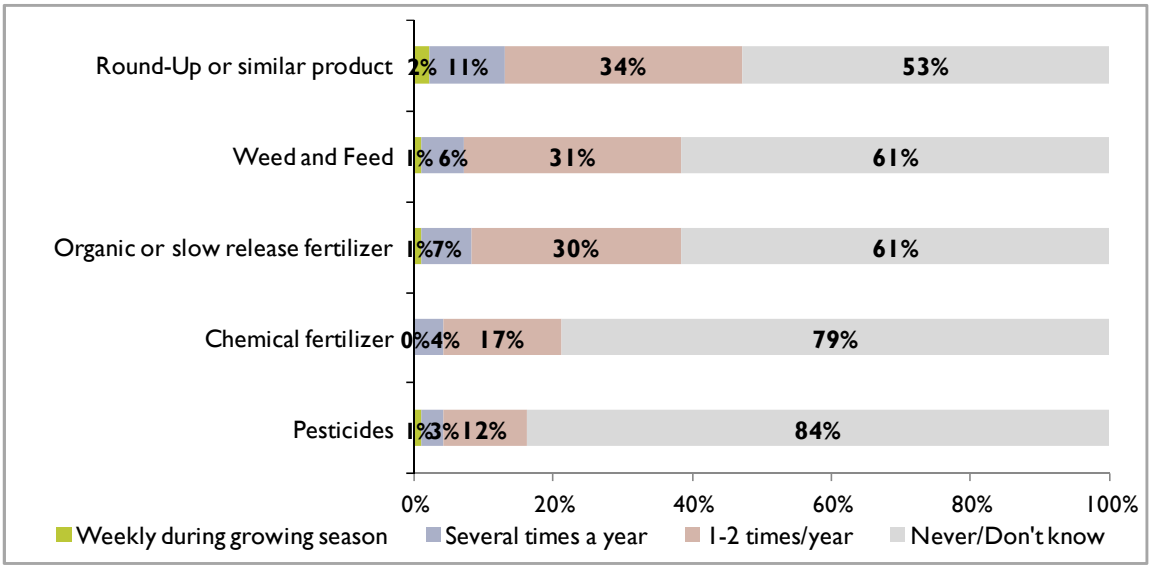
Chemical fertilizer was less commonly used than the organic fertilizer with 21% of the respondents using it. Pesticides were even less common with 16% reporting its use.

I am going to list some products that people commonly use to maintain their lawn and garden. For each product let me know if any of these products are used in your yard. Would you say that use this products over most of yard, or just on certain spots? Base = 717



The most common application timeframe of these products was 1 to 2 times a year. However, about 1 in 10 (11%) said they use Round-Up several times a year and 6% said they use Weed and Feed several times a year.

For each of the products used in your yard, about how often are they used? About once a week during the growing season, several times during the growing season, a couple of times a year, or once a year. Base = 717



Round-Up

Round-Up was used by nearly half (47%) of the respondents. Most of the coverage was on certain spots (42%) compared to over most of the yard (4%). Those who used Round-Up were more likely to be:

- Homeowners with annual household income of $50,000+.
- Residents of Port Orchard and unincorporated Kitsap County had the highest proportion of Round-Up use, although it was only statistically significantly higher than Bainbridge Island residents, which had the lowest use.

Organic or Slow-Release Fertilizer

Two in 5 (40%) used organic fertilizer with nearly half using it all over (18%) and half (20%) using it on certain spots in the yard. Users of this product were more likely to:

- Hold a graduate or professional degree.
- Age 36+.
- Be aware that stormwater flows to water bodies untreated.
- Residents of Bainbridge Island, Gig Harbor and unincorporated Kitsap County had the highest proportion of organic fertilizer use, although it was only statistically significant higher than Bremerton residents, which had the lowest use.
- Homeowners with annual household income of $50,000+.

Weed and Feed

Two in 5 (40%) used Weed and Feed with half (20%) using it all over their yard and nearly half (18%) using it in spots. Users of Weed and Feed were more likely to be:

- Residents of Poulsbo and unincorporated Kitsap County had the highest proportion of Weed and Feed use, although it was only statistically significant higher than Bainbridge Island residents, which had the lowest use.
- Households with annual income of $75,000+.
- Households with annual income of >$25,000 were more likely to use Weed and Feed all over while households with annual income of <$25,000 were more likely to use the product in spots.

Chemical Fertilizer

Chemical fertilizer was used by about 1 in 5 (21%) of the respondents, with 12% using it over most of the yard and 9% using it in spots. Users of chemical fertilizer were more likely to be:

- Men.
- Households with annual income of $50,000+.

Pesticides

Pesticides were used by 16% of the respondents with most (14%) using it in spots and 2% using pesticides all over. Users of pesticides were more likely to be:

- Households with annual income of $50,000+.

Respondents Who Never Use and Yard or Garden Products

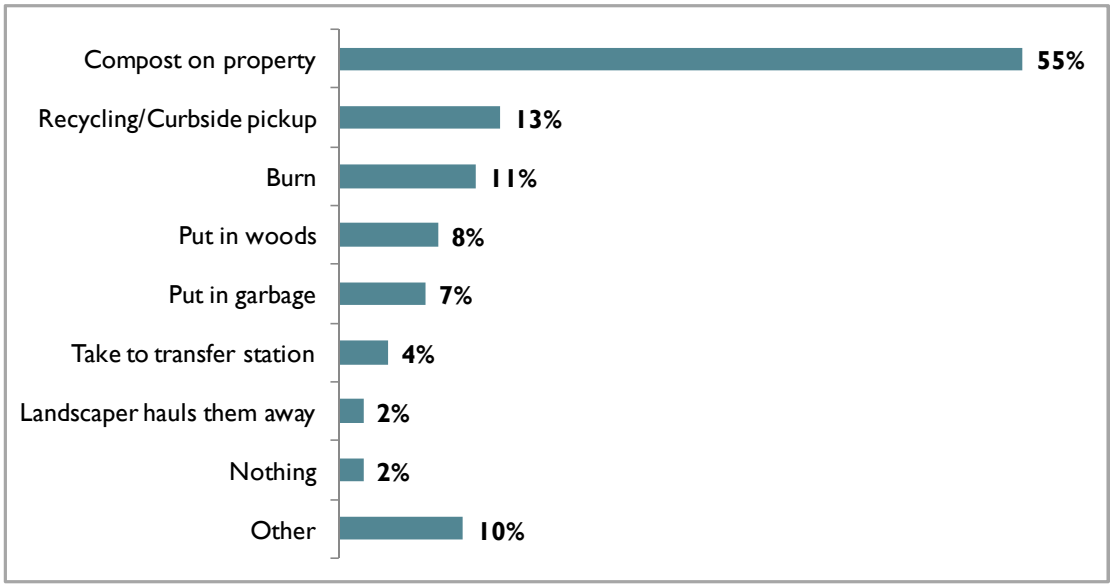
Those who never used any of the products discussed above were more likely to be:

- Renters with annual household incomes of $50,000 or less.
- Have less than a college education.

What Happens to Yard Waste

More than half of the respondents (55%) said they typically compost yard waste. The next most frequently mentioned option was putting yard waste in the curbside pickup bin (13%). Burning yard waste was mentioned by about 1 in 10 (11%) respondents while tossing the yard waste in the woods was reported by 8%.

What does your household typically do with yard waste, like leaves, small branches and lawn clippings? Base = 717



Respondents who reported composting yard waste on their property were more likely to be:

- Residents of Bainbridge Island or unincorporated Kitsap County.
- Live on a lot of 0.5 acres or more.
- In the 36-64 age range.

Respondents who used a curbside yard waste cart were more likely to:

- Live on small lots.

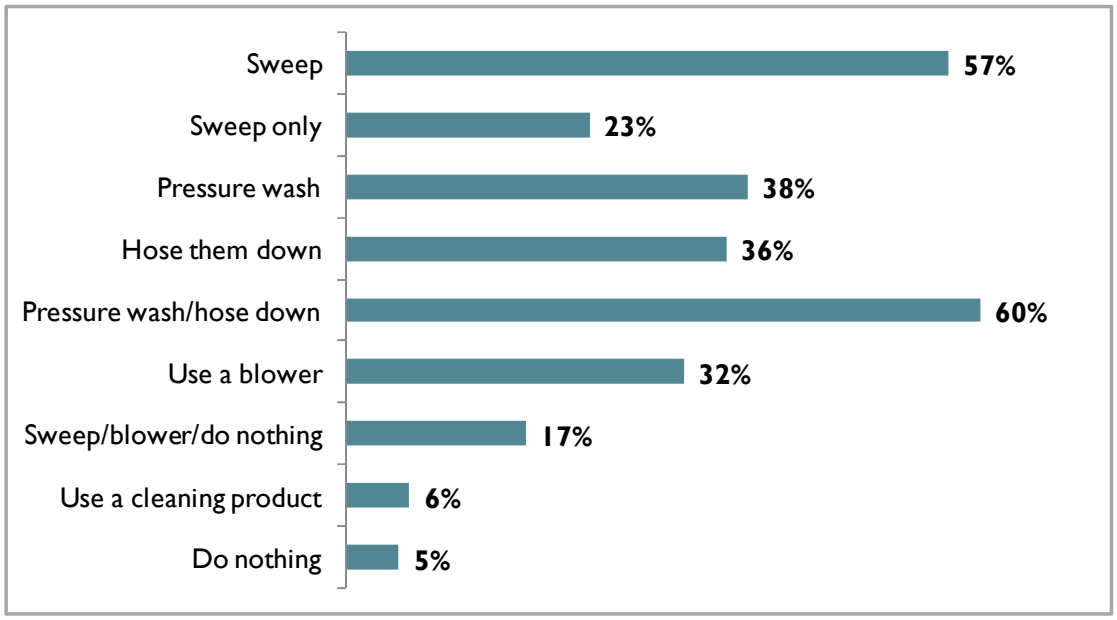
Respondents who were more likely to burn their yard were more likely to:

- Live on small lots.
- Have less than a college education.

Cleaning Paved Areas

The majority (57%) said they sweep when typically cleaning paved areas and decking. More than a third pressure wash (38%) and hose them down (36%). About a third (32%) use a blower. A low percentage (6%) of respondents uses a cleaning product.

When you clean places like your driveway, walkways, patio or deck, do you typically…
Base = 717



Although more than half reported to clean paved areas by sweeping, only 23% reported sweeping as the only cleaning method for cleaning paved areas. An additional 17% either use a blower, combination of sweep and blower, or do nothing. More than half (60%) of the respondents uses water when cleaning, either pressure washing or a hose.

Respondents who swept the paved areas and decking were more likely to:

- Live on small to mid-size lots of 2 acres or less.

- Residents of Port Orchard and Bainbridge Island had the highest proportion of sweepers, although it was only statistically significant higher than Gig Harbor and unincorporated Kitsap County respondents.

Respondents who **only** swept paved areas and decking were more likely to:

- Have a college education or more.
- Be in the 51-64 age group.
- Live on small lots of less than 0.5 acre.
- Port Orchard had the highest proportion of only sweepers, although it was only statistically significant higher than Gig Harbor and unincorporated Kitsap County.

Respondents who typically use a blower were more likely to be:

- Homeowners in the higher income bracket of $75,000+.
- Be over the age of 35.
- Live on mid to large sized lots of more than 0.5 acres.

Pressure washers were more likely to be:

- Couples with no children.
- Couples with no children were also more likely to use a cleaning product.
- Live on mid to large sized lots of more than 0.5 acres.
- Residents of Gig Harbor, Poulsbo and unincorporated Kitsap County had the highest proportion of pressure washers, although it was only statistically significant higher than Bremerton and Port Orchard respondents, which were the least likely to pressure wash.

Pet Waste Disposal

Dog Ownership

More than half (57%) of the respondents said they have at least one pet dog, which equates to nearly 1 dog (0.93) per all households on the Kitsap Peninsula. Dogs were most likely living in households that were single family homes. As might be expected, households with more than 4 dogs lived on larger lots.

The prime dog owning years were ages 36-50, in households with children, and average annual income $75,000+. Single, childless households were least likely to have a pet dog.

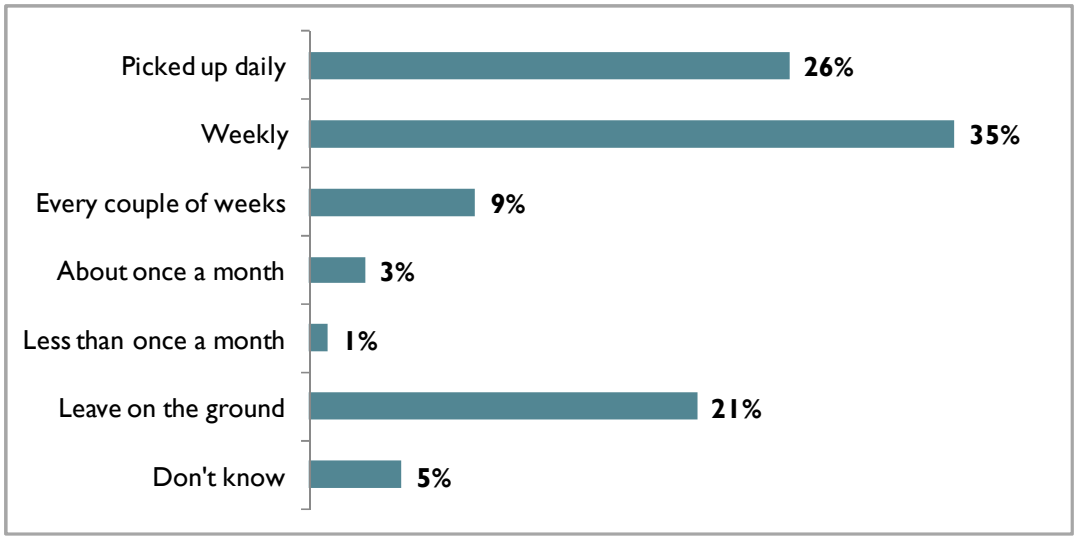
Dog Waste Pickup and Disposal Behaviors

The survey measures three behaviors: 1) waste pickup at home; 2) waste pickup during dog walks; and, 3) how dog waste is disposed.

Practices at Home

About 60% of dog owners pick up waste at their home either daily (26%) or weekly (35%), while 21% always leave it on the ground. Another 13% pick up the waste, but less frequently.

What is typically done with the dog waste in your yard? Base = 457



Respondents who were more likely to pick up waste more frequently were:

- Respondents living on small lots (0.5 acre or less) were more likely to pick up dog waste weekly.
- Those in the lowest income bracket (<$25,000) were more likely to pick up waste daily.

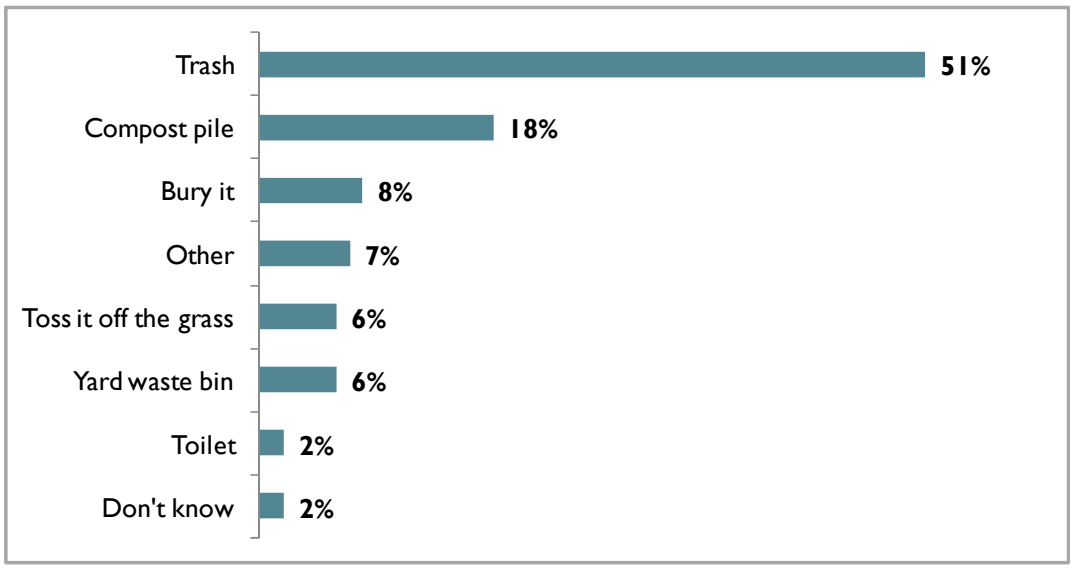
Those who always left the waste on the ground were more likely to:

- Live on lots of 2 acres or more.
- Residents of Bainbridge Island and unincorporated Kitsap County had the highest proportion that always left waste on the ground, although it was only statistically significant higher than Poulsbo and Port Orchard respondents.

Half of the respondents dispose the dog waste in the trash according to the message in the KPCRC pet waste campaign. Respondents more likely to put the pet waste in the trash were:

- Those who live on small lots and pick waste either daily or weekly are also more likely to dispose of the waste in the trash.
- Residents of Bremerton and Bainbridge Island.

Once the waste is picked up, how do you typically dispose of it? Base = 360



Nearly 1 in 5 (18%) put the waste in a compost pile. Respondents living on lots of 0.5 acres or more were more likely to use this method.

Less than 1 in 10 (6%) said they toss the waste off the grass. Those respondents were more likely to live on large lots.

Practices while Dog Walking

Dog walking is more likely to be practiced by respondents under the age of 65. Half of the respondents pick up their dog waste every time while a third (34%) left it on the ground at least some of the time. Those more likely to pick up the dog waste every time were:

- Women.
- Live on lots 2 acres or less.
- Hold a graduate or professional degree.

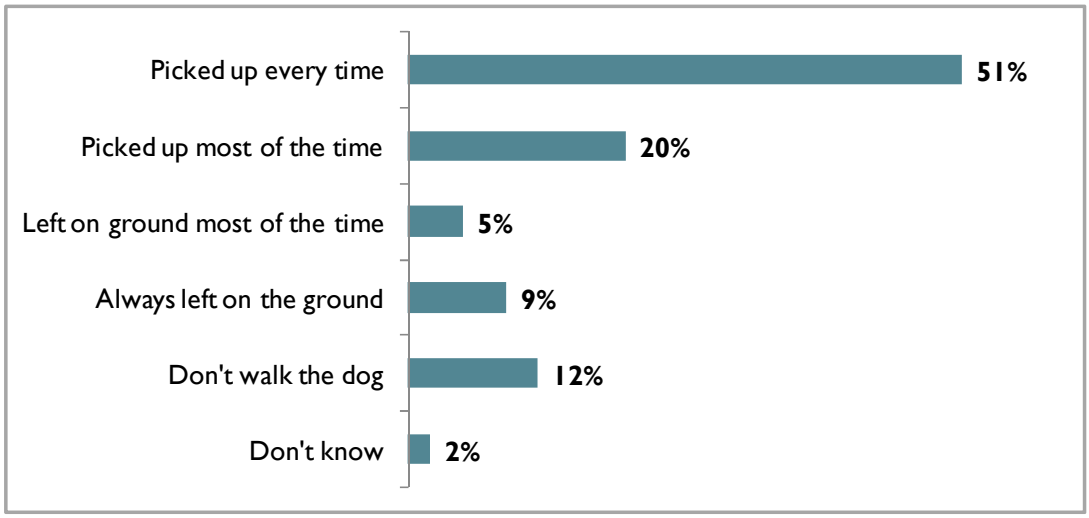
Those least likely to pick up dog waste all or most of the time were:

- Respondents in the $50-$75,000 household income bracket.

About 1 in 10 (12%) said they never pick up the waste when out walking their dog. Respondents who were more likely to always leave waste on the ground were:

- Men.
- Live on lots of 2 acres or more.

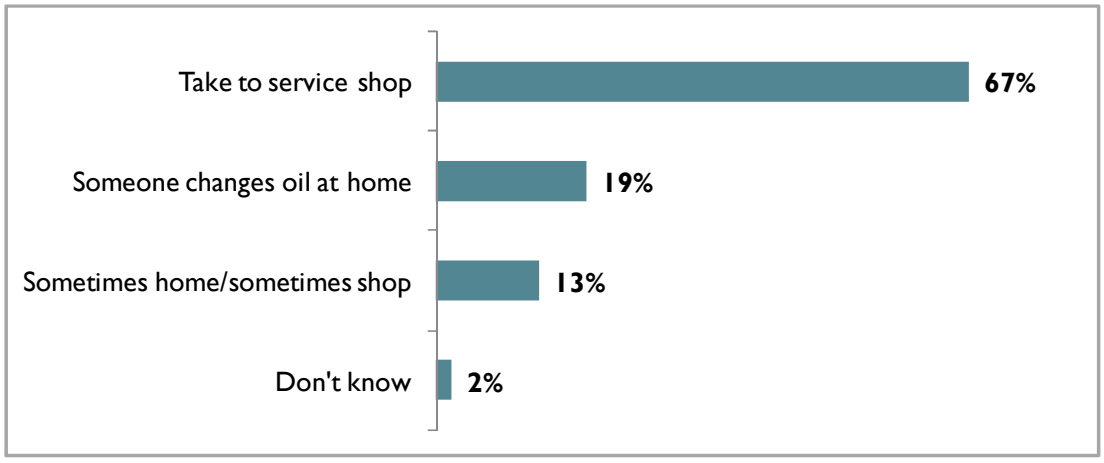
When your dog is out for a walk, how is the waste dealt with? Base = 457



Vehicle Maintenance

Two in 3 (67%) respondents take their vehicles to a service shop to change oil and other fluids rather than do-it-yourself (DIY) at home. About 1 in 3 (32%) change oil at home either some or all of the time.

When it comes to changing the motor oil, anti-freeze and other fluids in your vehicles, do you or someone in your household typically do it yourself at home, or are the vehicles taken to a service shop? Base = 802



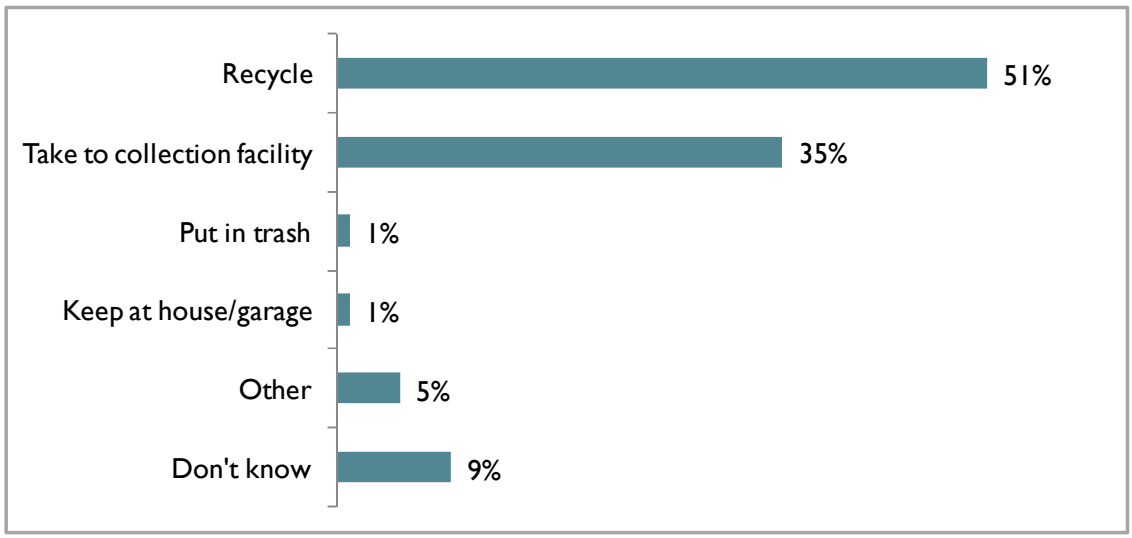
Respondents who are more likely to DIY oil change at home were:

- Men.
- Live in Poulsbo or unincorporated Kitsap County.
- Have less than a college education.

The vast majority (86%) said they either recycle (51%) used oil and other automotive fluids, or take them to the collection facility (35%).

- Bainbridge Island respondents were more likely to recycle.
- Port Orchard respondents were more likely to take used oil and other fluids to a collection facility.

When the oil (and other fluids) is changed at home, what is typically done with the used fluids? Base = 215



More than a third (37%) of the respondents said they regularly check for leaks under the vehicle, while about the same proportion (39%) do not check for leaks but think they will notice if there is a leak. About 1 in 20 (6%) said they do not check for leaks.

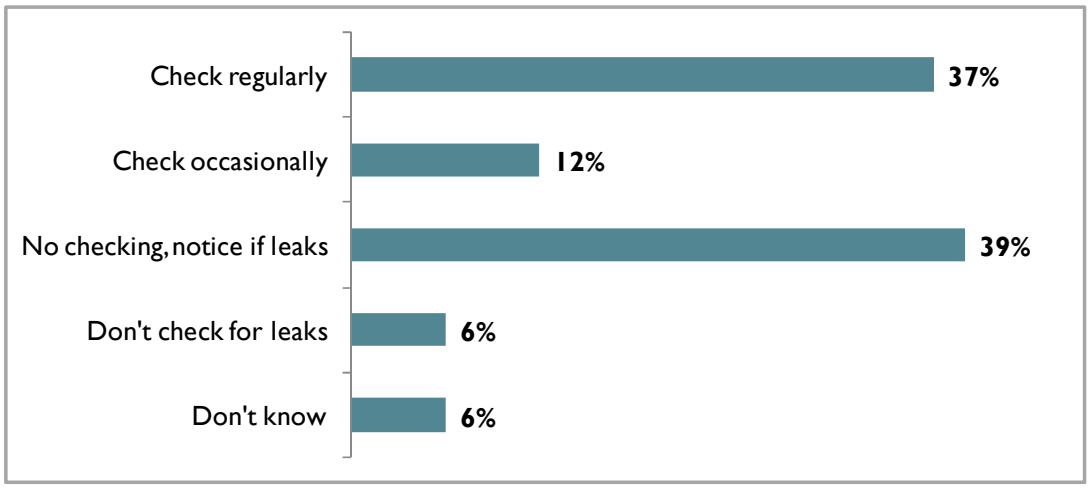
Respondents who check regularly are more likely to:

- Change their motor oil at home.
- Men.

Respondents who do not check for leaks but will notice if there is one are more likely to:

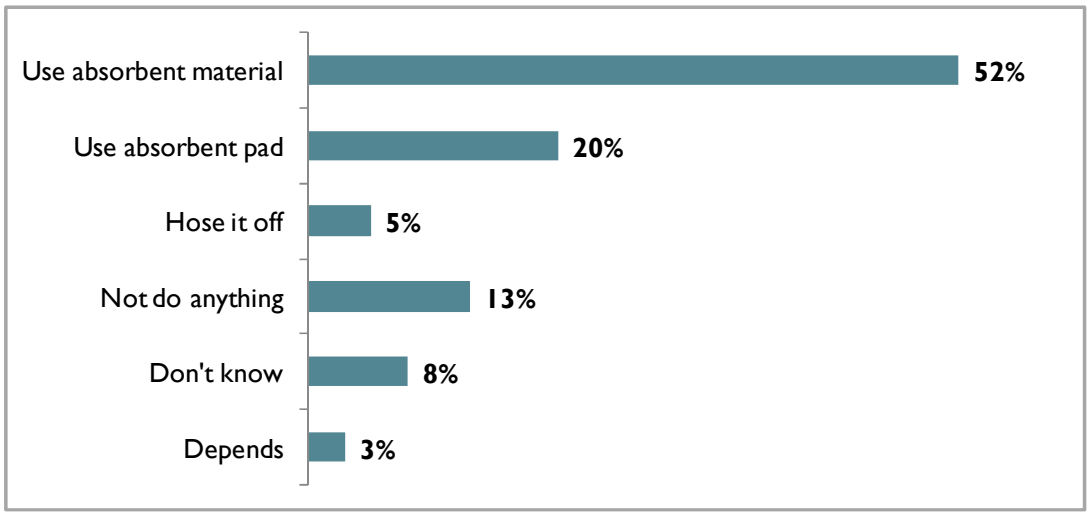
- Have an annual household income of $75,000+.
- Live in a single family house.

When it comes to leaks under your vehicle, which of the following best describes you or someone in your household? Base = 802



About 3 in 4 (72%) mentioned using either absorbent material or an absorbent pad to clean up leaks or spilled auto fluids. One in 5 said they would either hose it off (5%) or do nothing (13%).

If your vehicle leaked or spilled oil or antifreeze onto the pavement, which of the following would you be most likely to do? Base = 802



Respondents who reported using an absorbent material or pad on the spill were more likely to be:

- Homeowners.
- Live in a single family or duplex dwelling. Apartment dwellers were more likely to do nothing.

Respondents who reported hosing off the spill were more likely to be:

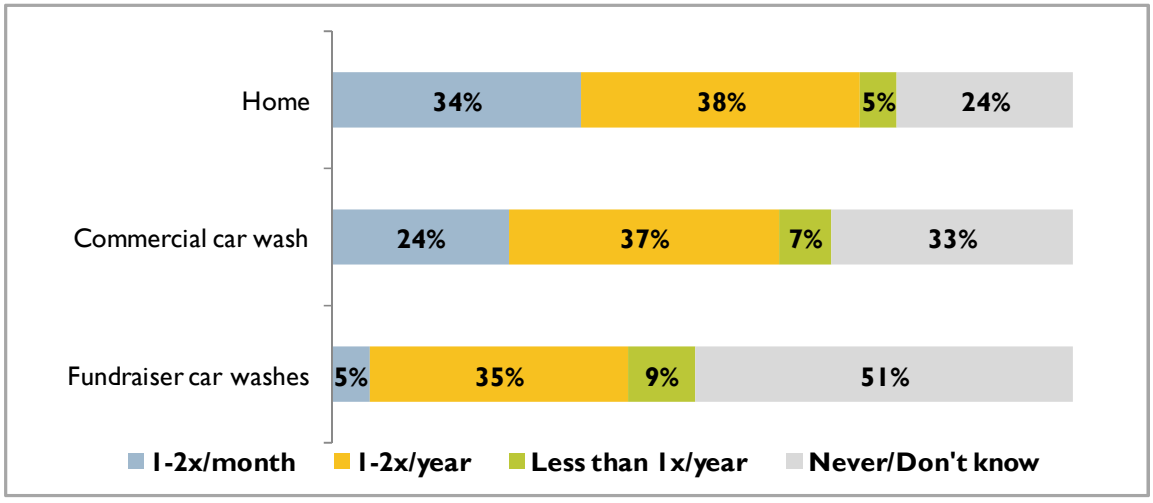
- Residents of Bainbridge Island and Gig Harbor had the highest proportion of respondents hosing off the spill, although it was only statistically significant higher than Bremerton, Poulsbo, and unincorporated Kitsap County respondents.

Car Washing

Vehicle Car Washing at Home

Three in 4 (76%) respondents washed their vehicles at home, compared to 2 in 3 (67%) at commercial car washes and half (49%) at fundraiser car washes. The vast majority washed their cars in more than one way. Less than 1 in 5 (17%) washed their car exclusively at home, 8% washed their car exclusively at commercial car washes, and 2% exclusively at fundraiser car washes.

Where do you wash your vehicles? And how often? Base = 802



The reported frequency was highest at home with 34% washing their cars at home at least once a month. A slightly higher proportion (38%) washes their cars only 1-2 times a year.

Respondents who are more likely to wash their cars at home are:

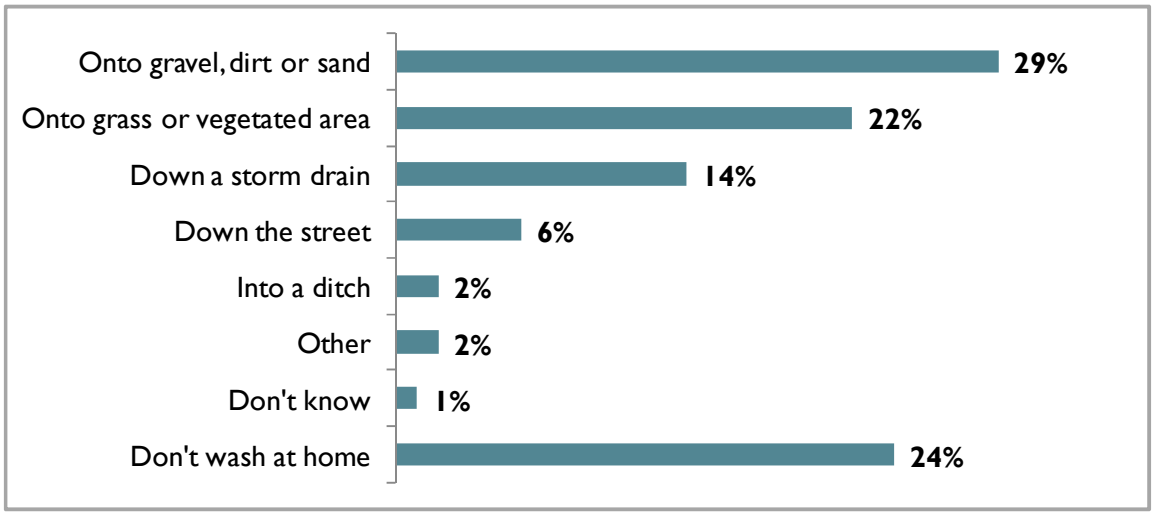
- Respondents 18-35 years of age were more likely to wash their cars at home and reported more frequent (at least once a month) car washing.
- Respondents who take care of the yard themselves.
- Couples reported washing cars at home more than single households.

About half (51%) of all respondents said the wash water goes onto a grass, gravel, dirt or sand. One in 5 (22%) said the wash water goes down a storm drain, down the street, or into the ditch where it may enter the storm drain system.

Respondents who were more likely to wash cars with the wash water draining to grass, gravel, dirt or sand were more likely to be:

- Men.
- Homeowners.
- Couples with children.
- Live on a lot 0.5 acres or larger.

When you wash your vehicles at home, where does the wash water go? Base = 802



Commercial Car Washes

Two in 3 (67%) used commercial car washes. The reported frequency of using commercial or coin-operated car washes was less, with 24% washing their cars at least once a month. Similar to the DIY home car washers, the majority of respondents also combined commercial car washing with home or fundraiser washing.

Statistically significant differences in using commercial car washes were:

- More likely to also wash their car at fundraiser car washes than wash at home.
- Those with a graduate/professional degree were more likely to use commercial car washes.
- The commercial car washing years are more likely to be 36-50 and 65+.
- Gig Harbor respondents were more likely to use a commercial car wash.

- Respondents who change their own oil were **not** likely to use a commercial car wash.

Fundraiser Car Washes

About half of the respondents reported using fundraiser car washes, with the most common frequency of 1 to 2 times a year. Only 1 in 20 (5%) take their car to a fundraiser car wash once a month or more.

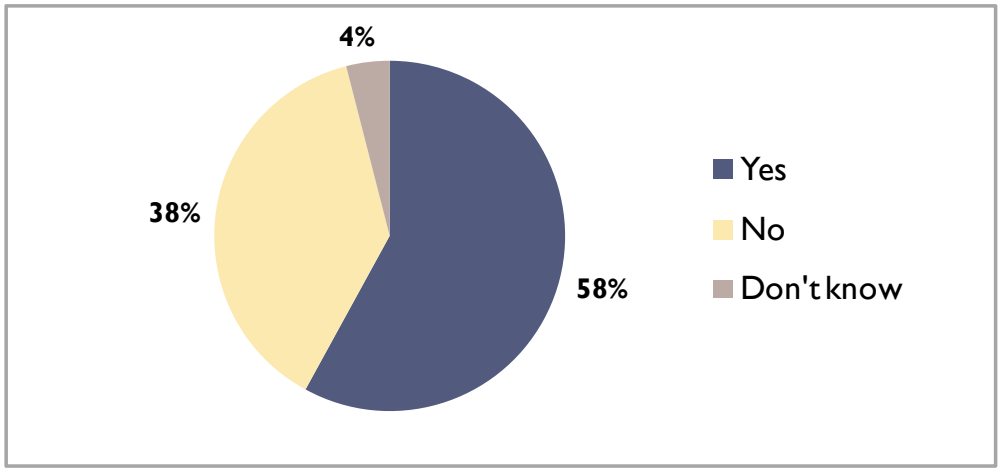
The majority of respondents who use fundraiser car washes do not wash their cars at home (76%) or at commercial car washes (60%).

Users of fundraiser car washes were more likely to:

- Live on Bainbridge Island.
- Live on mid-sized lots of 0.5 to 2 acres.
- Be men.
- Go to fundraiser car washes 2 times a year or less.
- Think that soapy water from washing cars at home contributes to pollution.

More than half (58%) of the respondents were aware that the wash water from fundraiser car washes does not always go into the sewer system to get treated.

You may be familiar with fundraiser carwashes that are held to raise money for school clubs, charities and other events. Were you aware that at some locations where they are held the dirty, soapy water goes into the storm drain and flows to local water bodies? Base = 802

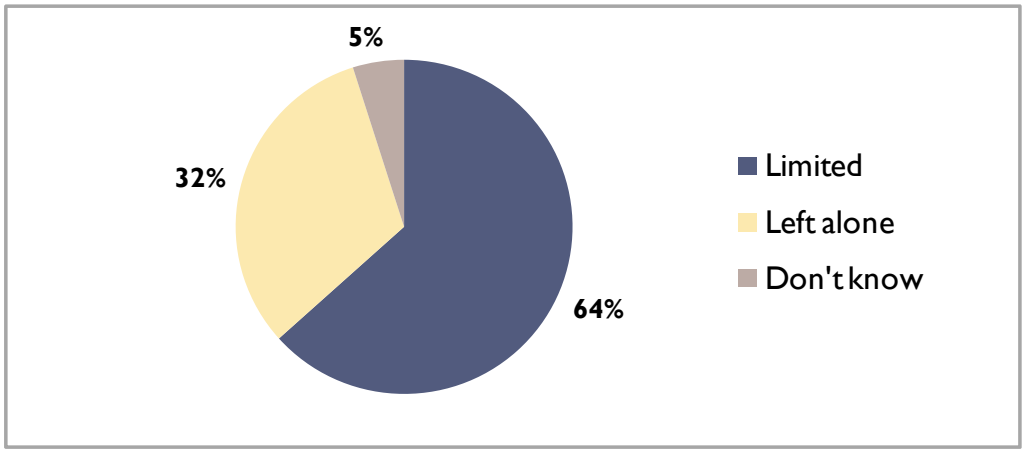


Respondents who were more aware of the fate of wash water at fundraiser car washes were also more likely to be:

- Ages 35+.
- Men.
- Homeowners.
- Respondents who were more aware that stormwater drains to water bodies untreated.

Nearly 2 in 3 (64%) thought that fundraiser car washes should be limited to areas where the sewer system can treat the wash water.

Do you think that the fundraiser car washes should be limited to places that have proper plumbing so the wastewater is treated, or do you think that they should be left alone? Base = 802



Respondents who thought fundraiser car washes should be limited were more likely to be:

- Women.
- Aware of the “Puget Sound Starts Here” tagline.

Respondents who thought fundraiser car washes should **not** be limited were more likely to be:

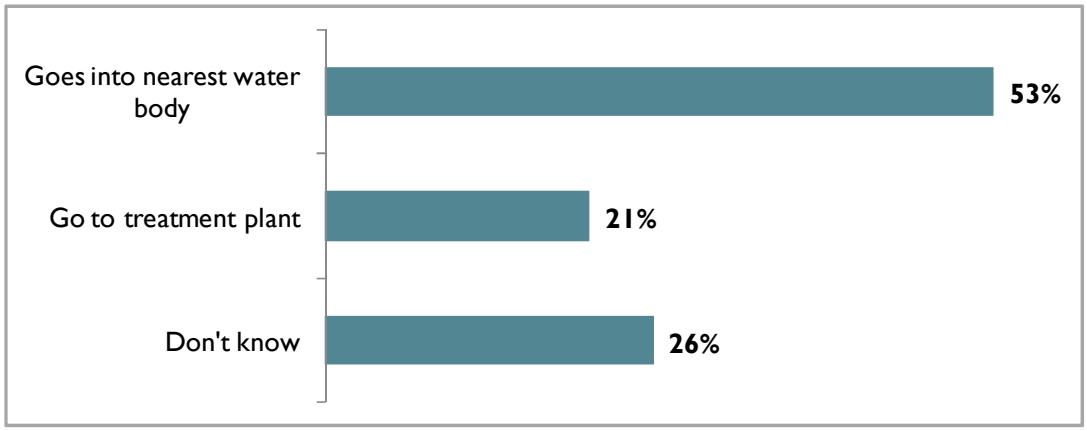
- Younger, ages 18-35.
- Men.

Attitudes and Awareness of Educational Outreach

Basic Awareness about the Fate of Stormwater Runoff

About half of the respondents knew that surface runoff flows to water bodies untreated. One in 5 thought that surface runoff goes through a treatment plant, while 1 in 4 did not know.

Water that runs off of streets, parking lots, roofs, and other hard surfaces drains into the storm drain system of ditches and pipes. To the best of your knowledge, what happens to that water that goes into storm drains? Base = 802



Respondents who were aware that stormwater drains to water bodies untreated were more likely to:

- Be male.
- Have a household income bracket of $75,000+ and hold a graduate/professional degree.
- Live on a large lot of 2 acres or more.
- Live on Bainbridge Island.
- Not always practice what they believe to be the best yard care practices. They:
  - Compost yard waste and clippings but they also burn them.
  - Think that pesticides and fertilizers from yards are a “significant contribution” to water pollution.
  - Use Round Up as well as an organic fertilizer.
  - Marginally use more chemical fertilizer.
- Leave pet waste on the ground while walking the dog.
- Have a higher awareness about stormwater messaging.
- Have seen or heard about ways that people can help prevent water pollution.
- Be aware of brochures or direct mail about stormwater runoff and to have heard about proper waste disposal.
- Be aware that at some fundraiser car washes, the soapy water goes into storm drains.

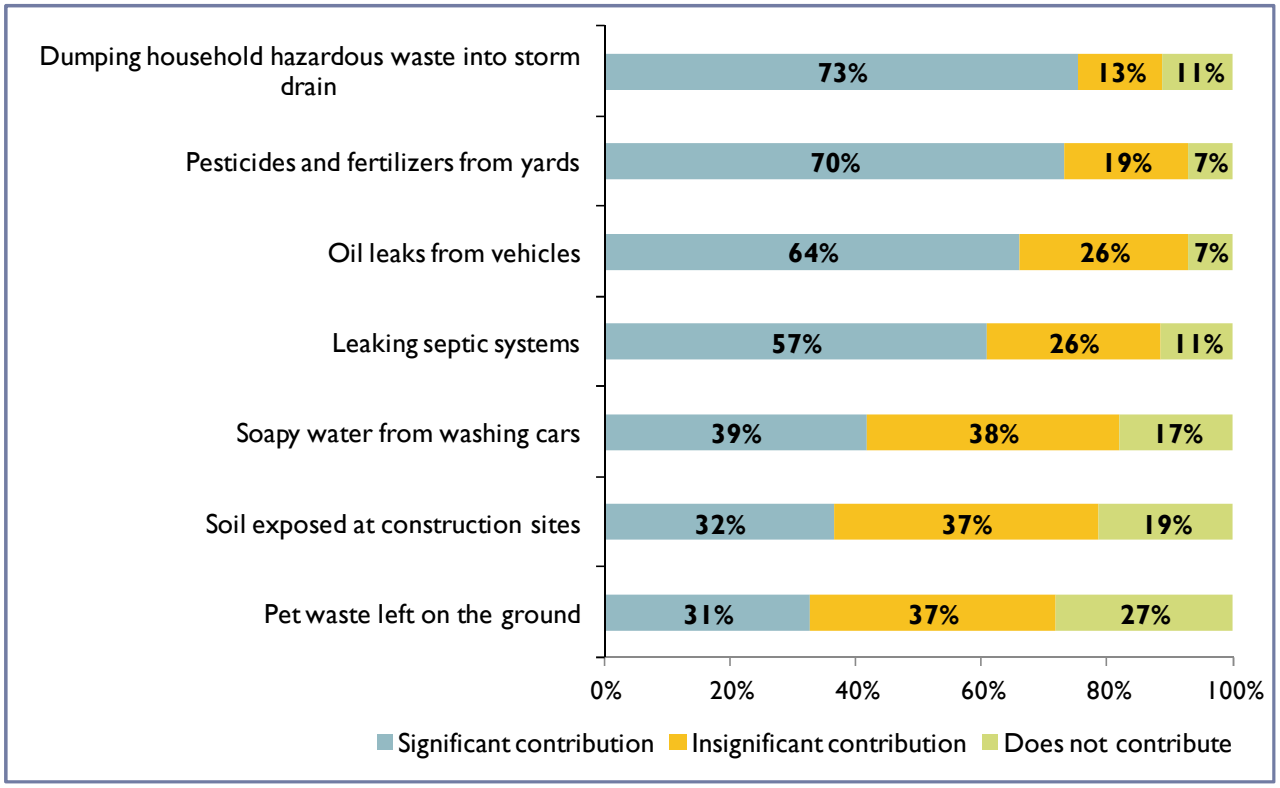
What Activities Contribute Most to Water Pollution

More than half of the respondents thought that certain activities contribute significantly to water pollution. In order, they are:

- Household hazardous waste being dumped into storm drains.
- Pesticides and fertilizers from yards.
- Oil leaks from vehicles.
- Leaking septic systems.

Only about 10% thought that these activities "did not contribute" at all to water pollution.

Tell me whether you believe that these things from all residents in the region are a "significant contribution" to pollution in the local waterways, "may contribute an insignificant amount of pollution", or "does not contribute" to pollution. Base = 802



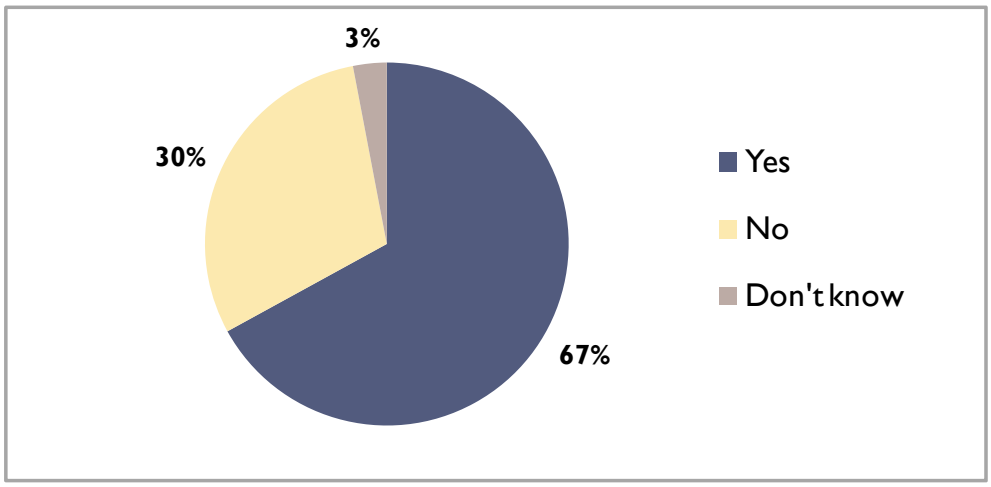
Even the less convincing activities still received concern about the effects on water pollution. About a third of the respondents thought that exposed soil at construction sites, and pet waste left on the ground pose a "significant contribution" to water pollution. Leaving pet waste on the ground was considered the least threat to water quality. Nearly a third thought pet waste did not contribute at all. Respondents who thought pet waste does not contribute to pollution were more likely to live on mid to large size lots in unincorporated Kitsap County.

Women consistently were more likely than men to think all 7 activities posed a "significant contribution" to water pollution. Households with children were more likely than childless households to be concerned about the effects of pet waste left on the ground. Respondents living on large lots were more likely to think that septic system maintenance is effective in protecting water quality.

Awareness of Messages about Stormwater

In the last year, 2 in 3 (67%) have seen or heard messages about ways residents can help prevent water pollution.

In the last year or so, have you seen or heard anything about ways that people can help prevent water pollution? Base = 802

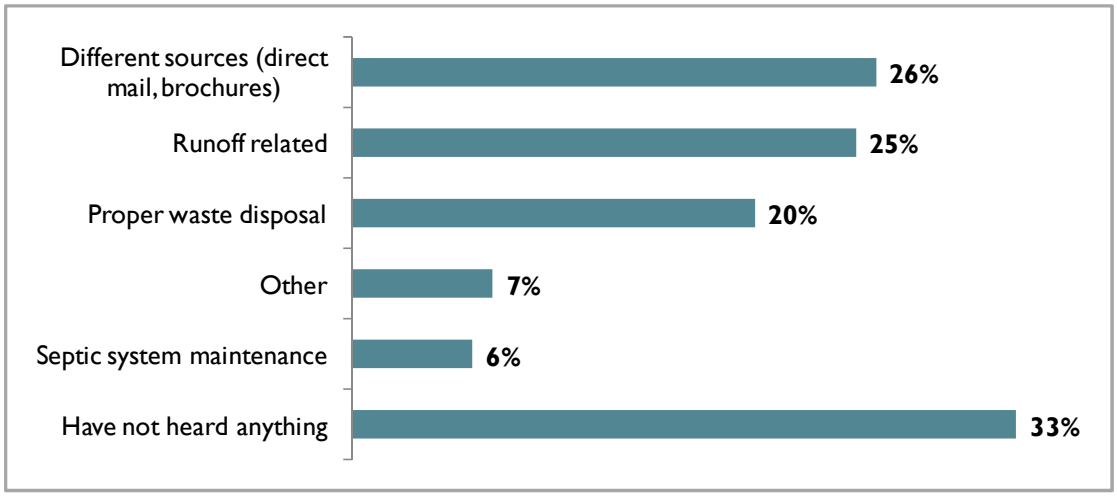


About 1 in 4 (26%) have received messages through a variety of sources, including TV, newspapers, online content, direct mail and brochures.

The most commonly heard or read messages have been related to runoff (25%) and proper waste disposal (20%). Specific examples of messages in these two categories are:

- Don't dump in storm drains.
- Cleanup spill and leaks.
- Proper car washing.
- Proper dog waste disposal.
- Proper household hazardous waste disposal.

What have you seen or heard? Base = 802



Respondents who have been aware of messages about stormwater and water pollution were more likely to be:

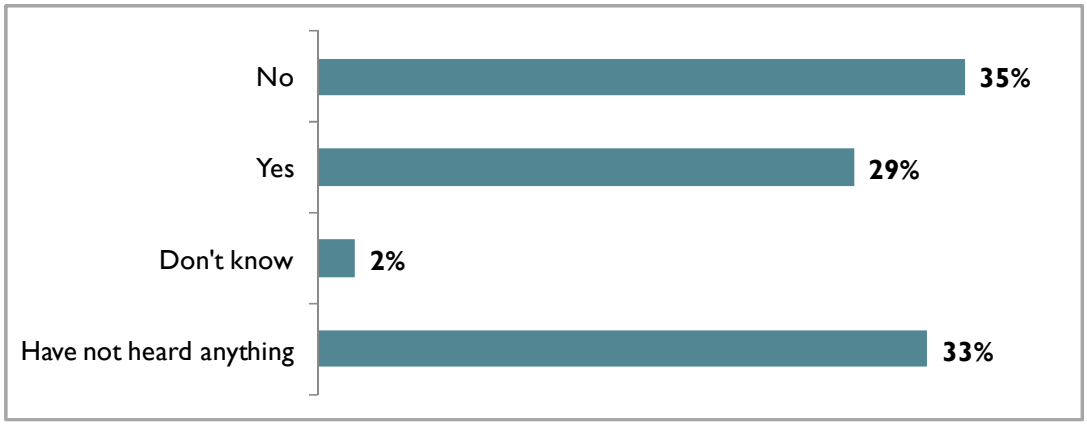
- Home owners with annual household incomes of $50,000+.
- Over the age of 35.
- Have a graduate or professional degree.
- Know that stormwater is not treated before entering water bodies.
- Residents of Bainbridge Island were more likely to have heard about runoff related messages.

Puget Sound Starts Here

The Puget Sound Starts Here (PSSH) campaign was launched in the Fall of 2009 with 15 and 30-second promotional TV spots. The messages were to inform residents about car washing, yard care, and pet waste practices that minimize polluted runoff. The campaign ran again in the Spring of 2010 and Spring of 2011 and was expanded to include radio, social media, and adoption of the PSSH brand by jurisdictions in the Puget Sound region.

The bar graph illustrates that 29% of the respondents have seen or heard the phrase “Puget Sound Starts Here”.

Have you ever seen or heard the phrase “Puget Sound Starts Here”? Base = 802



Cross-tabulations and significance testing show no significant differences in yard, pet waste, or vehicle maintenance practices between respondents who were aware of the PSSH message and those who were unaware. There was also no difference between the two subgroups in knowing that stormwater drains to water bodies and is not first treated.

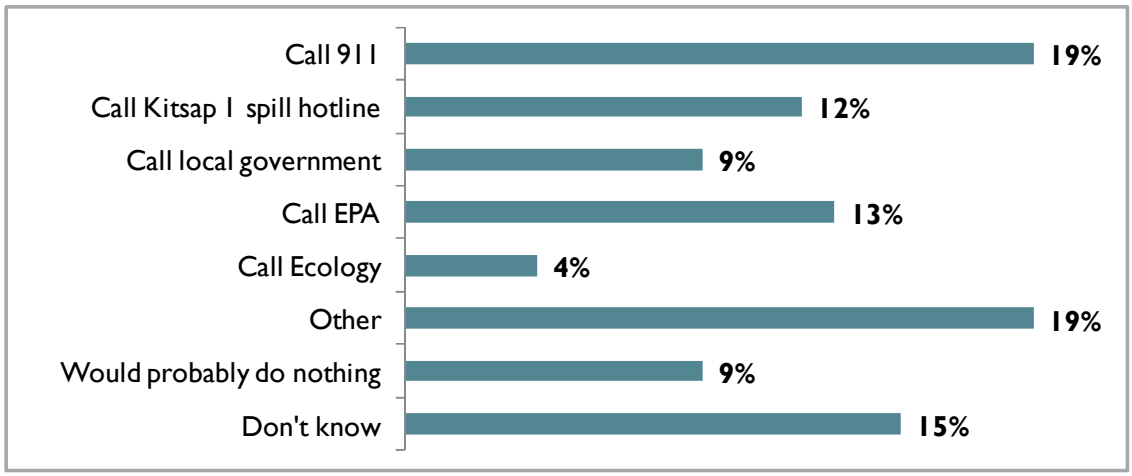
Respondents who were aware of the PSSH campaign were more likely to have the following opinions and characteristics:

- Think that dumping household hazardous materials in the storm drain significantly contributes to water pollution.
- Marginally more likely to think oil leaks from vehicles contributes significantly to water pollution.
- Think that disposing of pet waste in the trash, regular septic system maintenance, and fixing vehicle leaks are “very effective” at protecting water quality.
- Say that fundraiser car washes should be limited to places that have proper plumbing so that the wastewater is treated.

Reporting Spills and Suspicious Substances in Local Waters

The preferred reporting protocol for a spill is either the Kitsap 1 Spill Hotline, city hall or 911. About 2 in 5 respondents said they would call 911 (19%), the Spill Hotline (12%), or local government (9%). The EPA was also mentioned as an agency to contact by 13% of the respondents. About 1 in 4 (24%) would either do nothing or not know who to contact in the event of a spill or suspicious substance.

If you saw what looked like a spill of suspicious substance in a local water body, what would you do about it, if anything? Base = 802



Are the Messages Effective

Respondents were asked about 8 different residential activities and whether they thought these practices made a difference in protecting water quality. More than half of the respondents thought that 6 practices were "very effective" in protecting water quality. The top 3 were regular septic system maintenance, fixing vehicle leaks, and reporting water pollution to a hotline.

The least effective activities were washing cars on lawn or gravel and disposing pet waste in the garbage, reported as being "very effective" by about 1 in 3.

Who thought these practices are very effective

- Bainbridge Island and Gig Harbor respondents were more likely to think avoiding yard chemicals is a "very effective" measure to take to protect water quality.
- Respondents familiar with the phrase "Puget Sound Starts Here" for maintaining septic systems, proper pet waste disposal, and fixing vehicle leaks.
- Women for all 8 listed activities.
- Lower income (<$25, 000) for regular septic system maintenance.

Who thought these practices are somewhat effective

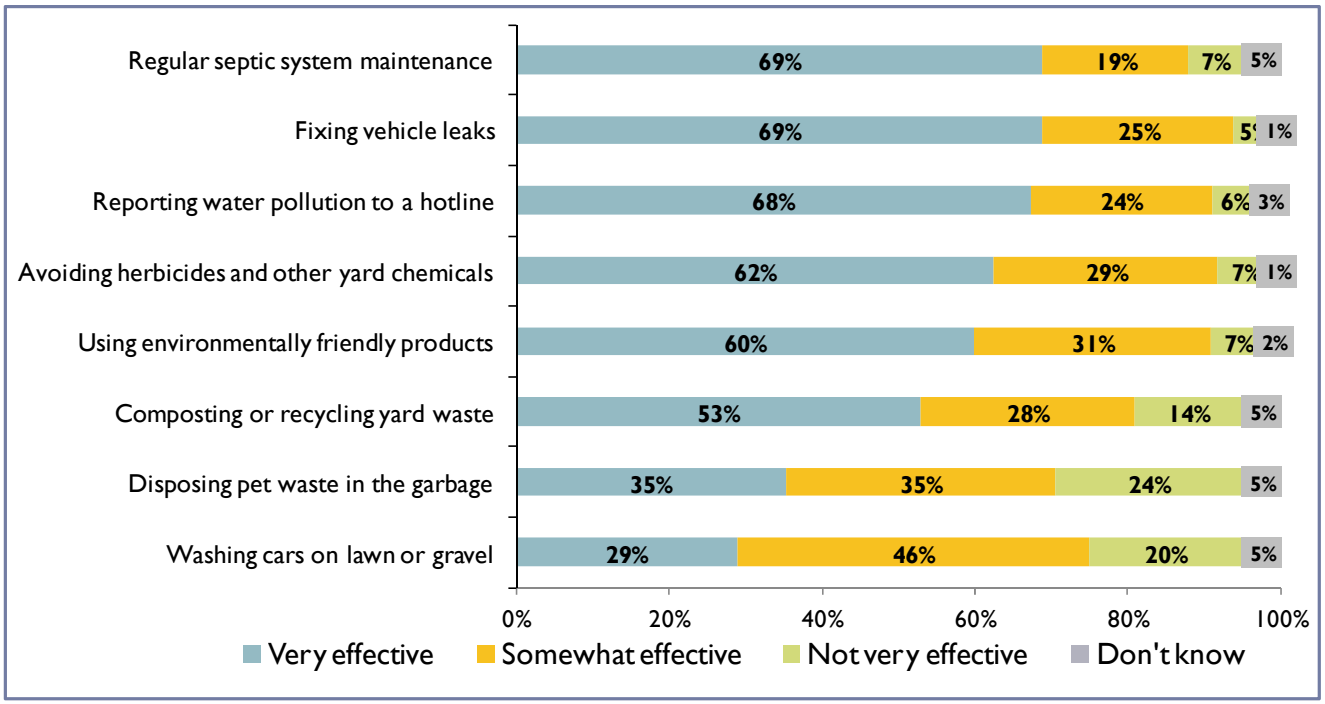
- Bainbridge Island respondents on disposing of pet waste in the garbage.
- Better educated respondents on proper home car washing, reporting water pollution to a hotline, and proper pet waste disposal.

- Men were more likely to rate all 8 activities as either “somewhat effective” or “not very effective”.

Who thought these practices are not very effective

- Respondents living on lots 0.5 acres or larger on disposing of pet waste in the garbage.

Tell me whether you personally think that these activities are Very Effective, Somewhat Effective, or Not Very Effective to protect water quality. Base = 802



4. Jurisdictional Comparisons

The charts in this section of the report show how each jurisdiction responded to the survey questions. In some cases where there were more than 5 possible responses, they were aggregated in accordance with the Environmental Behavior Index measurements.

In noting which jurisdictional results stood out from the study area, it is not necessarily a statistically significant difference. In many instances, the statistical significance was only between 1 or 2 jurisdictions and it was rare for a jurisdiction to have a response that was statistically significant from the other 5 other jurisdictions.

The jurisdictional comparisons are based on weighted results. Some care needs to be taken into account in interpreting the results for Gig Harbor, since they are based on a very small sample size of 36. While the respondents from Gig Harbor were "given more votes" to boost that proportion, that also means that the responses are more amplified than those from the other jurisdictions.

The margin of error for the jurisdictions is as follows:

Kitsap Peninsula	±3.5%
Kitsap Peninsula with yards	±3.7%
Kitsap Peninsula with dogs	±4.6%
Bainbridge Island	±9.3%
Bremerton	±9.6%
Gig Harbor	±16.3%
Port Orchard	±10.3%
Poulsbo	±10.2%

The table on the next page shows a profile of the demographic, economic, and social characteristics of the respondents from each of the jurisdictions. Percentages that are bolded indicate a statistical significant difference from at least three of the other jurisdictions.

Profile of Respondents by Jurisdiction

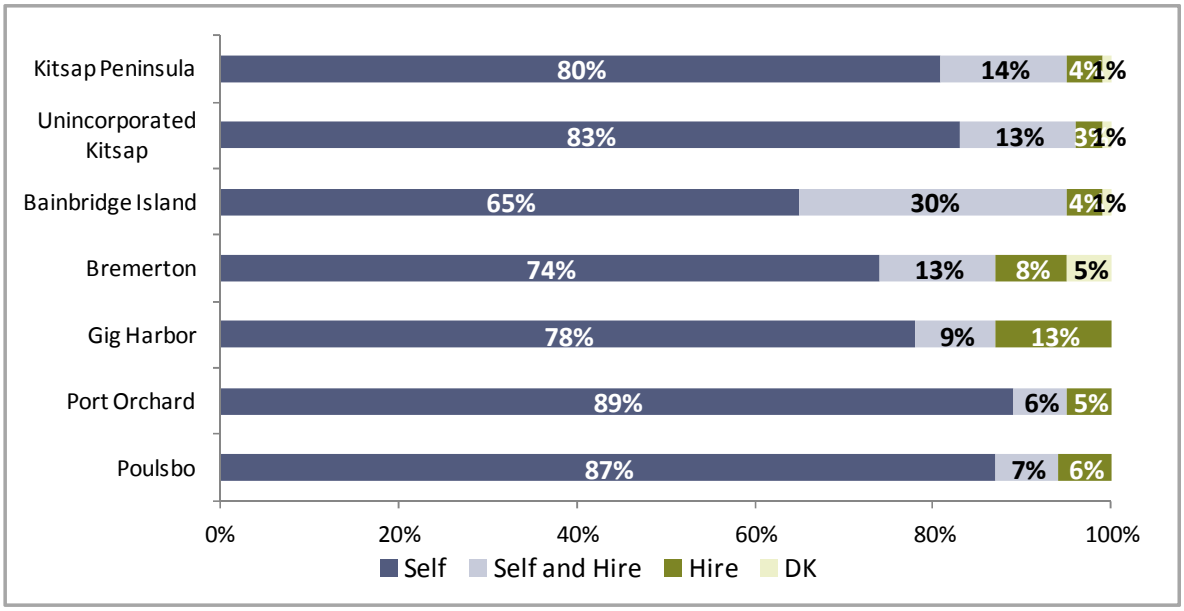
	Unincorp. Kitsap County	Bainbridge Island	Bremerton	Port Orchard	Poulsbo	Gig Harbor
Gender						
Male	45%	51%	39%	50%	39%	45%
Female	55%	49%	61%	50%	61%	55%
Age						
18-35	24%	**7%**	41%	**88%**	49%	21%
36-50	27%	34%	24%	**0%**	23%	22%
51-64	34%	35%	17%	**0%**	**0%**	17%
65+	15%	24%	19%	12%	28%	41%
Education						
High school	21%	4%	21%	**42%**	**55%**	21%
Business/vocational	4%	1%	1%	0%	0%	3%
Some college	20%	13%	**42%**	**40%**	17%	18%
College degree	34%	37%	26%	6%	21%	23%
Graduate/Professional school	22%	**45%**	10%	12%	7%	36%
Household						
Single w/ no children	14%	9%	21%	14%	14%	22%
Couple w/ no children	37%	34%	31%	31%	23%	32%
Single with children	7%	9%	13%	15%	2%	6%
Couple with children	41%	42%	34%	40%	**61%**	40%
Income						
No answer	9%	17%	11%	6%	19%	16%
<$25,000	6%	3%	13%	7%	17%	16%
$25-$50,000	22%	11%	28%	28%	21%	9%
$50-$75,000	24%	12%	32%	31%	6%	23%
$75,000+	38%	**56%**	15%	28%	37%	36%
Ownership						
Own home	81%	**90%**	64%	56%	76%	69%
Rent	19%	9%	**34%**	**40%**	17%	31%
Live with friends, relatives	1%	1%	2%	4%	7%	0%
Dwelling Type						
Single house on lot	88%	95%	75%	88%	95%	69%
Duplex/multi-plex on lot	4%	2%	**13%**	0%		3%
Apartment/condo	7%	3%	12%	12%	5%	**28%**
Lot Size						
Half acre or less	44%	43%	**77%**	61%	45%	**79%**
One-half acre to 2 acres	25%	37%	17%	22%	24%	17%
Larger than 2 acres	**29%**	18%	5%	12%	31%	0%
Have Yard						
Yes	90%	**97%**	85%	88%	94%	72%
No	10%	3%	15%	12%	6%	**28%**
Have a Dog						
Yes	57%	59%	47%	65%	**73%**	54%
No	43%	41%	53%	35%	27%	46%

Yard Care Practices

4 in 5 (80%) in the study area take care of the yard themselves without hiring outside help.

- Port Orchard had the highest proportion of respondents who took care of the yard without hired help.
- Bainbridge Island had the lowest proportion to maintain the yards themselves.
- Gig Harbor had the highest proportion of exclusively hired help.

Do you or someone in your household maintain the yard yourself? Or do you hire someone to take care of it? Or both?



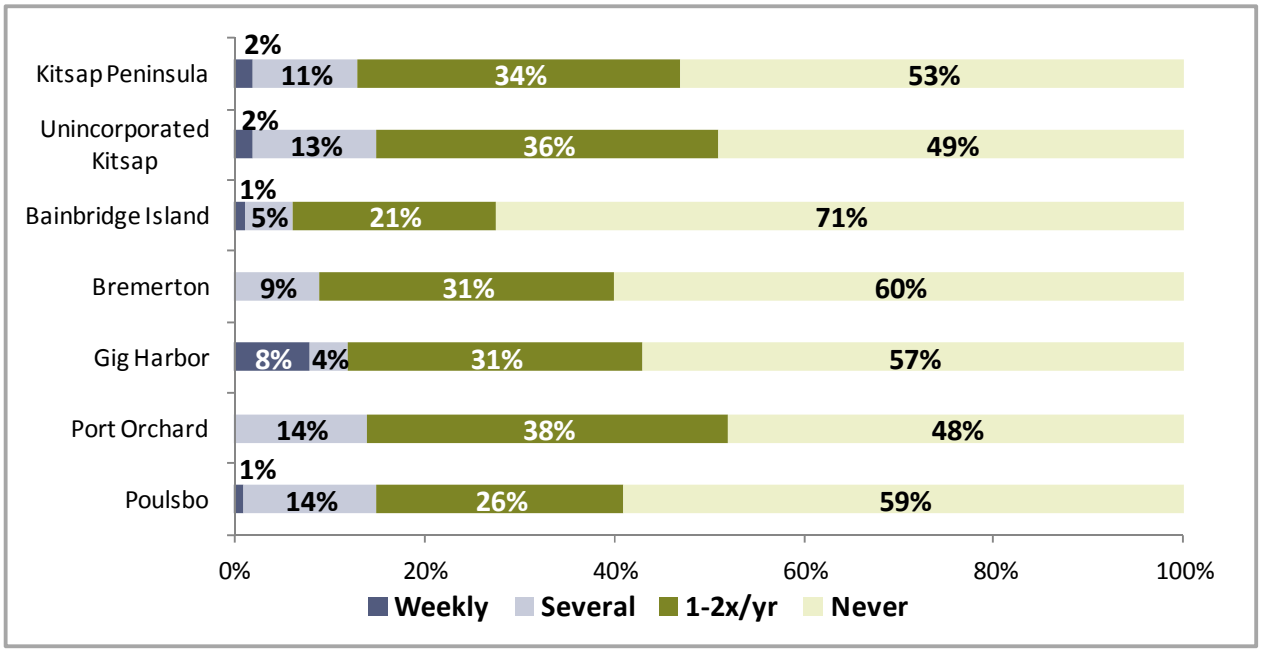
Use of Lawn and Garden Products

Question. For each of the products used in your yard, about how often are they used? About once a week during the growing season, several times during the growing season, a couple of times a year, or once a year.

Round-Up was used by nearly half of the study area respondents.

- Bainbridge Island respondents used Round-Up the least.
- Port Orchard and unincorporated Kitsap County respondents used this product the most.

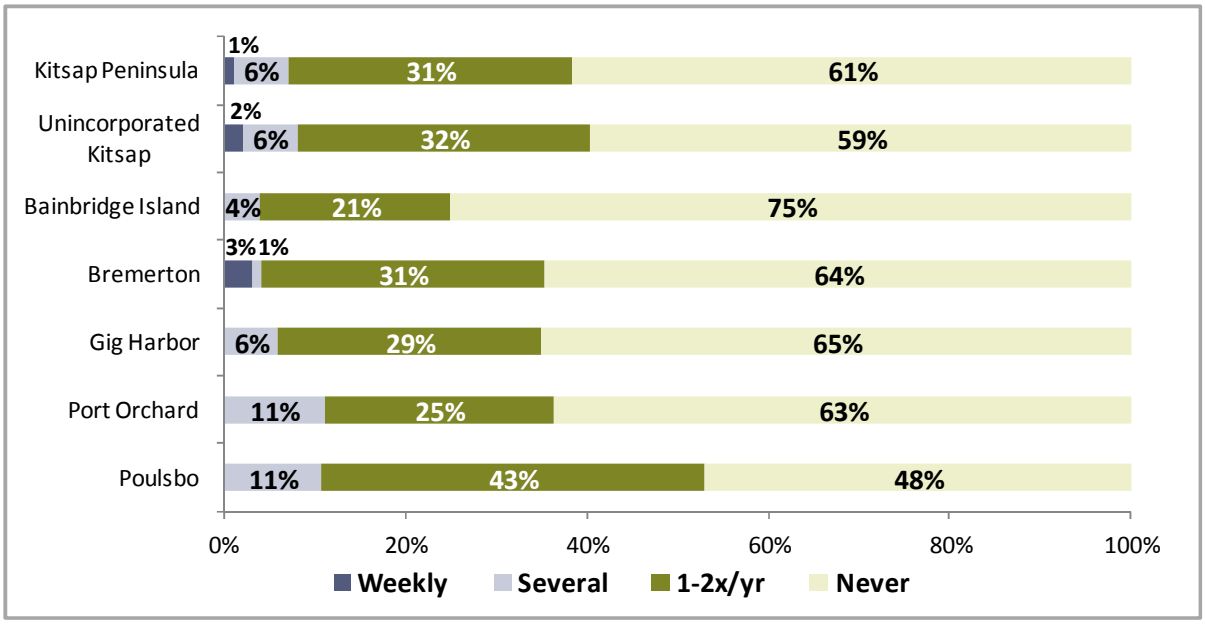
Round-Up Use



Weed and Feed was used by 2 in 5 study area respondents.

- Weed and Feed use was highest among Poulsbo respondents and lowest among Bainbridge Island respondents.

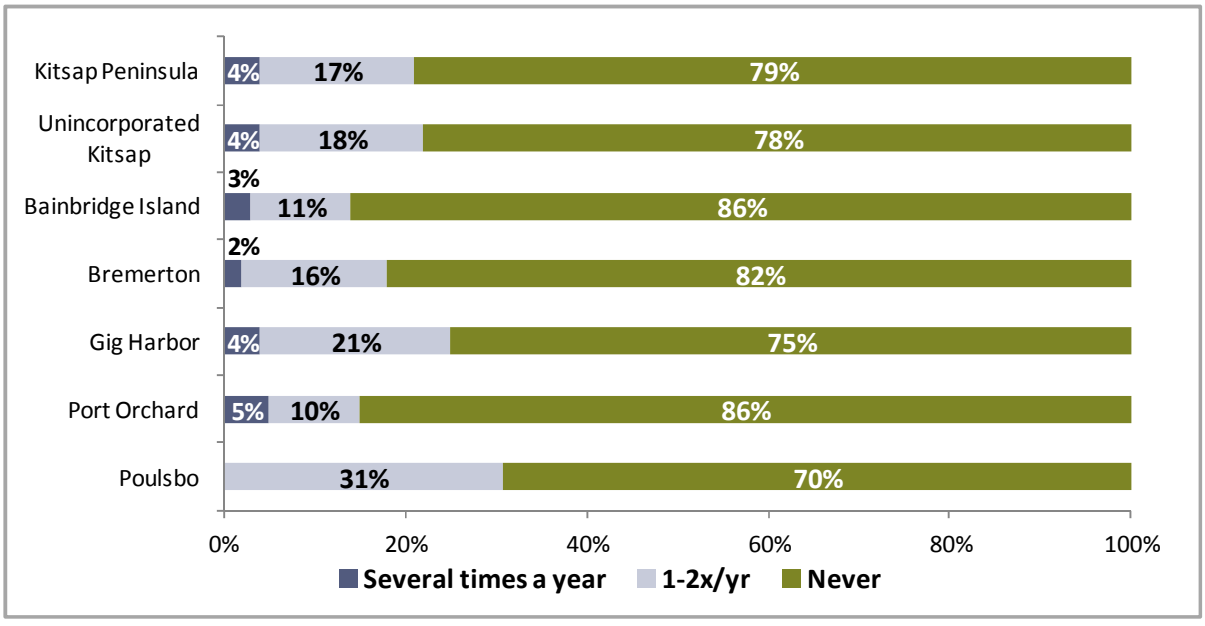
Weed and Feed Use



Chemical Fertilizer was used by 1in 5 of the study area respondents.

- Use of this product was highest in Poulsbo and lowest on Bainbridge Island and Port Orchard.

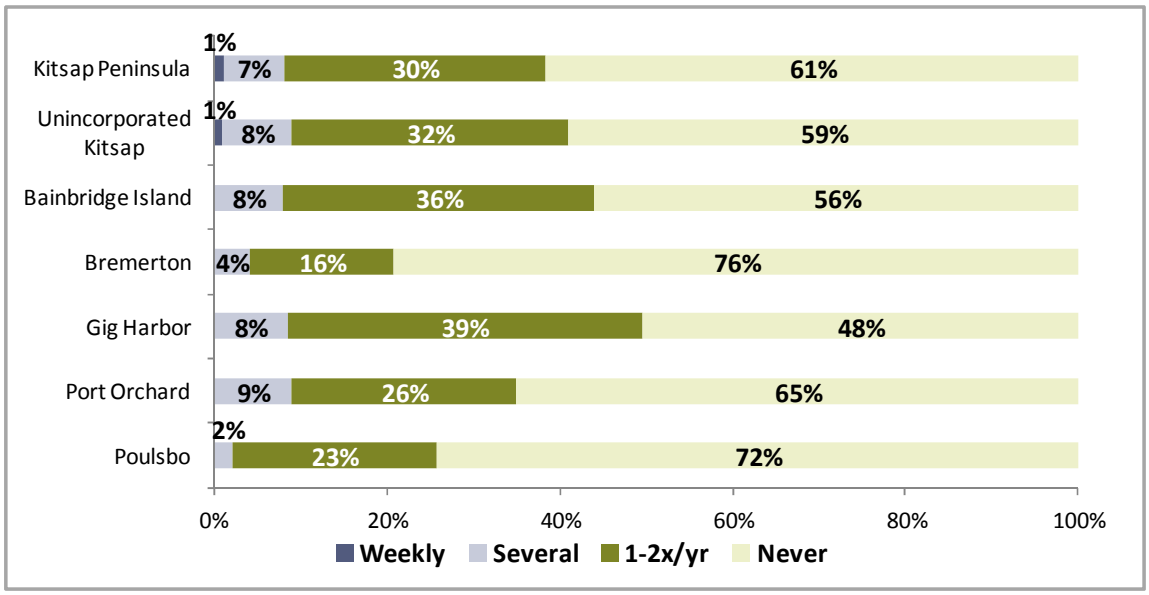
Chemical Fertilizer Use



Organic or Slow Release Fertilizer was used by 2 in 5 of study area respondents.

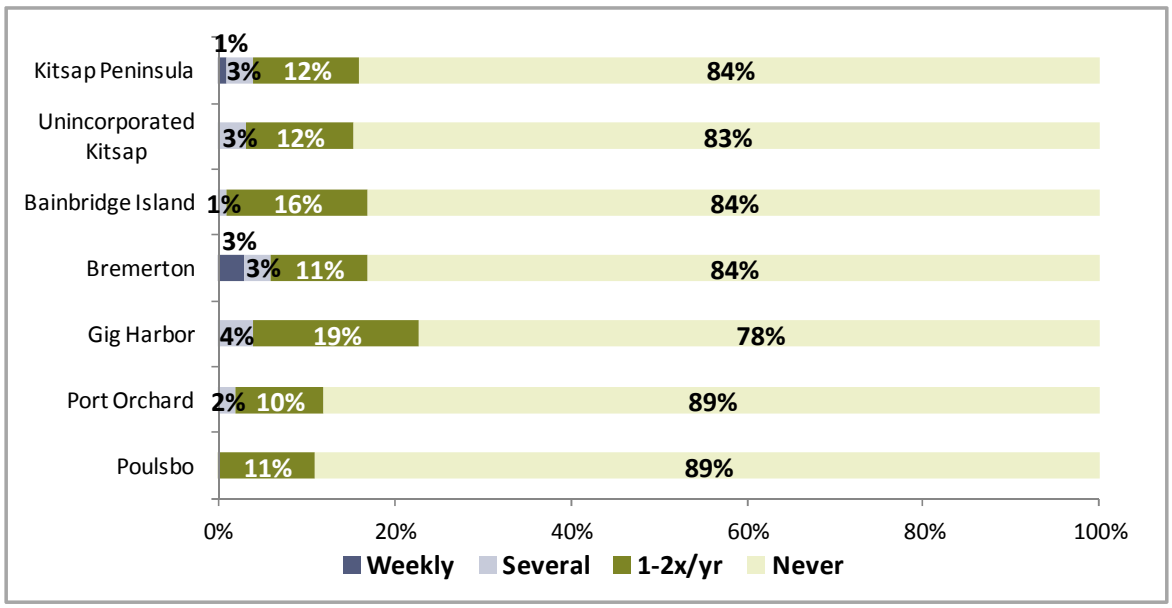
- Use of organic fertilizer was highest in Gig Harbor and Bainbridge Island and lowest in Bremerton.

Organic or Slow Release Fertilizer Use



Pesticides were used by only 16% of the study area respondents.

Pesticides

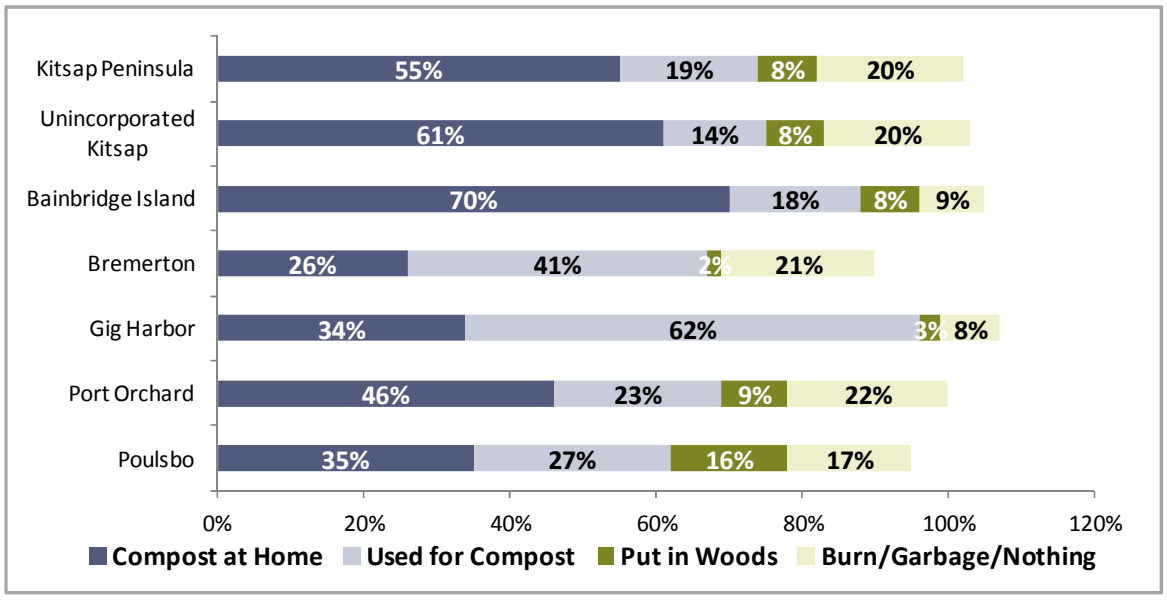


What Happens to Yard Waste

Yard waste was composted at home by more than half of the study area respondents.

- Home composting was highest on Bainbridge Island.
- Use of the yard waste curbside collection bin was highest in Gig Harbor.

What does your household typically do with yard waste, like leaves, small branches and lawn clippings? (Multiple responses allowed) Used for compost = collection bin, transfer station and landscaper hauling yard waste away)

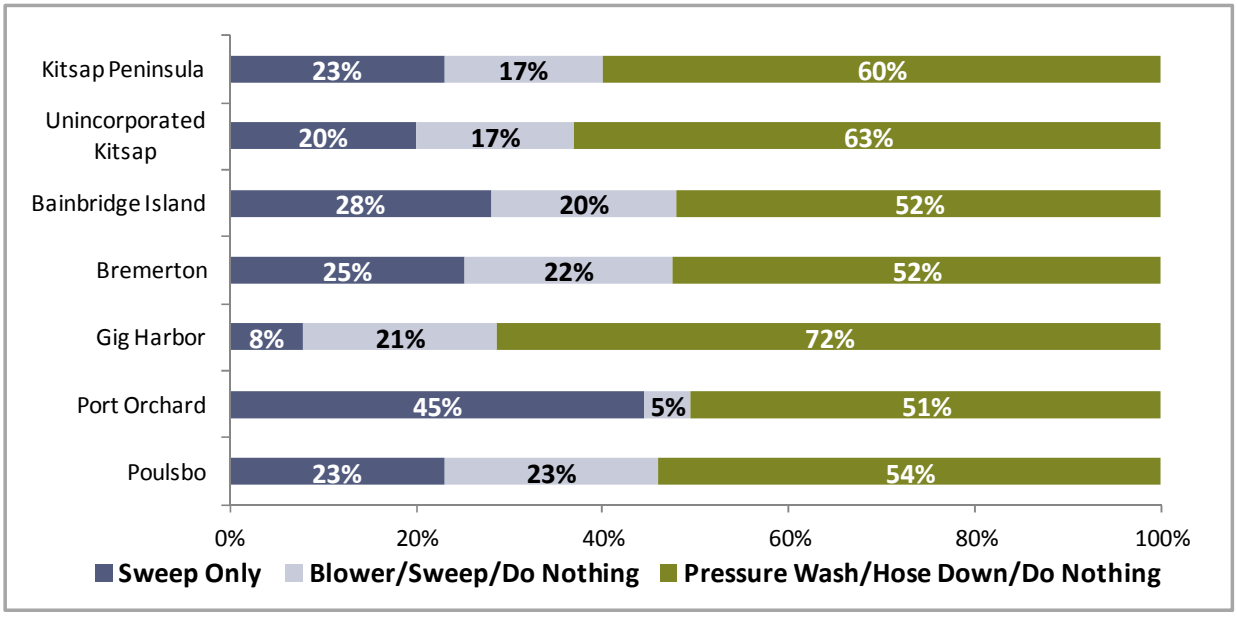


Cleaning Paved Areas

More than half of the respondents in the study area pressure wash or use a hose to clean driveways and other hard surfaces. Using water to clean paved areas was prevalent in all areas.

- Respondents in Port Orchard were more likely to sweep only.
- Gig Harbor had the highest proportion of respondents who used water to clean paved areas.

When you clean places like your driveway, walkways, patio or deck, do you typically…

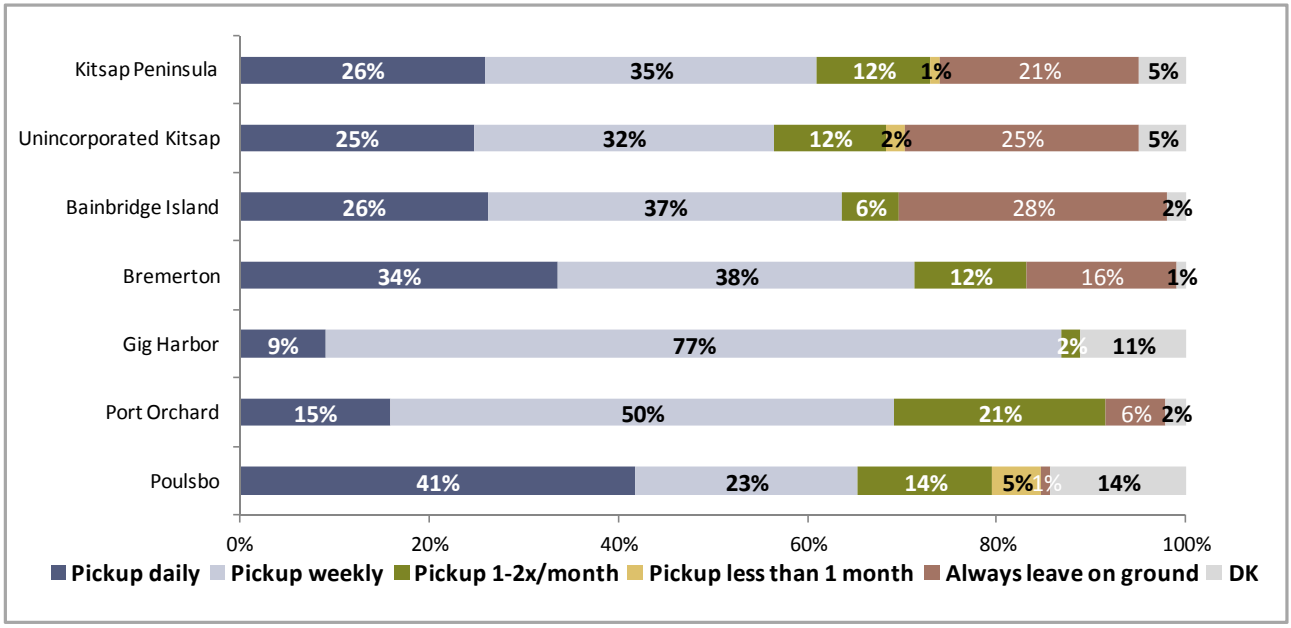


Pet Waste Disposal

1 in 4 picks up their dog waste in the yard daily in the study area. 1 in 5 always leaves it on the ground.

- Daily pickup of waste was reported by a higher proportion of respondents in Poulsbo and Bremerton.
- Gig Harbor had the highest proportion that picked up at least weekly.
- Bainbridge Island and unincorporated Kitsap County had the highest proportion that always left the dog waste on the ground.

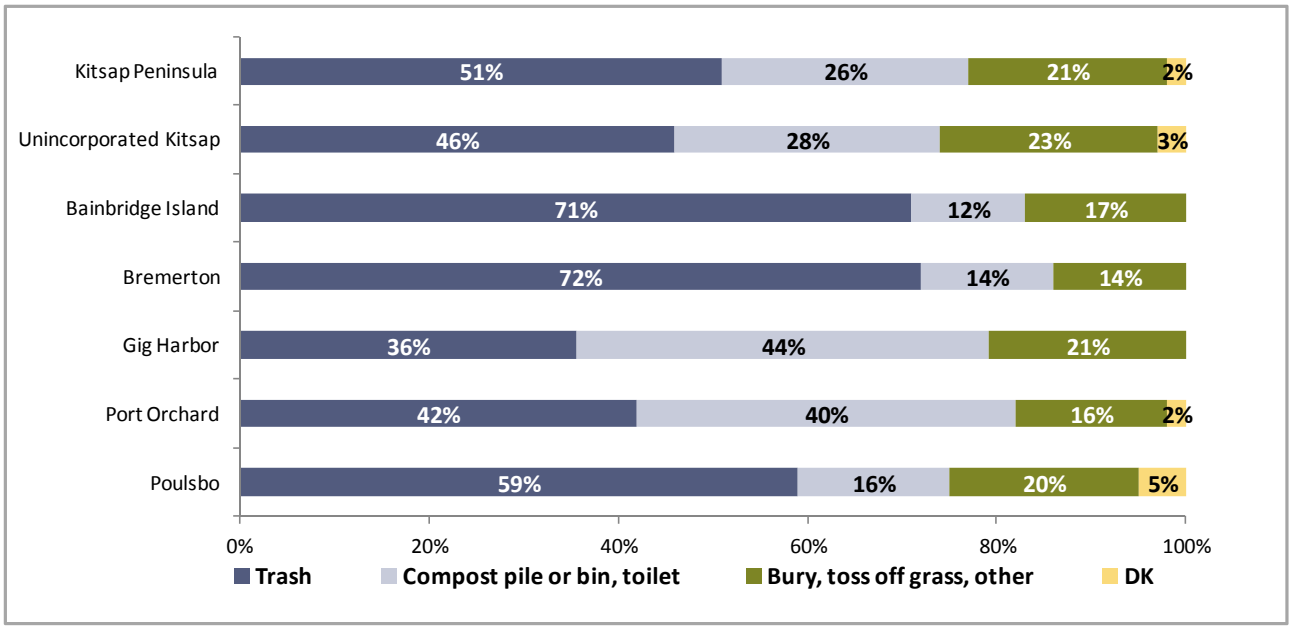
What is typically done with the dog waste in your yard?



Half of the study area respondents disposed of the dog waste properly – in the trash.

- Disposal in the trash was highest in Bremerton and Bainbridge Island with nearly 3 in 4 disposing of dog waste properly.
- Composting dog waste in a pile or putting it in the yard waste collection bin was highest in Gig Harbor and Port Orchard.

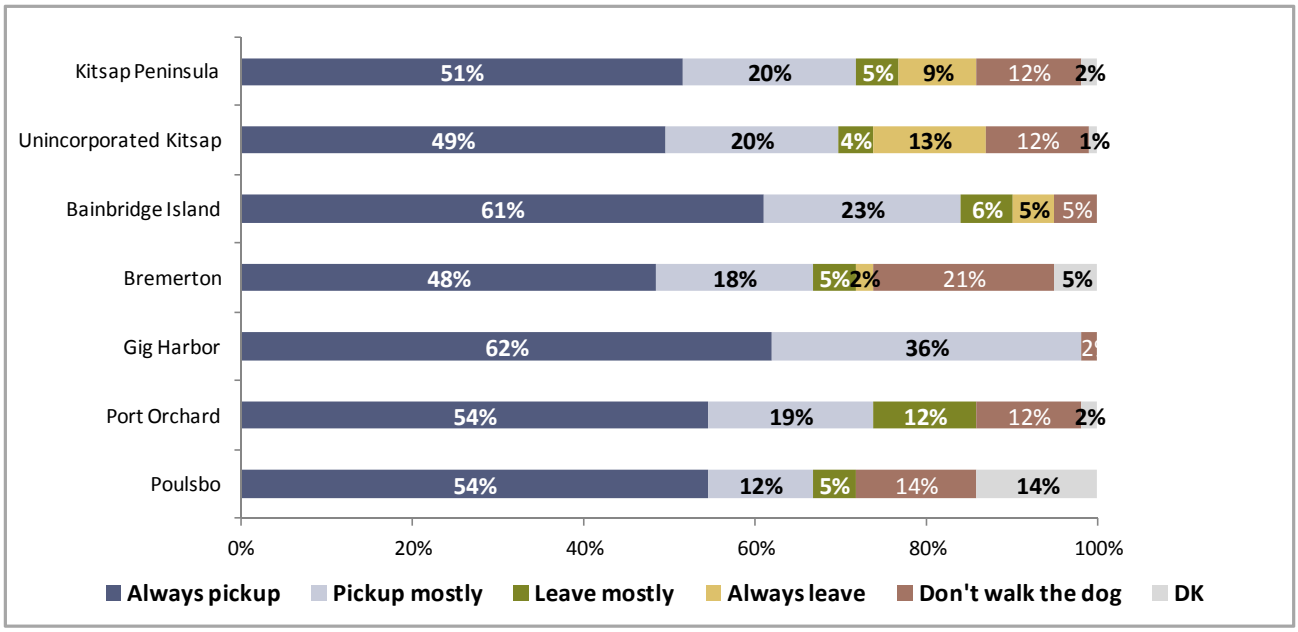
Once the waste is picked up, how do you typically dispose of it?



Half of the study area respondents always picked up their dog waste when out walking their dog.

- The highest proportion of respondents who picked up their dog waste all the time lived in Gig Harbor or Bainbridge Island.
- Unincorporated Kitsap County had the highest proportion who mostly or always left the dog waste on the ground.

When your dog is out for a walk, how is the waste dealt with?

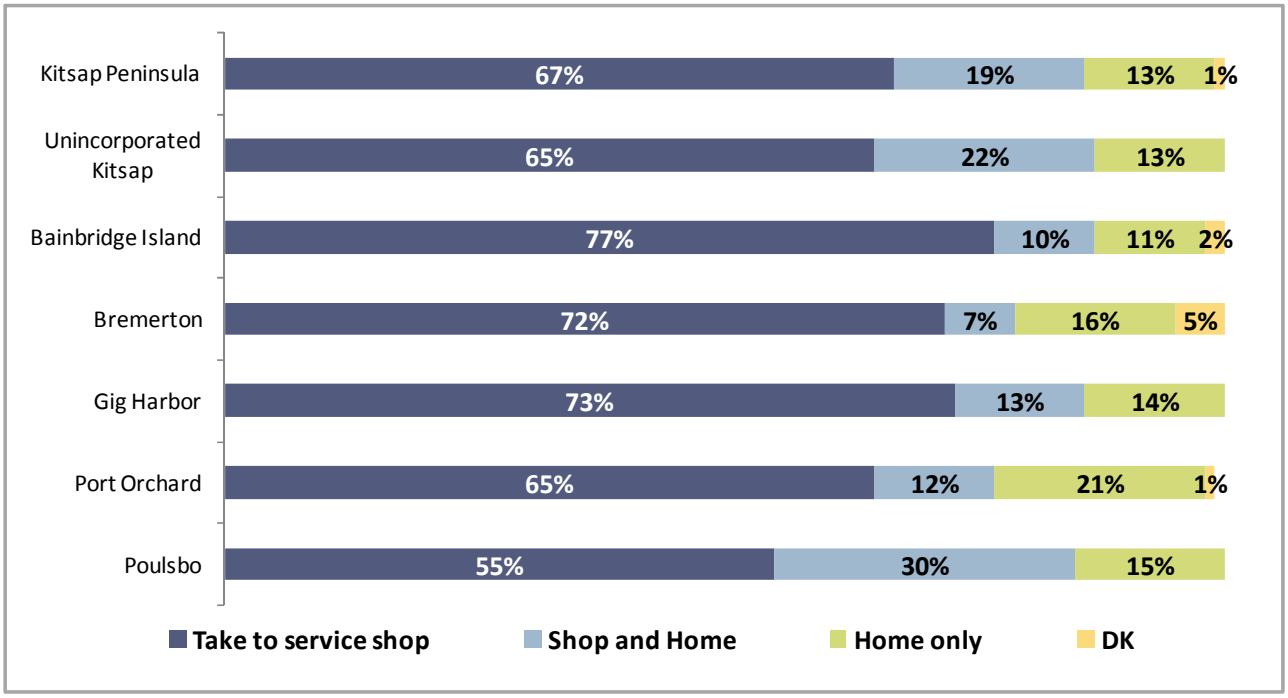


Vehicle Maintenance

2 in 3 study area respondents took their vehicle to a service shop exclusively for changing oil and other auto fluids. 1 in 3 either changed oil and other fluids at home only (13%) or a combination of shop and home (19%).

- Poulsbo had the highest proportion of respondents who changed oil and other fluids at home, followed by unincorporated Kitsap County and Port Orchard.
- Bainbridge Island and Bremerton had the lowest proportion of respondents who changed their oil at home.

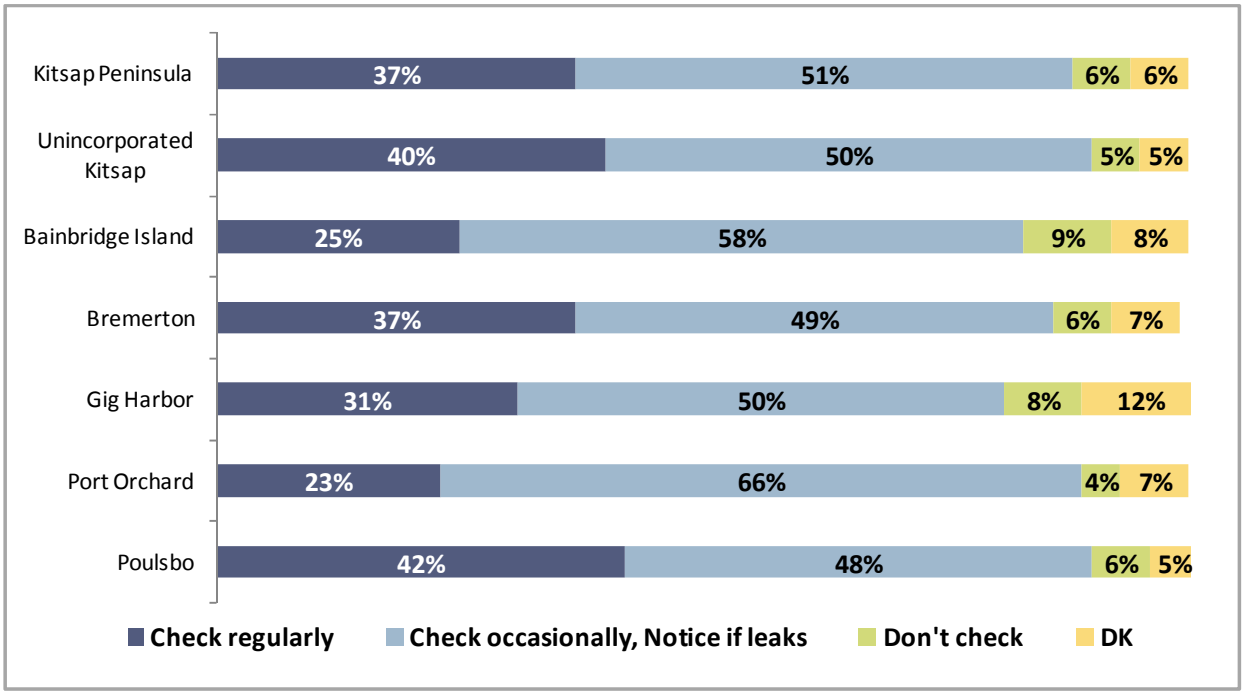
When it comes to changing the motor oil, anti-freeze and other fluids in your vehicles, do you or someone in your household typically do it yourself at home, or are the vehicles taken to a service shop?



More than 1 in 3 (37%) respondents in the study area checked regularly for oil leaks. The vast majority either checked for oil leaks or noticed a leak if there was one.

- Bremerton, Poulsbo and unincorporated Kitsap County respondents were more likely to check regularly for oil leaks.
- Bainbridge Island and Port Orchard respondents were less likely to check regularly.

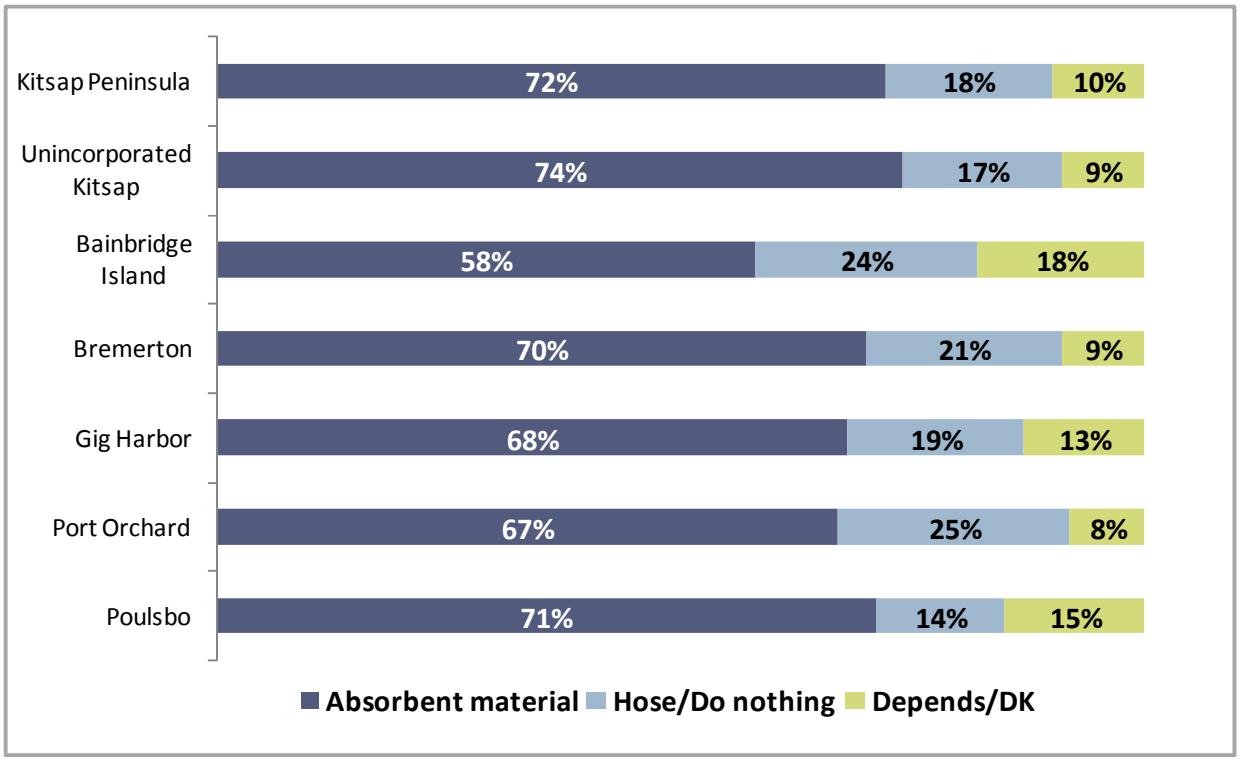
When it comes to leaks under your vehicle, which of the following best describes you or someone in your household?



Nearly 3 in 4 respondents in the study area would use an absorbent material or pad to clean up the spill.

- A higher proportion of Poulsbo and unincorporated Kitsap County respondents said they would use absorbent material to clean up a spill.
- Hosing off spills or doing nothing was reported by a higher proportion of Port Orchard and Bainbridge Island respondents.

If your vehicle leaked or spilled oil or antifreeze onto the pavement, which of the following would you be most likely to do?

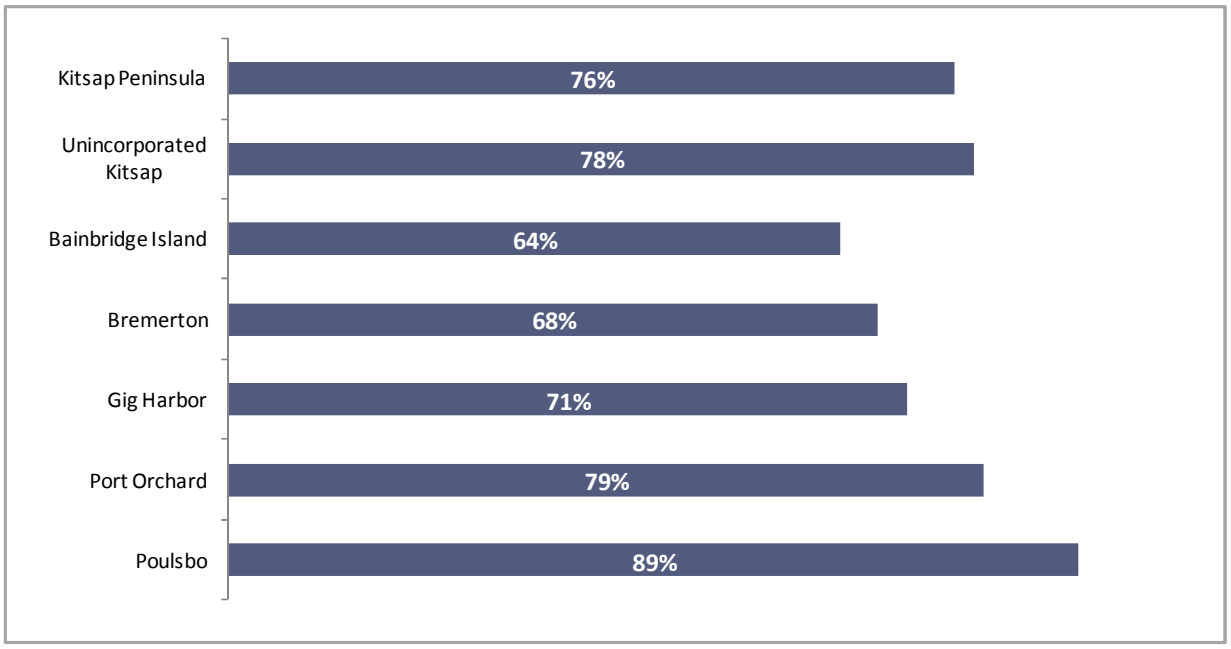


Car Washing

3 in 4 respondents in the study area reported washing their cars at home.

- Home car washing was highest in Poulsbo.
- Home car washing was lowest on Bainbridge Island where nearly 2 in 3 reported this behavior.

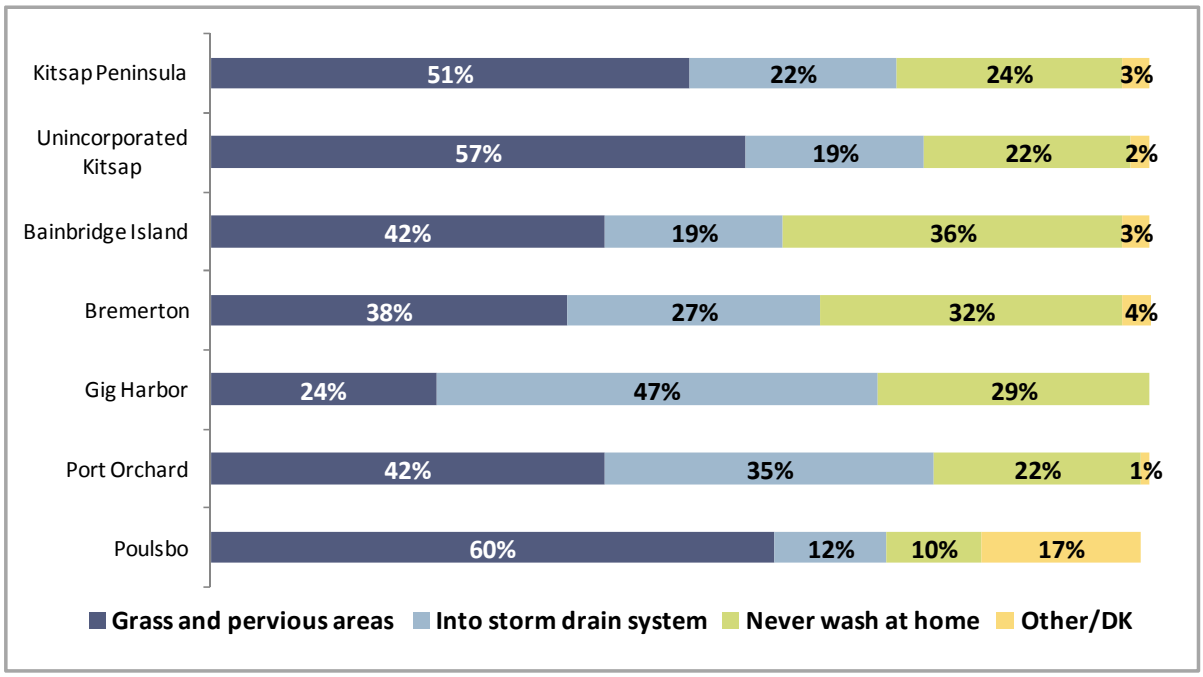
Percent who wash their cars at home



Half in the study area said that when they wash their car at home the wash water drains onto grass, gravel, dirt or other pervious surfaces.

- Poulsbo and unincorporated Kitsap County respondents had the highest proportion who reported wash water going onto pervious surfaces.
- About 1 in 5 (22%) of study area respondents said their wash water goes into the streets, storm drain, or in ditches.
- Gig Harbor had the highest proportion that reported wash water going into the storm drain system.

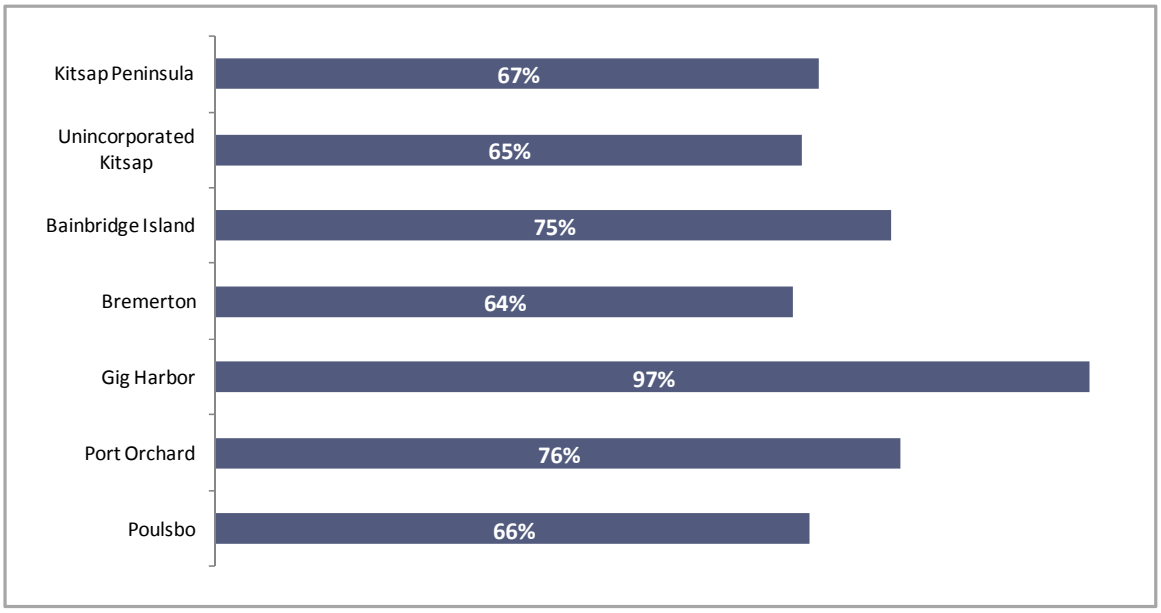
When you wash your vehicles at home, where does the wash water go?



2 in 3 respondents in the study area used commercial or coin-operated car washes.

- The majority of respondents in all jurisdictions used commercial car washes.
- Use of commercial car washes was highest in Gig Harbor.

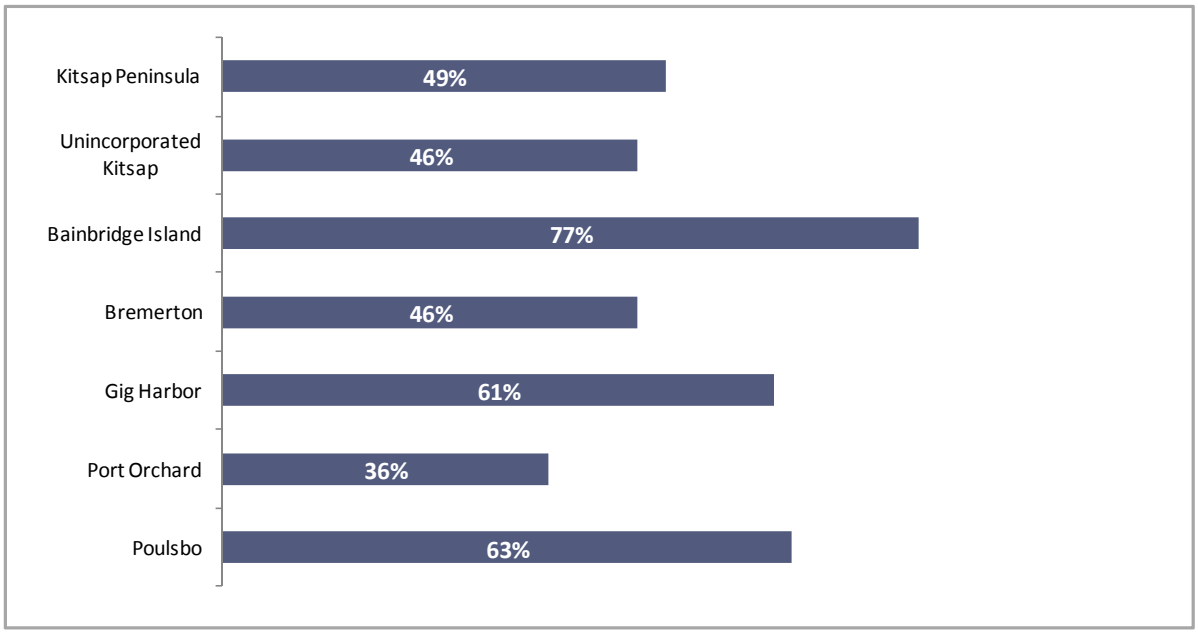
Percent who wash their cars at commercial or coin-operated car washes



Half of study area respondents used a fundraiser car wash.

- Bainbridge Island had the highest proportion of respondents who used fundraiser car washes.
- Port Orchard had the lowest use of fundraiser car washes.

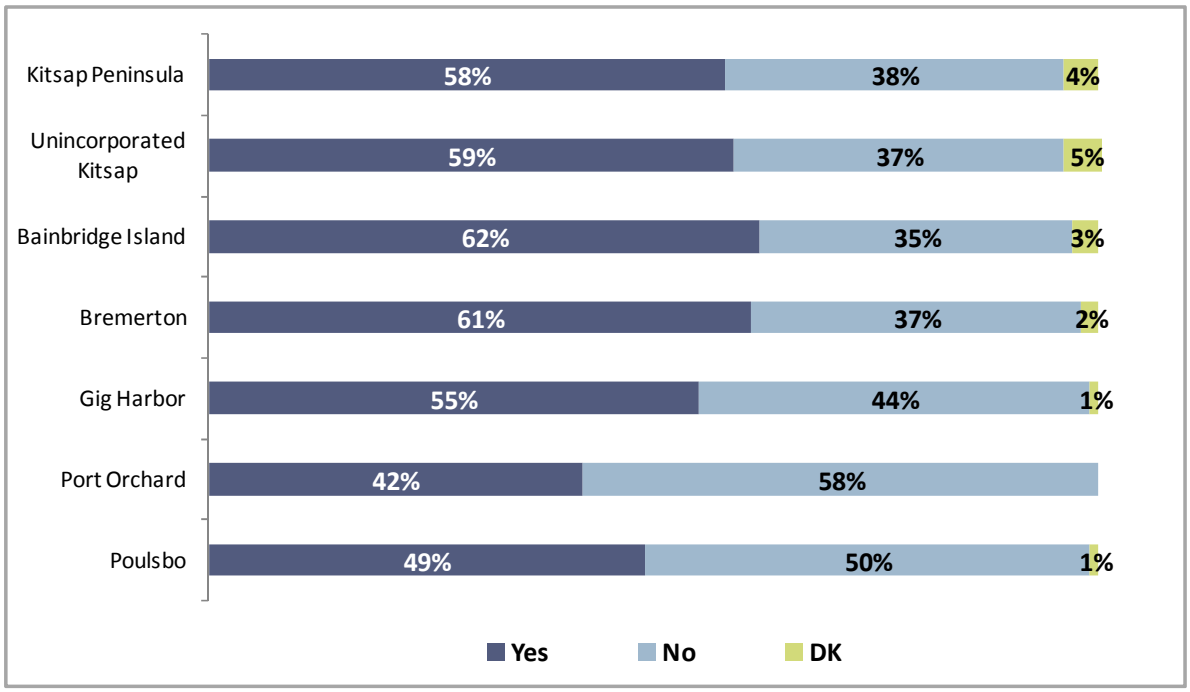
Percent who wash their cars fundraiser car washes



More than half of the study area respondents were aware that in some locations, the wash water from fundraiser car washes does not get treated.

- Awareness was about the same across the study area, except for Port Orchard and Poulsbo where it was less than half.

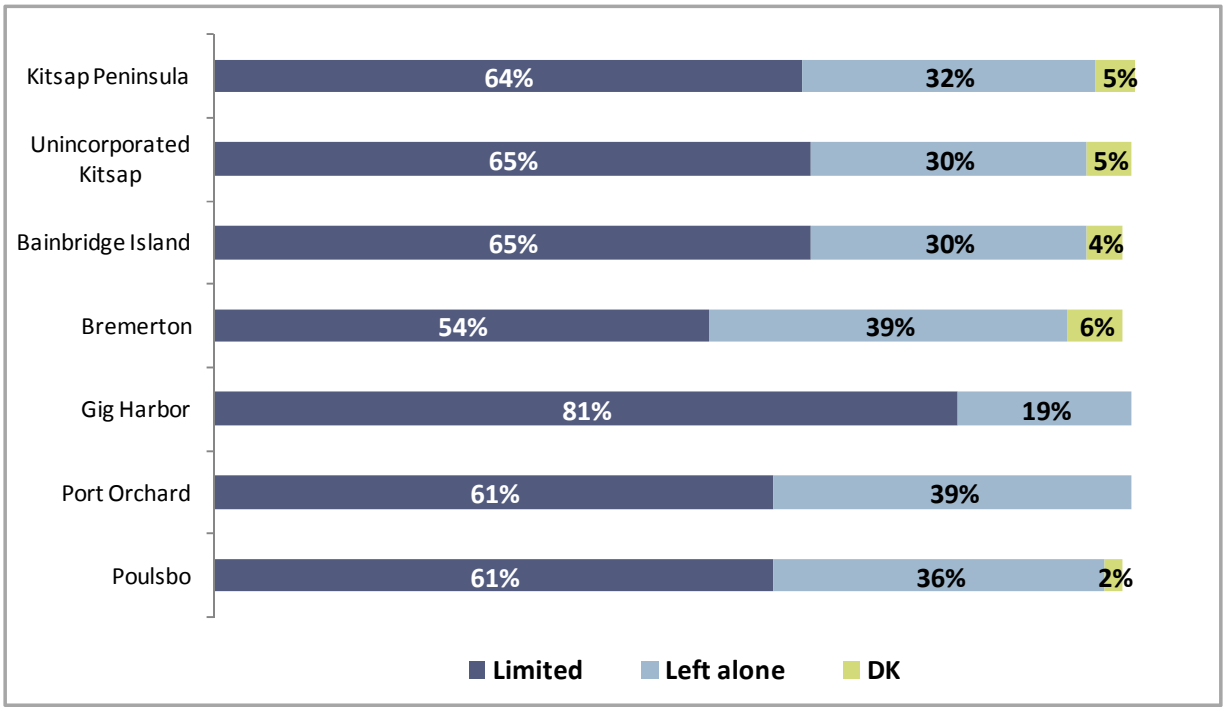
Were you aware that at some locations where fundraiser car washes are held the dirty, soapy water goes into the storm drain and flows to local water bodies?



Nearly 2 in 3 of study area respondents thought that fundraiser car washes should be limited to areas with proper plumbing.

- This belief was stronger in Gig Harbor.
- A higher proportion of respondents in Bremerton, Port Orchard and Poulsbo thought that fundraiser car washes should be left alone.

Do you think that the fundraiser car washes should be limited to places that have proper plumbing so the wastewater is treated, or do you think that they should be left alone?



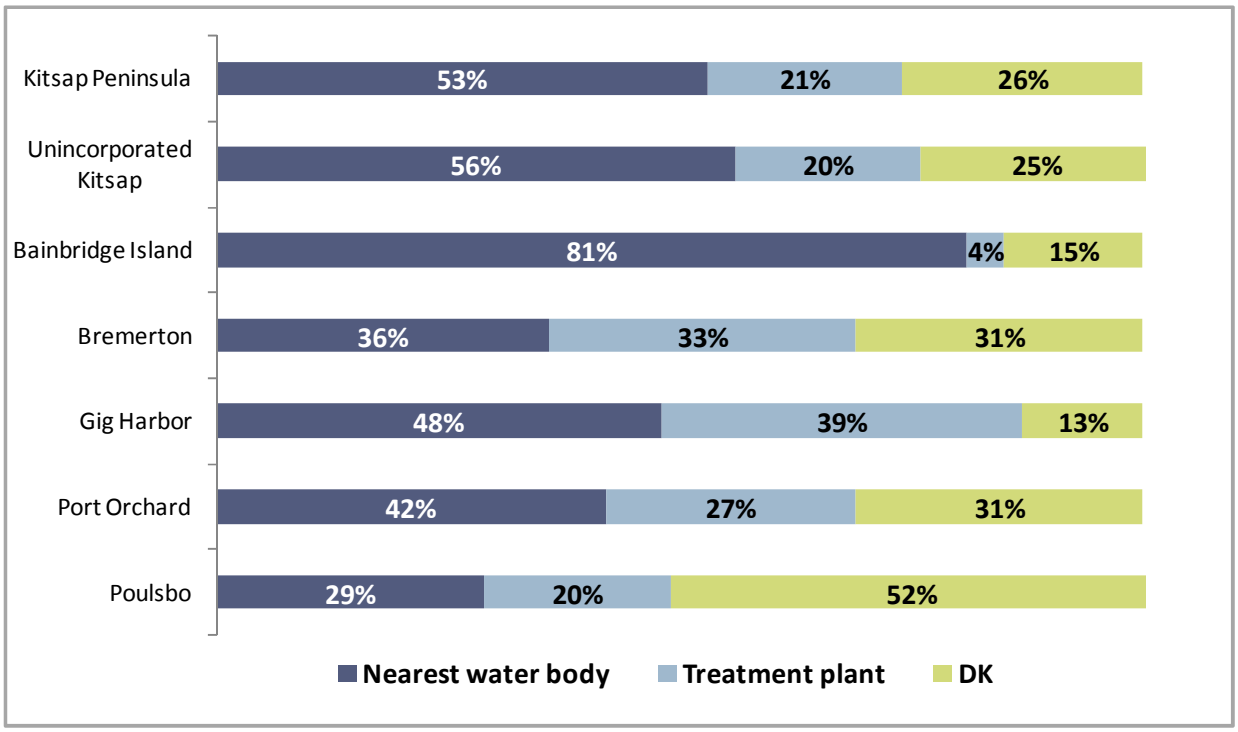
Attitudes and Awareness of Educational Outreach

Basic Awareness about the Fate of Stormwater Runoff

About half know correctly that water runoff goes into the storm drain system and empties into the nearest water body without being treated.

- Bainbridge Island had the highest proportion of respondents who knew that runoff is not treated.
- Poulsbo and Bremerton had the lowest proportion of respondents who knew that runoff is not treated.
- Gig Harbor had the highest proportion who erroneously thought that storm water was treated.
- Poulsbo had the highest proportion who did not know the answer to the question.

To the best of your knowledge, what happens to that water that goes into storm drains?

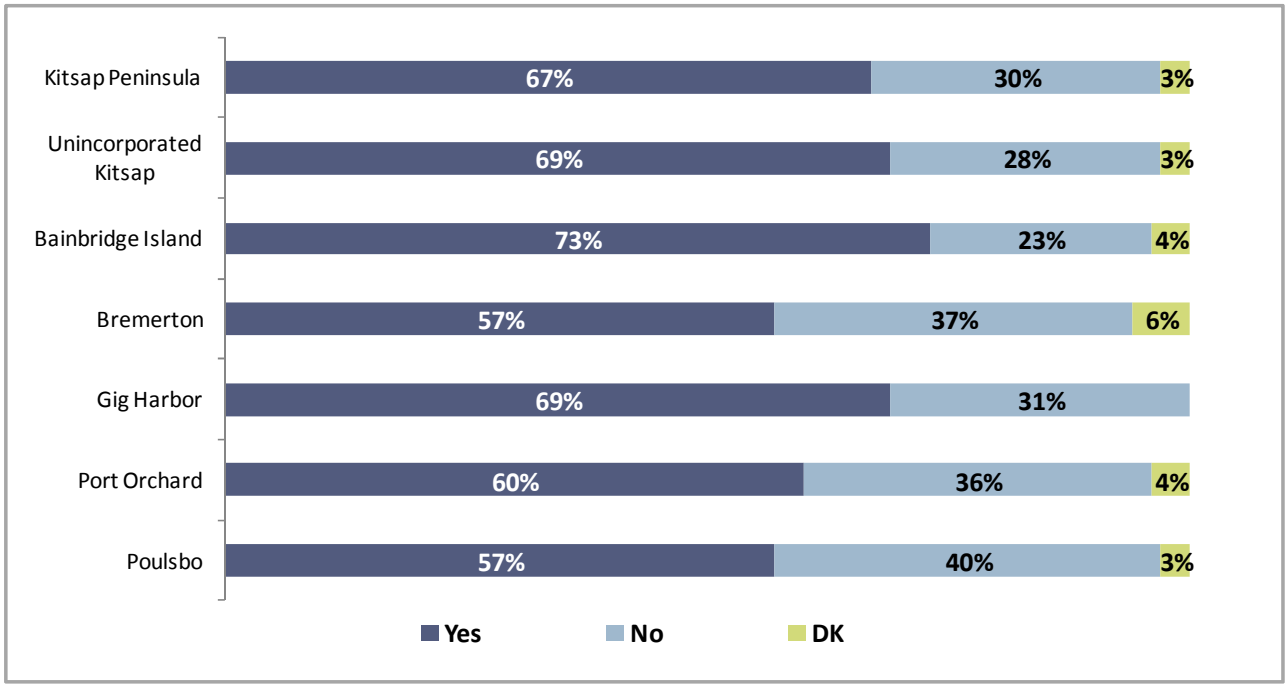


Awareness of Messages about Stormwater

2 in 3 in the study area have heard or seen information about ways to prevent stormwater runoff.

- A higher proportion of Bainbridge Island respondents have been aware of messages relating to stormwater runoff. They were more likely to hear about runoff related issues.
- A lower proportion of Bremerton and Poulsbo respondents have been aware of stormwater messages.

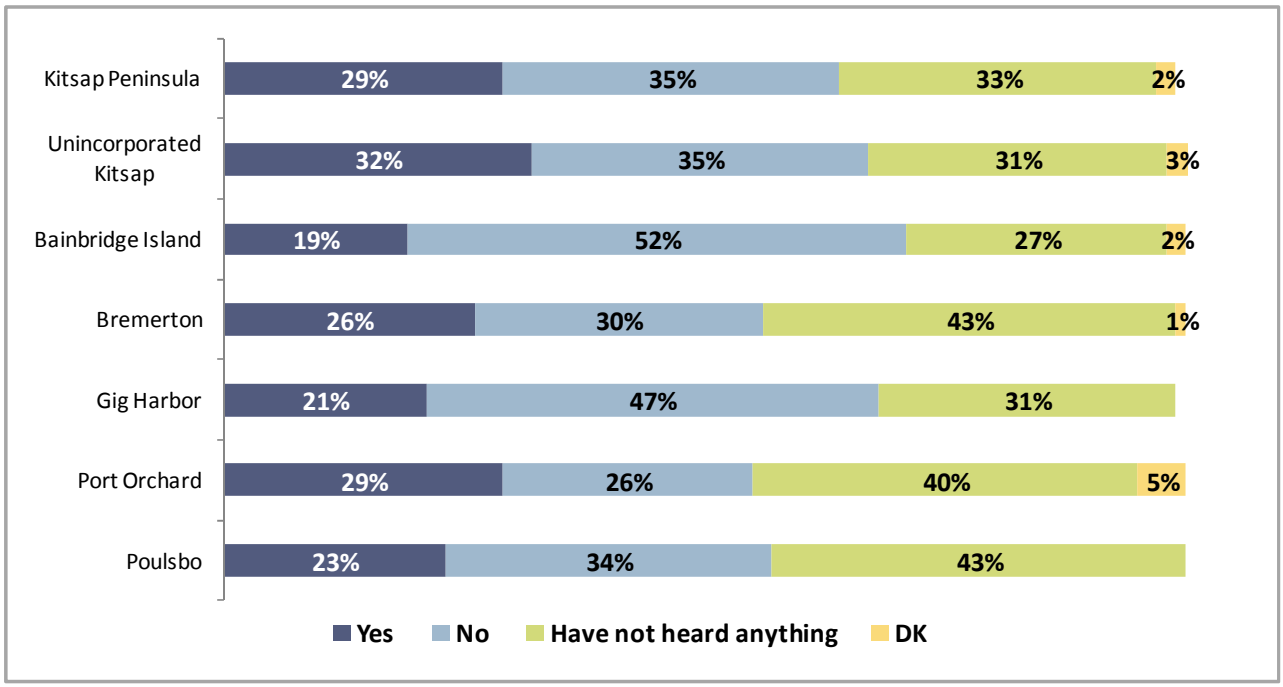
In the last year or so, have you seen or heard anything about ways that people can help prevent water pollution?



About 30% in the study area are familiar with the brand "Puget Sound Starts Here".

- Port Orchard, Bremerton, and unincorporated Kitsap County had the highest proportion of respondents who have heard this phrase.
- Bainbridge and Gig Harbor had the lowest proportion who are familiar with this phrase.

Have you ever seen or heard the phrase "Puget Sound Starts Here"?

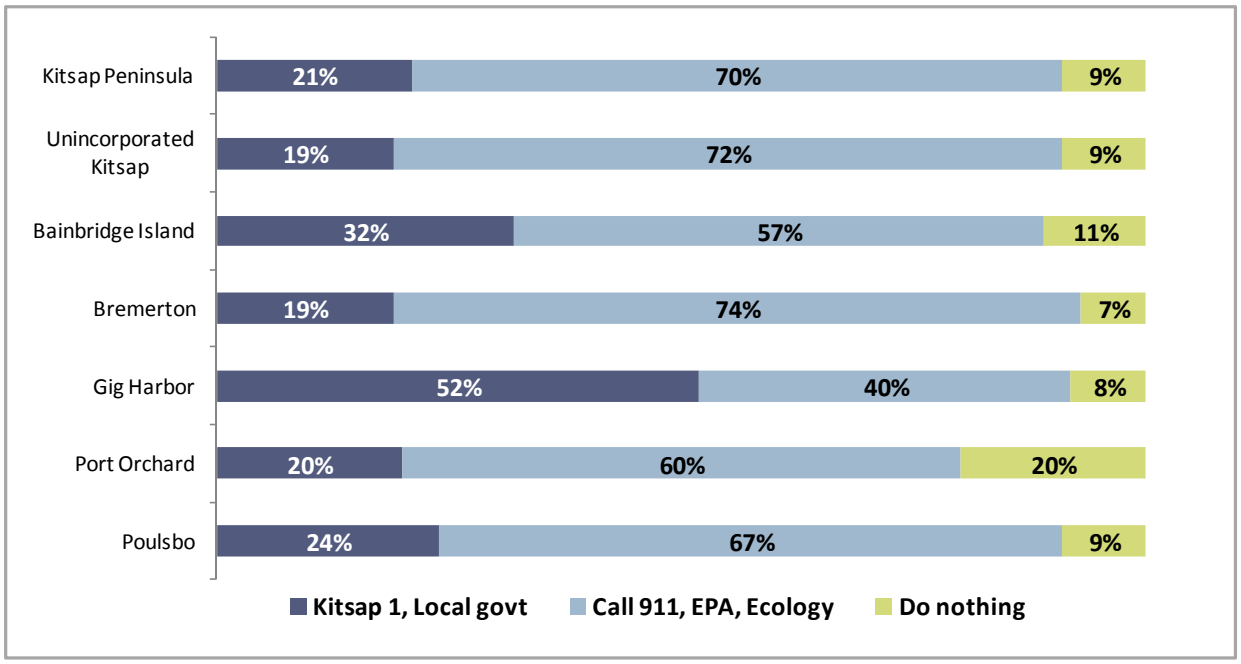


Reporting Spills and Suspicious Substances in Local Waters

About 1 in 5 respondents in the study area knew to call Kitsap 1 or their local government to report a spill or suspicious substance in a water body.

- Gig Harbor had the highest proportion of respondents who knew to call local government to report a spill.
- Bremerton, Port Orchard and unincorporated Kitsap County had the lowest proportion of respondents who knew to call local government.

If you saw what looked like a spill of suspicious substance in a local water body, what would you do about it, if anything?



Are the Messages about Proper Activities Effective

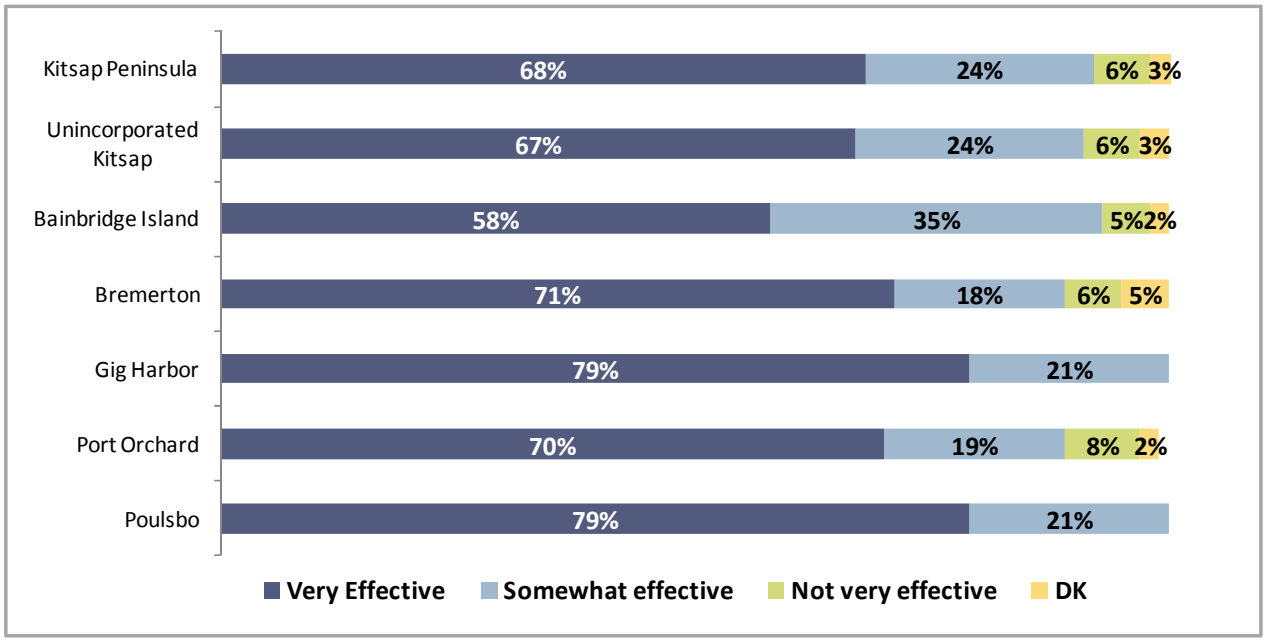
The jurisdictions were consistent in how they rated 3 of the 8 activities. Those were: 1) regular septic system maintenance; 2) composting yard waste, and; 3) fixing vehicle leaks. The individual jurisdictions had differing opinions about the other 5 activities. The charts for these activities are included below.

Question: Tell me whether you personally think that these activities are Very Effective, Somewhat Effective, or Not Very Effective to protect water quality.

2 in 3 study area respondents thought that reporting water pollution to a hotline was very effective to protect water quality.

- Gig Harbor and Poulsbo had a higher proportion of respondents who thought reporting water pollution to a hotline was a very effective practice.
- Bainbridge Island had the lowest proportion.

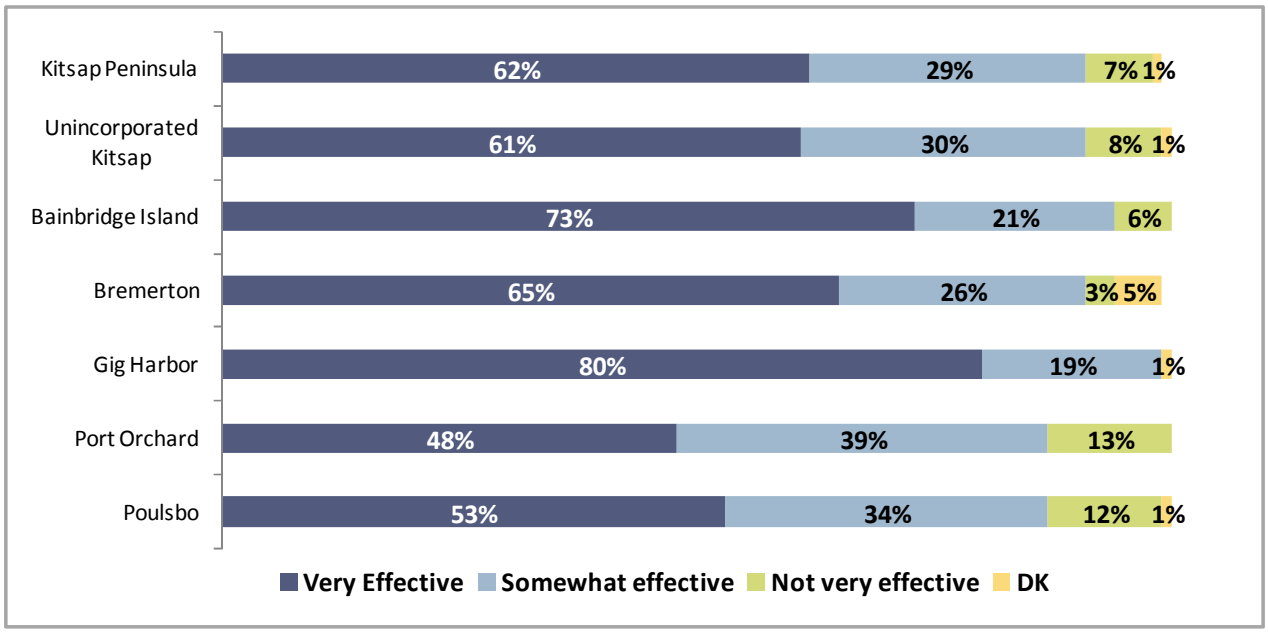
Reporting water pollution to a hotline



About 3 in 5 study area respondents thought that avoiding lawn and garden chemicals was a very effective practice to protect water quality.

- Gig Harbor and Bainbridge Island had a higher proportion who believed avoiding yard chemicals was very effective in protecting water quality.
- Port Orchard and Poulsbo had a lower proportion.

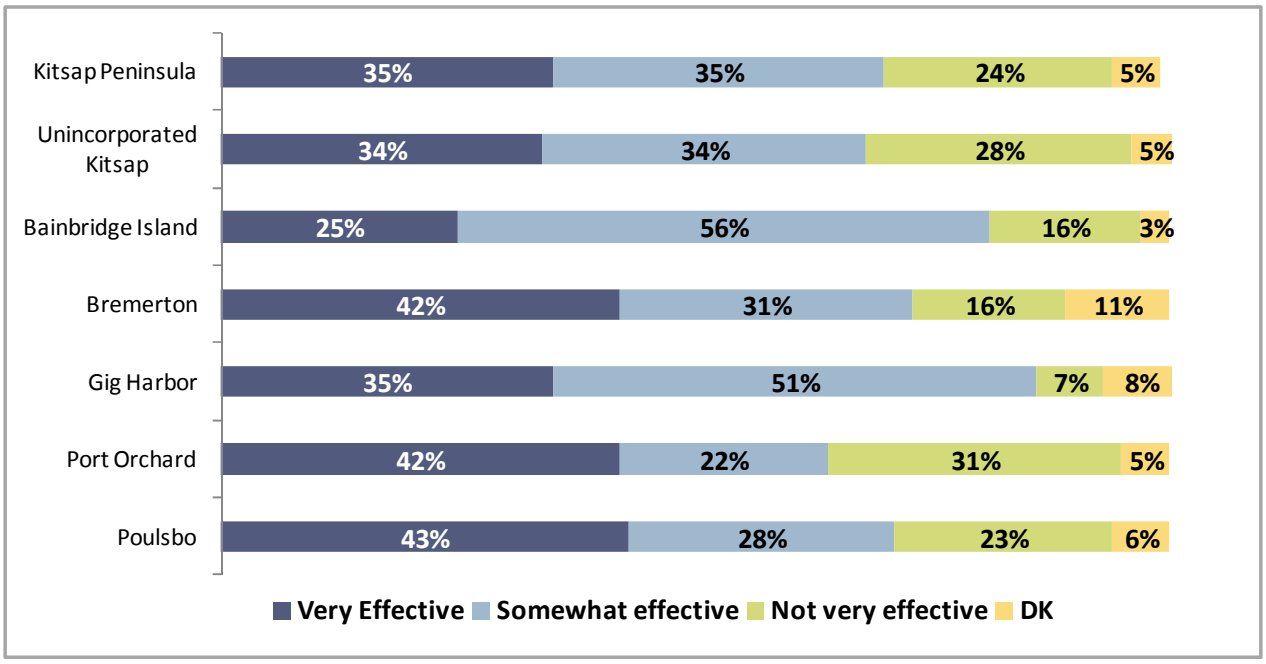
Avoiding herbicides and other yard chemicals



1 in 3 in the study thought disposing pet waste in the garbage was a very effective practice to protect water quality.

- A higher proportion of Bremerton, Port Orchard and Poulsbo thought this to be an effective practice.
- A lower proportion of Bainbridge Island respondents thought this.

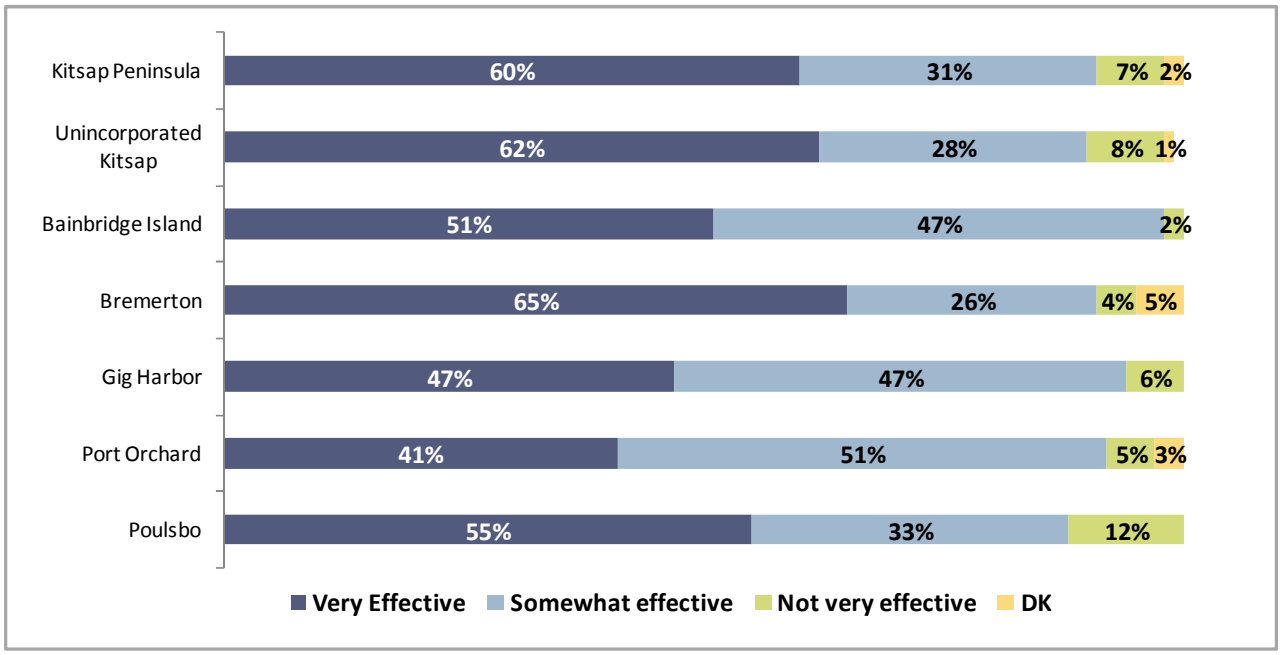
Disposing pet waste in the garbage



3 in 5 in the study area thought that using environmentally friendly products was a very effective practice to protect water quality.

- Bremerton and unincorporated Kitsap County had the highest proportion who thought using environmentally friendly products was a very effective practice.
- A lower proportion of Port Orchard and Gig Harbor respondents thought this.

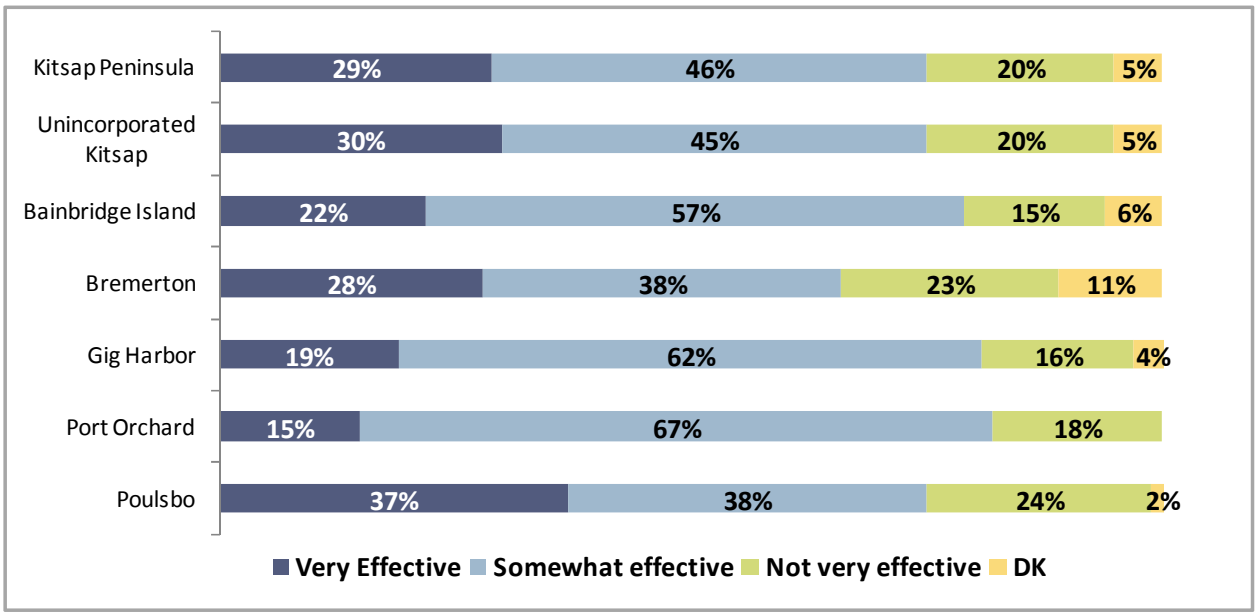
Using environmentally friendly products



Washing cars on gravel, grass or other permeable surfaces was considered overall to be the least effective practice from the list of 8 practices.

- Poulsbo had the highest proportion of respondents who thought this practice was very effective.
- Port Orchard and Gig Harbor had the lowest proportion.

Washing cars on grass or gravel



5. Changes in Behaviors and Attitudes since the 2008 Survey

The 2008 survey included 400 respondents for the study area analysis and then oversampled in the jurisdictions to provide a jurisdictional comparison, which included all 838 respondents. The 2011 survey had 802 respondents and was used for both the study area analysis and the jurisdictional comparisons. The 2011 data were weighted to better align with the geographic and age distribution of the study area population.

In order to have a likewise (apples to apples) comparison, the 2011 un-weighted data were compared to the 2008 un-weighted data. The percent responses may be slightly different for the weighted and un-weighted 2011 data. Differences between the two groups of respondents that are statistically significant are addressed in the discussion. It is important to consider the demographic, economic and social differences in the two respondent profiles since activities and attitudes are often driven by those factors.

Respondent Profile

Below are two charts that present the profiles of the survey respondents. In comparison to the 2008 survey respondents, the 2011 respondents were more likely to be:

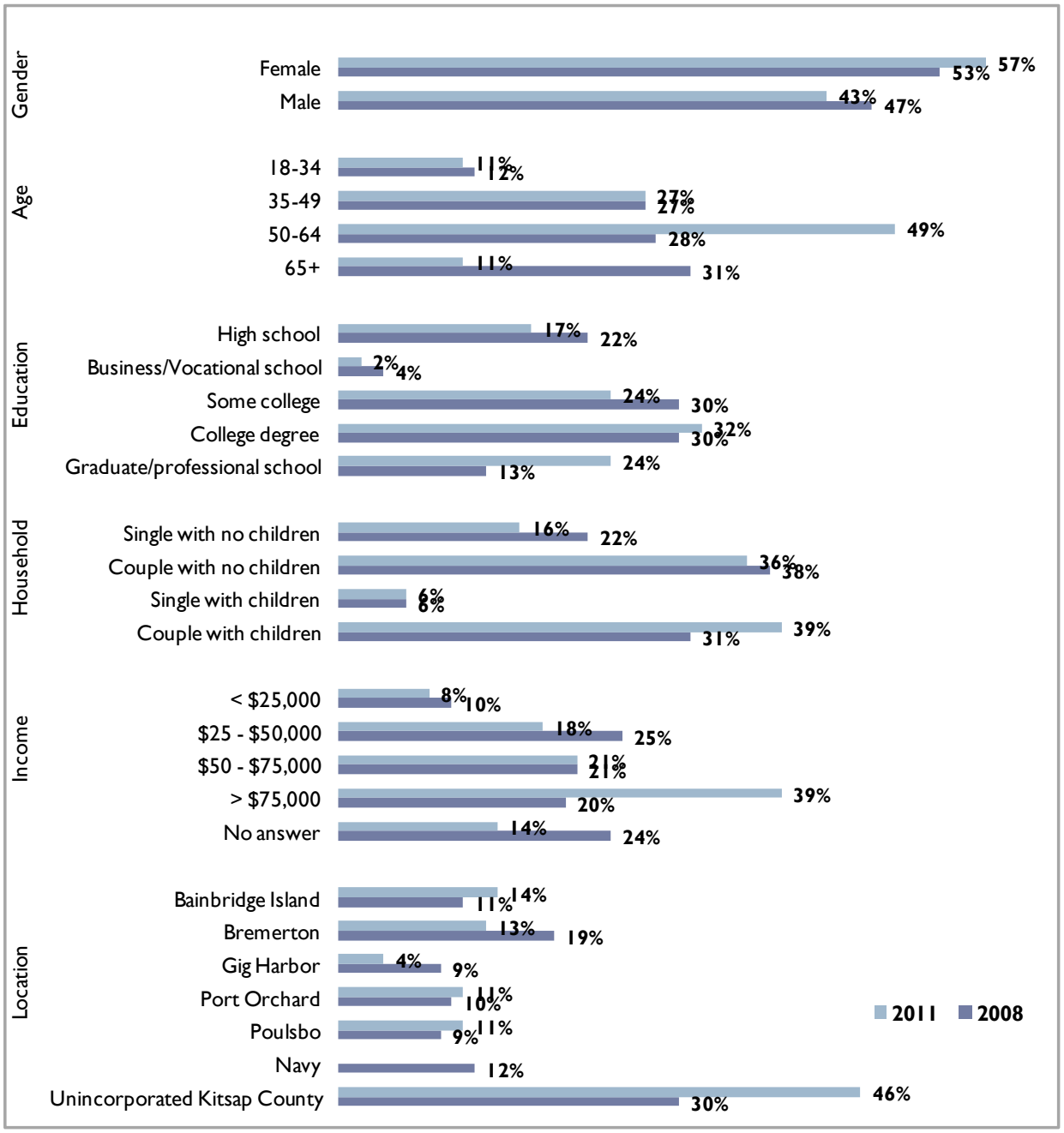
- Age 50-64.
- Have a graduate or professional degree.
- Be a couple with children.
- Have an annual household income of $75,000+.
- Live in unincorporated Kitsap County.
- Homeowner.
- Live in a single family house.
- Live on a mid to large lot, greater than 0.5 acres.
- Have a yard.
- Have a pet dog.

The 2008 survey respondents were more likely to be:

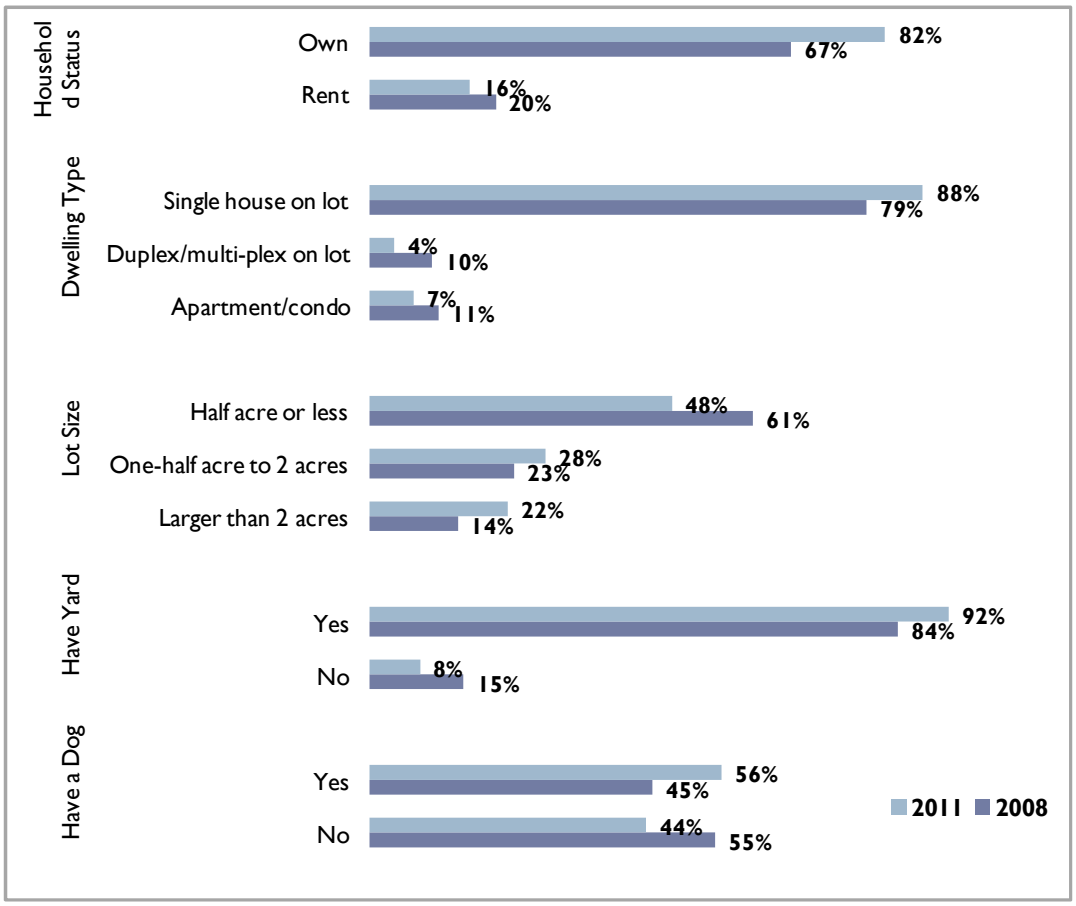
- Age 65+.
- Have a high school degree or some college.
- Be single with no children.
- Have an annual household income of $25,000 – $50,000.
- Live in Bremerton or Gig Harbor.
- Renter.
- Live in a duplex, apartment, or condominium.

- Live on a small lot of 0.5 acre or less.
- Not have a pet dog.

Comparison of Respondent Profiles in 2008 and 2011 Base = 855 (2008) 802 (2011)



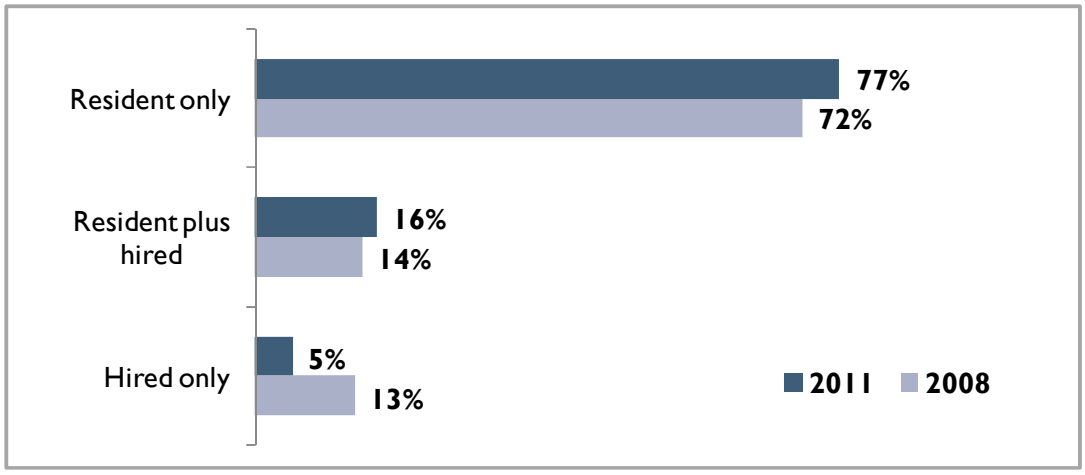
Comparison of Respondent Profiles in 2008 and 2011 (continued) Base = 855 (2008) 802 (2011)



Yard Care Practices

Respondents in 2011 were more likely to take care of the yard themselves and less likely to rely on hired help.

Do you or someone in your household maintain the yard yourself? Or do you hire someone to take care of it? Or both? Base = 716 (2008), 734 (2011)



Use of Lawn and Garden Products

The 2008 and 2011 data could not be merged for the questions on product use, frequency, and coverage because of the different way the questions were structured, not allowing for an apples to apples comparison.

A few observations can be made based on reviewing the results of the 2008 survey of 400 respondents. The data supports a significant reduction in the use of lawn and garden chemicals, as well as organic fertilizer from 2008 to 2011.

Chemical fertilizer: Use in 2008 was 52% for entire lawn coverage and 57% for spot coverage. In 2011, chemical fertilizer was used by 21% of the respondents.

Weed and Feed: Use in 2008 was 54% - 56%, depending on coverage. Use in 2011 was reported by 40%.

Pesticides: Use in 2008 was reported by 63% for spot coverage and 74% for a wide area. Use of pesticides in 2011 was reported by 16%.

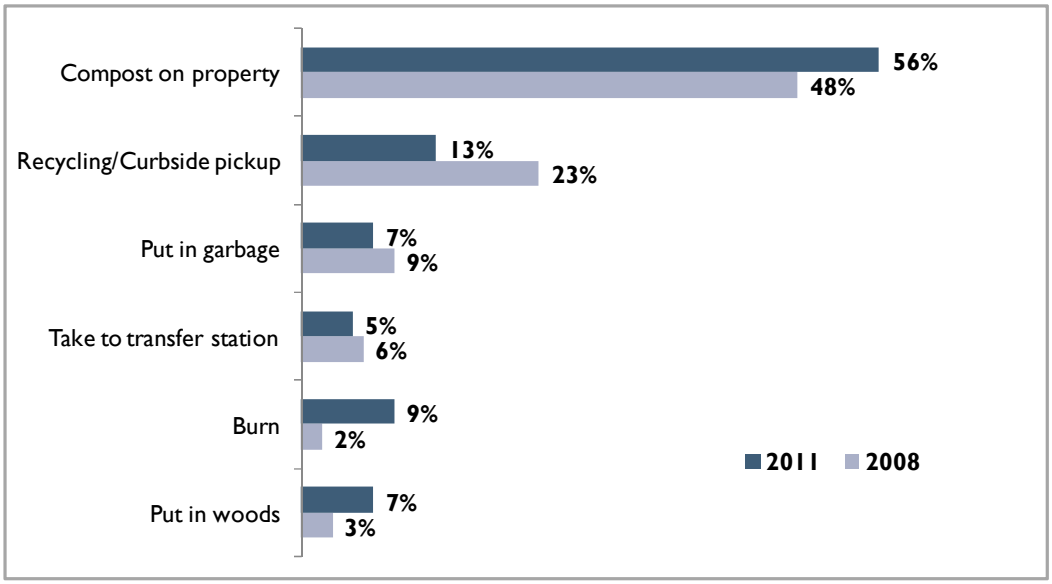
Round-Up: Round-Up, which is an herbicide, was not included in the 2008 survey.

Organic or slow-release fertilizer: Use in 2008 was reported by about 52% of the respondents. In 2011 40% reported using organic fertilizer.

What Happens to Yard Waste

Changes from 2008 to 2011 were a mixed bag. Respondents in the 2011 survey were more likely to compost their yard waste, as well as burn and putting it in the woods.

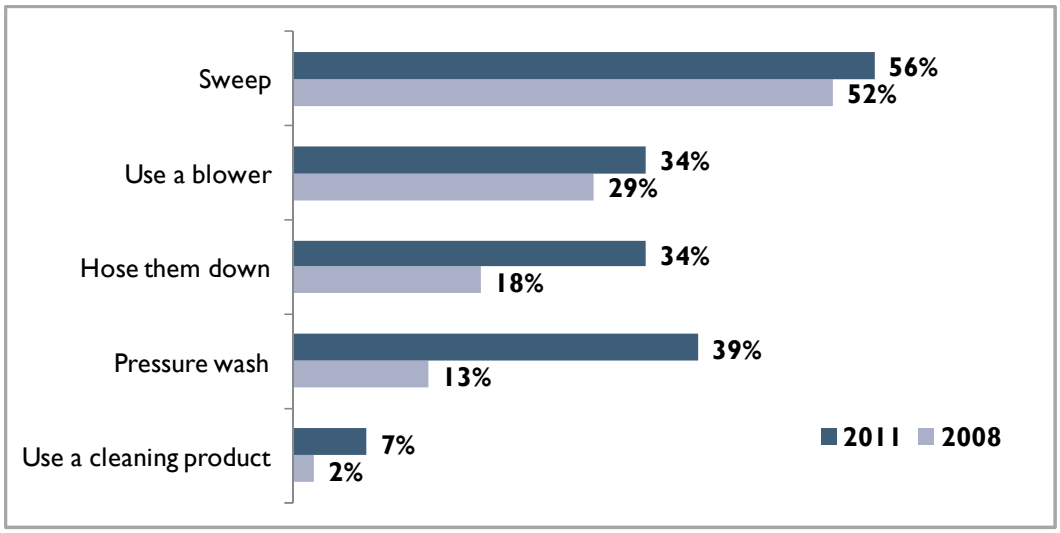
What does your household typically do with yard waste, like leaves, small branches and lawn clippings? Base = 698 (2008), 734 (2011)



Cleaning Paved Areas

Respondents in the 2011 survey were more likely to use water when cleaning driveways, walkways and other hard surfaces. The use of both a hose and pressure washing increased dramatically in 2011. The 2011 respondents were also more likely to use a cleaning product. The use of blowers also increased significantly in 2011.

When you clean places like your driveway, walkways, patio or deck, do you typically….
Base = 716 (2008), 734 (2011)



Pet Waste Disposal

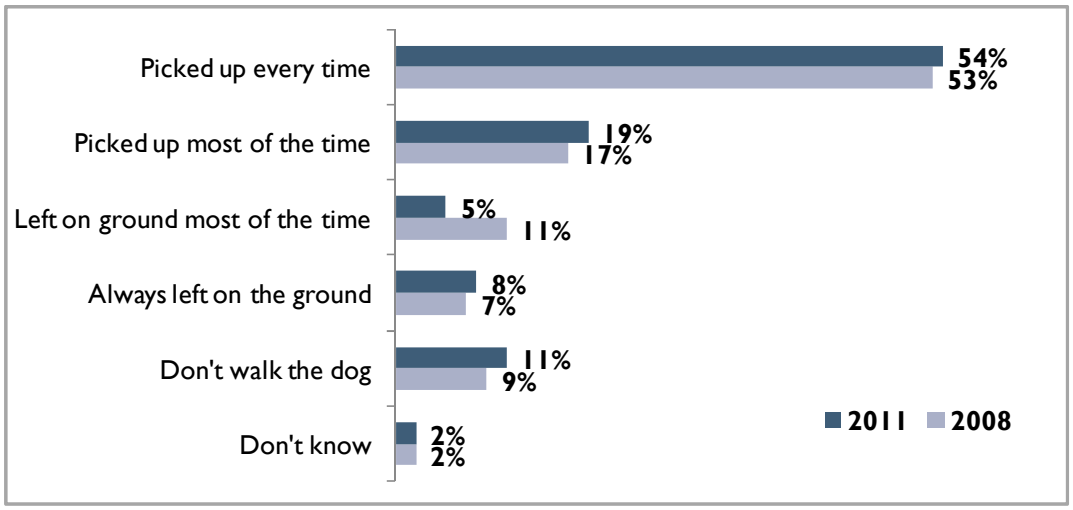
Dog Ownership

Dog ownership increased from 52% of the respondents in 2008 to 57% in 2011. The number of dogs per all households in the study area increased from 0.82 dogs to 0.93 dogs per household.

Dog Waste Pickup and Disposal Behaviors

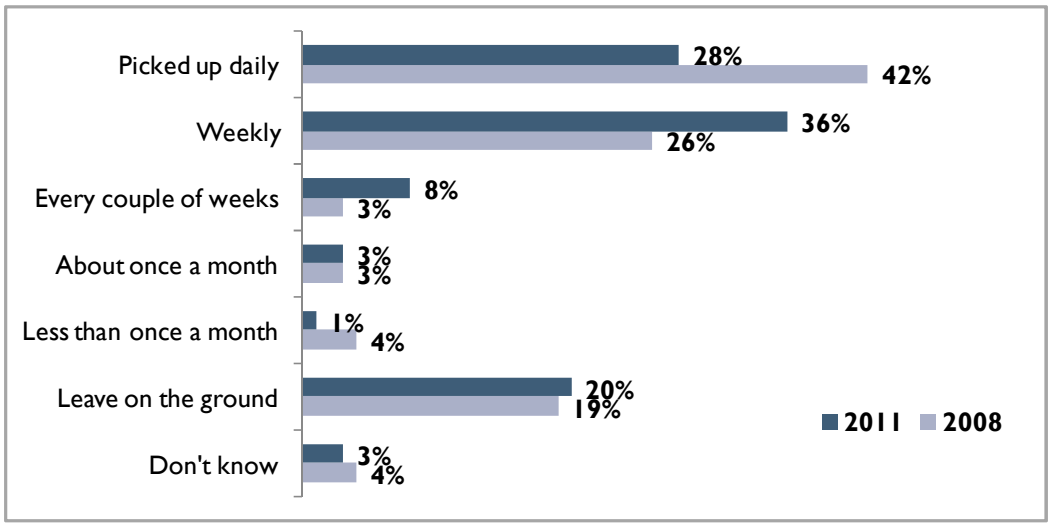
The percentage of respondents who left dog waste on the ground most of the time when walking their dog decreased between 2008 and 2011. In 2008, 11% said they left dog waste on the ground most of the time, and in 2011, this behavior was reported by 5% of the respondents.

When your dog is out for a walk, how is the dog waste dealt with? Base = 382 (2008), 448 (2011)



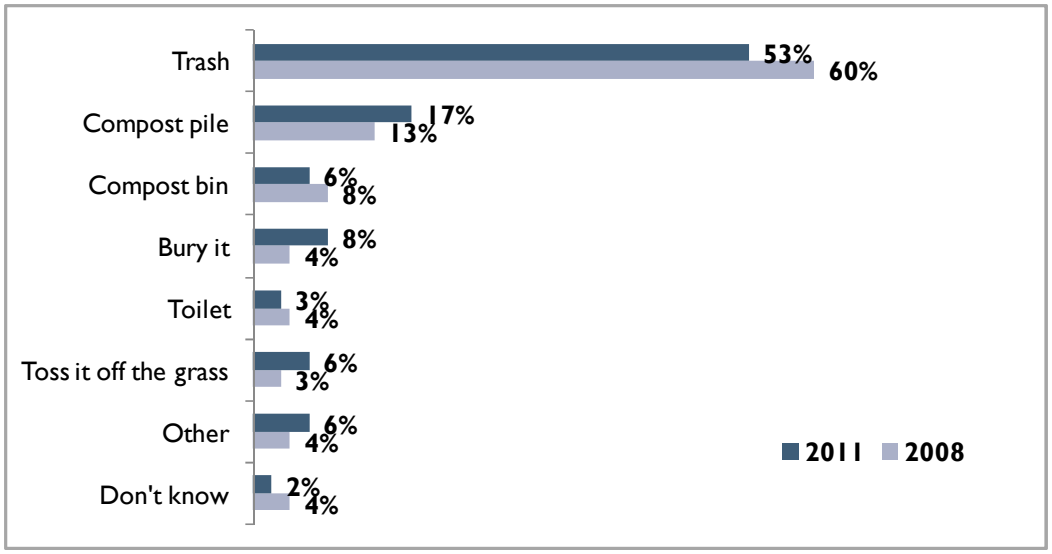
At home, the frequency of dog waste pickup decreased daily but increased weekly from 2008 to 2011. The difference in responses may be due to how the question was re-worded in the 2011 survey. In 2008, the question was asked as close-ended and respondents were given possible answers. This may have prompted respondents to provide a socially desirable response (e.g. daily pickup) rather than a more honest answer that would be received from an open-ended question. To reduce that bias, this question was asked as open-ended in the 2011 survey.

How about when your dog is at home. What is typically done with the dog waste in the yard? Base = 387 (2008), 448 (2011)



The only statistically significant difference in how the dog waste is disposed is that more respondents in 2011 reported burying the waste. The decrease in disposal in the trash can in 2011 is only marginally significant at the 90% level.

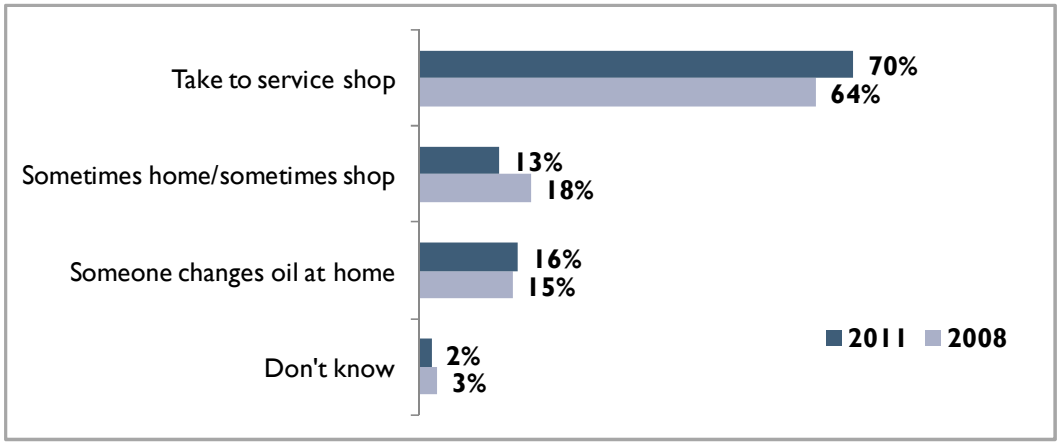
Once the waste is picked up, how do you typically dispose of it? Base = 314 (2008), 357 (2011)



Vehicle Maintenance

Respondents in the 2011 survey were more likely to take their vehicle to a shop for service exclusively, while respondents in the 2008 were more likely to combine taking the car to the shop and changing motor oil and other fluids at home.

When it comes to changing the motor oil, anti-freeze and other fluids in your vehicles, do you or someone in your household typically do it yourself at home, or are the vehicles taken to a service shop? Base = 838 (2008), 802 (2011)

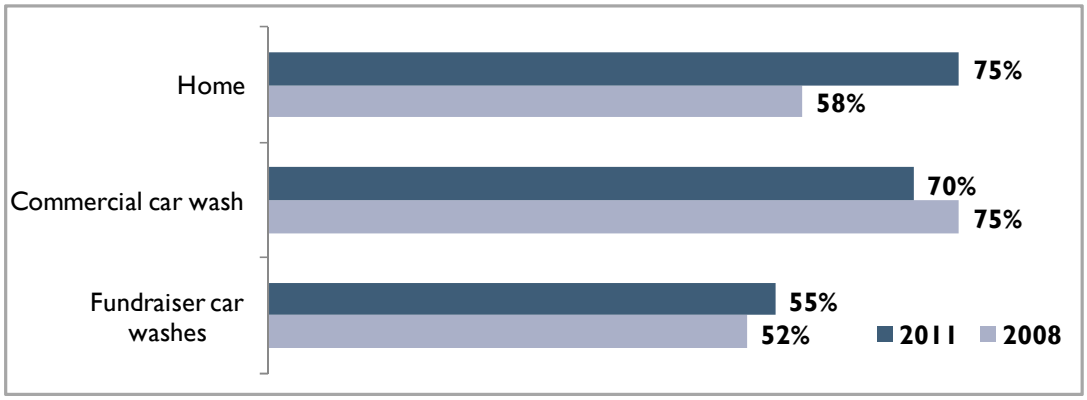


Car Washing

Vehicle Car Washing at Home

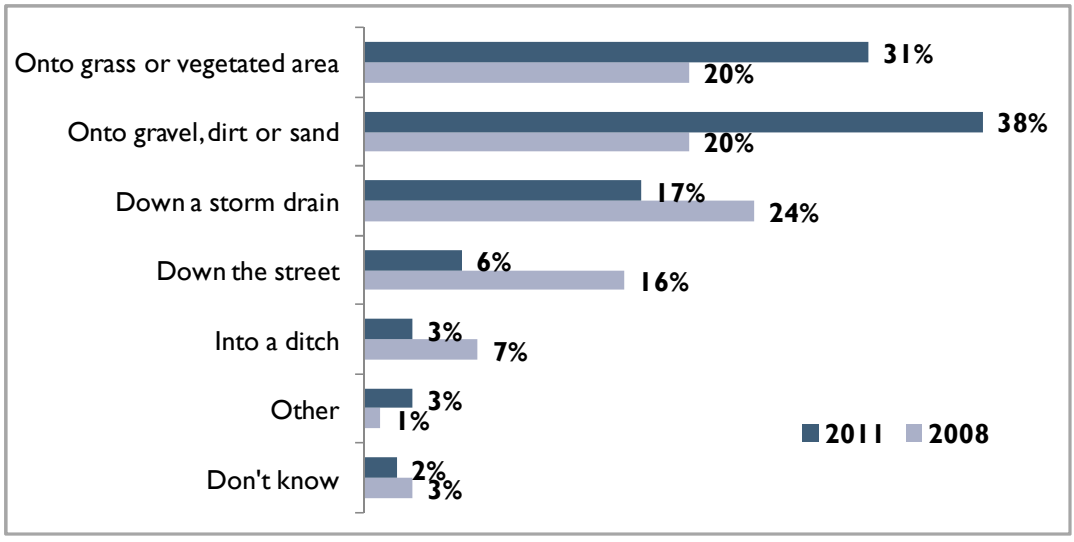
Car washing at home increased significantly in 2011. The percent of respondents who washed their car at home increased from 58% in 2008 to 75% in 2011. The increase was most noticeable in the number of respondents who reported washing their car at home 1 to 2 times a year, up from 18% in 2008 to 37% in 2011.

Where do you wash your vehicles? Base = 838 (2008), 802 (2011)



Although a higher percentage of respondents in 2011 washed their cars at home, there was a dramatic reduction in the wash water going down streets, into ditches, and storm drains.

When you wash your vehicles at home, where does the wash water go? Base = 477 (2008), 588 (2011)



The percentage of respondents washing their cars where wash water goes onto grass, dirt, or other permeable surfaces increased from 40% in 2008 to 69% in 2011. Wash water going into storm drains, down the street and into ditches decreased significantly from 2008 to 2011.

Commercial Car Washes

The percent who took their cars to a commercial or coin-operated car wash decreased significantly from 75% in 2008 to 70% in 2011. Although the percentage of respondents decreased their use of commercial car washes, the frequency of washing 1 to 2 times a year increased from 24% in 2008 to 38% in 2011.

Fundraiser Car Washes

There was no significant change in the use of fundraiser car washes from 2008 to 2011. The question about whether fundraiser car washes should be limited to areas with proper plumbing that conveys wash water to a treatment plant was revised from the 2008 and split into two questions. The wording also changed in 2011 to reduce bias and the word "restricted" was replaced with "limited".

2008 Question: *In some places, when school or charity groups hold car washes to raise money the dirty soapy water drains directly into local water yaws. Because of this, come people think fundraiser car washes should be restricted to certain areas with proper plumbing or drainage. Others think they don't do that much harm – plus, the money goes to good causes – so that restrictions are unnecessary. In your own opinion, should restrictions be placed on fundraiser car washes or should they be left alone?* ***Restricted Left alone DK/NA***

2011 Questions:

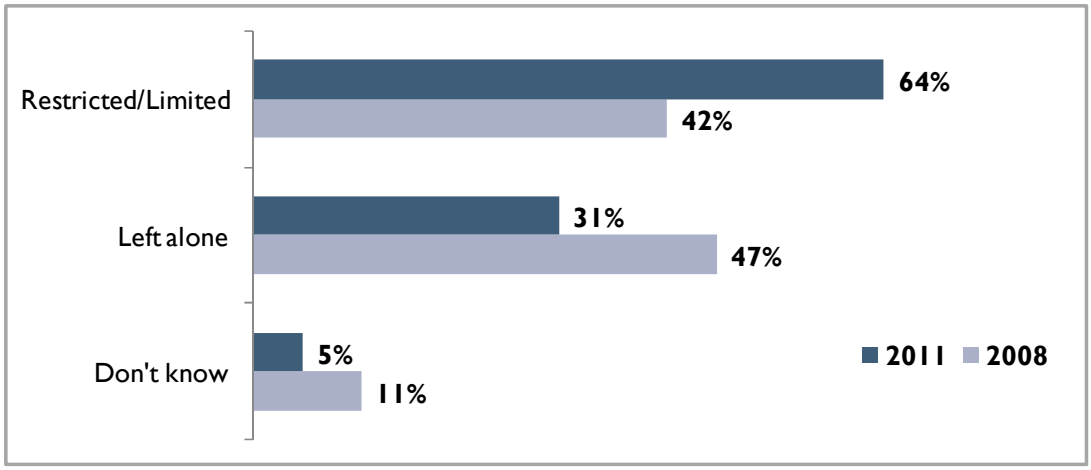
1. *You may be familiar with fundraiser carwashes that are held to raise money for school clubs, charities and other events. Were you aware that at some locations where they are held the dirty, soapy water goes into the storm drain and flows to local water bodies?* ***Yes No DK/NR***

2. Do you think that the fundraiser car washes should be limited to places that have proper plumbing so the wastewater is treated, or do you think that they should be left alone? ***Limited Left alone DK/NR***

As shown in the next chart, the attitudes towards fundraiser car washes changed significantly from the 2008 to 2011 survey. In 2008, 42% thought the fundraiser car washes should be

"restricted" to areas with proper plumbing. In 2011, the percentage supporting "limitations" on fundraiser car washes increased to 64%.

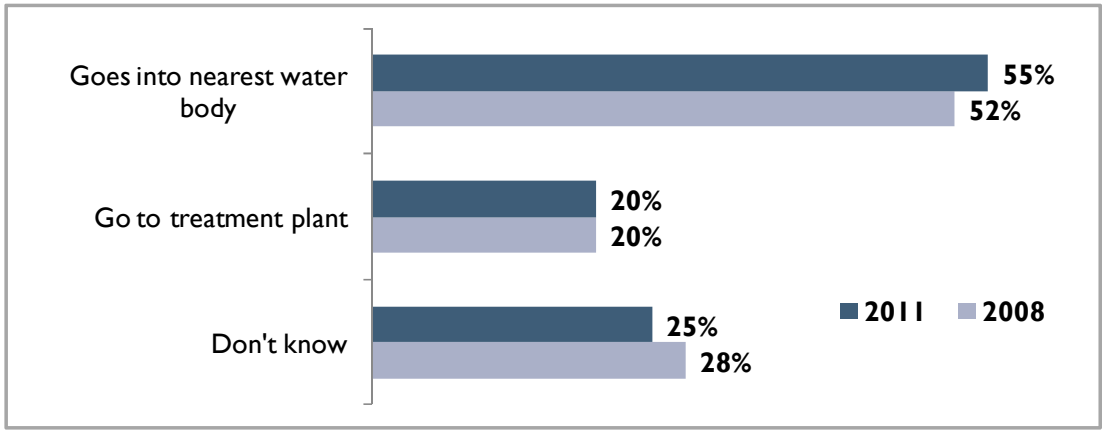
Do you think that the fundraiser car washes should be limited to places that have proper plumbing so the wastewater is treated, or do you think that they should be left alone? Base = 838 (2008), 802 (2011)



Attitudes and Awareness of Educational Outreach

There were no significant changes in the respondents' awareness that runoff is not treated before entering water bodies.

Water that runs off of streets, parking lots, roofs, and other hard surfaces drains into the storm drain system of ditches and pipes. To the best of your knowledge, what happens to that water that goes into storm drains? Base = 838 (2008), 802 (2011)



The chart on the next page shows a comparison of 2008 and 2011 survey respondents' attitudes about 7 activities and their contribution to pollution.

Respondents in the 2011 survey were **more likely** than the 2008 respondents to think:

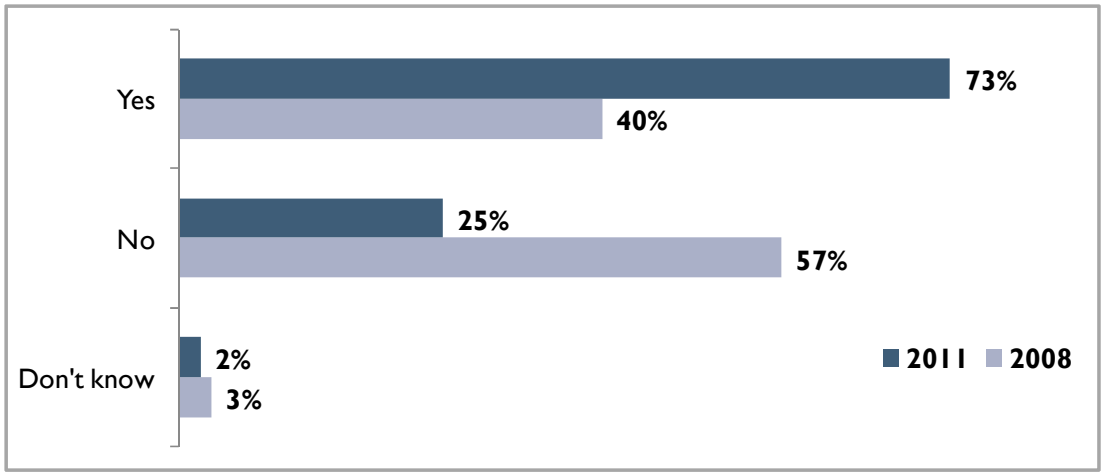
- Dumping household hazardous waste into the storm drain system is a significant contribution to pollution.
- Pesticides and fertilizers from yards make a significant contribution to pollution.
- Oil leaks from vehicles make a significant contribution to pollution.

Respondents in the 2011 survey were **less likely** to think:

- Leaking septic systems are a significant contribution to pollution.
- Erosion at construction sites are a significant contribution to pollution.
- Pet waste left on the ground does not contribute to pollution.
- Washing cars on pavement does not contribute to pollution.

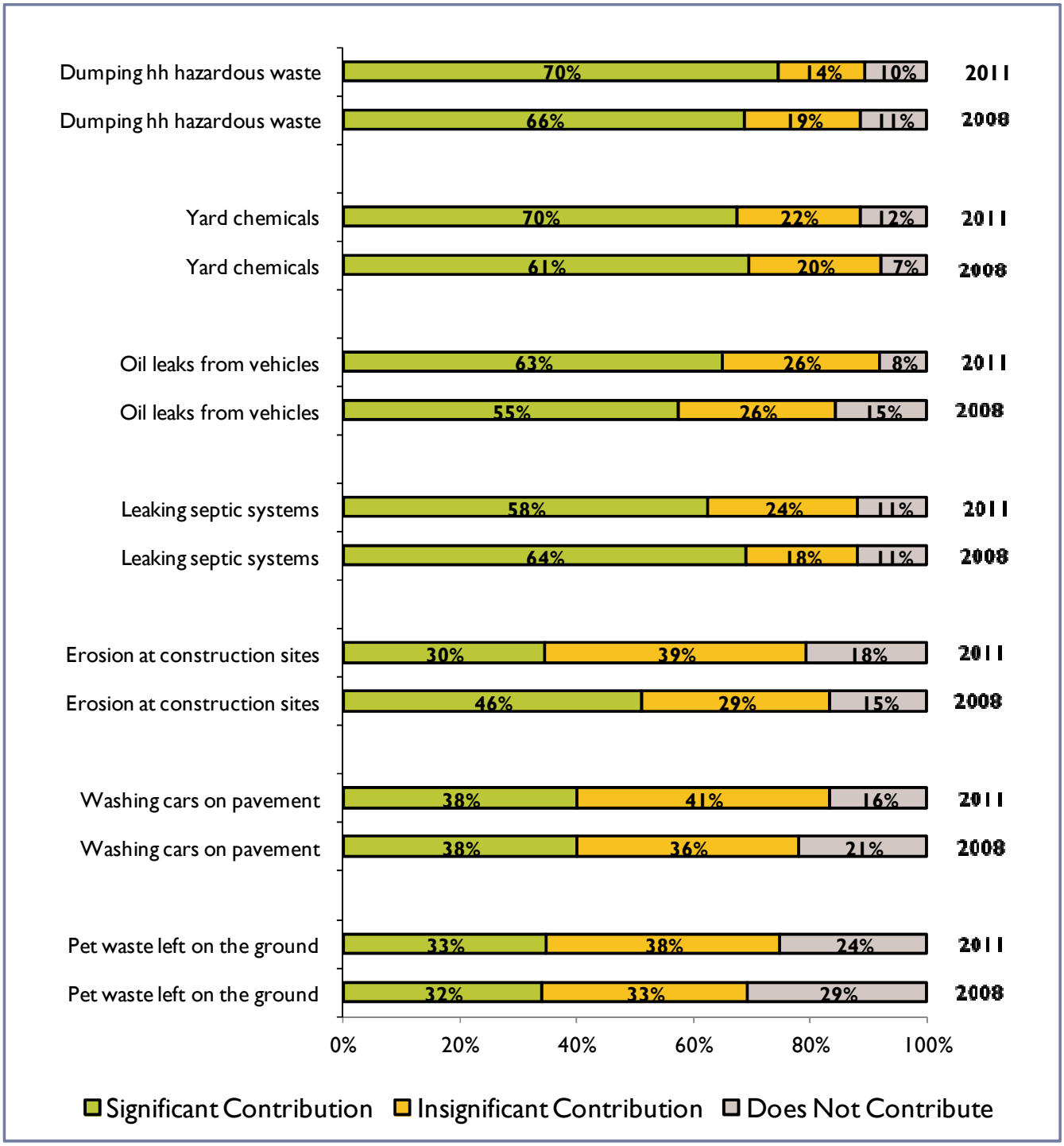
The percentage of respondents who had seen or heard about ways to help water pollution increased dramatically from 40% in 2008 to 73% in 2011.

In the last year or so, have you seen or heard anything about ways that people can help prevent water pollution? Base = 838 (2008), 802 (2011)



A comparison could not be made of what respondents had seen or heard between the 2008 and 2011 surveys because the answers could not be matched and reconciled.

Tell me whether you believe that these things from all residents in the region are a "significant contribution" to pollution in the local waterways, "may contribute an insignificant amount of pollution", or "does not contribute" to pollution. Base = 855 (2008), 802 (2011)



Are the Messages about Proper Activities Feel Good or Really Effective

Respondents in both survey years were asked about 7 different residential activities and whether they thought these practices made a difference in protecting water quality. More than half of the respondents in both years thought that 5 of the 7 practices were “very effective” in protecting water quality.

Respondents in 2008 were consistently more likely to think all 7 activities were **very effective** in protecting water quality. Fixing oil leaks was the only activity in which the 2008 survey respondents were marginally more likely to think it was very effective.

Respondents in 2011 were more likely to say the following activities were **somewhat effective** in protecting water quality”

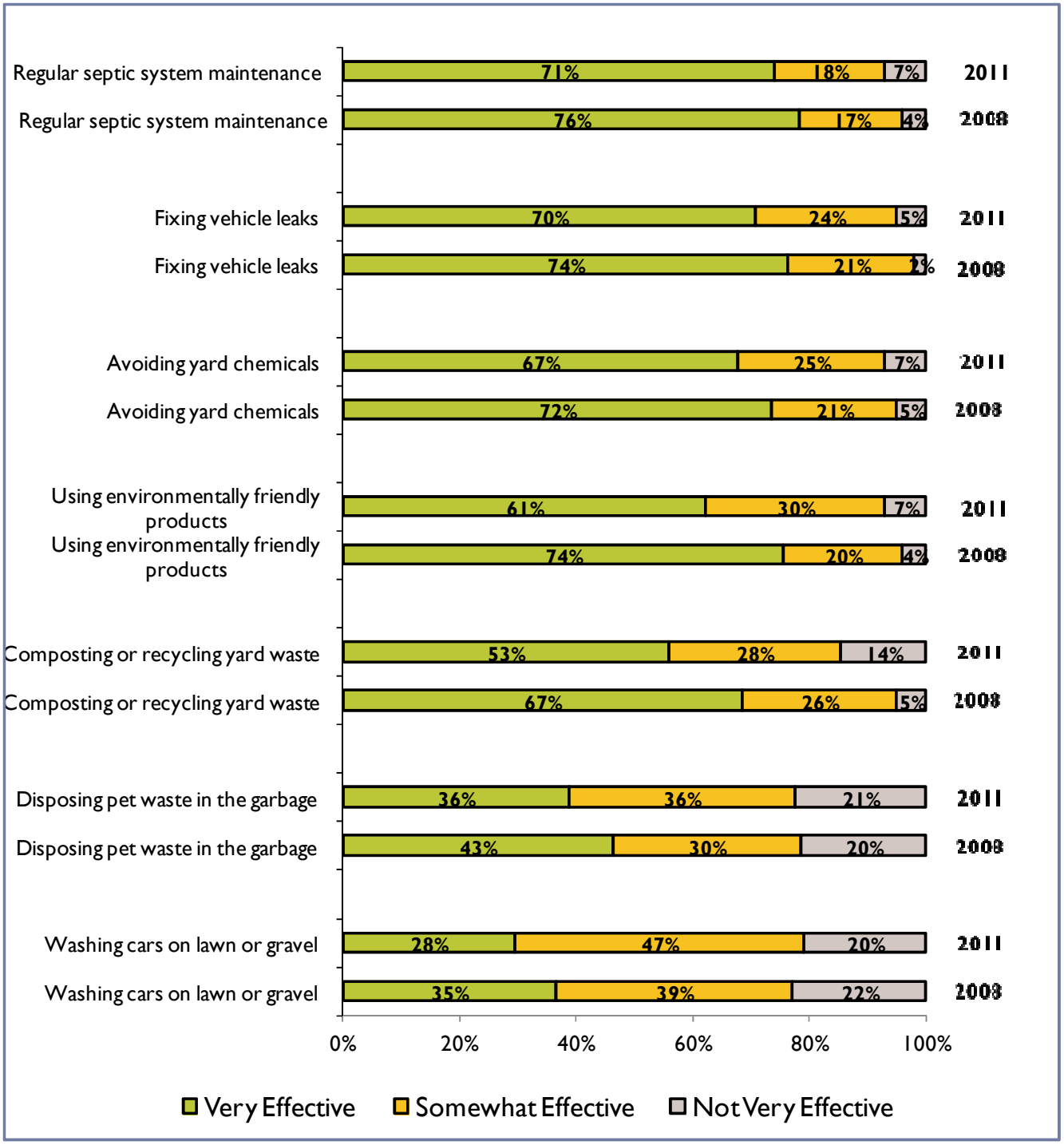
- Washing cars on grass or gravel.
- Disposing of pet waste in the garbage.
- Using environmentally friendly products.

Respondents in 2011 were more likely to say the following activities were **not very effective** in protecting water quality:

- Composting yard waste.
- Using environmentally friendly products.
- Regular septic system maintenance.
- Fixing vehicle leaks.

This is an interesting phenomenon and there appears to be no obvious explanation for the change in attitudes from 2008 to 2011. The wording of the question was identical in both surveys.

Tell me whether you personally think that these activities are Very Effective, Somewhat Effective, or Not Very Effective to protect water quality Base = 855 (2008), 802 (2011)



KPCRC Stormwater Survey
Environmental Behavior Index

Responses to key questions are categorized into 3 levels: Greens already do the behavior; Yellows are on the right track but could benefit from further education; Browns are engaged in behaviors detrimental to runoff.

Environmental Behavior Index	Response to Question & EBI Level
Avoiding chemical lawn fertilizer	Never use
	1-2x/yr
	Several times a year
Avoiding pesticides	Never use
	1-2x/yr
	Several times a year
Avoiding Round Up	Never use
	1-2x/yr
	Several times a year
Avoiding Weed & Feed	Never use
	1-2x/yr
	Several times a year
Composting yard waste	Compost at home or put in yard waste cart, transfer station, landscaper hauls
	Put in woods
	Burn, put in garbage
Avoiding pressure washing	Sweep only
	Sweep & blower, blower only, do nothing, don't know
	Pressure wash, hose down, cleaning products, other
Dog waste pickup out walking	Always pick up
	Picked up most of the time
	Left on ground most or all the time
Dog waste pickup at home	Picked up daily, weekly
	Picked every couple of weeks
	Left on ground most or all the time
Dog waste disposal	Put in the trash
	Flush down the toilet, compost pile, yard waste bin
	Bury, toss, other
Car washing – at home and commercial car washes	Commercial car wash only Wash at home + "onto gravel" or "onto grass"
	Wash at home + "down a storm drain", "down the

	street", "into a ditch", "other", "DK"
Awareness and attitudes about fundraiser car washes	Aware but limit them
	Not aware but limit them
	Do not limit them
Dealing with auto fluids	Take auto fluids to a collection facility or recycle
	Keep around the house
	Put in trash, pour down the drain, pour onto ground
Checking oil leaks	Check regularly
	Check occasionally, notice if leaks
	Don't check
Dealing with auto fluid spills	Use absorbent pad, absorbent material
	Hose it off, not do anything
General stormwater awareness	Flows into water bodies
	Don't know
	Treatment plant
Specific stormwater awareness – how daily activities contribute to pollution of local waterways – 7 attributes	Significant = 2 points Insignificant = 1 point Not/DK = 0 points
	11- 14 points
	6 – 10 points
	0 – 5 points
General stormwater awareness of outreach efforts	2 or more mentions
	1 mention
	No mentions
Awareness of STORM campaign message "Puget Sound Starts Here"	Yes
	No, DK
Awareness of spill hotline	Call Kitsap or local government, call 911
	Call other, DK
	Do nothing
Effect of daily practices at protecting water quality – 8 attributes	Very = 2 points Some = 1 point Not, DK = 0 points
	12-16 points
	7-11 points
	0-6 points

Introduction

Hello, my name is _____ with Pacific Market Research, a public opinion research firm here in Washington State. We are conducting a brief survey among 800 randomly selected residents on the Kitsap Peninsula and would like to include your household's opinions. We are trying to keep our sample in balance, so my instructions are to talk to the [MALE / FEMALE – GOAL IS 50/50] head of the household. Would that be you? IF NO, ASK TO SPEAK TO THAT PERSON AND REINTRODUCE YOURSELF. IF NOT AVAILABLE ARRANGE CALL-BACK.

Note: Open-ended questions – responses are in Caps. Close-ended questions – responses are in lower case.

Residential Information

I am going to be asking questions about yard care, vehicle maintenance, and other activities at home. Please keep in mind that there are not any "right" answers to these questions. We are looking for your genuine opinions.

1. Is your residence inside the city limits or in unincorporated Kitsap County?

UNINCORPORATED KITSAP COUNTY…**66**
BAINBRIDGE ISLAND…**9**
BREMERTON…**14**
GIG HARBOR…**3**
PORT ORCHARD…**5**
POULSBO…**4**

2. Could you tell me what type of home you live in? Is it…..

A single family home on its own lot…**87**
A duplex or multi-plex on its own lot…**5**
SKIP TO 4 An apartment or condo…**8**

3. About what size is the lot on which your home is located? Is it…

Half acre or less…**50**
One half acre to 2 acres…**25**
Larger than 2 acres…**23**
Don't know/No answer…**2**

4. Do you have your own yard?

YES…**89**
SKIP TO Q9 NO…**11**

5. Do you or someone in your household maintain the yard yourself? Or do you hire someone to take care of it? Or both?

SELF…**80**
BOTH SELF AND HIRE…**14**
HIRE SOMEONE…**4**
DK/NA…**1**

6. I am going to list some products that people commonly use to maintain their lawn and garden. For each product let me know if any of these products are used in your yard.
CHECK ALL THAT APPLY; ROTATE

Weed & Feed…**40**
Pesticides…**16**
Chemical fertilizer…**21**
Organic or slow-release fertilizer…**40**
Round-Up or similar product for getting rid of weeds…**47**
[Never]…**25**
IF YES TO ANY OF ABOVE ASK Q6.1 & 6.2

6.1 For each of the products used in your yard, about how often are they used? First, is **[INSERT PRODUCT]** used about once a week during the growing season, several times during the growing season, a couple of times a year, or once a year.

		Weekly	Several	2/Yr	1/Yr	Never
a.	Chemical fertilizer on the lawn	**0**	**4**	**11**	**6**	**79**
b.	Pesticides	**1**	**3**	**8**	**4**	**84**
c.	Weed & Feed	**1**	**6**	**16**	**15**	**61**
d.	Organic or slow-release fertilizer on the lawn	**1**	**7**	**15**	**15**	**61**
e.	Round-Up or similar product for weeds	**2**	**11**	**20**	**14**	**53**

6.2 Would you say that you use **[INSERT PRODUCT]** over most of the yard, or just on certain spots?

		All over	Spots	Never	DK/NA
f.	Chemical fertilizer on the lawn	**12**	**9**	**79**	**1**
g.	Pesticides	**2**	**14**	**84**	**1**
h.	Weed & Feed	**20**	**18**	**60**	**1**
i.	Organic or slow-release fertilizer on the lawn	**18**	**20**	**60**	**2**
j.	Round-Up or similar product for weeds	**4**	**42**	**53**	**1**

7. What does your household typically do with yard waste, like leaves, small branches and lawn clippings?
DO NOT READ

COMPOST IN THE YARD...**55**
PUT IN YARD WASTE CART FOR CURBSIDE PICKUP…**13**
PUT IN GARBAGE...**7**
TAKE TO TRANSFER STATION...**4**
BURN...**11**
PUT IN THE WOODS…**8**

LANDSCAPER/GARDENER HAULS THEM AWAY…**2**
Other…**10**
Don't know/NA…**1**

8. When you clean places like your driveway, walkways, patio or deck, do you typically….
CHECK ALL THAT APPLY; ROTATE 1st FIVE

Sweep those areas…**57**
Use a blower…**32**
Hose them down..**36**
Pressure wash them…**38**
Use a cleaning product..**6**
Other…**1**
Do nothing…**5**
Don't know/NA…**1**

Pet Waste

9. My next question is about pets. Do you have a pet dog? How many dogs are currently living in your household?
IF NO DOGS, SKIP TO Q13

None…**43**
1…**33**
2…**17**
3…**4**
4…**1**
5+…**2**

10. When your dog is out for a walk, how is the dog waste dealt with? Would you say the waste is…
ROTATE TOP/BOTTOM

Picked up every time…**51**
Picked it up most of the time…**20**
Left on the ground most of the time…**5**
Always left on the ground…**9**
Don't walk the dog…**12**
DK/NA…**2**

11. How about when your dog is at home. What is typically done with the dog waste in the yard?
IF THEY SAY THEY PICK IT UP PROMPT FOR FREQUENCY

Picked up daily…**26**
Weekly…**35**
Every couple of weeks…**9**
About once a month…**3**
Less than once a month…**1**
SKIP TO Q13 Leave it on the ground…**21**
DK/NA…**5**

12. Once the waste is picked up, how do you typically dispose of it? Do you…
ROTATE

Put it in the trash…**51**
Put it in your compost pile…**18**
Put it in the yard waste bin…**6**
Bury it…**8**
Flush down the toilet…**2**
Toss it off the grass …**6**
Other….**7**
DK/NA…**2**

Vehicle Maintenance

13. Let's talk about the vehicles at your home. When it comes to washing your vehicles, how often do you **[INSERT LIST]**? Would you say you…

ROTATE	1/MO	MO/2	1-2/Yr	Less	Never	DK/NA
a. Wash them at home **IF EVER ASK Q13.1**	**23**	**11**	**38**	**5**	**23**	**1**
b. Take them to a commercial or coin-operated car wash	**18**	**6**	**37**	**7**	**31**	**2**
c. Take them to a fundraiser car wash	**4**	**1**	**35**	**9**	**49**	**2**

13.1 When you wash your vehicles at home, where does the wash water go? Does it go…
ROTATE 1-5

Down a storm drain…**14**
Down the street…**6**
Into a ditch…**2**
Onto gravel, dirt or sand…**29**
Onto the grass or other vegetated areas…**22**
Other…**2**
DK/NA…**1**
Don't wash at home…**24**

14. When it comes to changing the motor oil, anti-freeze and other fluids in your vehicles, do you or someone in your household typically do it yourself at home, or are the vehicles taken to a service shop?
DO NOT READ

ASK Q14.1 CHANGES OIL AND/OR OTHER FLUIDS AT HOME…**19**
ASK Q14.1 COMBINATION OF CHANGING AT HOME AND SERVICE SHOP…**13**
SKIP TO Q15 TAKES CARS TO SERVICE SHOP…**67**
DK/NA…**2**

14.1 When the oil (and other fluids) is changed at home, what is typically done with the used fluids?
DO NOT READ

PUT IN THE TRASH…**1**
KEEP IT AT THE HOUSE/GARAGE…**1**
TAKE IT TO A COLLECTION FACILITY…**35**
RECYCLE…**51**

OTHER…**5**
DK/NA...**9**

15. When it comes to leaks under your vehicle, which of the following best describes you or someone in your household:
ROTATE

You make it point to check for leaks regularly…**37**
You occasionally check for leaks when you think of it…**12**
You notice a leak if there is one…**39**
You don't make a point of checking for leaks…**6**
[Don't know/NA]…**6**

16. If your vehicle leaked or spilled oil or antifreeze onto the pavement, which of the following would you be most likely to do?
ROTATE

Hose it off…**5**
Use an absorbent pad to soak it up…**20**
Put absorbent material on the spill…**52**
Probably not do anything…**13**
[Depends]…**3**
[Don't know/NA]…**8**

Attitudes & Awareness

17. Water that runs off of streets, parking lots, roofs, and other hard surfaces drains into the storm drain system of ditches and pipes. To the best of your knowledge, what happens to that water that goes into storm drains? Does that water…

Go to a treatment plant...**21**
or Go into the nearest body of water without being treated….**53**
Don't know/NA…**26**

18. [Actually / As you said], water from storm drains goes directly into the nearest body of water untreated. I am going to read you a list of some of the things that can get washed into lakes, streams and Puget Sound. As I read each one, tell me whether you believe that these things from all residents in the region are a "significant contribution" to pollution in the local waterways, "may contribute an insignificant amount of pollution", or "does not contribute" to pollution. The first one is….

ROTATE	SIGNIF	MAY	NOT	DK/NA
a. Pesticides and fertilizers from yards	**70**	**19**	**7**	**3**
b. Oil leaks from vehicles	**64**	**26**	**7**	**3**
c. Soapy water from washing cars on pavement	**39**	**38**	**17**	**5**
d. Pet waste left on the ground	**31**	**37**	**27**	**6**
e. Soil exposed at construction sites	**32**	**37**	**19**	**13**
f. Leaking septic systems	**57**	**26**	**11**	**6**
g. Dumping paint, cleaning fluids and other household hazardous waste into the storm drain system	**73**	**13**	**11**	**4**

19. In the last year or so, have you seen or heard anything about ways that people can help prevent water pollution?

Ask Q19.1 YES…**67**
SKIP TO Q20 NO…**30**
SKIP TO Q20 DK/NA..**3**

19.1 What have you heard or seen? **DO NOT READ**

RUNOFF RELATED (DON'T DUMP IN DRAINS, SPILL/LEAK CLEANUP, PROPER CAR WASHING…**25**
PROPER WASTE DISPOSAL (DOG WASTE, OIL, BATTERIES, PAINT, OTHER HOUSEHOLD HAZARDOUS WASTE)…**20**
MENTIONED DIFFERENT SOURCES (BROCHURES, DIRECT MAIL, TV, ETC.)...**26**
CARE AND MAINTENANCE OF SEPTIC SYSTEMS…**6**
HAVE NOT HEARD ANYTHING…**33**

19.2 Have you ever seen or heard the phrase "Puget Sound Starts Here"?

YES...**29**
NO…**35**
HAVE NOT HEARD ANYTHING…**33**
DK/NA…**2**

20. If you saw what looked like a spill of suspicious substance in a local water body, what would you do about it, if anything?
DO NOT READ

CALL KITSAP COUNTY (ALSO KNOWN AS KITSAP 1 SPILL HOTLINE)…**12**
CALL LOCAL GOVERNMENT…**9**
CALL EPA…**13**
CALL ECOLOGY…**4**
CALL 911…**19**
WOULD PROBABLY NOT DO ANYTHING…**9**
OTHER…**19**
DK/NA…**15**

21. Some people think the things we have been mentioning are effective at protecting the water quality. Others say they are mostly for show or to make people feel good – they are not really effective at protecting water quality. As I list some of these things, tell me whether you personally think it is Very Effective, Somewhat Effective or Not Very Effective to protect water quality.

ROTATE	VERY	SOME	NOT	DK/NA
a. Composting yard waste	**53**	**28**	**14**	**5**
b. Reporting water pollution to a hotline	**68**	**24**	**6**	**3**
c. Washing cars on grass or gravel	**29**	**46**	**20**	**5**
d. Disposing of pet waste in the garbage	**35**	**35**	**24**	**5**
e. Avoiding the use of herbicides and other chemicals in the yard	**62**	**29**	**7**	**1**
f. Regular septic system maintenance	**69**	**19**	**7**	**5**
g. Using environmentally friendly cleaning products	**60**	**31**	**7**	**2**
h. Fixing vehicle leaks	**69**	**25**	**5**	**1**

22. You may be familiar with fundraiser carwashes that are held to raise money for school clubs, charities and other events. Were you aware that at some locations where they are held the dirty, soapy water goes into the storm drain and flows to local water bodies?

YES…**58**
NO…**38**
DK/NR…4

23. Do you think that the fundraiser car washes should be limited to places that have proper plumbing so the wastewater is treated, or do you think that they should be left alone?

LIMITED…**64**
LEFT ALONE…**32**
DK/NR…**5**

Demographics

The last set of questions is for statistical purposes only.

24. What is your age?

18 to35…**29**
36 to 50…**25**
51 to 64…**28**
65 +…**17**

25. What is the last year of schooling you completed?

HIGH SCHOOL…**22**
BUSINESS/VOCATIONAL SCHOOL…**3**
SOME COLLEGE…**23**
COLLEGE DEGREE…**31**
GRADUATE/PROFESSIONAL SCHOOL…**21**

26. Do you own or rent the place in which you live?

OWN…**77**
RENT…**21**
LIVE WITH FRIENDS OR RELATIVES…**1**

27. Which of the following best describes your household?

Single with no children at home…**15**
Couple with no children at home…**35**
Single with children at home…**8**
Couple with children at home…**42**

28. Finally, which of these categories best describes your approximate household income, before taxes, for last year?

$25,000 or less…**8**
$25 to 50,000…**22**
$50 to 75,000…**24**
Over $75,000…**36**
No answer…**11**

Thank you very much for participating in this study.

29. Gender

Male…**45**
Female….**55**