



Public Outreach Study

December 17, 2009



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Research Methodology

1,200 telephone interviews were conducted with a random selection of adult residents of Jefferson County, KY.

Analysis Group	# of Interviews	Max Margin of Error at 95% Confidence
Males	516	+/- 4.3 percentage points
Females	684	+/- 3.7 percentage points
Age 18-34	96	+/- 10.0 percentage points
Age 35-54	559	+/- 4.1 percentage points
Age 55 +	536	+/- 4.2 percentage points
Total Sample	1,200	+/- 2.8 percentage points

- Interviews averaged 12 minutes in length
- Research dates: November 30, 2009 through December 7, 2009
- Survey data is weighted to actual demographic distribution of population.

Demographic Profile

	Total
Males	47%
Females	53%
Average Age	45.9
% 4-year College Degree	39%
Average HH Income	\$63,900

Base: All respondents

About This Presentation

Parts of the survey asked respondents to indicate their level of agreement or disagreement to a series of statements (some of the statements being true, and some being false). This presentation of the survey data will focus on the percentage of the adult population with “incorrect” knowledge – the percentage that future communication efforts will need to reach and educate.

For “true” statements, the incorrect responses are those who responded **3 or lower** on the five-point scale shown below, plus the “Don’t Know” responses.

For the “false” statements, the incorrect responses are those who responded **3 or higher** on the five-point scale shown below, plus the “Don’t Know” responses.

	True Statements	False Statements
5 – Completely Agree		✓
4		✓
3	✓	✓
2	✓	
1 – Completely Disagree	✓	
Don’t Know	✓	✓

Correct Answer

Incorrect Answer

Attitudes About Stormwater Pollution

Q. How much do you agree or disagree that...?

	Total	Males	Females	Age 18-34	Age 35-54	Age 55 +
<u>Stormwater that flows into streams, drains, or ditches negatively affects stream water quality (TRUE)</u>						
• Rated 1 – Completely Disagree	9%	10%	9%	7%	10%	11%
• Rated 2	8%	10%	6%	9%	8%	6%
• Rated 3	24%	28%	20%	36%	22%	16%
• Don't Know	1%	1%	1%	2%	1%	1%
<i>Sub-total Incorrect</i>	42%	50%	35%	55%	40%	34%
<u>Stormwater may be polluted from lawn or yard chemicals (TRUE)</u>						
• Rated 1 – Completely Disagree	6%	9%	3%	7%	3%	8%
• Rated 2	7%	11%	3%	12%	6%	4%
• Rated 3	17%	20%	15%	18%	18%	16%
• Don't Know	+	-	1%	-	-	1%
<i>Sub-total Incorrect</i>	30%	40%	21%	37%	27%	28%

Base: All respondents

+ indicates a response of less than 0.5%

Significantly higher levels of incorrect responses are highlighted in **RED**.

Attitudes About Stormwater Pollution

Q. How much do you agree or disagree that...?

	Total	Males	Females	Age 18-34	Age 35-54	Age 55 +
<u>Stormwater may be polluted from sediment, petroleum or untreated sewage (TRUE)</u>						
• Rated 1 – Completely Disagree	4%	4%	4%	2%	4%	6%
• Rated 2	7%	8%	6%	8%	7%	6%
• Rated 3	15%	18%	12%	15%	18%	11%
• Don't Know	1%	2%	+	2%	+	1%
<i>Sub-total Incorrect</i>	26%	32%	22%	27%	29%	24%
<u>Stormwater may be polluted from litter (TRUE)</u>						
• Rated 1 – Completely Disagree	5%	8%	4%	3%	6%	7%
• Rated 2	7%	10%	3%	8%	5%	8%
• Rated 3	16%	18%	14%	18%	15%	16%
• Don't Know	+	+	+	-	-	1%
<i>Sub-total Incorrect</i>	29%	36%	22%	29%	26%	32%

Base: All respondents

+ indicates a response of less than 0.5%

Significantly higher levels of incorrect responses are highlighted in **RED**.

Hard Surfaces and Stormwater

Q. How much do you agree or disagree that...?

	Total	Males	Females	Age 18-34	Age 35-54	Age 55 +
<u>Hard surfaces like concrete and rooftops reduce the amount of water and pollutants that flow into storm drains and ditches (FALSE)</u>						
• Rated 5 – Completely Agree	13%	12%	13%	14%	10%	16%
• Rated 4	11%	10%	12%	13%	9%	10%
• Rated 3	32%	24%	39%	35%	35%	27%
• Don't Know	3%	2%	3%	2%	1%	5%
<i>Sub-total Incorrect</i>	58%	48%	67%	64%	55%	58%

Base: All respondents

+ indicates a response of less than 0.5%

Significantly higher levels of incorrect responses are highlighted in **RED**.

Impact of Pet Waste

Q. How much do you agree or disagree that...?

	Total	Males	Females	Age 18-34	Age 35-54	Age 55 +
<u>Leaving pet waste on the ground can pollute creeks and streams when it rains (TRUE)</u>						
• Rated 1 – Completely Disagree	14%	19%	10%	12%	15%	14%
• Rated 2	11%	16%	7%	7%	16%	10%
• Rated 3	23%	26%	21%	27%	25%	19%
• Don't Know	1%	1%	1%	2%	1%	1%
<i>Sub-total Incorrect</i>	50%	63%	39%	48%	57%	44%
<u>Stormwater may be polluted from pet waste (TRUE)</u>						
• Rated 1 – Completely Disagree	12%	17%	8%	11%	13%	12%
• Rated 2	12%	14%	9%	6%	15%	11%
• Rated 3	23%	25%	21%	22%	26%	20%
• Don't Know	1%	2%	+	2%	+	1%
<i>Sub-total Incorrect</i>	48%	59%	38%	41%	54%	45%

Base: All respondents

+ indicates a response of less than 0.5%

Significantly higher levels of incorrect responses are highlighted in **RED**.

Impact of Pet Waste

Q. How much do you agree or disagree that...?

	Total	Males	Females	Age 18-34	Age 35-54	Age 55 +
<u>Leaving pet waste on the ground has no impact on public health</u> (FALSE)						
• Rated 5 – Completely Agree	15%	12%	17%	9%	13%	21%
• Rated 4	12%	11%	13%	14%	12%	9%
• Rated 3	19%	24%	15%	20%	20%	17%
• Don't Know	+	+	+	-	+	1%
<i>Sub-total Incorrect</i>	46%	47%	45%	44%	46%	47%

Base: All respondents

+ indicates a response of less than 0.5%

Significantly higher levels of incorrect responses are highlighted in **RED**.

Impact of Pet Waste

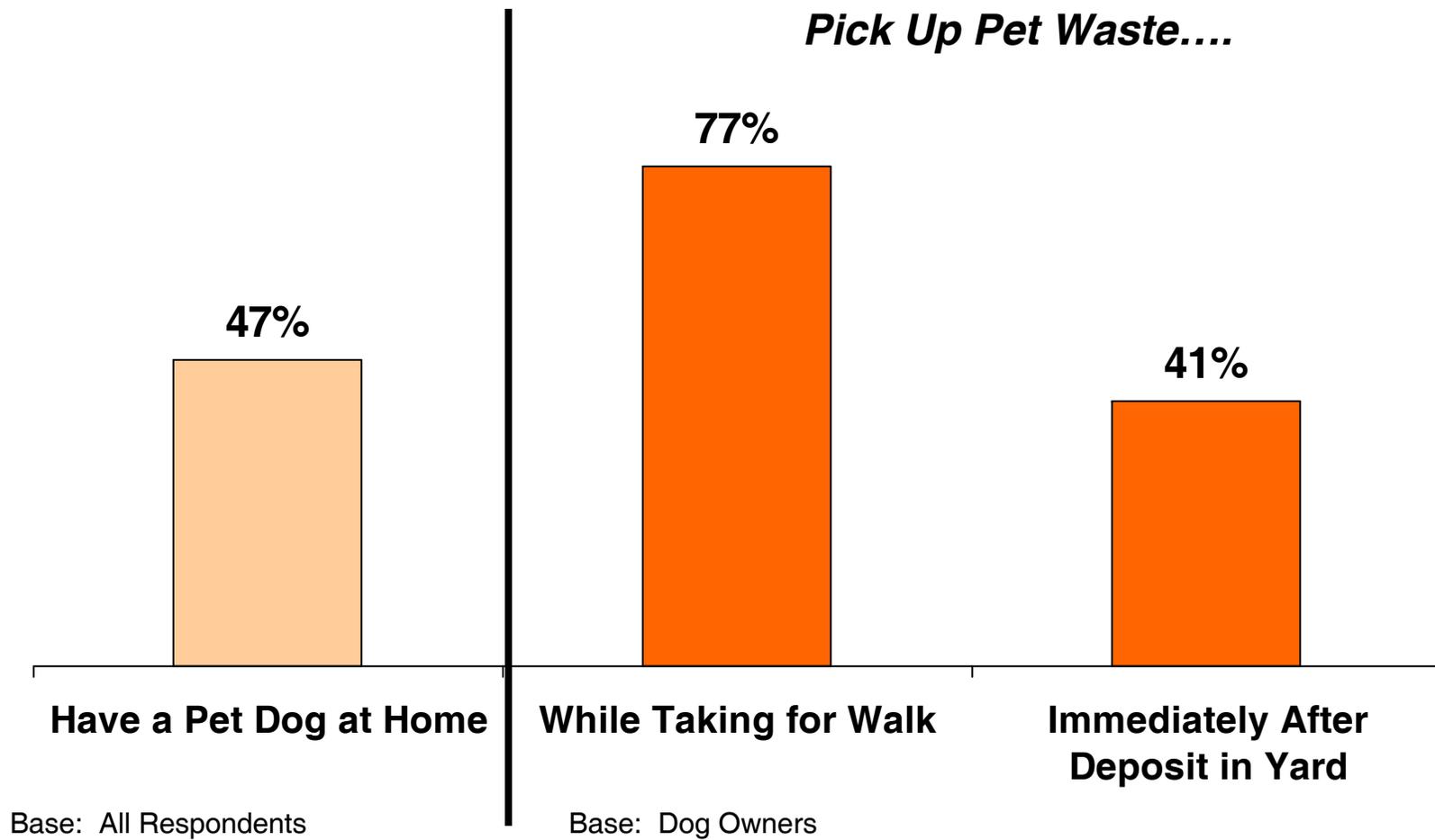
Q. How much do you agree or disagree that...?

	Total	Dog Owners	Non-Owners
<u>Leaving pet waste on the ground can pollute creeks and streams when it rains (TRUE)</u>			
• Disagree (Rated 1/2)	25%	30%	22%
• Neutral/Don't Know	25%	24%	25%
<i>Sub-total Incorrect</i>	50%	54%	47%
<u>Stormwater may be polluted from pet waste (TRUE)</u>			
• Disagree (Rated 1/2)	24%	26%	22%
• Neutral/Don't Know	24%	23%	24%
<i>Sub-total Incorrect</i>	48%	50%	46%
<u>Leaving pet waste on the ground has no impact on public health (FALSE)</u>			
• Agree (Rated 5/4)	26%	28%	25%
• Neutral/Don't Know	20%	19%	20%
<i>Sub-total Incorrect</i>	46%	46%	46%

Those who own pet dogs are no more likely to be knowledgeable about the potential impact of pet waste on water quality than are those who do not have pet dogs.

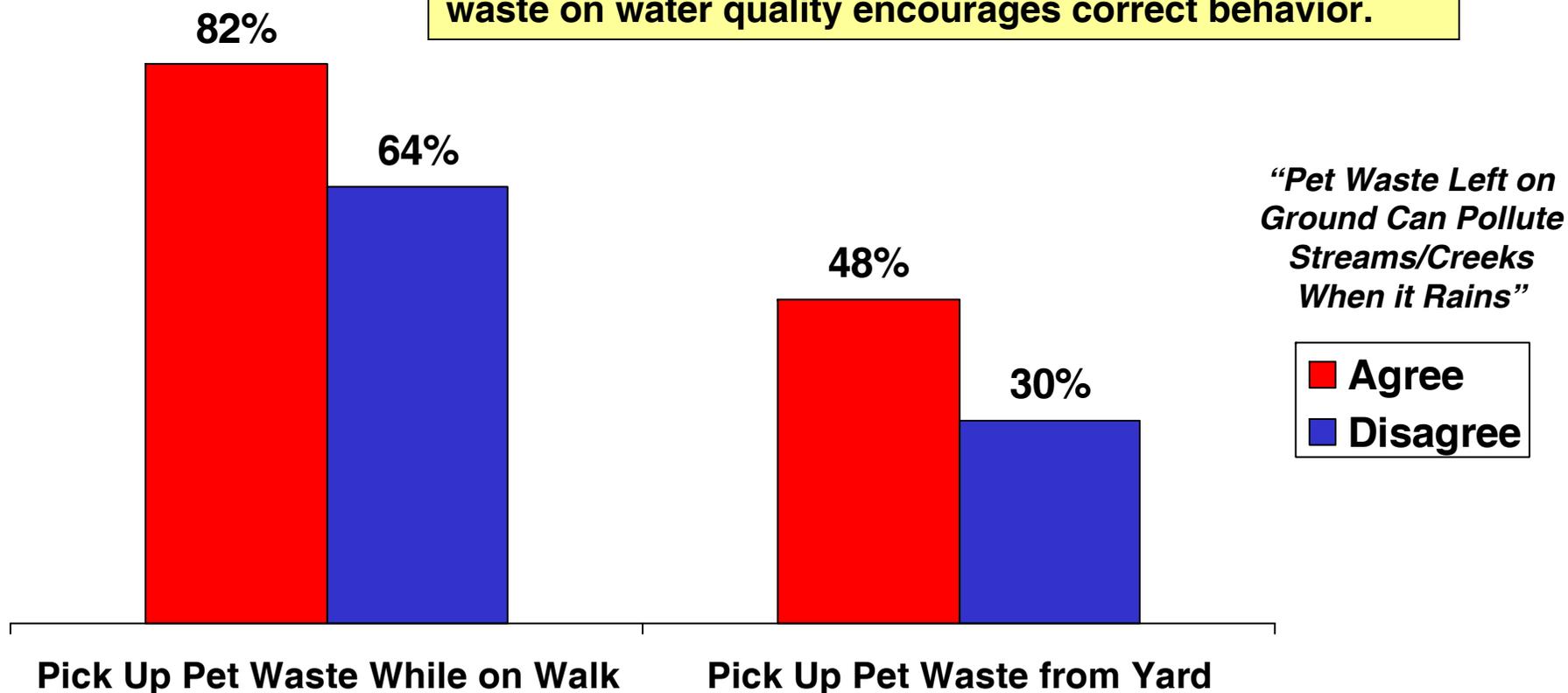
Base: All respondents

Dog Ownership and Pet Waste



Impact of Awareness on Dog Owners' Behavior

Among pet dog owners, awareness of the impact of pet waste on water quality encourages correct behavior.



Base: Dog Owners

Lawn Chemicals

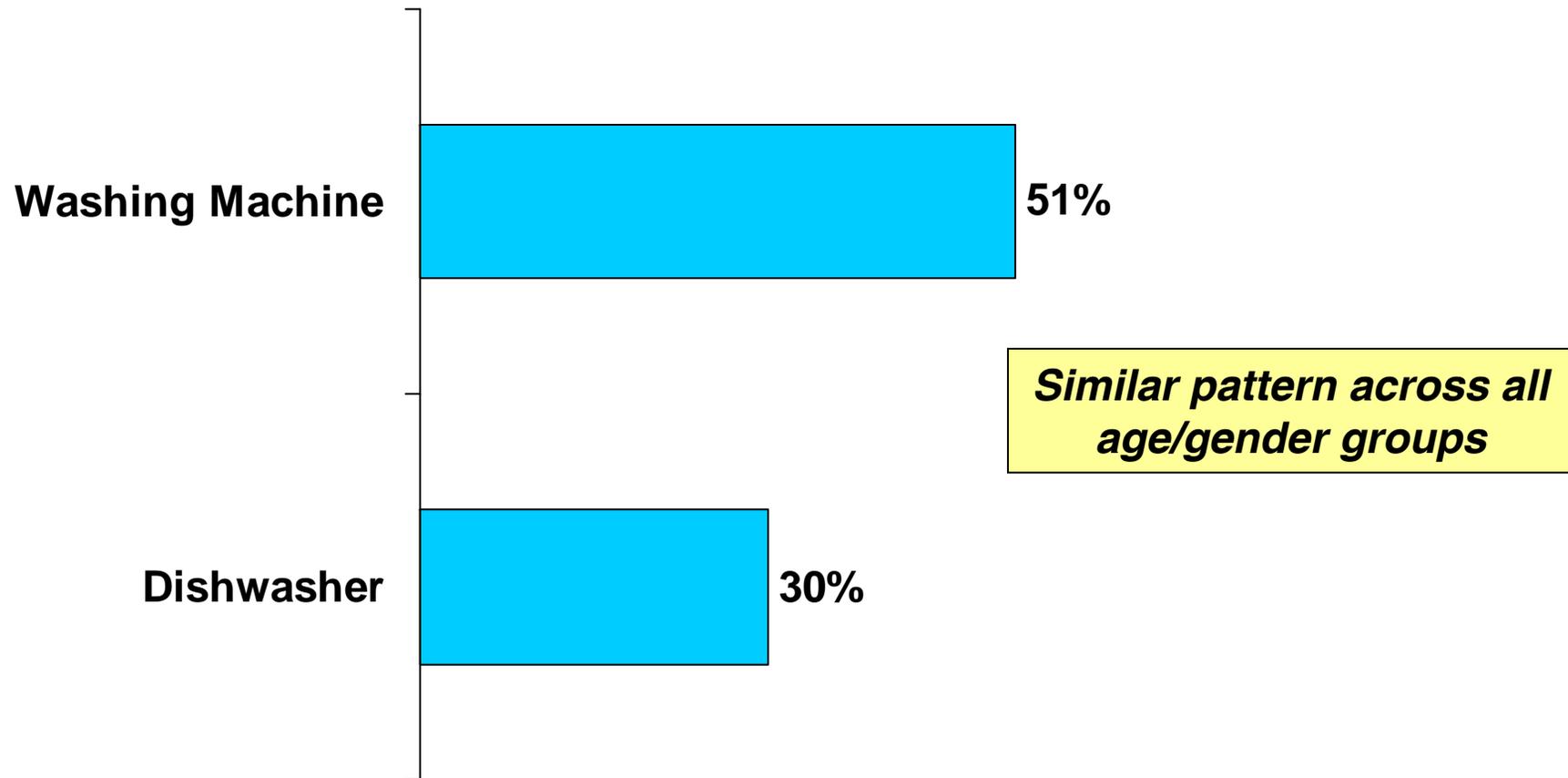
	Total	Males	Females	Age 18-34	Age 35-54	Age 55 +
Use Lawn Chemicals on Yard	41%	49%	35%	28%	47%	46%
<u>Typically Apply Lawn Chemicals...</u>						
• Before a rainstorm	23%	23%	24%	21%	24%	24%
• Immediately after a rainstorm	4%	6%	2%	6%	3%	4%
• At least 48 hours after a rain	19%	19%	19%	12%	24%	18%
• Rain not a consideration	47%	46%	50%	51%	47%	46%
• Don't know/No answer	6%	7%	5%	10%	2%	8%

Base: All respondents / Those who use lawn chemicals

Significantly lower levels of use highlighted in **BLUE**.

Appliance Use During Rainstorms

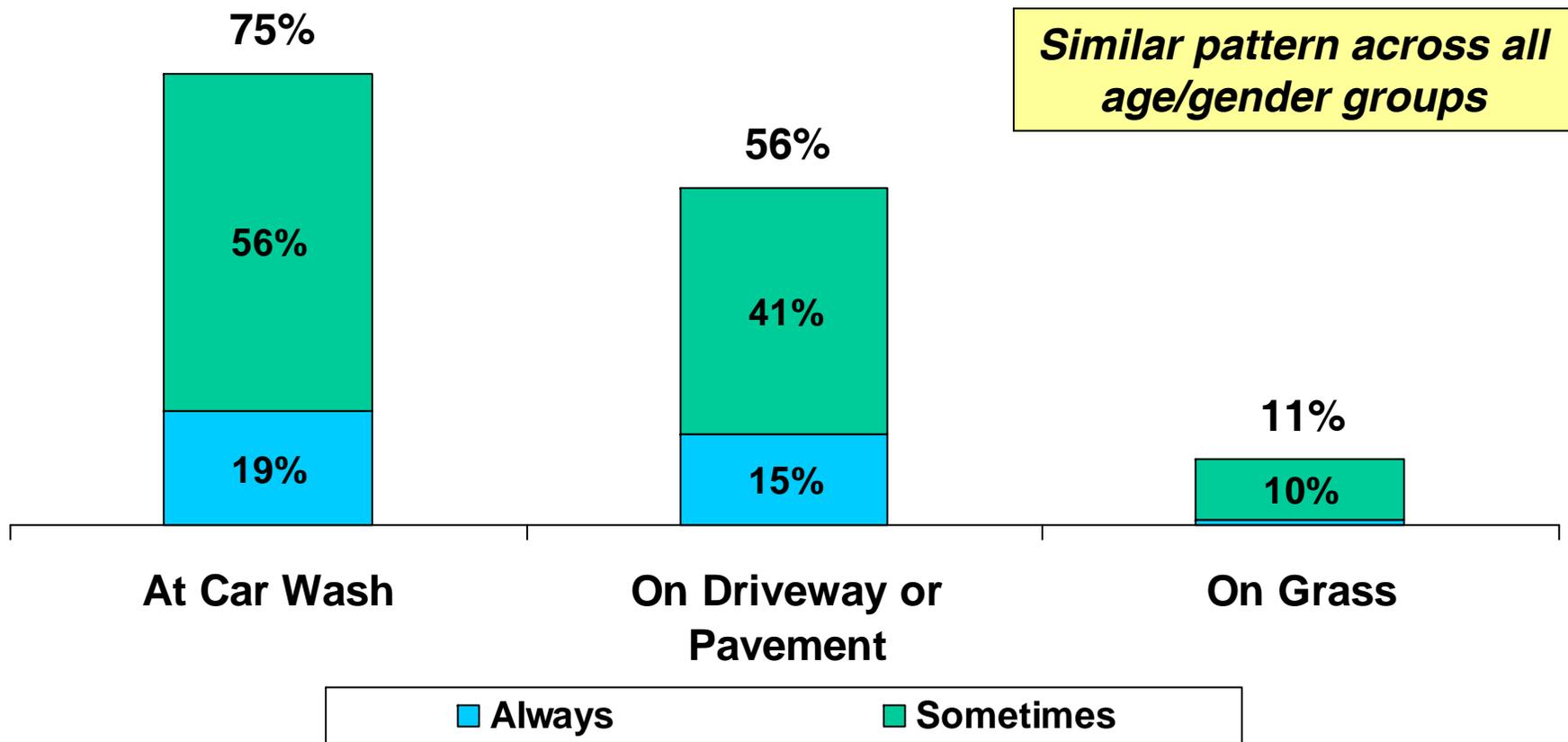
Q. Do you run your ___ during a rainstorm?



Base: All Respondents

Car Washing Habits

Q. How often do you wash your car at a car wash? On the driveway or pavement? On grass?



Base: All Respondents

Destination of Polluted Stormwater

Q. How much do you agree or disagree that...?

	Total	Males	Females	Age 18-34	Age 35-54	Age 55 +
<u>Pollution picked up by storm water flows to a sewage treatment plant</u>						
(FALSE)						
• Rated 5 – Completely Agree	36%	31%	41%	37%	33%	40%
• Rated 4	18%	16%	19%	15%	20%	16%
• Rated 3	28%	28%	28%	36%	27%	22%
• Don't Know	2%	1%	2%	2%	1%	3%
<i>Sub-total Incorrect</i>	83%	76%	89%	89%	81%	81%
<u>Pollution picked up by storm water flows to local creeks or streams</u>						
(TRUE)						
• Rated 1 – Completely Disagree	4%	5%	3%	3%	3%	6%
• Rated 2	4%	7%	2%	6%	3%	4%
• Rated 3	17%	21%	14%	26%	15%	12%
• Don't Know	+	1%	+	1%	+	+
<i>Sub-total Incorrect</i>	25%	33%	19%	36%	20%	22%

Base: All respondents

+ indicates a response of less than 0.5%

Significantly higher levels of incorrect responses are highlighted in **RED**.

Disposal of Paints and Household Cleaners

Q. How often do you dispose of paints or household cleaners by...?

	Total	Males	Females	Age 18-34	Age 35-54	Age 55 +
<u>Taking them to a chemical drop off</u>						
• Always	31%	30%	32%	15%	36%	39%
• Sometimes	25%	30%	20%	18%	28%	25%
• Never	44%	40%	48%	67%	36%	36%
<u>Putting them in the trash</u>						
• Always	15%	16%	15%	22%	14%	11%
• Sometimes	29%	30%	28%	25%	33%	28%
• Never	56%	54%	57%	53%	53%	61%
<u>Running them down a sink drain</u>						
• Always	4%	2%	6%	8%	3%	2%
• Sometimes	14%	15%	13%	20%	15%	9%
• Never	82%	83%	81%	72%	82%	89%

Base: All respondents Significantly higher levels of incorrect responses are highlighted in **RED**.

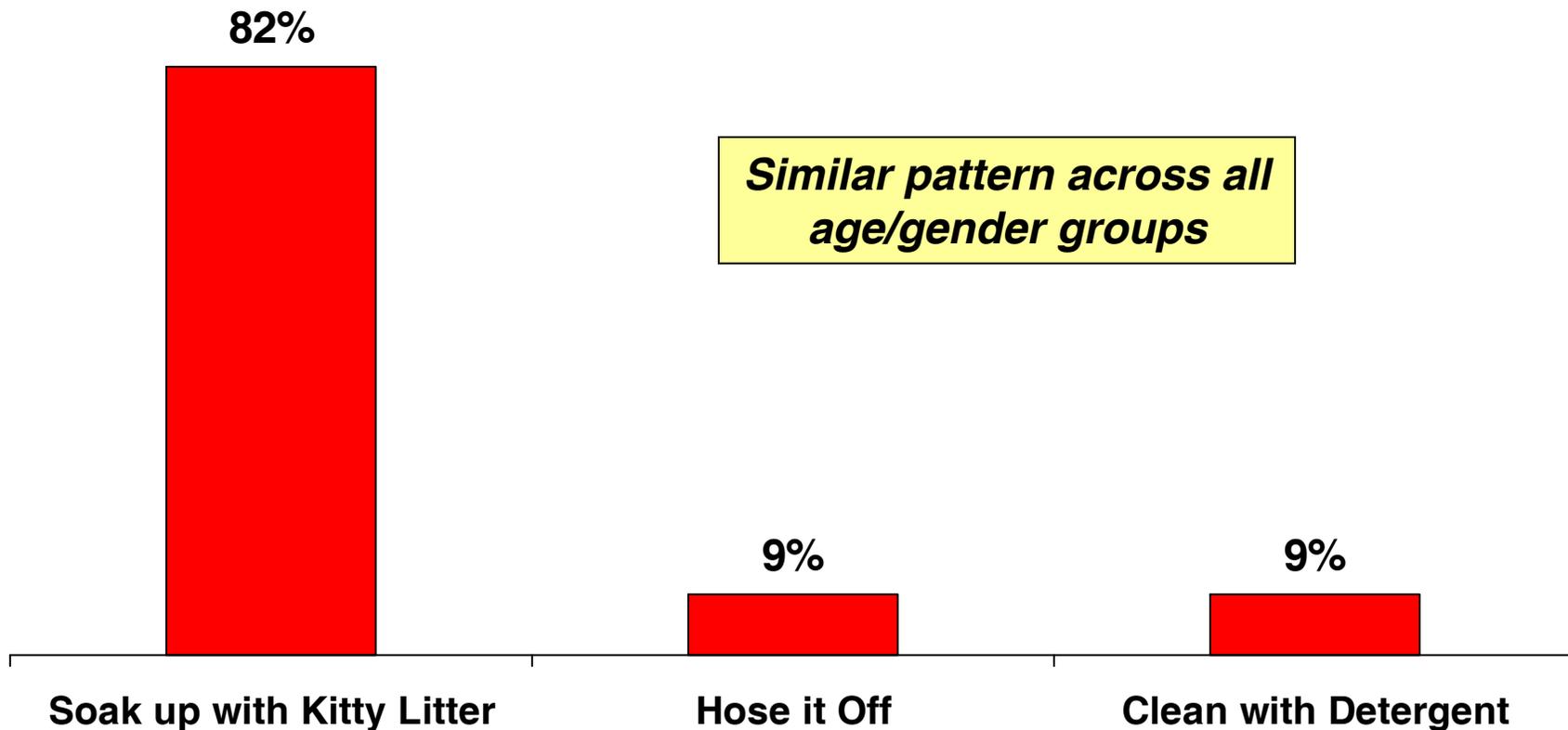
Disposing of Fats, Oils and Grease

Q. How often do you dispose of fats, oils, and grease by...?

	Total	Males	Females	Age 18-34	Age 35-54	Age 55 +
<u>Scraping them off into the trash</u>						
• Always	44%	37%	50%	37%	48%	46%
• Sometimes	41%	46%	37%	45%	41%	38%
• Never	15%	17%	13%	17%	12%	6%
<u>Running hot water/dish soap and running them down the drain</u>						
• Always	7%	6%	8%	10%	7%	4%
• Sometimes	34%	39%	29%	39%	37%	27%
• Never	59%	55%	63%	50%	56%	70%
<u>Flushing them down the toilet</u>						
• Always	2%	3%	2%	7%	1%	1%
• Sometimes	8%	7%	8%	8%	8%	7%
• Never	90%	90%	90%	85%	91%	92%

Base: All respondents

Best Way to Clean Oils, Chemicals or Gasoline that Spills Outdoors



Base: All Respondents

Awareness of Ways to Reduce Water Run-Off

Q. How much do you agree or disagree that you can reduce the amount of water that flows into creeks or streams by...?

	Total	Males	Females	Age 18-34	Age 35-54	Age 55 +
<u>Capturing and Storing Stormwater (TRUE)</u>						
• Rated 1 – Completely Disagree	10%	11%	10%	15%	7%	11%
• Rated 2	7%	10%	5%	10%	6%	7%
• Rated 3	25%	25%	26%	35%	23%	20%
• Don't Know	1%	1%	1%	2%	+	2%
<i>Sub-total Incorrect</i>	44%	47%	42%	62%	36%	39%
<u>Redirecting stormwater to grassy areas (TRUE)</u>						
• Rated 1 – Completely Disagree	9%	9%	8%	17%	5%	7%
• Rated 2	6%	9%	3%	8%	5%	4%
• Rated 3	24%	21%	26%	31%	22%	20%
• Don't Know	2%	3%	1%	3%	+	2%
<i>Sub-total Incorrect</i>	40%	42%	38%	59%	32%	33%

Base: All respondents

+ indicates a response of less than 0.5%

Significantly higher levels of incorrect responses are highlighted in **RED**.

Awareness of Ways to Reduce Water Run-Off

Q. How much do you agree or disagree that you can reduce the amount of water that flows into creeks or streams by...?

	Total	Males	Females	Age 18-34	Age 35-54	Age 55 +
Changing your landscaping (TRUE)						
• Rated 1 – Completely Disagree	9%	12%	7%	11%	7%	11%
• Rated 2	8%	9%	7%	14%	6%	5%
• Rated 3	20%	21%	19%	25%	18%	19%
• Don't Know	1%	2%	1%	2%	+	2%
<i>Sub-total Incorrect</i>	39%	44%	34%	52%	31%	38%

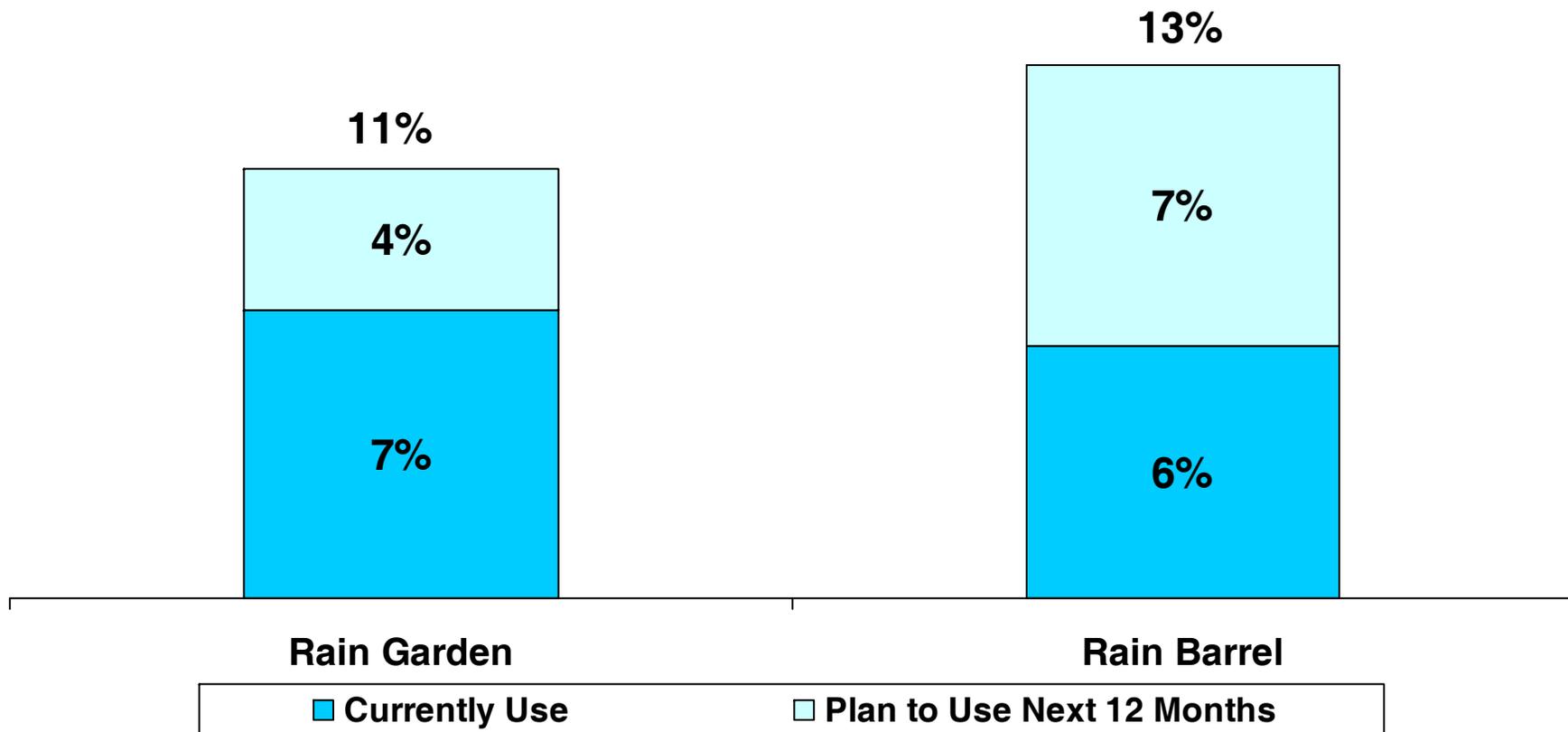
Base: All respondents

+ indicates a response of less than 0.5%

Significantly higher levels of incorrect responses are highlighted in **RED**.

Use of Rain Gardens and Rain Barrels

Similar pattern across all age/gender groups



Base: All Respondents

Awareness of Uses of Water Barrels

Q. How much do you agree or disagree that rain barrels can collect stormwater from...?

	Total	Males	Females	Age 18-34	Age 35-54	Age 55 +
<u>Your Yard (FALSE)</u>						
• Rated 5 – Completely Agree	27%	25%	29%	29%	27%	27%
• Rated 4	10%	11%	9%	11%	11%	7%
• Rated 3	21%	16%	25%	25%	21%	17%
• Don't Know	1%	1%	2%	-	1%	3%
<i>Sub-total Incorrect</i>	59%	53%	65%	65%	60%	54%
<u>Your Driveway (FALSE)</u>						
• Rated 5 – Completely Agree	19%	17%	21%	22%	17%	5%
• Rated 4	7%	8%	6%	10%	7%	20%
• Rated 3	22%	17%	26%	25%	24%	18%
• Don't Know	1%	1%	1%	-	2%	2%
<i>Sub-total Incorrect</i>	49%	43%	55%	57%	50%	44%

Base: All respondents

+ indicates a response of less than 0.5%

Significantly higher levels of incorrect responses are highlighted in **RED**.

Awareness of Uses of Water Barrels

Q. How much do you agree or disagree that rain barrels can collect stormwater from...?

	Total	Males	Females	Age 18-34	Age 35-54	Age 55 +
<u>Your Roof (TRUE)</u>						
• Rated 1 – Completely Disagree	9%	10%	9%	18%	4%	9%
• Rated 2	3%	4%	3%	6%	2%	3%
• Rated 3	13%	11%	15%	19%	13%	10%
• Don't Know	1%	+	1%	-	+	1%
<i>Sub-total Incorrect</i>	26%	25%	27%	43%	19%	23%

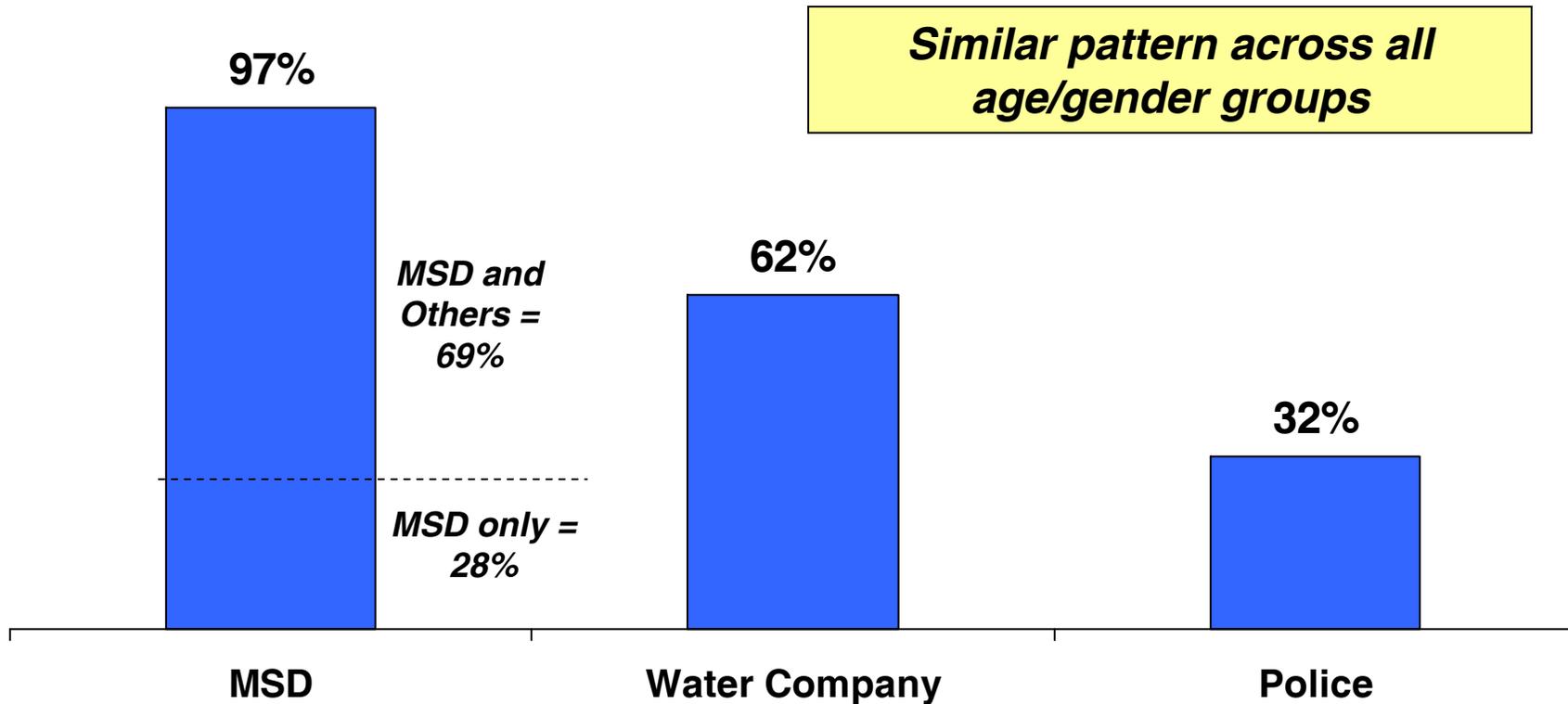
Base: All respondents

+ indicates a response of less than 0.5%

Significantly higher levels of incorrect responses are highlighted in **RED**.

Who to Contact to Report Violations

Q. To report the draining or dumping of pollutants into storm drains or ditches, should you contact...?



Base: All Respondents

Materials that Wash Off Vehicles

Q. How much do you agree or disagree that materials that wash off of vehicles onto roads and driveways...?

	Total	Males	Females	Age 18-34	Age 35-54	Age 55 +
<u>Have no effect on stream water quality (FALSE)</u>						
• Rated 5 – Completely Agree	11%	11%	12%	12%	8%	15%
• Rated 4	8%	10%	7%	12%	6%	8%
• Rated 3	20%	22%	19%	22%	20%	20%
• Don't Know	1%	1%	1%	2%	+	1%
<i>Sub-total Incorrect</i>	41%	43%	39%	48%	34%	43%
<u>Are cleaned before reaching creeks or streams (FALSE)</u>						
• Rated 5 – Completely Agree	9%	9%	10%	8%	7%	12%
• Rated 4	9%	10%	8%	15%	7%	6%
• Rated 3	22%	24%	20%	20%	22%	22%
• Don't Know	+	+	1%	-	-	1%
<i>Sub-total Incorrect</i>	40%	43%	38%	43%	37%	42%

Base: All respondents

+ indicates a response of less than 0.5%

Significantly higher levels of incorrect responses are highlighted in **RED**.

Materials that Wash Off Vehicles

Q. How much do you agree or disagree that materials that wash off of vehicles onto roads and driveways...?

	Total	Males	Females	Age 18-34	Age 35-54	Age 55 +
<u>End up in creeks or streams (TRUE)</u>						
• Rated 1 – Completely Disagree	6%	5%	6%	5%	5%	7%
• Rated 2	10%	14%	6%	18%	8%	6%
• Rated 3	20%	22%	18%	23%	19%	20%
• Don't Know	1%	1%	+	2%	+	1%
<i>Sub-total Incorrect</i>	37%	44%	31%	48%	32%	33%

Base: All respondents

+ indicates a response of less than 0.5%

Significantly higher levels of incorrect responses are highlighted in **RED**.

Excess Pesticides, Weed Killers and Yard Chemicals

Q. How much do you agree or disagree that excess pesticides, weed killers and other lawn chemicals...?

	Total	Males	Females	Age 18-34	Age 35-54	Age 55 +
<u>Soak into the ground (FALSE)</u>						
• Rated 5 – Completely Agree	40%	34%	45%	34%	39%	47%
• Rated 4	20%	25%	16%	20%	25%	15%
• Rated 3	26%	29%	24%	28%	25%	25%
• Don't Know	+	+	+	-	-	1%
<i>Sub-total Incorrect</i>	86%	88%	85%	72%	88%	87%
<u>Remain in the Yard (TRUE)</u>						
• Rated 1 – Completely Disagree	17%	14%	19%	14%	17%	20%
• Rated 2	16%	16%	15%	23%	13%	13%
• Rated 3	31%	34%	28%	26%	36%	28%
• Don't Know	+	1%	+	-	-	1%
<i>Sub-total Incorrect</i>	64%	65%	63%	63%	66%	62%

Base: All respondents

+ indicates a response of less than 0.5%

Excess Pesticides, Weed Killers and Yard Chemicals

Q. How much do you agree or disagree that excess pesticides, weed killers and other lawn chemicals...?

	Total	Males	Females	Age 18-34	Age 35-54	Age 55 +
<u>Are carried away with stormwater into drains and ditches (TRUE)</u>						
• Rated 1 – Completely Disagree	5%	6%	4%	6%	3%	5%
• Rated 2	8%	12%	4%	11%	7%	7%
• Rated 3	20%	23%	17%	20%	21%	19%
• Don't Know	+	+	+	-	-	1%
<i>Sub-total Incorrect</i>	33%	42%	25%	36%	32%	32%

Base: All respondents

+ indicates a response of less than 0.5%

Significantly higher levels of incorrect responses are highlighted in **RED**.

Proper Placement of Roof Gutters and Downspouts

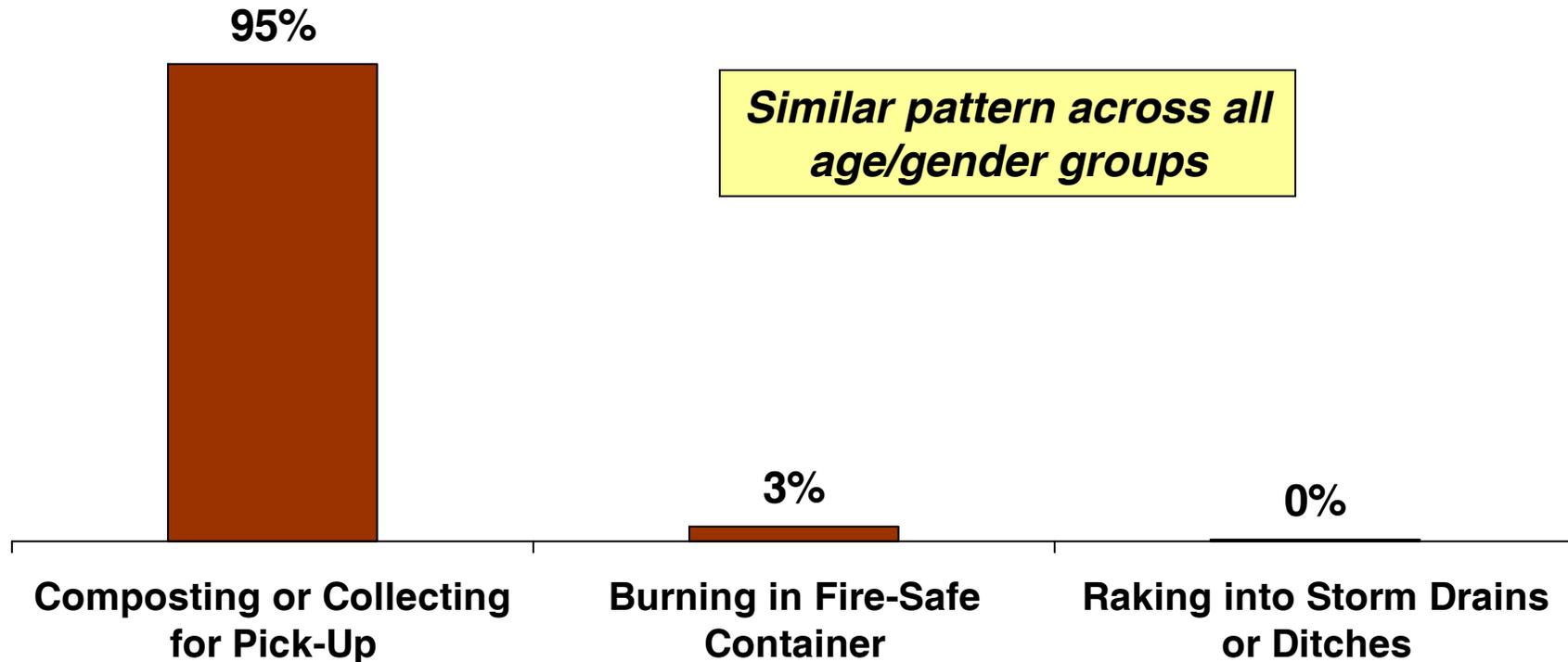
Q. In your opinion, should roof gutters and downspouts drain...?

	Total	Males	Females	Age 18-34	Age 35-54	Age 55 +
Onto a paved surface where water runs off	7%	5%	10%	9%	7%	7%
Onto a lawn or garden where water can soak into the yard	63%	67%	59%	49%	69%	67%
Directly into a storm drain or ditch	12%	13%	12%	17%	12%	9%
Directly into the sewer	16%	13%	18%	22%	11%	16%
Don't know//No answer	2%	3%	1%	3%	1%	2%

Base: All respondents

Proper Disposal of Leaves and Grass Clippings

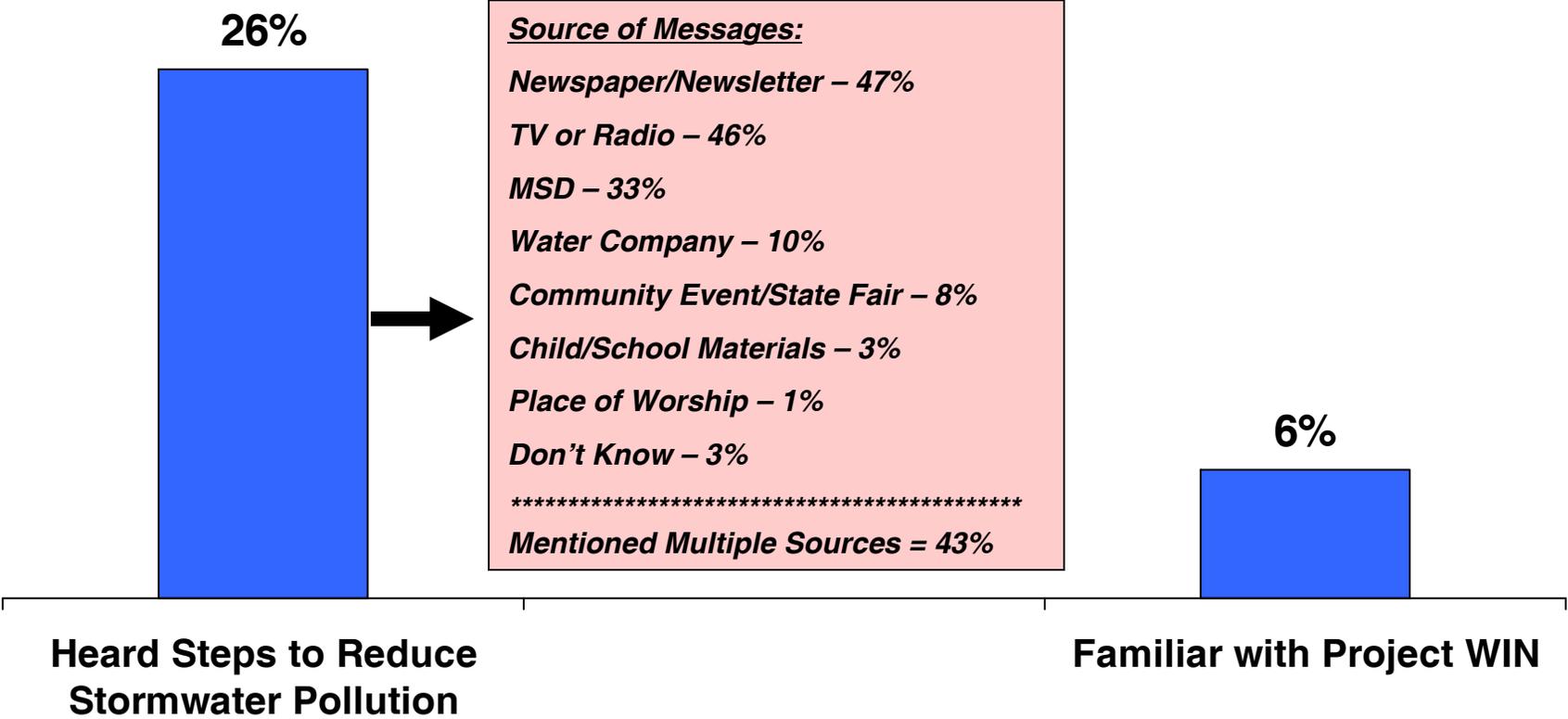
Q. In your opinion, should leaves and grass clippings be disposed of by...?



Base: All Respondents

Message Awareness

Similar pattern across all age/gender groups



Base: All Respondents/Those Aware of Message



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December 17, 2009



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