Kentucky Stormwater Survey Results

# A Telephone Survey of Residents

in MS4 Phase II Communities and Counties:

Assessing Knowledge, Attitudes, Behaviors, and Education Venues

Conducted for the Kentucky Transportation Cabinet by the University of Kentucky Survey Research Center *2016-2017*

 **KENTUCKY STORMWATER SURVEY OVERVIEW**

The Kentucky Environmental Education Council and Kentucky Transportation Cabinet designed a telephone survey as part of the Kentucky Municipal Separate Storm Sewer Systems (MS4) Phase II program. The survey, which measured knowledge, attitudes and behaviors of the general public concerning stormwater pollution issues, was administered by the University of Kentucky Survey Research Center. The purpose of the original survey was to set baselines for MS4 Phase II permittees to use in measuring the progress of their Public Education and Public Participation Minimum Control Measures over the life of the 2008-2013 permits.

The baseline survey was conducted in a total of 26 different MS4 Phase II regions between June 13, 2008 and January 31, 2009 to a random sample of 4,527 adults. The compiled survey response rate of all 26 regions was 40.2%.

A follow-up survey was conducted by UK-SRC to see if progress has been made in the permitted communities through education programs over the life of the permits. The survey, which repeated most of the measures from the baseline survey, was administered a random sample of 4,847 adults in Kentucky MS4 Phase II regulated cities and counties. The survey was conducted in a total of 26 different MS4 Phase II regions between June 4, 2016 and February 8, 2018 using a dual frame methodology with a target of including at least 25% of the interviews in each region with cell phone households. Final results for each region were weighted to reflect the estimated percentage of cell-only households in each. The survey response rate was 38.3%.

The Frequency Tables in this report show the compiled results for all 26 regions surveyed. The survey results are categorized by knowledge, attitudes, behavior, and educational venues.

Demographic information, a summary of the results, discussion, and a list of communities and counties included in the survey are provided following the survey results.

It should be noted that one of the original regions, Paducah in McCracken County, was replaced by Louisville/Jefferson County in the follow-up survey. Thus the comparison of the results between the two waves of the survey should be reviewed with this in mind. UK-SRC did conduct statistical tests (t-tests for independent samples) to determine if results from the follow-up survey were significantly different in a statistical sense from the baseline results. These tests were conducted without including the Paducah and Louisville data to make the direct comparison meaningful. To see the results of these statistical tests, please see full report with data tables.

**Results of the Kentucky Stormwater Survey**

The survey questions were developed to measure basic knowledge about stormwater runoff pollution, attitudes about water quality and stormwater pollution, behaviors that help to prevent stormwater runoff pollution and venues that are effective for educating the public about water quality.

All percentages in the narrative have been rounded to the nearest decimal for easier reading.

**STORMWATER KNOWLEDGE**

The majority of respondents had a low level of knowledge about commonly known sources of stormwater pollution. Using a rating system of 1-5, in which one is “no threat” and five is a “very serious threat”, respondents were asked to rate how serious of a threat a variety of materials were to streams, lakes, or sinkholes in their community.

Only 14% to 28% of respondents rated the following materials as a threat to our waterways, as indicated by a 4 or 5 on the rating scale: fertilizers and pesticides (28%), sewage from leaky pipes or septic tanks (23%), soil from construction sites (15%), and pet waste (14%).

A greater percentage of respondents were knowledgeable about the impact of various materials disposed of in storm drains on water quality. Eighty eight percent of respondents knew that it is harmful to water quality to dispose of oil in a storm drain, 50% knew it was harmful to dispose of soapy water from washing cars or from a washing machine, and 39% knew it was harmful to dispose of leaves or grass.

Another question to measure knowledge about the sources of stormwater pollution asked respondents to agree or disagree with the statement that most stormwater pollution comes from a few big polluters. Forty two percent of respondents incorrectly agreed with this statement. The leading source of water pollution is actually stormwater runoff pollution which all individuals and societal groups contribute to. This is a significant improvement over the baseline results however.

Respondents were asked questions which measured their knowledge about storm drain pipes and the treatment of stormwater. Only half of the respondents knew that water flushed down toilets and water that goes down storm drains does not flow into the same underground pipes. Similarly, only 51% of respondents knew that water that goes down storm drains is not typically treated at a wastewater treatment plant before it is released into the nearest river. Sixty percent knew that litter that goes down storm drains does not get filtered out before being released into streams.

In regard to knowledge about actions that protect water quality from stormwater runoff pollution, 50% knew what they personally can do to prevent pollution from going down storm drains. This is a significant improvement over 2008-09.

Seventy six percent knew that shrubs and trees left along the banks of creeks streams, and lakes protect water quality. Fifty five percent of respondents reported that they knew who to contact if they wanted to properly dispose of paint, household chemicals, or motor oil. When asked who they would call, the top five answers were city government (26%), garbage collection services (20%), county government (15%), retail store (10%), and commercial waste disposal (9%).

**STORMWATER ATTITUDES**

The attitude questions on the survey measured respondents’ concern about water quality in their local area and their willingness to pay a stormwater fee, or if the fee they pay is being used to improve water quality. Surprisingly, 62% of the respondents reported having a low level of concern about water quality and stormwater pollution in their local area, but 44% were willing to pay a stormwater fee.

In one question, respondents were asked to rate how concerned they were about the water quality in their local area by using a scale of 1-5, with 1 being “not at all concerned” and 5 being “extremely concerned”. Forty five percent reported that they were “not at all” concerned with water quality in their local area, while another 16% reported a low level of concern as indicated by the number 2 on the rating scale. Only 15% were “extremely concerned”, 9% had a high level of concern as indicated by the number 4 on the scale, and another 15% had a mid-range concern.

Another question measured the degree to which respondents thought polluted stormwater was a problem in their community, by using a scale of 1-5, with 1 being “no problem” and 5 being “a severe problem”. See Chart 3 for these survey results.

Forty four percent of respondents were willing to pay a monthly stormwater fee for the purpose of helping to solve stormwater pollution problems in their communities. Of those who were willing, the largest percentage of respondents (33%) were willing to pay a monthly fee of $1.00 - $2.00. Another 28% were willing to pay $5.00-$6.00, 18% were willing to pay $3.00-$4.00, 12% were willing to pay $9.00-$10.00, 9% were willing to pay more than $10.00, and 1% was willing to pay $7.00-$8.00.

**STORMWATER BEHAVIOR**

The survey participants were asked whether they typically compost, dispose of used motor oil, paint cans or household chemicals at a recycling center or city/county clean up event, follow label instructions when applying fertilizers and pesticides, pick up their dog waste outside, and direct downspouts from roof onto lawn, garden, or into a rain barrel. These are activities that are known to prevent stormwater runoff pollution. See Chart 4 for these survey results.

Forty six percent of those surveyed reported that they typically wash their car on a paved driveway. This is an activity that causes stormwater runoff pollution as the soapy water goes directly into storm drains where it then flows into nearby waterways.

A very small percentage of respondents reported that they had volunteered for stormwater- related activities within the past year. Six percent reported that they had participated in a stream or lake cleanup event, 2% had done stream monitoring, and 1% served on a stormwater advisory committee or had participated in storm drain stenciling.

**EDUCATION VENUES**

A series of questions was asked to determine if and how residents were learning about stormwater pollution and to identify venues that would be effective for educating residents about stormwater runoff pollution. Thirty four percent of respondents reported seeing, reading, or hearing about ways to personally prevent pollution of water that flows into storm drains, streams, rivers, lakes, or sinkholes. This is significantly larger than 2008-09. The largest percentage of respondents reported that their source of information was television (39%) followed by the local newspaper (25%). Other sources of stormwater pollution information included websites (16%), community organization newsletters (11%), radio (10%), local business (4%), road-signage/billboard (3%), child-school material (2%), City Hall (2%), storm drain stencils (2%), and an advertisement (1%) shown with previews at the movies.

Thirty four percent of respondents recalled seeing an advertisement on TV showing a man in a fish costume dumping trash into someone’s swimming pool.

Other sources of information the survey participants were asked about included stormwater slogans and material their child had shared from school. Sixteen percent of respondents reported that they had seen a stormwater logo or slogan in their community and 17% reported that their child had told them something they learned about stormwater or stormwater pollution at school.

The survey participants were asked to identify the most useful means of communication about how water quality can be improved. See Chart 5 for these results.