
King County Wastewater Treatment Division

Water Quality Survey

August 2009

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King County

Department of Natural Resources and Parks
Wastewater Treatment Division

TABLE OF CONTENTS

<u>METHODOLOGY</u>	<u>2</u>
<u>KEY FINDINGS</u>	<u>3</u>
<u>MOST IMPORTANT ENVIRONMENTAL ISSUE</u>	<u>4</u>
<u>COUNTY SERVICES</u>	<u>5</u>
<u>WATER QUALITY</u>	<u>13</u>
<u>BIOSOLIDS</u>	<u>10</u>
<u>RECLAIMED WATER</u>	<u>11</u>
<u>SEWAGE & STORMWATER</u>	<u>14</u>
<u>APPENDIX A: DEMOGRAPHICS</u>	<u>16</u>

METHODOLOGY

This report is based on the findings of a telephone survey conducted August 2-5, 2009, by EMC Research. Four hundred (400) King County residents were selected for interviewing using an RDD (Random Digit Dial) sample. This sampling method uses a computer-generated list of potential phone numbers in the desired geography (King County) and means that every working phone number in King County has an equal chance of being selected for participation. Respondents were interviewed by trained, professional telephone interviewers. Respondents were screened to make sure they were over 18 years old and lived in King County. The margin of error for the overall survey results is ± 4.9 percentage points at the 95% confidence level. This confidence level means that if the survey were repeated, it would provide the same results to within ± 4.9 percentage points 95 times out of 100.

Research Design Summary

#Interviews:	400
Interviewing Dates:	August 2-5, 2009
Margin of Error:	± 4.9 points at the 95% confidence level
Universe:	King County residents 18 years or older

Results are compared where appropriate and possible to previous water quality surveys conducted by EMC.

KEY FINDINGS

The findings in the 2009 Water Quality Survey show strong support for programs to protect and enhance water quality, and positive ratings for the job the county is doing on providing wastewater treatment. Specifically:

- ▶ A majority of residents (53%) give King County positive ratings for the job it is doing providing wastewater treatment services, a rating that improves when residents hear about wastewater's mission (59% Positive).
- ▶ Water Pollution/Water Quality has replaced global warming as the most important environmental issue facing King County. Global warming remains a top issue, but its increase in mentions seen in previous years has stalled.
- ▶ A significant majority (70%) does not recall seeing or hearing anything about wastewater services, and the majority of those that have (29%) are vague about what they have seen or heard. Awareness of "new treatment plants" and Brightwater budget and scheduling issues are the top specific mentions of what people have seen.
- ▶ Residents say ensuring builders follow construction standards and having the County monitoring water quality levels are the two most important steps King County could take to protect water quality.
- ▶ Close to half (47%) of all respondents believe the fees they pay for sewage collection and treatment are a good value, a new question for 2009.
- ▶ Use in agriculture and forestry is now the leading choice for how to use biosolids. Two thirds (65%) of residents continue to say they are likely to use biosolids in their landscaping or home gardens.
- ▶ There continues to be overwhelming support (83%) for using as much reclaimed water as possible, in industry, municipal services, and watering of fields used by adults. At the same time, there is also continuing concern about using reclaimed water for fields that children use and for growing vegetables.
- ▶ A strong majority of respondents (72%) say they would be more likely to patronize a business or purchase a product if reclaimed water had been used.
- ▶ A strong majority of respondents (72%) are willing to pay an extra dollar each month to help build a new reclaimed water distribution system.
- ▶ A strong majority of residents (74%) are willing to pay \$1.50/month on their sewer bill to reduce sewage and stormwater releases into Puget Sound. When this amount is raised to \$3/month overall support drops 15 points to (59%).

MOST IMPORTANT ENVIRONMENTAL ISSUE

Water pollution/water quality has replaced global warming as the most important environmental issue facing King County. Both water pollution/water quality and global warming have been top issues for the past three years.

- Global warming remains a top issue, ranking second overall, but its rise from the previous two years (2006 and 2007) has stopped.
- Water quality/pollution, global warming, and air pollution represent half of all issues mentioned by residents.

What do you think is the most important environmental issue facing our region today?					
Issue	2004	2005	2006	2007	2009
Water pollution/quality	24	19	17	16	19
Global Warming	6	7	16	18	16
Air pollution	30	26	17	11	15
Traffic/Transportation	--	4	11	11	9

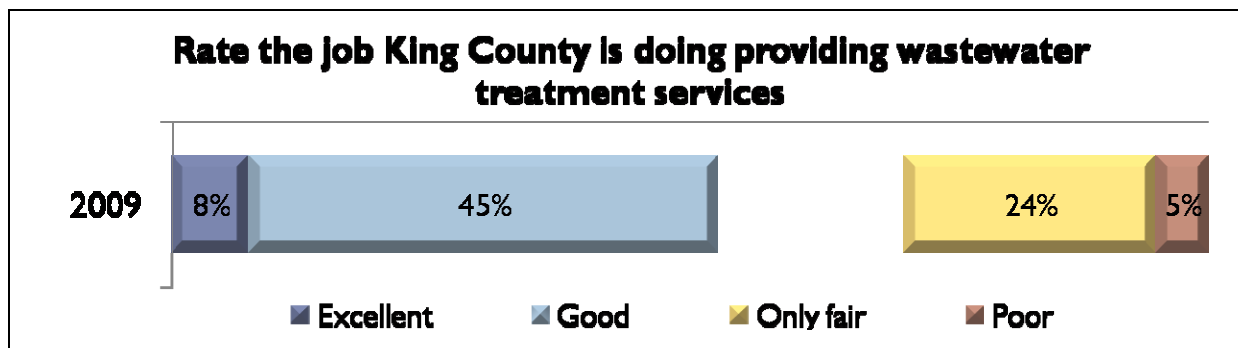
- Residents in East King County are less concerned with water quality and air pollution than other parts of the county, but are the most concerned about global warming.
- Concern about air pollution is noticeably higher in Seattle, while concern over water pollution is noticeably higher in South King County and Seattle.

What do you think is the most important environmental issue facing our region today? (by region subgroup)					
Issue	Overall		Seattle	South	East
(Water pollution/quality)	19		20	23	14
(Global Warming/Ozone)	16		16	13	19
(Air pollution)	15		21	16	9
(Traffic/Mass Transit)	9		8	6	12

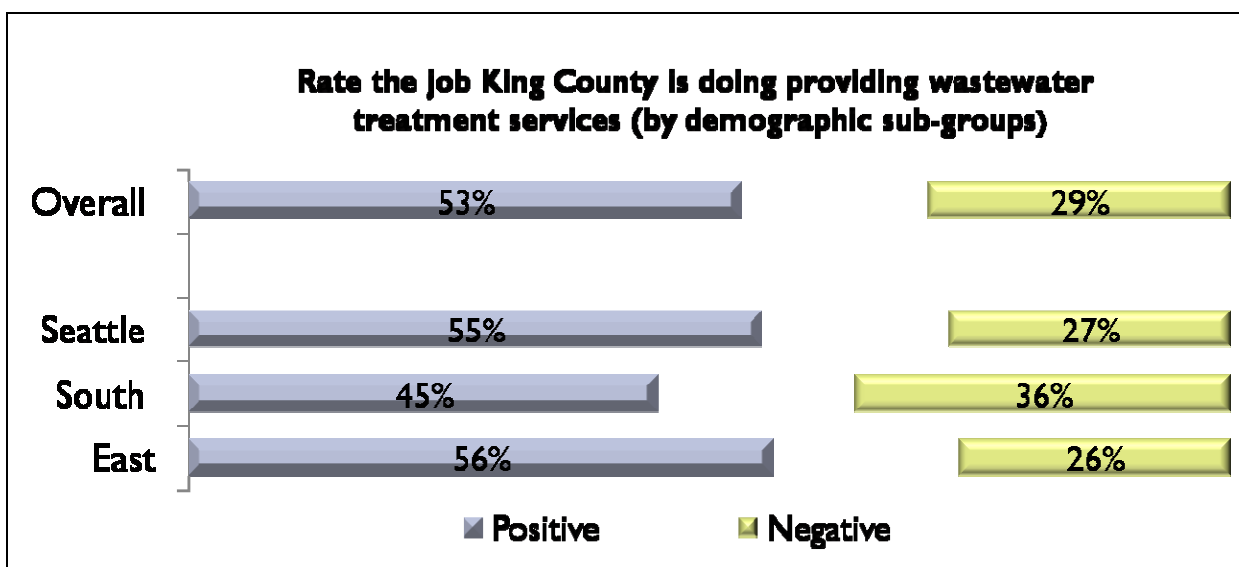
COUNTY SERVICES

Wastewater Job Ratings

Just over half (53%) of residents give a positive rating to the job King County is doing providing wastewater treatment services in an uninformed question, while only 29% give a negative rating. This is a net positive rating of 24 percentage points, and a healthy favorable to unfavorable ratio of 1.8 to 1.

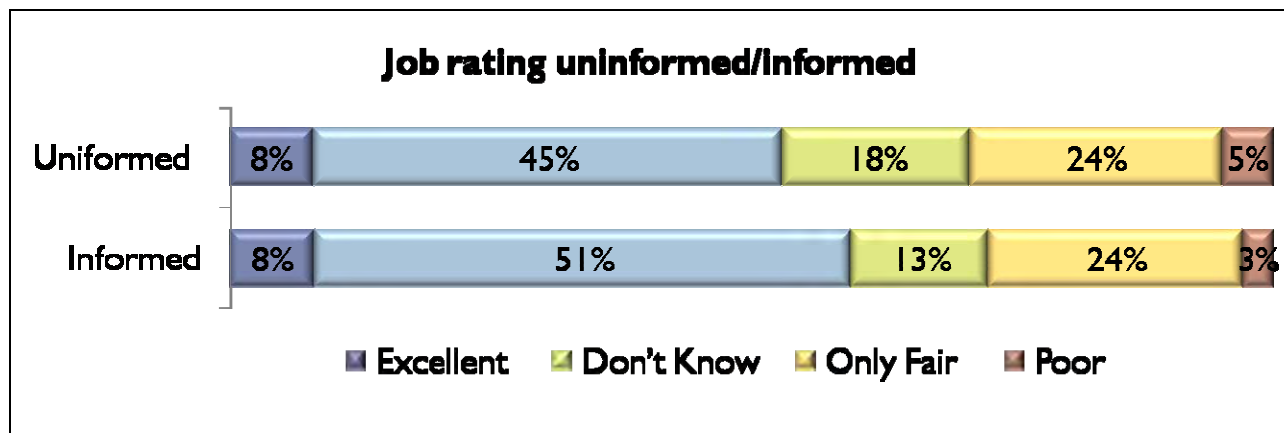


- Subgroups show some differences in ratings by geography. The ratings are noticeably lower in South King County, where less than a majority of residents give a positive rating.
- Seattle and East King County give ratings that are at least 19 percentage points more positive.



Following the uninformed job rating, residents were read the KCWTD mission statement and then again asked to provide an informed job rating on King County wastewater treatment services.

- The overall positive rating increases 6 points to (59%) while the negative rating is virtually unchanged (27%), a total net positive shift of 8 percentage points.



Perceived Value of Sewage Collection and Treatment

A little less than half (47%) of all respondents consider the fees they pay for sewage collection and treatment to be a good value, while a small minority (16%) say they are not. A significant proportion (37%) of all residents is not sure if the fees they pay are a good value or not.

Do you think the fees you pay for sewage collection and treatment are good value, Yes, No or are you not sure?	
	2009
Yes	47%
No	16%
Not Sure/Refused	37%

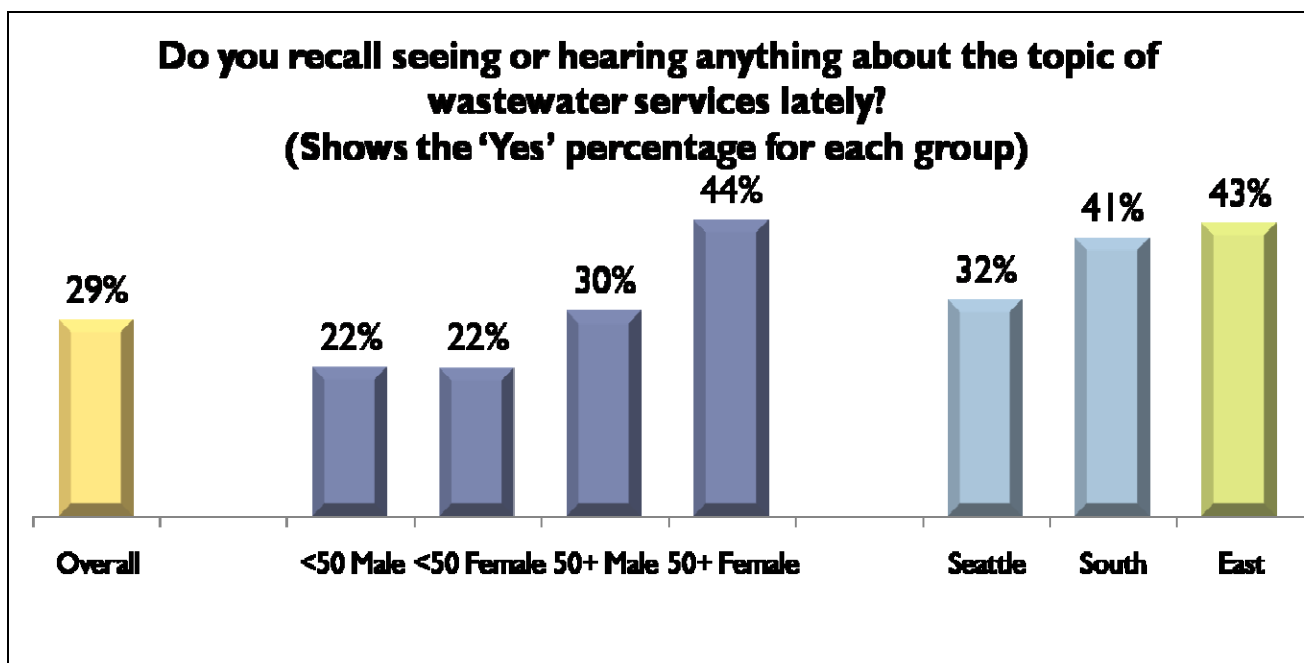
- Residents who consider the fees they pay a good value decreases to (40%) among males 50+ years of age.

Wastewater: General Awareness and Recall

Overall awareness of wastewater topics is low. Just over a quarter (29%) of residents recall seeing or hearing something about wastewater services.

Do you recall seeing or hearing anything about the topic of wastewater services lately?	
	2009
Yes	29%
No	70%
Not Sure/Refused	1%

- Women 50 and over (44%) are more likely than men 50 and over (30%) to recall seeing or hearing topics on wastewater treatment services.
- Recall of wastewater topics is higher in South King (41%) and East King (43%) than in Seattle (32%).



The actual open ended responses to the follow up question on wastewater topics suggest low specific awareness. A quarter (23%) of residents mentions the general “there is treatment for wastewater” or say they’ve heard about the issue in the media. Another 11% say they have heard about “new treatment plants being built”, but only 12% of residents mention Brightwater issues (having problems/rebuilding).

(If heard something) What have you seen or heard?	2009
Heard about it through the media (unspecified)	14
There is a treatment for the waste water	12
New treatment plants are being built	11
Brightwater is having problems/over budget/behind schedule	10
We must conserve water	10
Contaminated water (general)	9
Contaminated water is effecting our wild life	5
Flood occurred in the past	3
They are rebuilding the pipelines	2
Other	5
Don't know	18

Television and newspaper are where the majority of residents recall having heard about wastewater issues and include over half (67%) of all responses combined.

- Newsletters as a source for wastewater issues are higher in East King County.

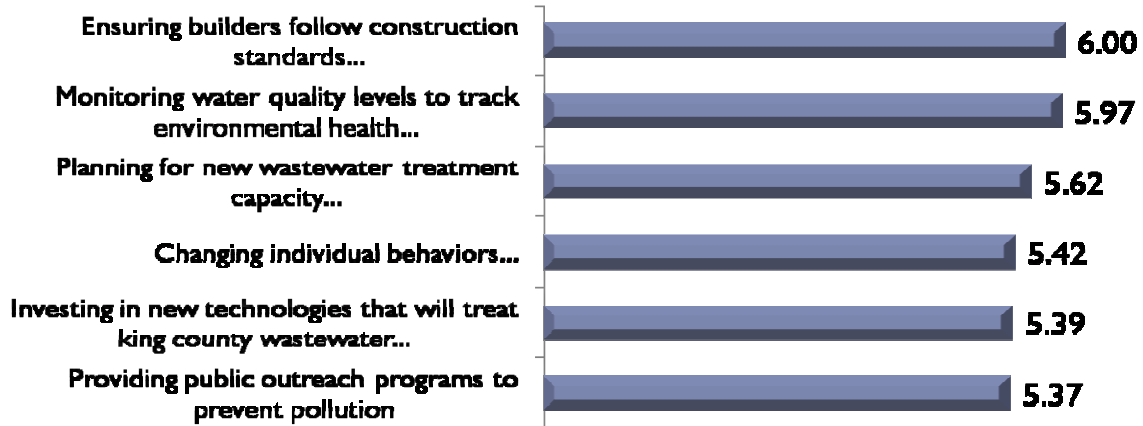
Where did you see or hear that? (Multi-response)					
	Overall		Seattle	South	East
Television	35		41	41	18
Newspaper	26		27	22	31
Online/Internet	3		2	2	7
Local sewer or water utility	2		1	5	0
Radio)	6		7	3	9
Friend or Family/Word of Mouth	7		8	5	9
Newsletter	7		6	1	17
Postcard	2		0	5	3
Rate Payer Report	1		1	2	0
Other Specify	4		3	5	5
Not Sure	6		5	9	3

Importance of Methods to Protect Water Quality

Residents were asked to rate the importance of a series of items the County could undertake to protect water quality. The two strongest items are “ensuring builders follow construction standards” (52% Highest Importance) and “monitoring water quality levels” (51% Highest Importance)

- The intensity, that is, the percentage giving the highest possible rating to both of these items is noticeably higher than any other item tested. The gap between the top two items and the rest of the items tested is significant, suggesting these two have by far the highest intensity behind them.
- Though providing public outreach programs to prevent pollution received the lowest mean score by residents, all of the items tested were deemed important (5 or above) by a majority of King County residents

I'm going to read you some things King County could do to help protect water quality in our rivers and Puget Sound. I'd like you to tell me how important each item is. Use a scale of one to seven, where one is not at all important and seven is extremely important.



- There is one interesting difference on the “changing individual behaviors” item. Residents of Seattle and East King County are just as likely as all residents to say changing individual behaviors is important. A significantly smaller proportion of South King County residents say the same; in fact, a third (31%) of South County residents says it is not important to change individual behaviors to protect water quality.

Changing individual behaviors					
	Overall		Seattle	South	East
Important	78		81	69	80
Not Important	22		19	31	20

BIOSOLIDS

Strong Majority of Residents Support Biosolids Use

The overall percentage of residents who say they are likely to use compost and or topsoil containing biosolids in home gardens or landscaping has maintained at the highest level tested (65% in 2009, 64% in 2007) —with only a third (34%) saying they are not likely.

Some biosolids are composted or mixed with other materials to create products for landscaping and home gardens. Using a scale of very likely, somewhat likely, not that likely and not at all likely, how likely are you to use compost or topsoil containing biosolids in your landscaping or home garden?				
	2005	2006	2007	2009
Very likely	26	24	27	26
Somewhat likely	34	28	37	39
Not that likely	14	12	13	14
Not at all likely	22	30	20	16
(Don't know)	3	6	3	4

- Biosolids to be used in agriculture and forestry has replaced restoring lands without vegetation as the preferred choice among residents for best use of biosolids.
- Though using biosolids in compost or topsoil for landscaping and home gardens continues to be the least preferred choice, two residents in ten (20%) still think it is the best use.

Of the following, which do you think would be the best use of biosolids?	2005	2006	2007	2009
Use for restoring land without vegetation, such as gravel pits...	26	34	32	27
Use in agriculture and forestry	35	26	30	38
Use in compost or topsoil for landscaping and home gardens	20	19	23	20
(All of the above)	9	8	6	5
(None of the above / Don't know)	8	12	10	9

RECLAIMED WATER

Overall Support for Reclaimed Water Strong

As in previous years, there is overwhelming support (83%) for reusing as much wastewater as possible. Only a small percentage (14%) of residents say KC should not make an effort to reuse this water

Changing subjects, I'd like to ask you about reclaimed water. King County collects wastewater from sewers. Some of this water will soon be sent to a new treatment plant that has the ability to treat this water to near drinking water quality. This water is called reclaimed water. Although it is not suitable for drinking, reclaimed water can be used for a variety of purposes such as irrigation and industry. In general, would you like to see King County reuse as much of this water as possible, or should King County not make an effort to reuse this water?

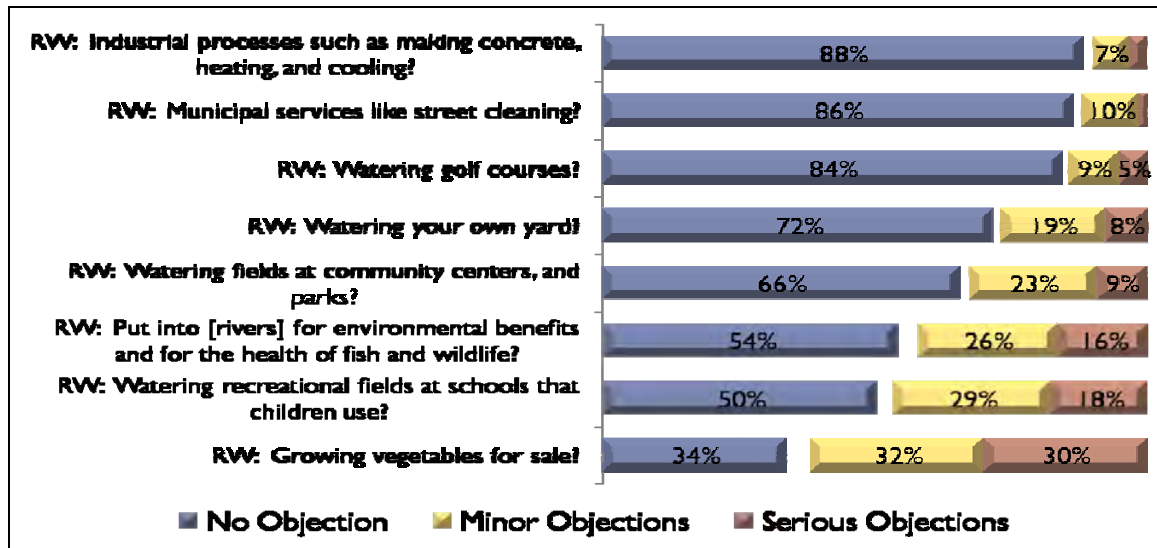
	2005	2006	2007	2009
Reuse as much of this water as possible	79	81	79	81
(Lean reuse as much as possible)	3	1	0	2
Not make an effort to reuse this water	11	11	16	14
(Lean not make an effort to reuse this water)	1	1	1	0
(Undecided/Doesn't matter)	6	6	3	2

Resident Support for Reclaimed Water Uses Tied to Personal Impact

Residents have few objections to using reclaimed water for industrial processes, municipal services, or for watering adult-use fields and landscaping. However, they continue to have objections when the suggested use might directly impact wildlife, children, or their own food source.

- Putting reclaimed water into streams (42%) and watering recreational fields used by children (47%) raises objections from close to half of all residents.

- Use of reclaimed water for growing vegetables has not statistically changed since 2007, and continues to have the highest level of objection (62%), with a third of this in the “serious objections” category.

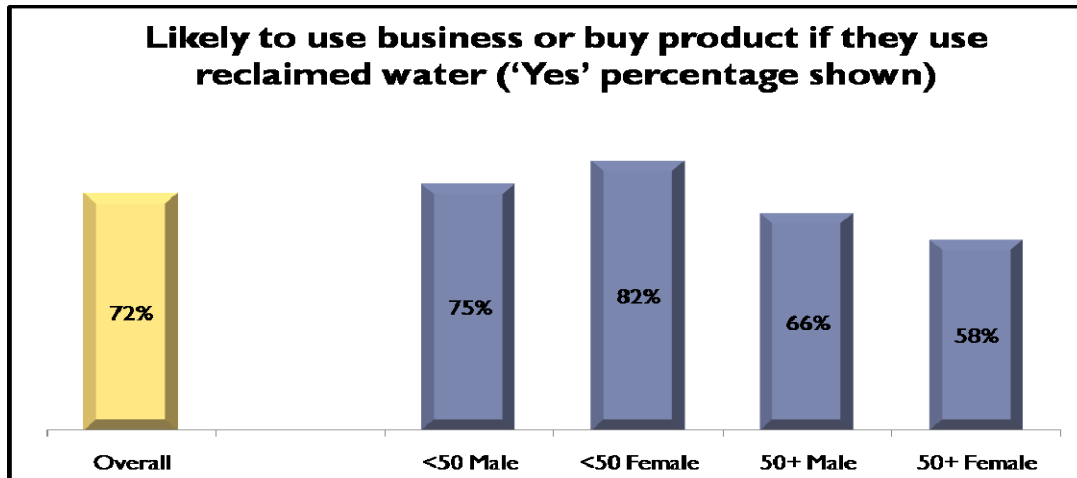


Increase in Likelihood to Use Businesses that Use Reclaimed Water

There has been a 13 point increase from 2007 in the amount of respondents who say they would be more likely to use a business or buy a product if that business or product used reclaimed water. Three quarters (72%) of residents now say they would be more likely to patronize a business or purchase a product if reclaimed water had been used.

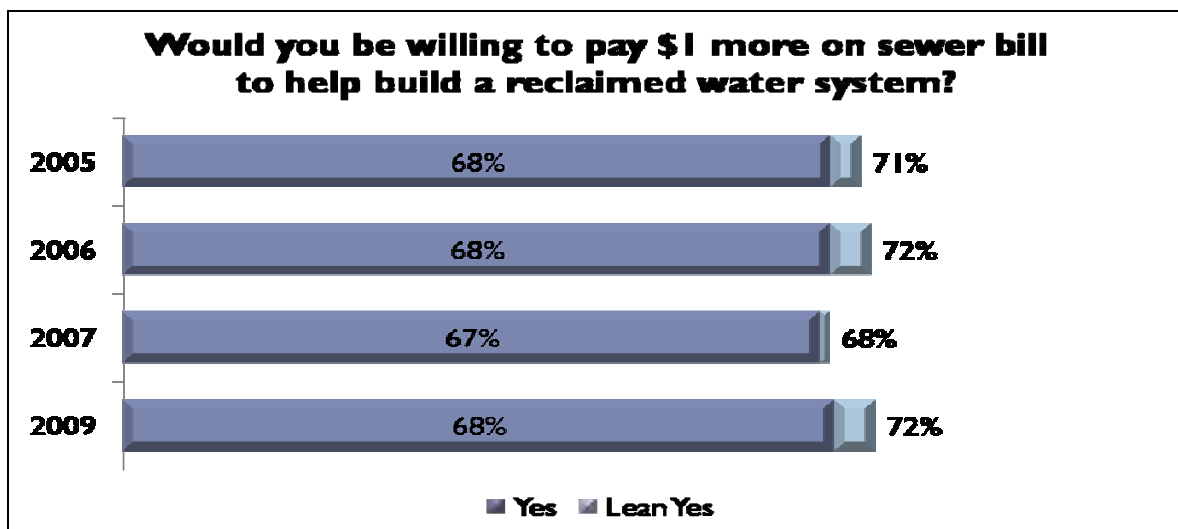
Do you think you would be more likely or less likely to use a business or buy a product if they used reclaimed water?				
	2005	2006	2007	2009
Much More Likely	23	26	17	20
Somewhat More Likely	38	33	42	52
Somewhat Less Likely	9	7	12	13
Much Less Likely	7	8	8	14
(Undecided / Don't know)	22	21	21	1

- Demographically, women over 50 years old are the group who are least likely to have their patronage or purchase influenced by the use of reclaimed water. Only (58%) say they are likely to use a business or product if reclaimed water was used.



Support for Building Reclaimed Water System with \$1 Fee Strong

As in past years, a solid majority (72%) of residents continue to say they are willing to pay one dollar more per month to help build a reclaimed water treatment and distribution system. Only a quarter (26%) of residents says they would not.



- Resident support for paying \$1.00 more per month is highest in East King County (78%), and is nearly 10 percentage points higher than either Seattle or South King County

SEWAGE AND STORMWATER

Support For Fee to Lessen Sewage Overflows Strong at \$1.50 a Month

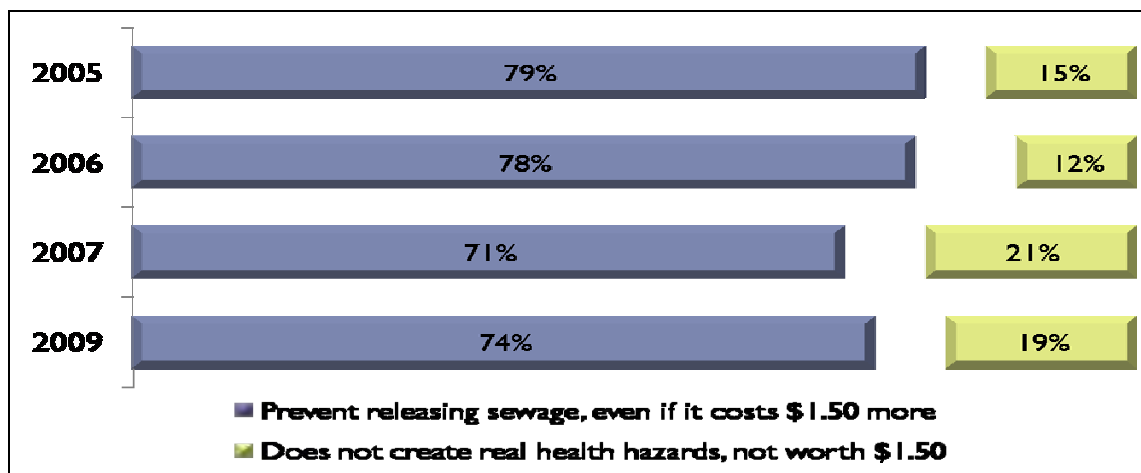
As in previous years, support for \$1.50 rate increase remains strong. Three quarters (74%) of residents say preventing the release of diluted sewage into Puget Sound rivers and lakes is worth \$1.50 more per month on their sewage bill.

In some areas of King county, sewage and stormwater travel through the same pipes. During heavy rains, this combination of sewage and stormwater can overflow into Puget Sound and other waterways because sewer pipes are full. This can happen up to 100 times per year, during our heavier storms. We will soon pay about a dollar and fifty cents more per month on our sewer bills to reduce the occurrence of these releases, but this will not eliminate the problem. Which of the following comes closest to your opinion?

We should prevent releasing this diluted sewage into Puget Sound rivers and lakes during storms, even if it costs \$1.50 more per month on our sewer rates

OR

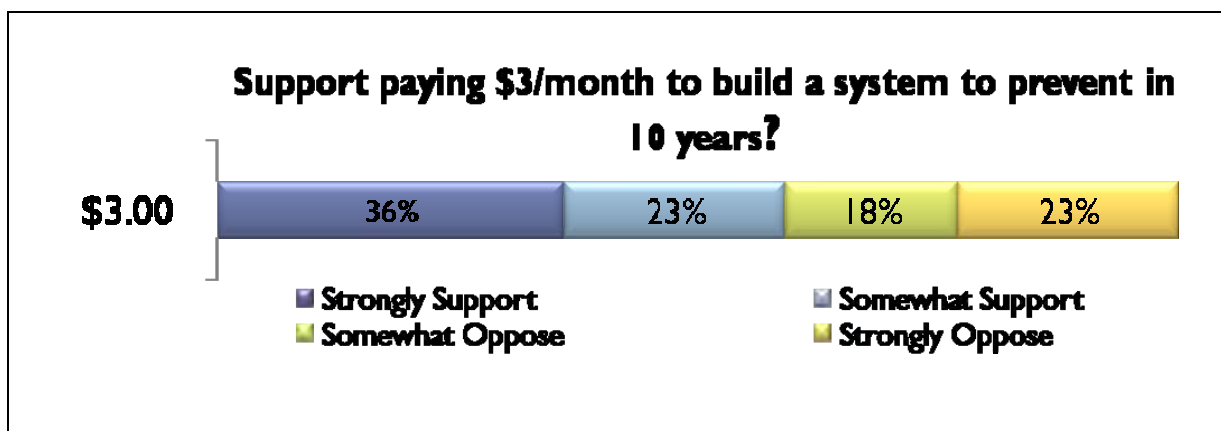
Some people believe releasing some diluted sewage into Puget Sound rivers and lakes during storms does not create any real health hazards for people or wildlife. It is not worth \$1.50 more per month on our sewer rates to prevent it.



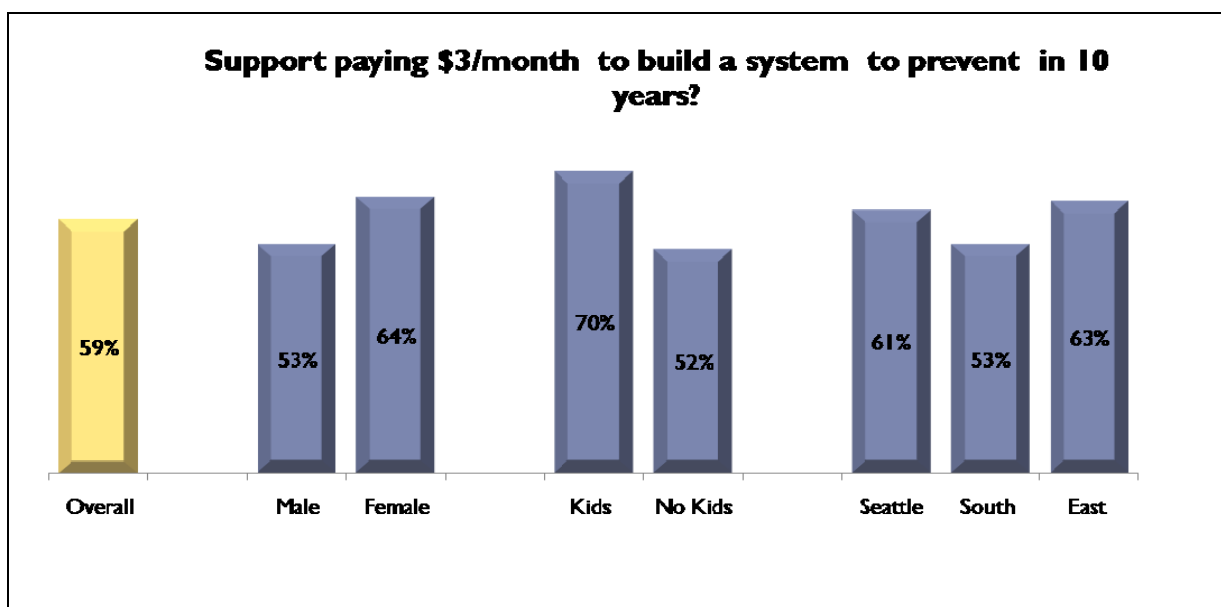
- In 2007, there were some differences in parts of King County, with the highest support in Seattle and the lowest in East King County. In 2009, these geographic differences are much less prevalent, but there continues to be a 10 point gender difference with women much more supportive (79%) than men (69%).

Support For Fee Decreases at \$3 Per Month

Though three quarters (74%) of residents are willing to pay \$1.50 more per month to prevent stormwater and sewage overflows into Puget Sound, the support is not as strong at a higher amount. When asked whether they'd be willing to pay \$3 more per month (to build the system in 10 years rather than 20), support drops 15 points to (59%).



- Support for the \$3 fee is strongest among women (64% support), residents with children in the HH (70% support) and residents in East King County (63% support).
- Raising the fee to \$3/month significantly erodes support among South King County residents. Support drops from three quarters (73%) at \$1.50/month to half (53%) at \$3/month.



APPENDIX A: DEMOGRAPHICS

	2004	2005	2006	2007	2009
Gender					
Male	49	49	50	50	50
Female	51	51	50	50	50
Homeowner					
Own/buying	77	68	71	72	75
Rent	21	28	28	28	23
(DK/Refused)	1	4	1	0	2
Children living at home					
Yes	33	38	34	35	38
No/(Refused)	67	62	66	65	62
Age					
18-24	6	8	8	8	8
25-29	6	9	9	8	8
30-34	10	11	11	12	12
35-39	11	9	9	8	8
40-44	11	12	13	13	13
45-49	11	10	8	7	7
50-54	11	12	10	11	11
55-59	9	7	11	12	12
60-64	7	4	6	6	6
65+	15	15	13	14	14
(Refused)	1	2	1	1	1