Greater Lansing Regional Water Quality Survey Findings Report

Submitted to

Greater Lansing Regional Committee

by

ETC Institute

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2006 Regional Water Quality Survey
Executive Summary

Purpose and Methodology

***Purpose*.** The Greater Lansing Regional Committee conducted a water quality survey during the Fall of 2006. The purpose of the survey was to provide a benchmark to gauge the effectiveness of regional and local public outreach campaigns on water quality issues in the Greater Lansing region.

Method of Administration. A four-page survey and cover letter were mailed to a stratified random sample of 1,800 households in the Greater Lansing region, which includes the Looking Glass, Red Cedar and Grand River watersheds; 600 households were selected at random from each of the three watersheds. Approximately 10 days after the surveys were mailed, residents who received the survey were contacted by phone. Those who indicated that they had not returned the survey were given the option of completing it by phone. Of the 1,800 households in the Greater Lansing region that received a survey, 403 households returned the survey by mail and 273 completed the survey by phone for a total of 676 completed surveys.

The sample was stratified to obtain at least 200 completed surveys from each of the three watersheds in the Greater Lansing Region. This was done to ensure that the results for each watershed would be statistically representative. The results for each watershed have a precision of at least +/-6.9% at the 95% level of confidence. The overall results for the Greater Lansing region have a precision of at least +/-3.7% at the 95% level of confidence.

Major Findings

Perceptions of Water Resources

Residents were asked questions about their perceptions of water resources. Some of the findings are listed below:

- Residents were asked to rate the quality of water in lakes, rivers, and streams in the community where they live. Thirty-percent (30%) of those surveyed thought water quality was improving ("somewhat better" or "much better"). One-fourth (25%)

reported that they thought water quality was getting worse ("somewhat worse" or "much worse"). Approximately one-fourth (27%) thought it was "staying the same," and 18% did not have an opinion.

- 80% of those surveyed thought the way they cared for their lawn and home affects the quality of water in lakes and streams in the community where they live; 11% did not, and 9% indicated that they "didn't know."

- 27% of those surveyed indicated that their household had taken some type of action to protect water resources in the past five years; 57% had not, and 16% indicated that they "didn't know" if they had done anything that would have helped protect water resources.

Connection of Stormwater Runoff and Water Resources

Residents were asked questions about stormwater runoff and water resource issues. Selected findings are listed below:

- 26% of those surveyed thought stormwater runoff was the greatest contributor of pollution to lakes, rivers and streams; 25% selected factory/industrial discharges; 15% selected construction sites, and 11% selected discharges from wastewater treatment plants.

- The majority of respondents (56%) thought stormwater goes directly to lakes/streams without treatment; 14% thought it goes to a treatment plant, and 11% thought it goes to lakes/streams with treatment. Nineteen percent (19%) of those surveyed indicated that they "did not know."

- Only twenty-nine percent (29%) of those surveyed really understood the meaning of the term "watershed." One-third (33%) of those surveyed indicated that were not familiar with the term "watershed." Almost one-fourth (24%) indicated that they lived near, but not in, a watershed and fourteen percent (14%) of those surveyed indicated that they did not live in a watershed.

- Most (84%) of those surveyed either "strongly agreed" or "agreed" with the statement that the quality of local streams and rivers where they live affects the Great Lakes.

- Fifty-two percent (52%) of those surveyed reported that they <u>had</u> seen road signs identifying rivers. Forty-four percent (44%) reported they <u>had</u> seen signs indicating that they were entering a watershed.

Current Activities

Residents were asked questions regarding lawn and home care activities. Some of the findings are listed below:

- One-fifth of those surveyed (20%) indicated that they typically wash their vehicles at home in the driveway. Most (73%) of those surveyed indicated that they use a car wash.

- 14% of those surveyed indicated that members of their household usually change motor oil, transmission fluid or radiator fluid for a vehicle at their home.

- More than two thirds (69%) of those surveyed indicated that their household uses a community collection site to dispose of household hazardous waste, such as old oil, fluids from vehicles, batteries, and pesticides; 19% of those surveyed indicated that their household typically disposes of household hazardous waste with their regular trash.

- Among those surveyed who were not using a community collection site for household hazardous waste, almost half (42%) indicated that the reason they did not use a community collection site was because they did not know where one was located.

- The most common reason residents gave for selecting the type of fertilizer or pesticide they use was previous experience with a product (44%). Fifteen percent (15%) of those surveyed indicated that a product's impact on the environment was an important reason for selecting the type of fertilizer their household used.

- More than one-quarter (26%) of those surveyed indicated that their household uses a lawn service for fertilizer and/or pesticide applications.

Willingness to Take Action to Help Reduce Pollution of Streams and Lakes.

Residents were asked how willing they would be to perform various actions to help reduce pollution in lakes and streams. Residents were most willing to dispose of hazardous waste at a community collection day (91%), sweep excess fertilizer/grass clippings into their lawn (90%), change their car washing practices (86%), and use low phosphorus or slow release fertilizer (84%). Residents were somewhat less willing to have their soil tested (56%) and to only use environmentally friendly lawn service companies (74%).

Best Ways to Inform Residents about Ways to Protect Lakes and Streams.

The top four ways residents preferred to receive information about what they can do to protect lakes and streams were from the Lansing State Journal (62%), television news (45%), community newspaper (41%), and municipal newsletter (25%).

Implications of Results

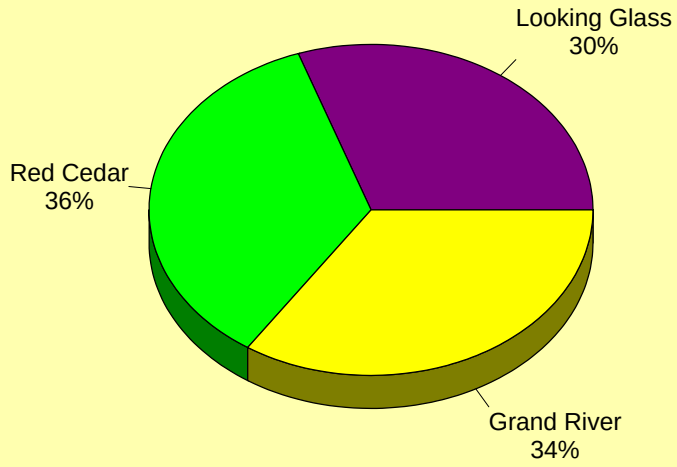
The survey results presented in this report provide a baseline for evaluating the effectiveness of regional and local water quality initiatives over time. This results will be used by the Greater Lansing Regional Committee and other organizations in the region to implement public education programs to meet federal stormwater regulations.

Overall, this survey shows that residents are concerned about the quality of the rivers and lakes in Greater Lansing Region. The survey points out that while many residents understand that their actions at home affect water quality, more education is needed. Most importantly, there is a willingness in the Greater Lansing Region to make some adjustments in daily habits to protect the water resources. Thus, there is value added in protecting water quality that can be achieved with public education efforts that tap the "willingness" to help expressed in this survey.

Charts and Graphs

Distribution of Respondents by Watershed

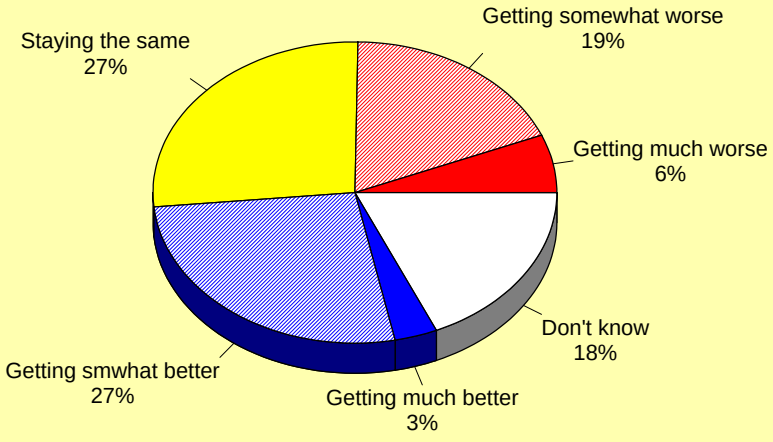
by percentage of respondents



Source: ETC Institute (November 2006)

How Residents Think the Quality of Water in Lakes, Rivers, and Streams in Their Community Is Changing

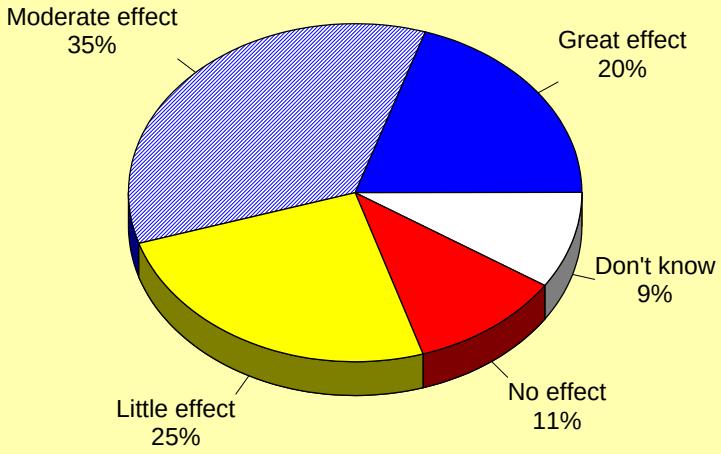
by percentage of respondents



Source: ETC Institute (November 2006)

How much do you think the way you maintain your home affects the quality of water in lakes and streams in the community where you live?

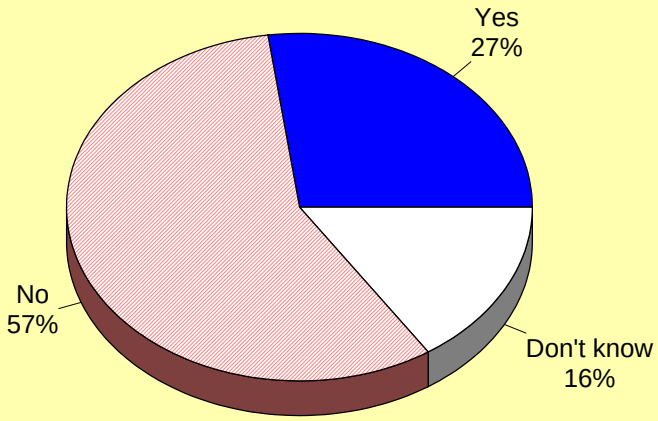
by percentage of respondents



Source: ETC Institute (November 2006)

During the past 5 years, have you or someone in your household taken action at your home or in your community to protect water resources?

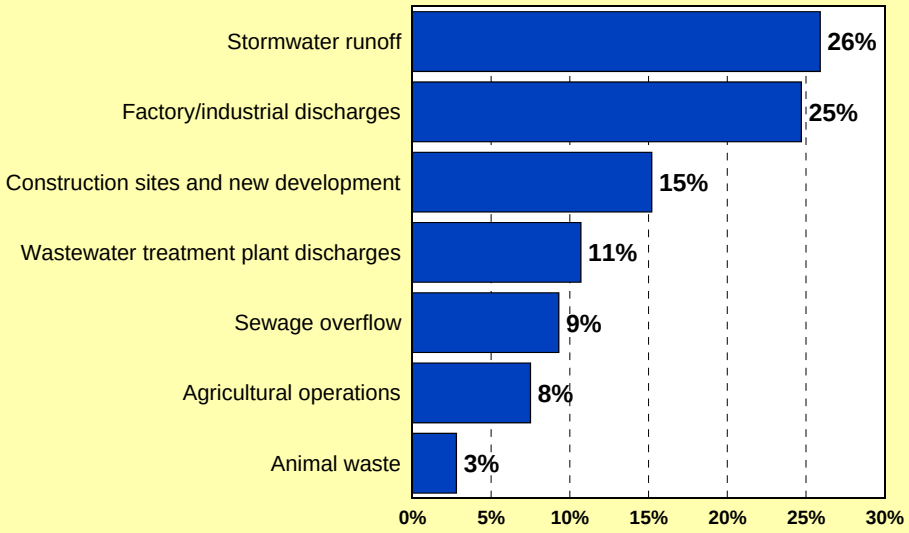
by percentage of respondents



Source: ETC Institute (November 2006)

During the past year, which of the following do you think contributed the MOST pollution to lakes, rivers and streams in the community where you live?

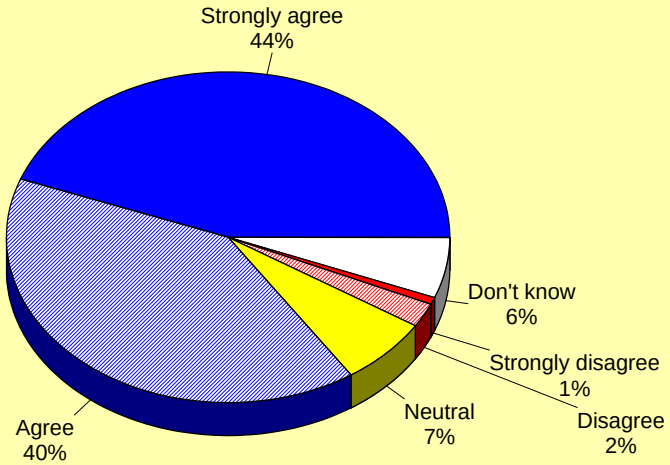
by percentage of respondents



Source: ETC Institute (November 2006)

Level of agreement with the statement: "The quality of local streams and rivers where I live affects the Great Lakes."

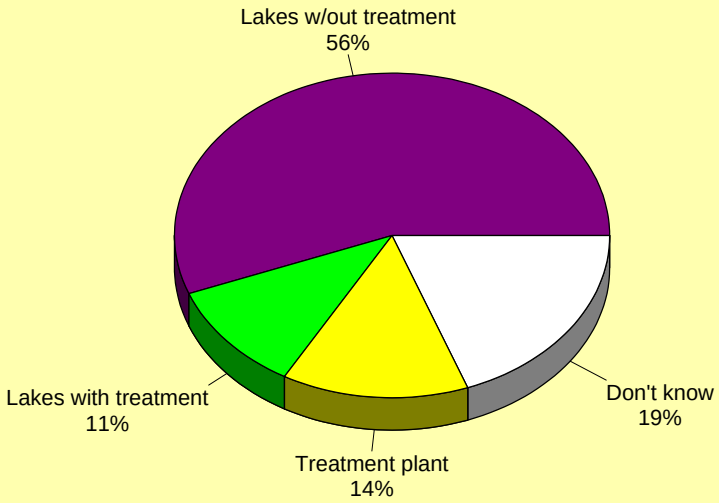
by percentage of respondents



Source: ETC Institute (November 2006)

Where do you think stormwater goes after it enters a storm drain or roadside ditch in your community?

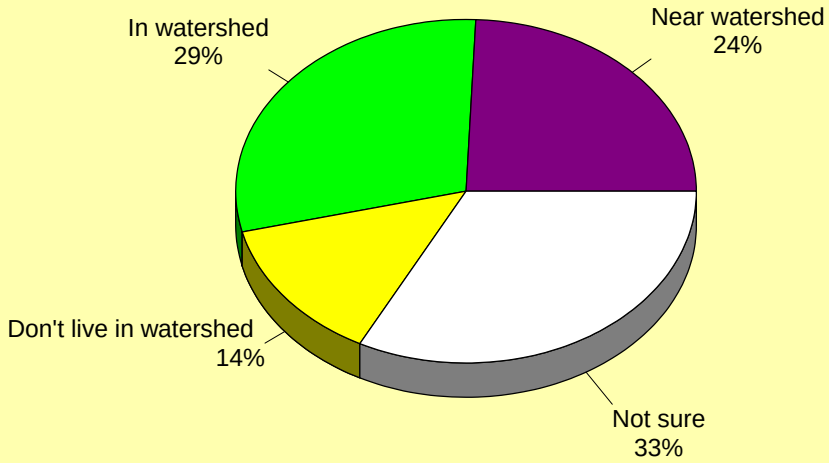
by percentage of respondents



Source: ETC Institute (November 2006)

Which ONE of the following BEST describes the location where you live?

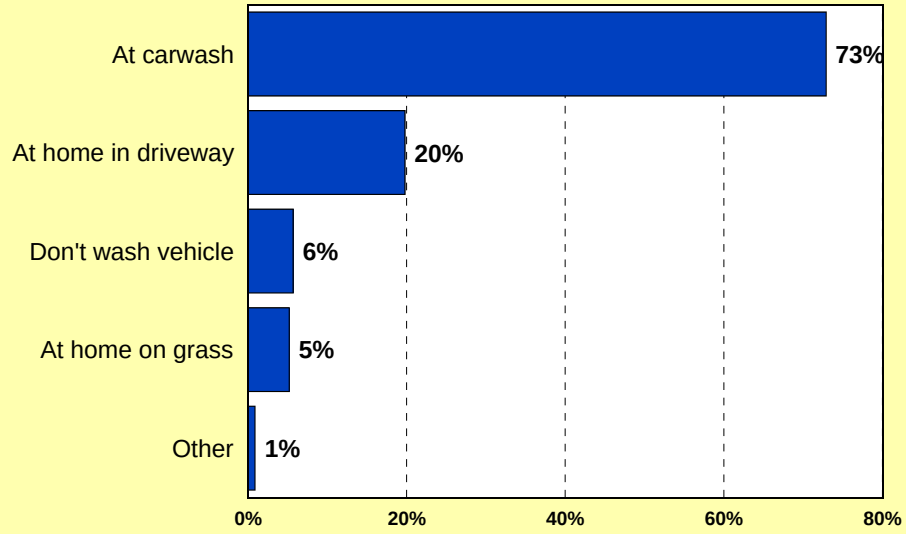
by percentage of respondents



Source: ETC Institute (November 2006)

Where Residents Typically Wash Their Vehicles During the Summer

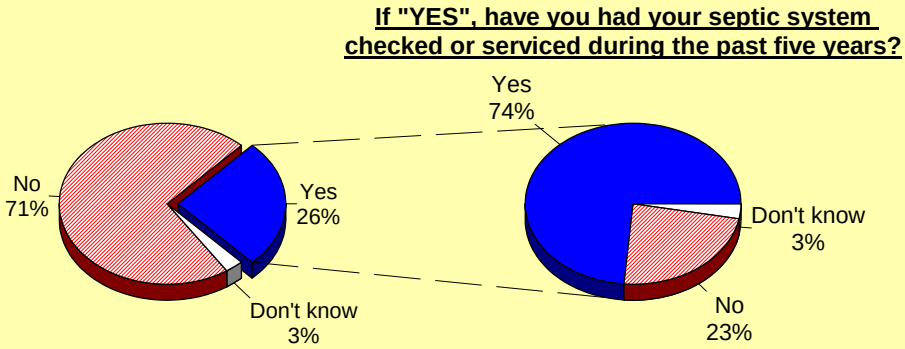
by percentage of respondents (multiple answers allowed)



Source: ETC Institute (November 2006)

Do you have a septic system at your home?

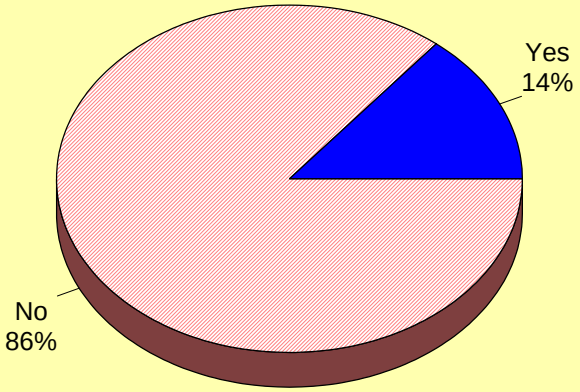
by percentage of respondents



Source: ETC Institute (November 2006)

Do you or other members of your household usually change motor oil, transmission fluid, or radiator fluid for vehicles at your home?

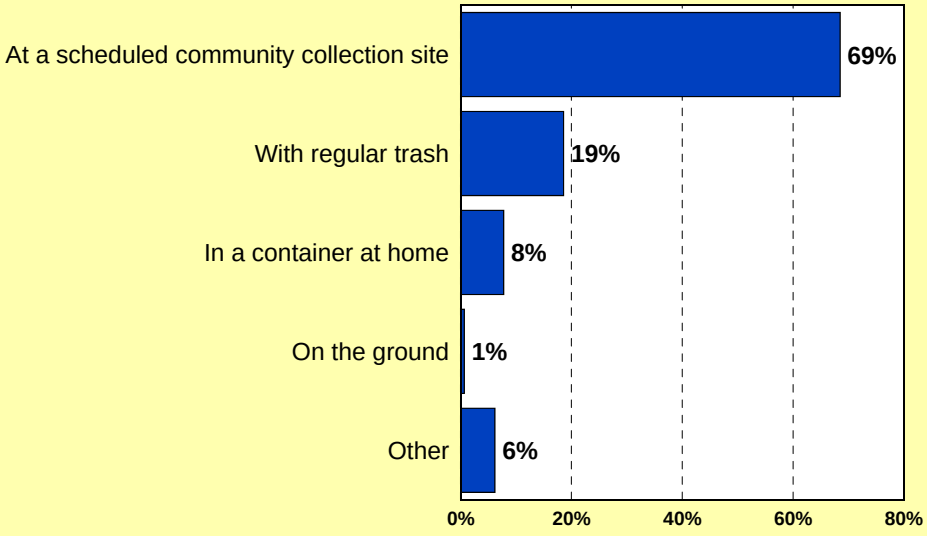
by percentage of respondents



Source: ETC Institute (November 2006)

Where Residents Typically Dispose of Household Hazardous Waste

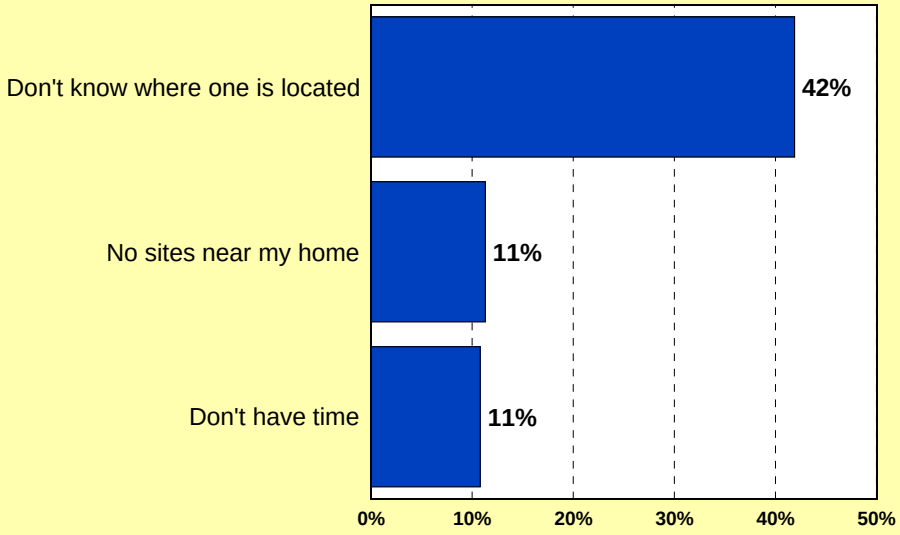
by percentage of respondents (multiple answers allowed)



Source: ETC Institute (November 2006)

Top Three Reasons that Residents Do Not Dispose of Household Hazardous Waste at a Community Collection Site

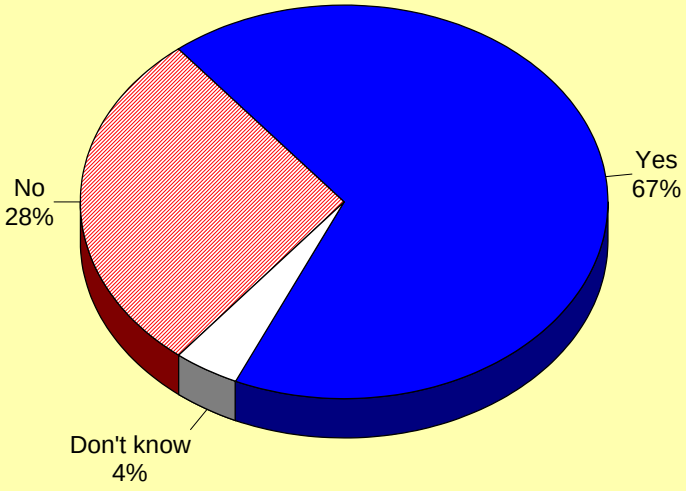
by percentage of respondents that **DO NOT** use community collection sites



Source: ETC Institute (November 2006)

Do you or other members of your household typically pick up your dog's waste when you go for a walk?

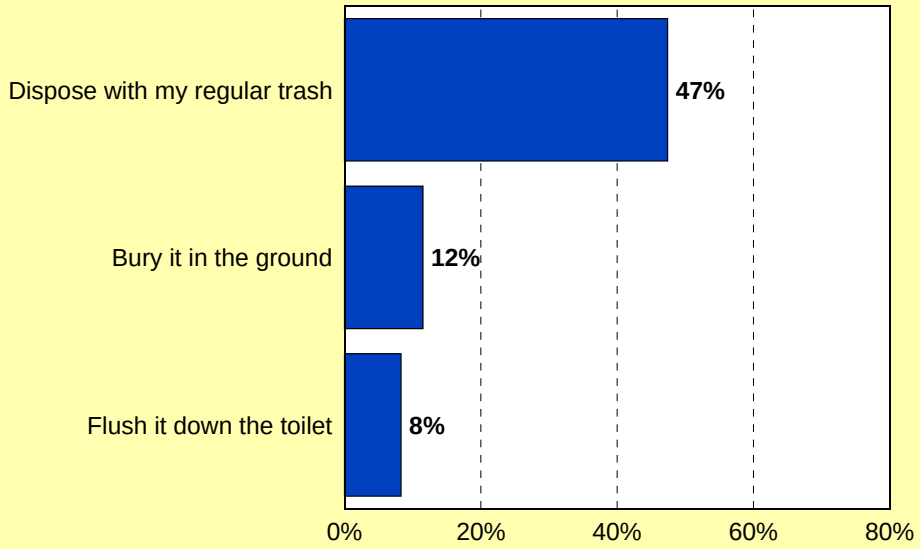
by percentage of respondents who indicated that they own a dog



Source: ETC Institute (November 2006)

Top Three Methods Used by Residents to Dispose of Their Dog's Waste

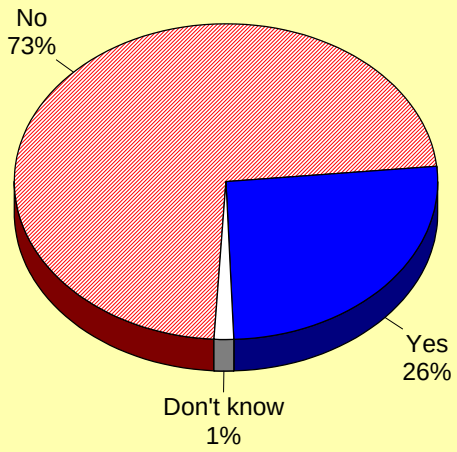
by percentage of respondents that **HAVE** a dog



Source: ETC Institute (November 2006)

Does your household use a lawn service for mowing, fertilizer and/or pesticide applications?

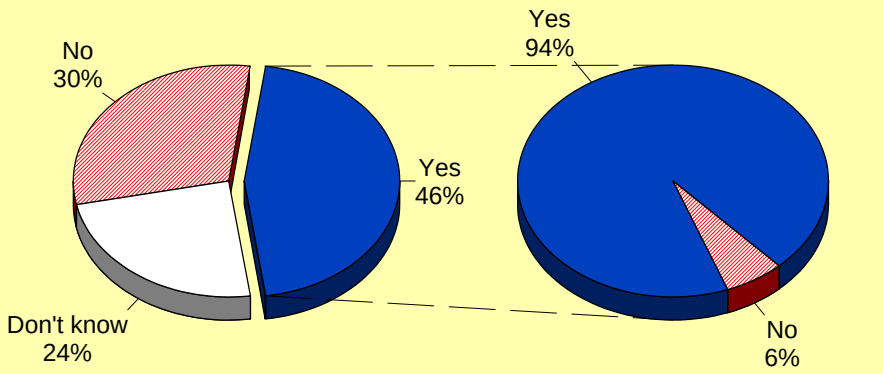
by percentage of respondents



Source: ETC Institute (November 2006)

Has your household asked your lawn service to use environmentally friendly/organic products and practices?

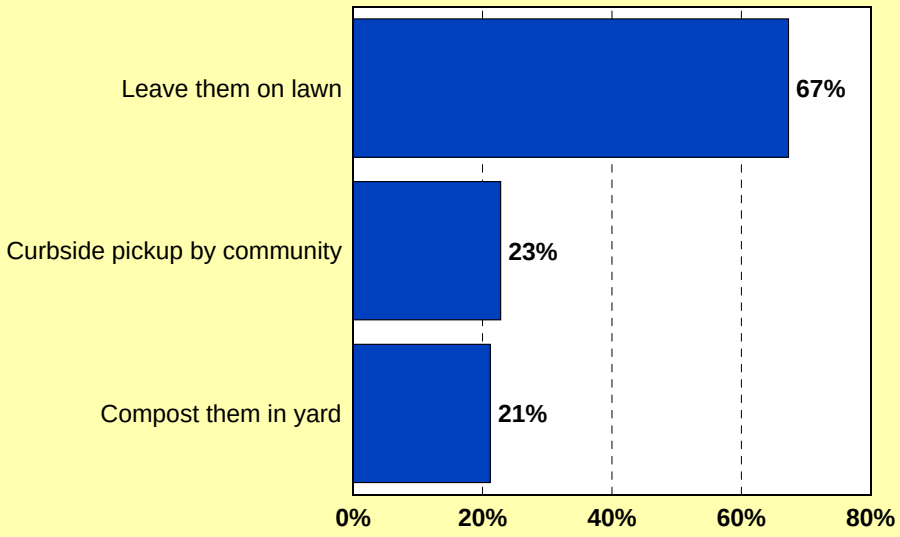
by percentage of respondents that **USE** a lawn service



Source: ETC Institute (November 2006)

Top Three Methods Used by Residents to Dispose of Grass Clippings and/or Leaves

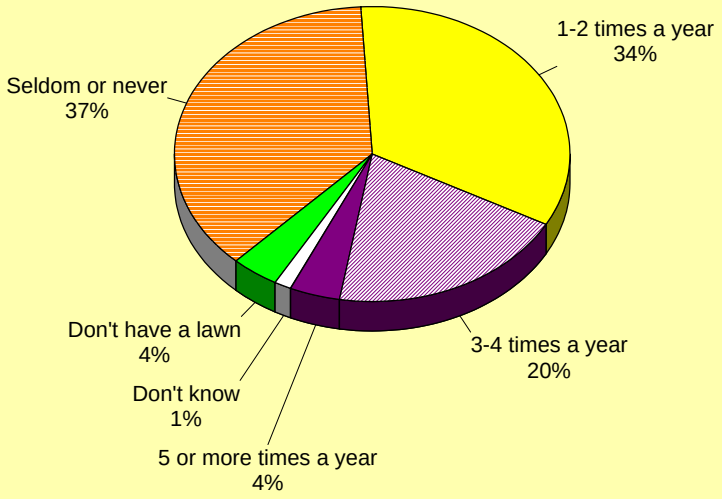
by percentage of respondents (multiple answers allowed)



Source: ETC Institute (November 2006)

Which of the following BEST describes how often your household fertilizes your lawn?

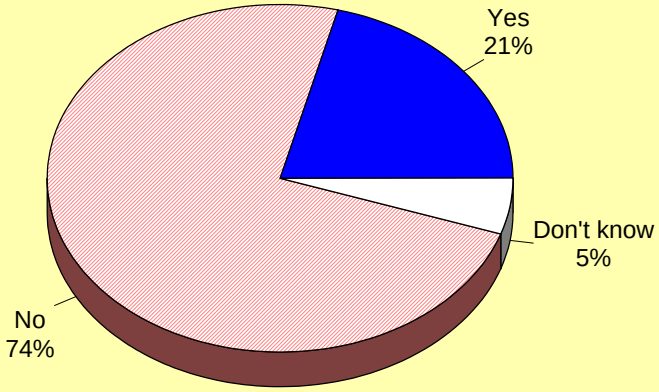
by percentage of respondents



Source: ETC Institute (November 2006)

Have you had your soil tested to determine how much and what kind of nutrients your lawn needs?

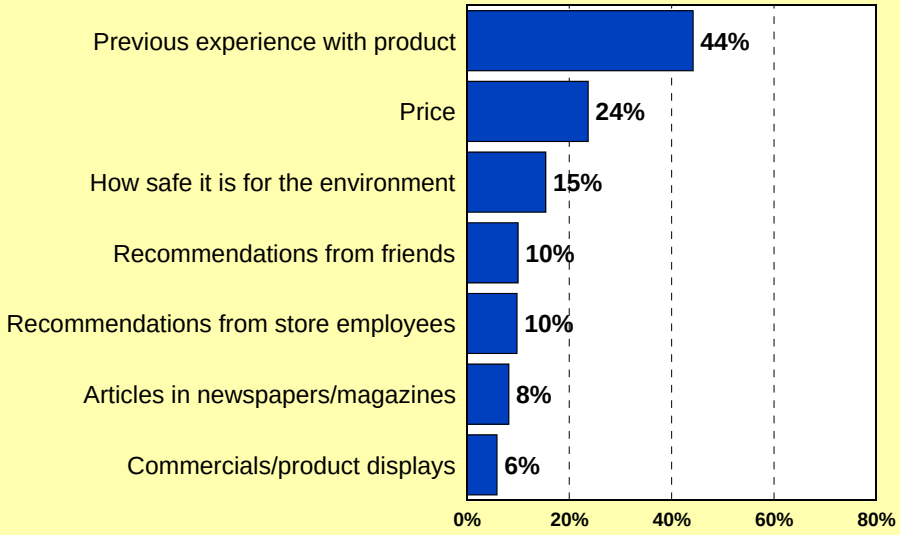
by percentage of respondents that **USE** fertilizer on their lawns



Source: ETC Institute (November 2006)

Which of the following reasons influence the type of fertilizer or pesticide your household uses most?

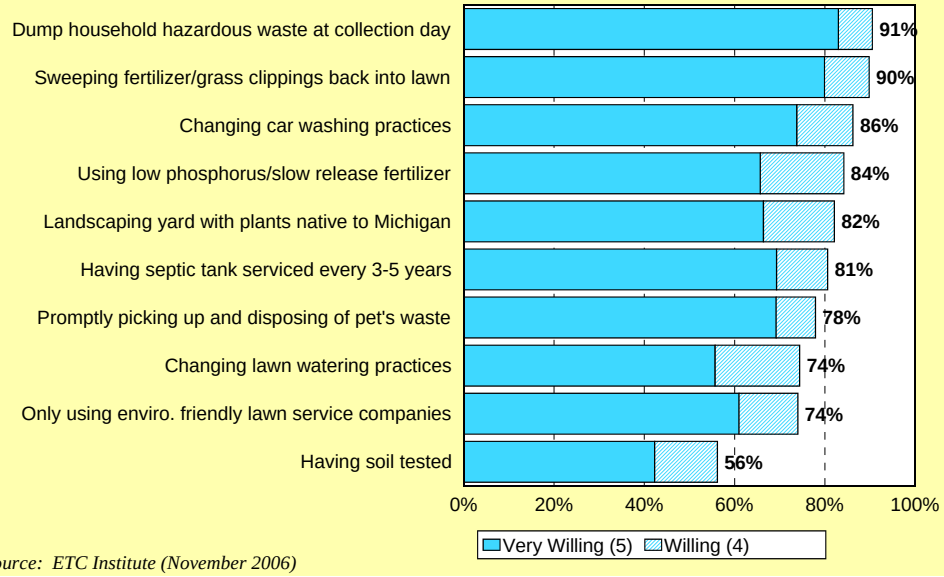
by percentage of respondents that USE Fertilizer (multiple answers allowed)



Source: ETC Institute (November 2006)

Willingness of Residents to Take Various Actions to Help Reduce Pollution of Streams and Lakes

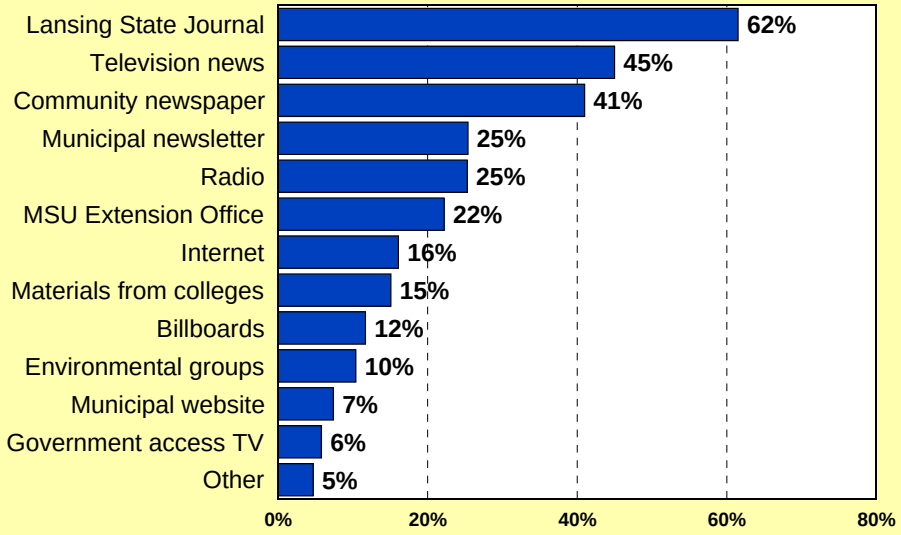
by percentage of respondents (excluding don't knows)



Source: ETC Institute (November 2006)

How Residents Would Prefer to Receive Information about Ways to Protect Lakes and Streams

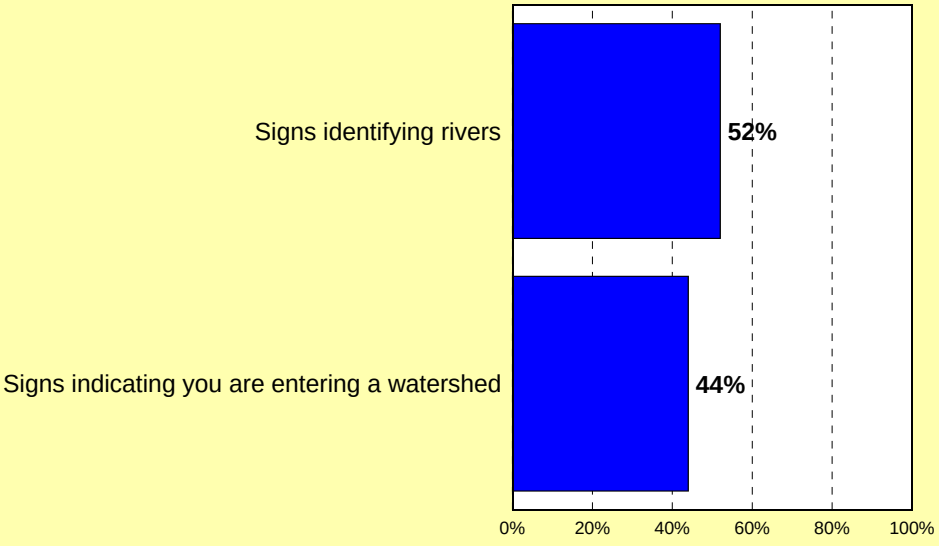
by percentage of respondents (multiple answers allowed)



Source: ETC Institute (November 2006)

Percentage of Residents Who Have Seen Various Types of Signs in Their Community

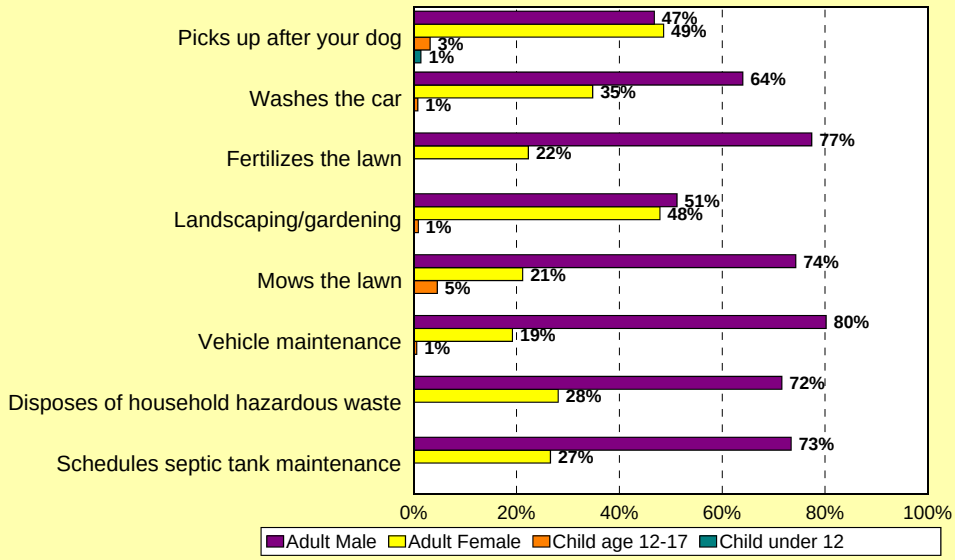
by percentage of respondents



Source: ETC Institute (November 2006)

Which person in your household most frequently does the activities listed below?

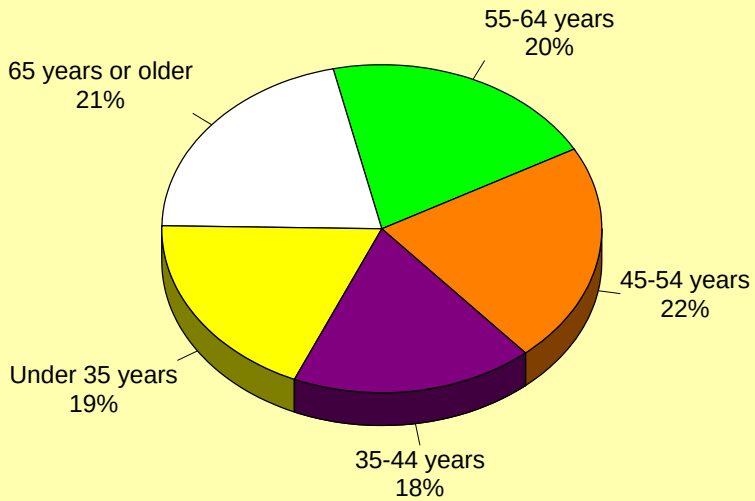
by percentage of respondents



Source: ETC Institute (November 2006)

Demographics: Age of Respondents

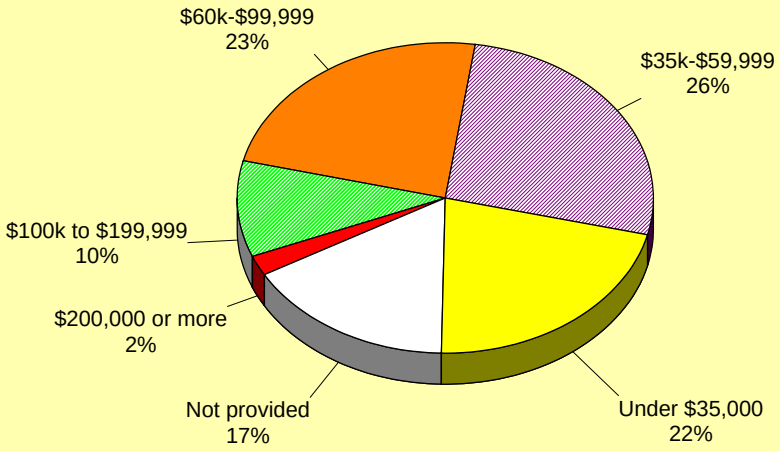
by percentage of respondents



Source: ETC Institute (November 2006)

Demographics: Annual Household Income

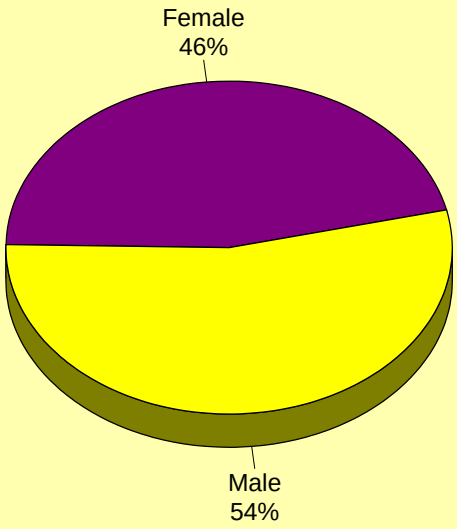
by percentage of respondents households



Source: ETC Institute (November 2006)

Demographics: Gender

by percentage of respondents



Source: ETC Institute (November 2006)

GIS Maps

Interpreting the Maps

The maps on the following pages show the mean ratings for several questions on the survey based on the home zip code the respondents.

If all zip codes on a map are the same color, then most residents across the Lansing region generally feel the same about that issue.

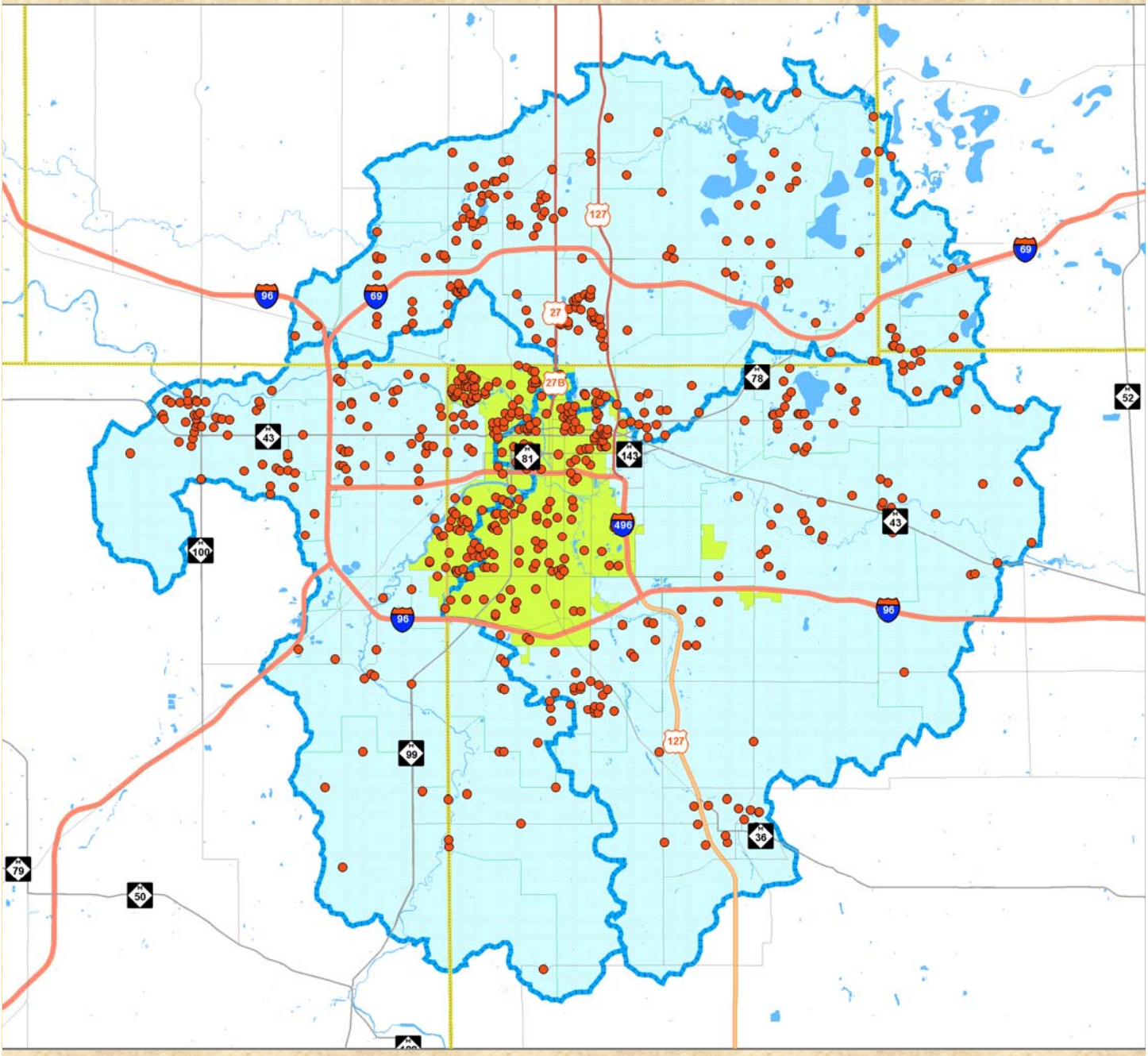
When reading the maps, please use the following color scheme as a guide:

- DARK/LIGHT BLUE shades identify POSITIVE ratings. Shades of blue generally indicate willingness, agreement, and affirmative responses ("YES") to questions.

- OFF-WHITE/LIGHT YELLOW shades identify NEUTRAL ratings. Shades of neutral generally indicate that residents think things are staying about the same, results are mixed, or residents do not have a strong opinion about an issue.

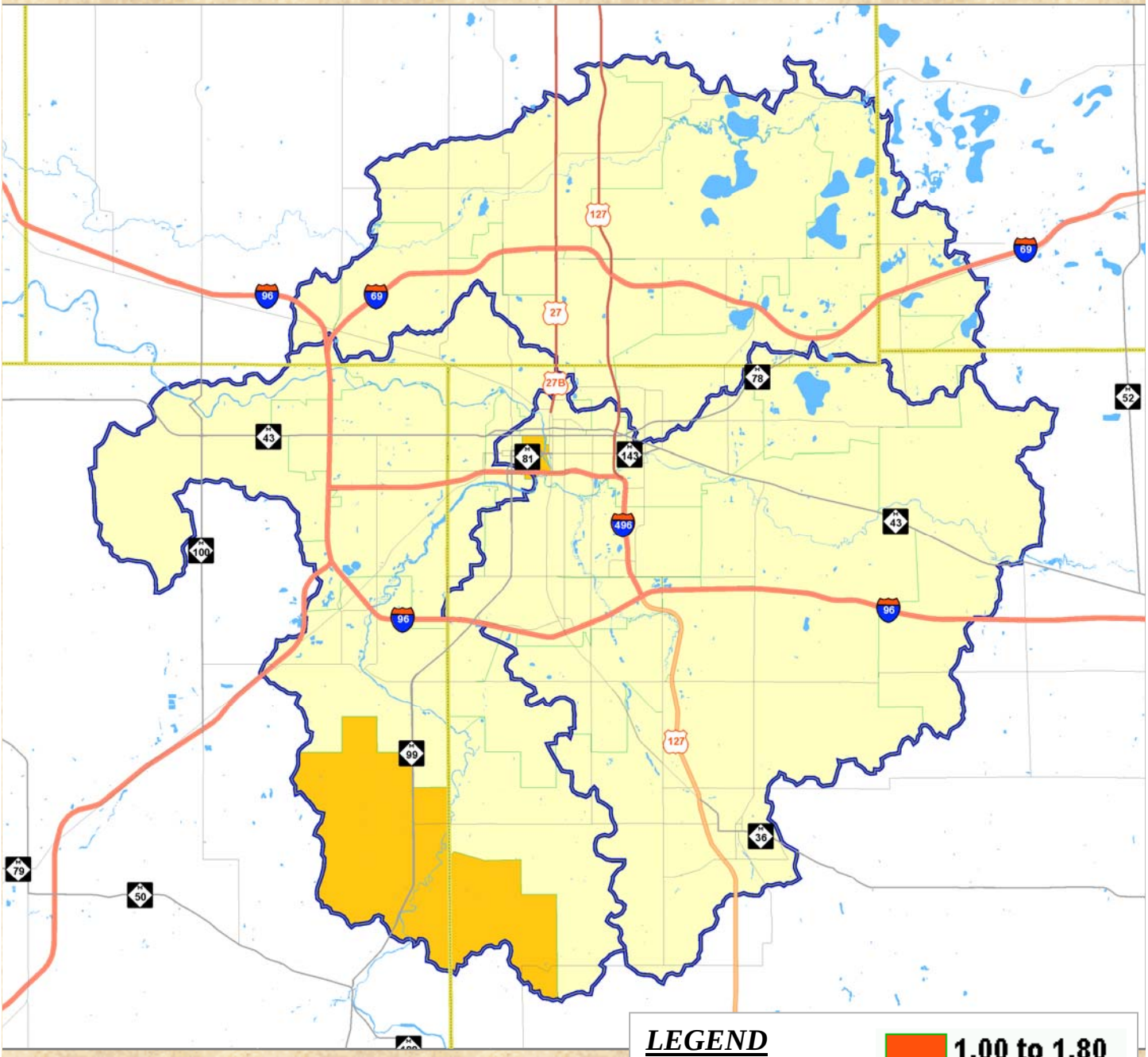
- ORANGE/RED shades identify NEGATIVE ratings. Shades of orange/red generally indicate unwillingness, disagreement, and negative responses ("NO") to questions.

Location of Survey Respondents



2006 Greater Lansing
Regional Water Quality Survey

Do you think the quality of water in lakes, rivers, and streams in the community where you live is getting worse, better, or staying about the same? (Q1)



2006 Greater Lansing Regional Water Quality Survey

Shading reflects the mean rating for all respondents **by ZIP Code***

*Clipped to watershed boundaries and combined based on respondent distribution

LEGEND

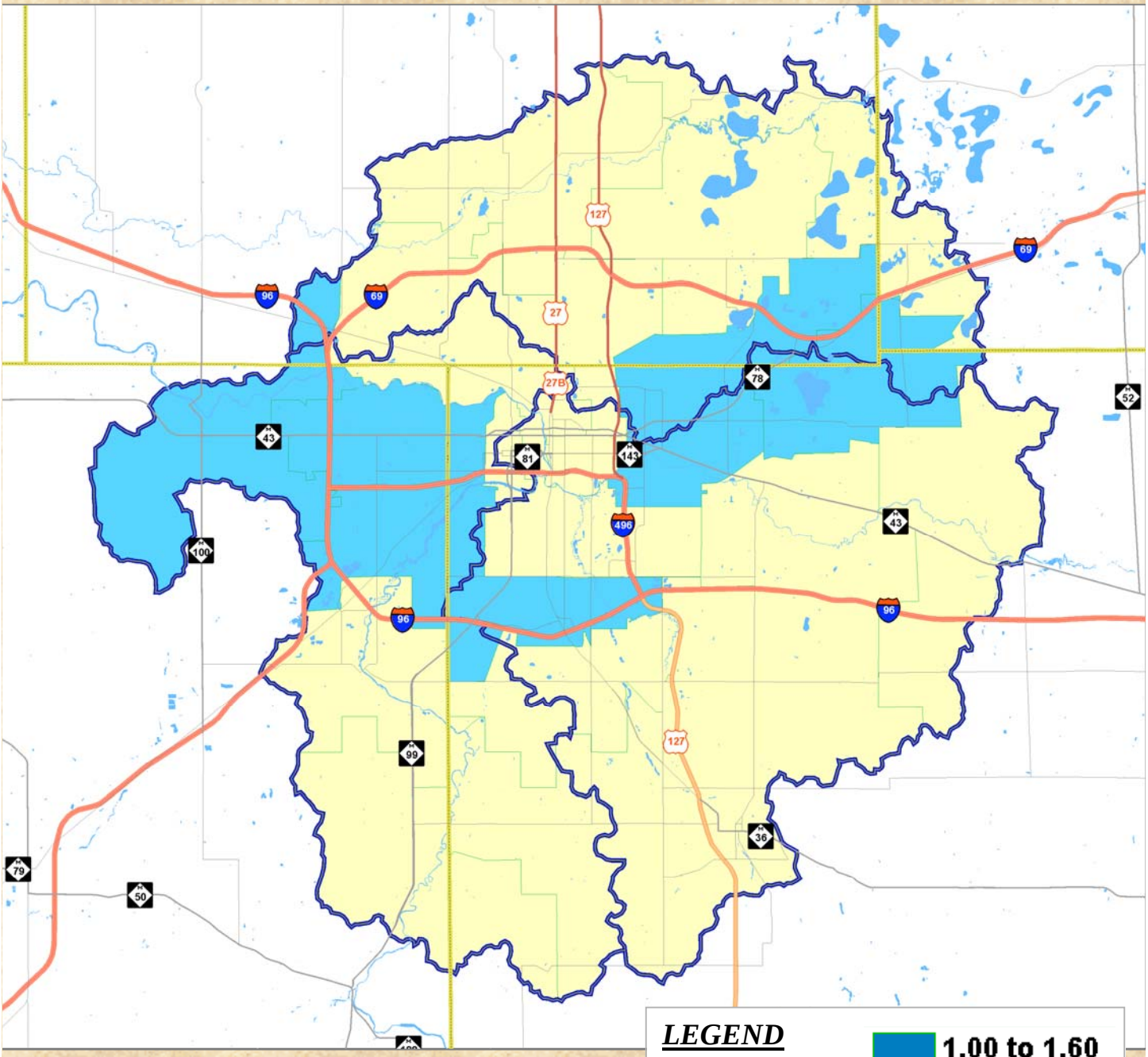
Mean rating on a 5-Point scale, where:

1 = Much Worse
3 = Same
5 = Much Better

- 1.00 to 1.80
- 1.80 to 2.60
- 2.60 to 3.40
- 3.40 to 4.20
- 4.20 to 5.00
- Other

Note: "Other" areas did not contain enough respondents to show statistically significant results.

How much do you think the way you maintain your home affects the quality of water in lakes and streams in the community where you live? (Q2)



2006 Greater Lansing Regional Water Quality Survey

Shading reflects the mean rating for all respondents **by ZIP Code***

*Clipped to watershed boundaries and combined based on respondent distribution

LEGEND

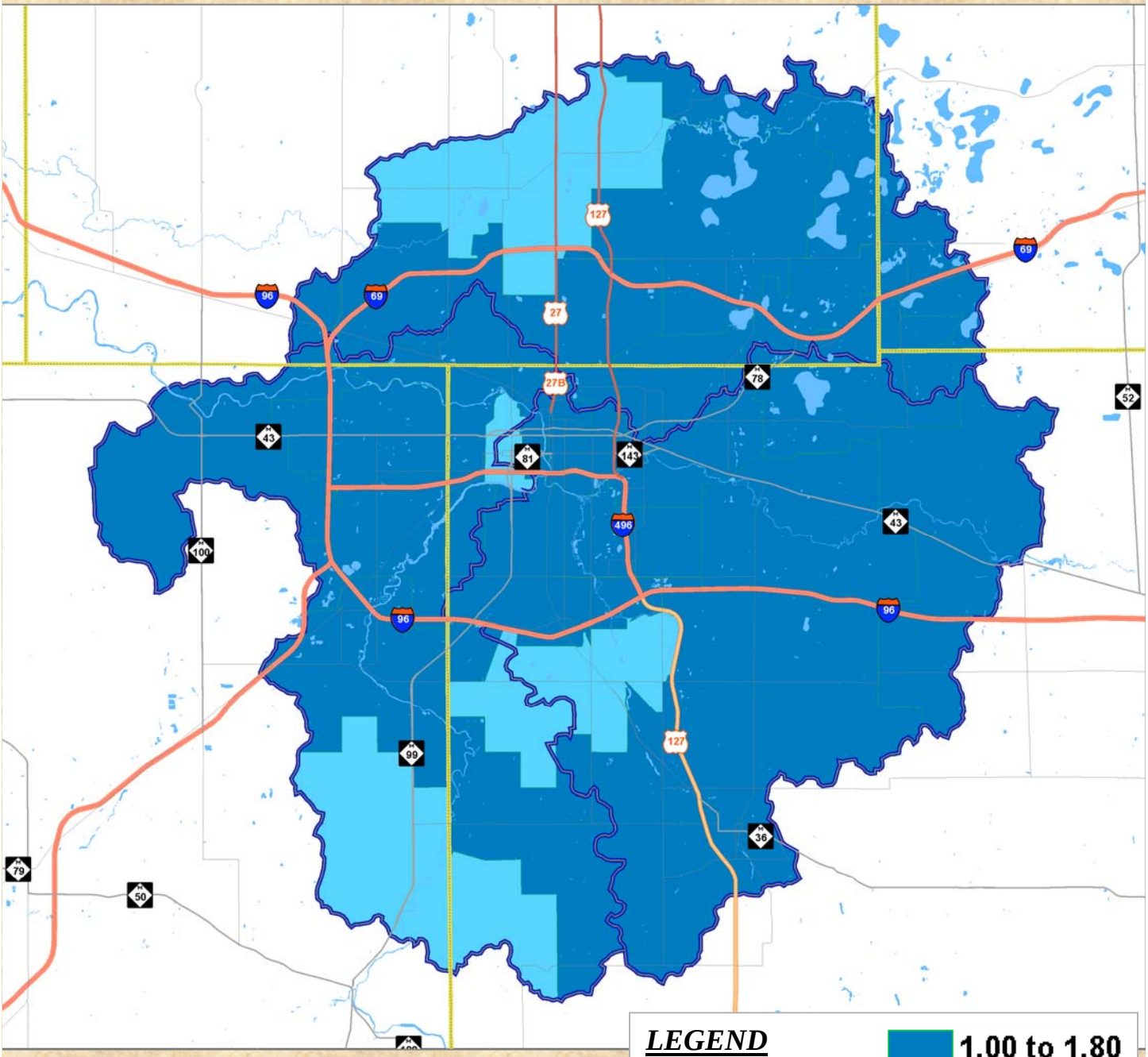
Mean rating on a 4-Point scale, where:

1 = Great Effect
4 = No Effect

- 1.00 to 1.60
- 1.60 to 2.20
- 2.20 to 2.80
- 2.80 to 3.40
- 3.40 to 4.00
- Other

Note: "Other" areas did not contain enough respondents to show statistically significant results.

Level of Agreement with the Statement: "The quality of local streams and rivers where I live affects the Great Lakes" (Q5)



2006 Greater Lansing Regional Water Quality Survey

Shading reflects the mean rating
for all respondents **by ZIP Code***

*Clipped to watershed boundaries and combined based on respondent distribution

LEGEND

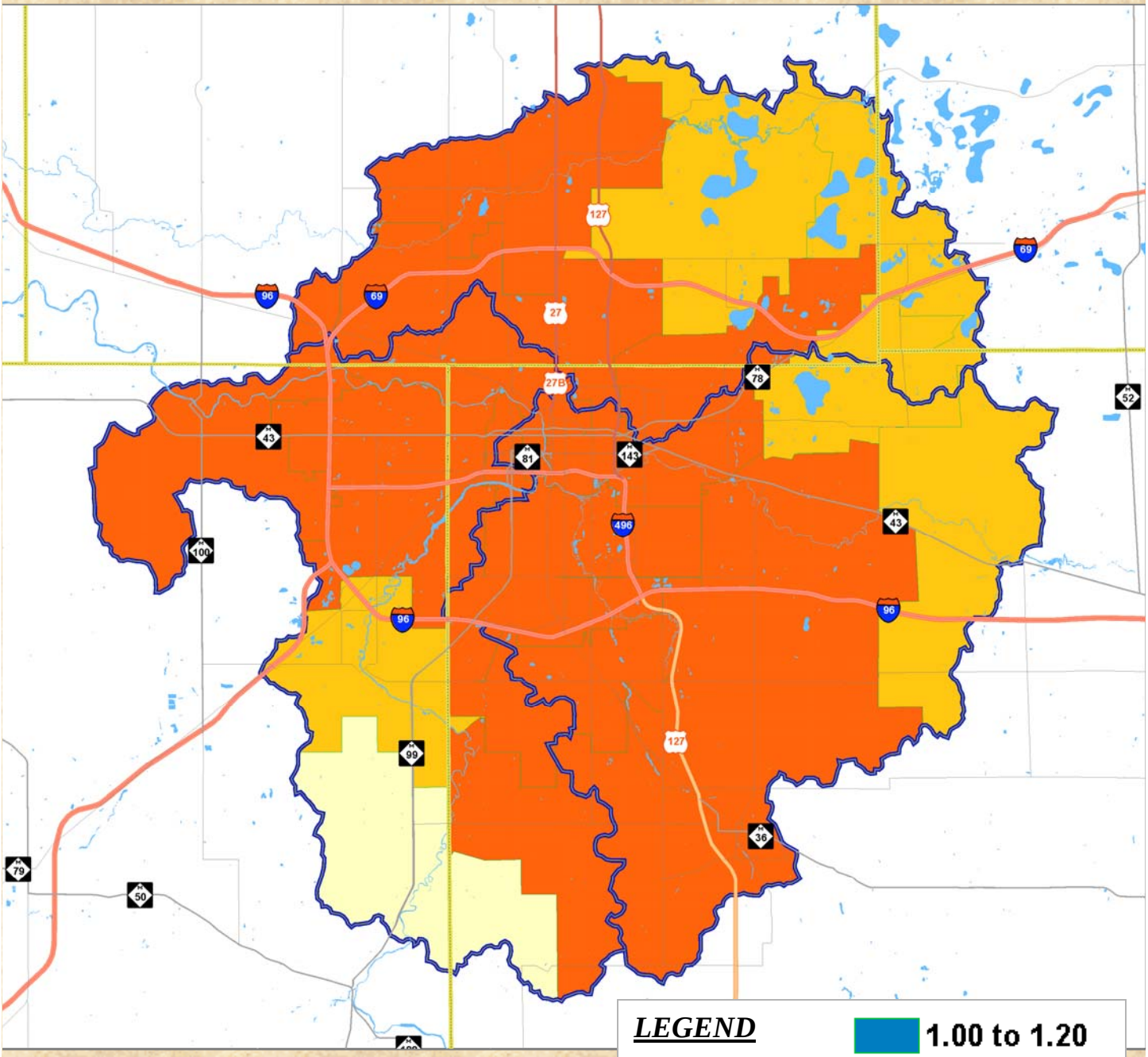
Mean rating
on a 5-Point
scale, where:

1 = Strongly Agree
5 = Strongly Disagree

- 1.00 to 1.80
- 1.80 to 2.60
- 2.60 to 3.40
- 3.40 to 4.20
- 4.20 to 5.00
- Other

Note: "Other" areas did not contain enough respondents to show statistically significant results.

Do you or other members of your household usually change motor oil, transmission fluid, or radiator fluid for vehicles at your home? (Q10)



2006 Greater Lansing Regional Water Quality Survey

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*Clipped to watershed boundaries and combined based on respondent distribution

LEGEND

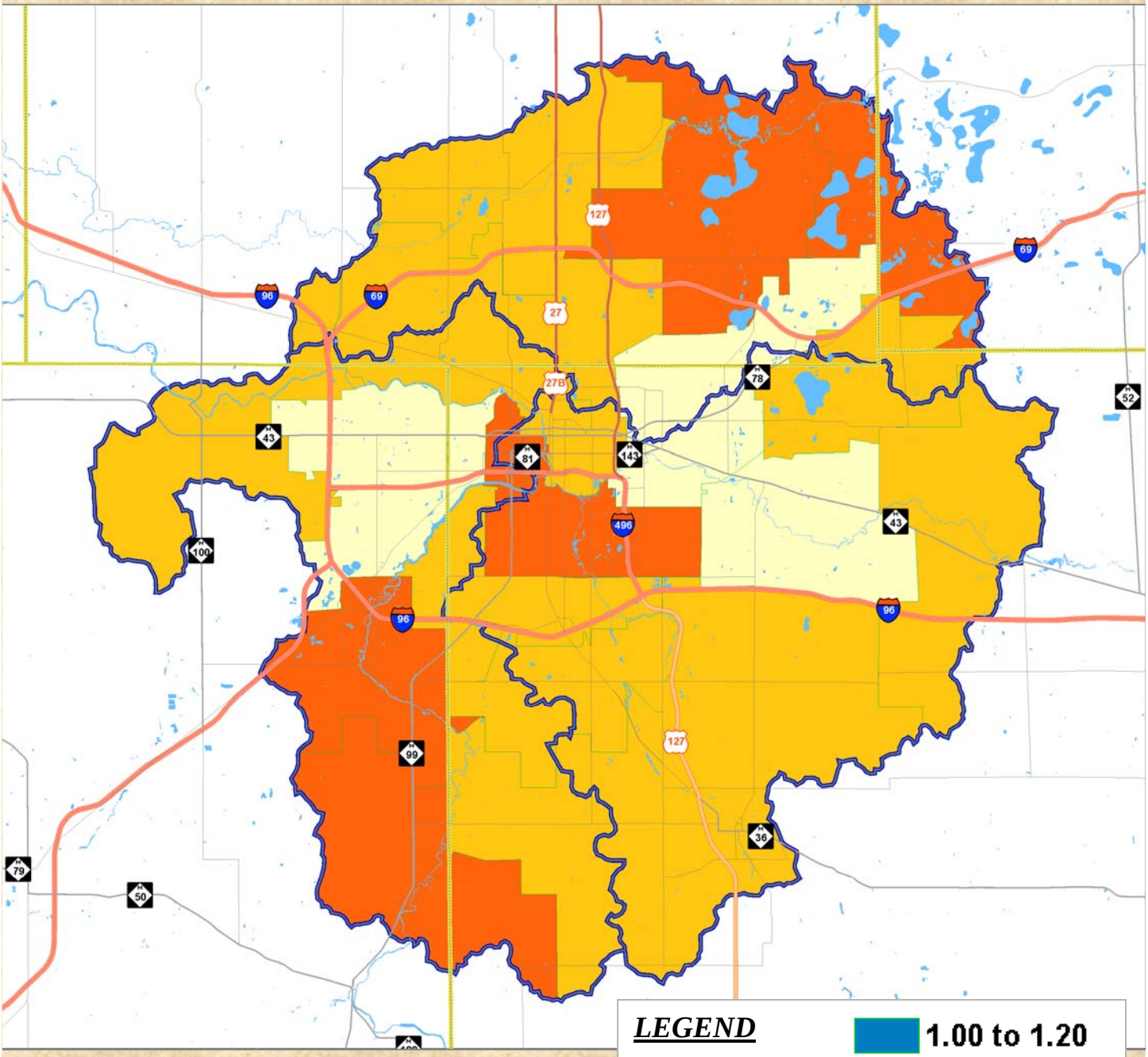
Mean response on a 2-Point scale, where:

1 = Yes
2 = No

- 1.00 to 1.20
- 1.20 to 1.40
- 1.40 to 1.60
- 1.60 to 1.80
- 1.80 to 2.00
- Other

Note: "Other" areas did not contain enough respondents to show statistically significant results.

Does your household use a lawn service for mowing, fertilizer and/or pesticide applications? (Q13)



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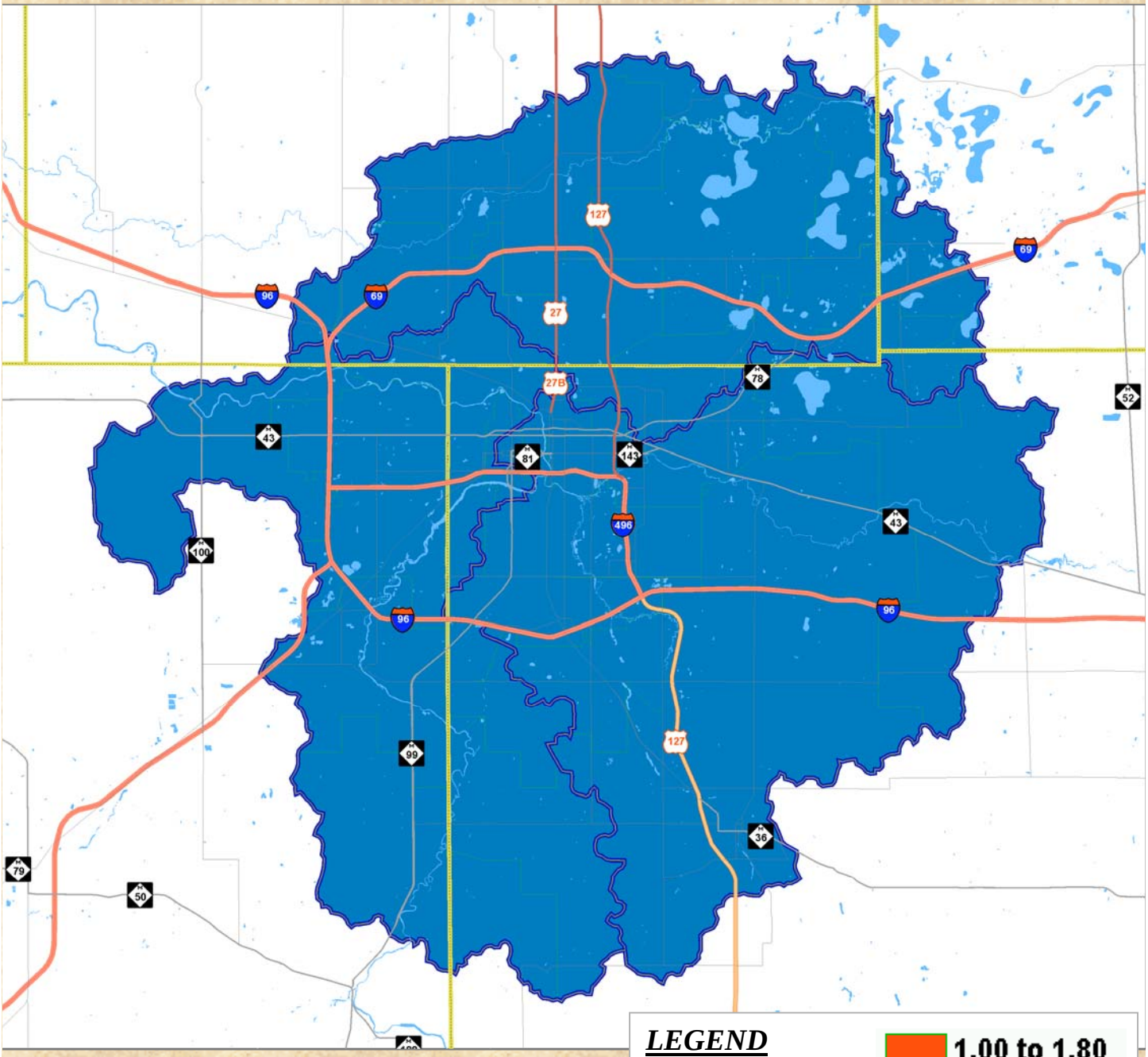
Mean response on a 2-Point scale, where:

1 = Yes
2 = No

- 1.00 to 1.20
- 1.20 to 1.40
- 1.40 to 1.60
- 1.60 to 1.80
- 1.80 to 2.00
- Other

Note: "Other" areas did not contain enough respondents to show statistically significant results.

How willing would you be to change you car washing practices (using a car wash, washing your car on the grass, or using less soap)? (Q16a)



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LEGEND

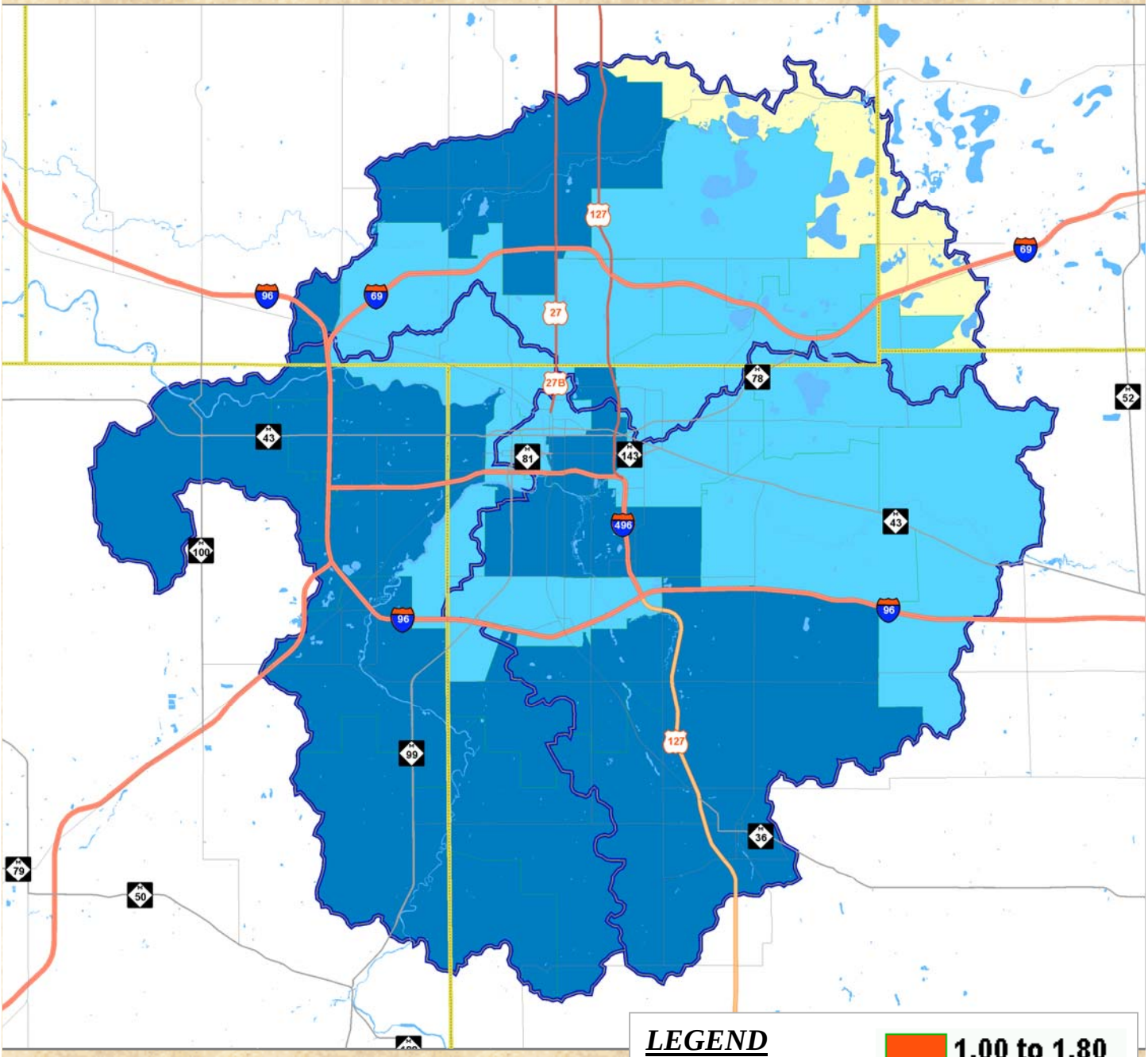
Mean rating on a 5-Point scale, where:

1 = Not Willing
5 = Very Willing

- 1.00 to 1.80
- 1.80 to 2.60
- 2.60 to 3.40
- 3.40 to 4.20
- 4.20 to 5.00
- Other

Note: "Other" areas did not contain enough respondents to show statistically significant results.

How willing would you be to promptly pick up and dispose of your pet's waste? (Q16b)



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LEGEND

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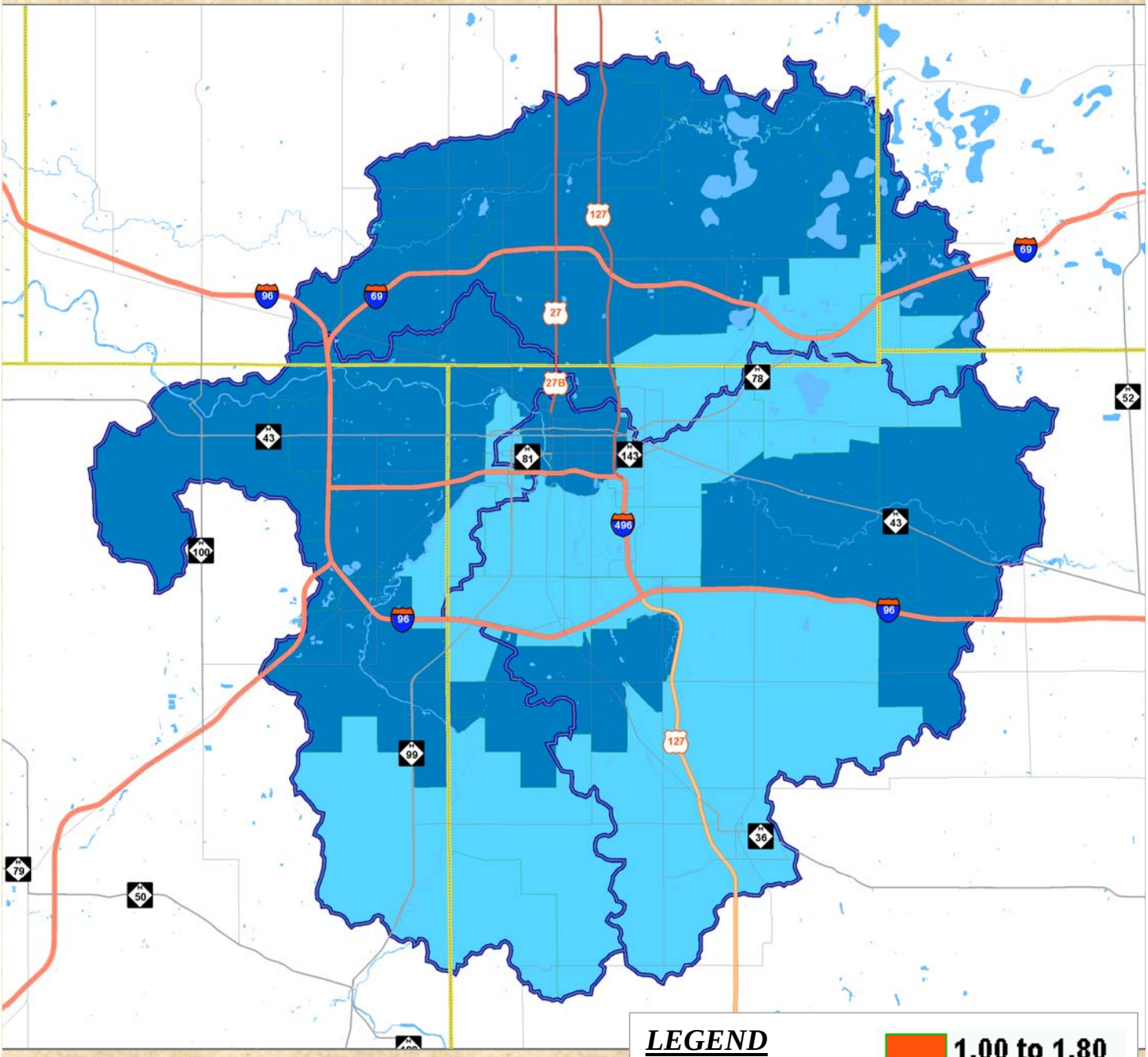
1 = Not Willing
5 = Very Willing

- 1.00 to 1.80
- 1.80 to 2.60
- 2.60 to 3.40
- 3.40 to 4.20
- 4.20 to 5.00
- Other

Note: "Other" areas did not contain enough respondents to show statistically significant results.

How willing would you be to have your septic tank serviced every 3-5 years? (Q16c)



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LEGEND

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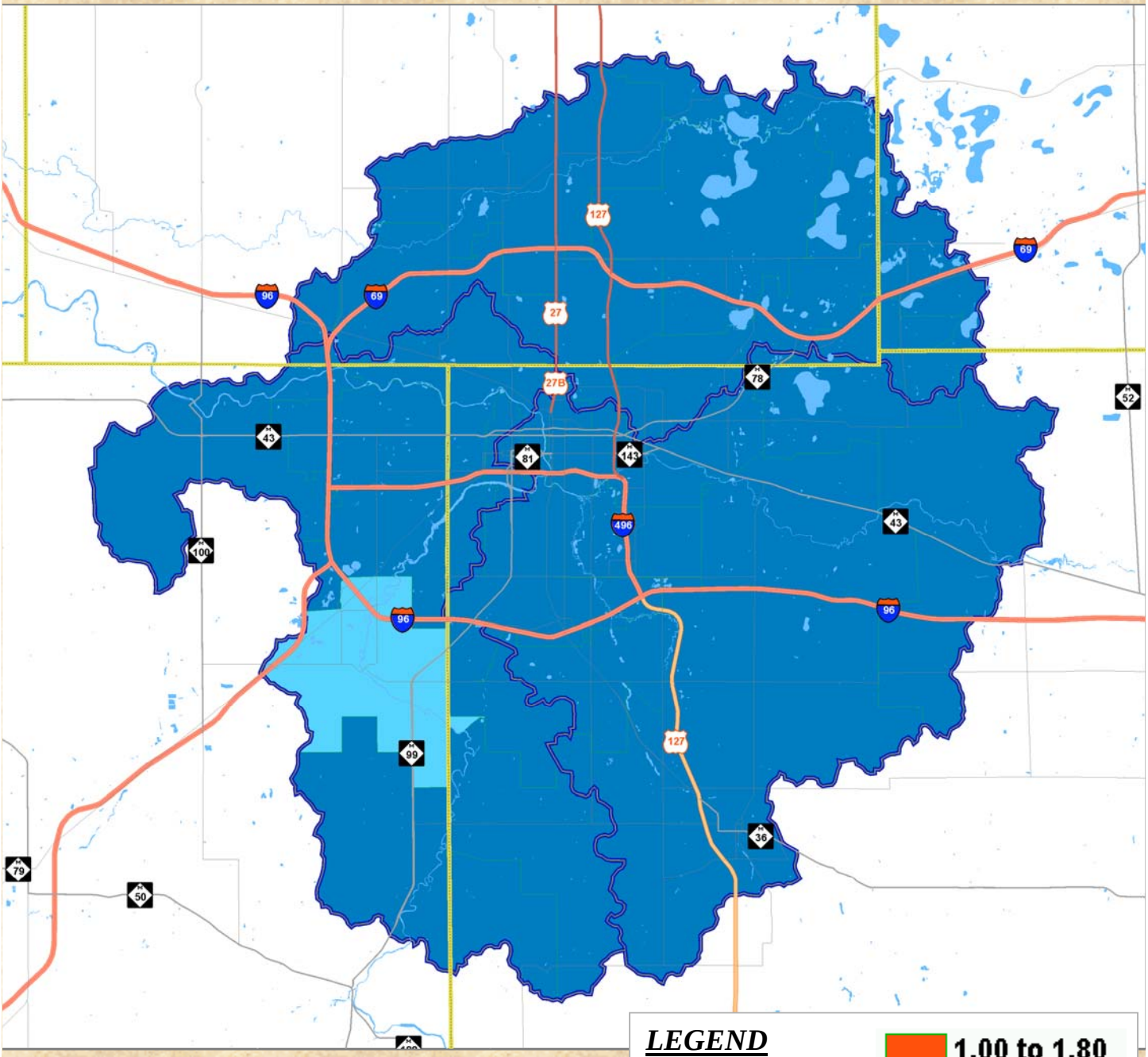
1 = Not Willing
5 = Very Willing

- 1.00 to 1.80
- 1.80 to 2.60
- 2.60 to 3.40
- 3.40 to 4.20
- 4.20 to 5.00
- Other

Note: "Other" areas did not contain enough respondents to show statistically significant results.

How willing would you be to sweep excess fertilizer and grass clippings from paved surfaces back onto lawn? (Q16d)



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LEGEND

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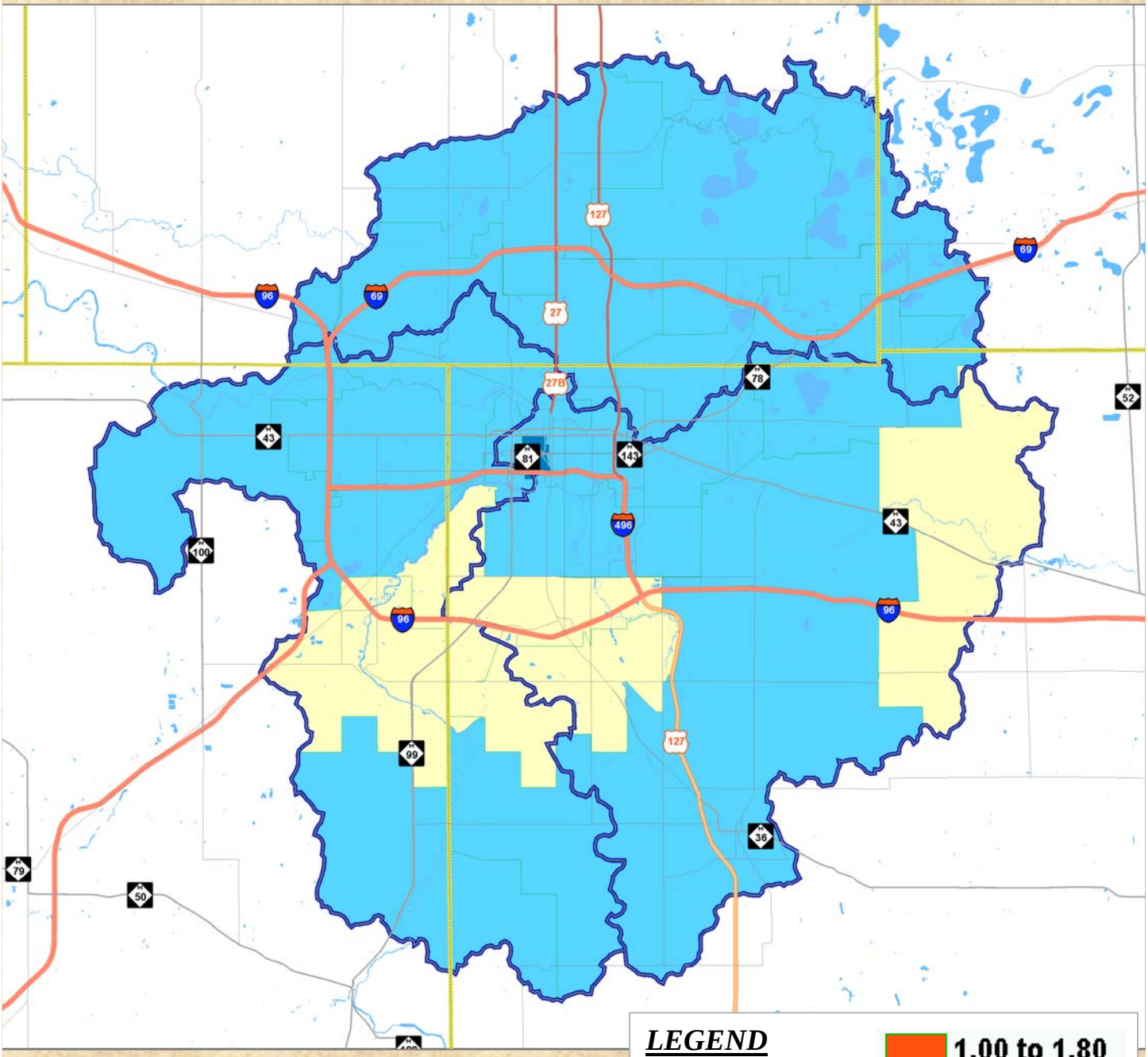
scale, where:

1 = Not Willing
5 = Very Willing

- 1.00 to 1.80
- 1.80 to 2.60
- 2.60 to 3.40
- 3.40 to 4.20
- 4.20 to 5.00
- Other

Note: "Other" areas did not contain enough respondents to show statistically significant results.

How willing would you be to have your soil tested? (Q16e)



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scale, where:

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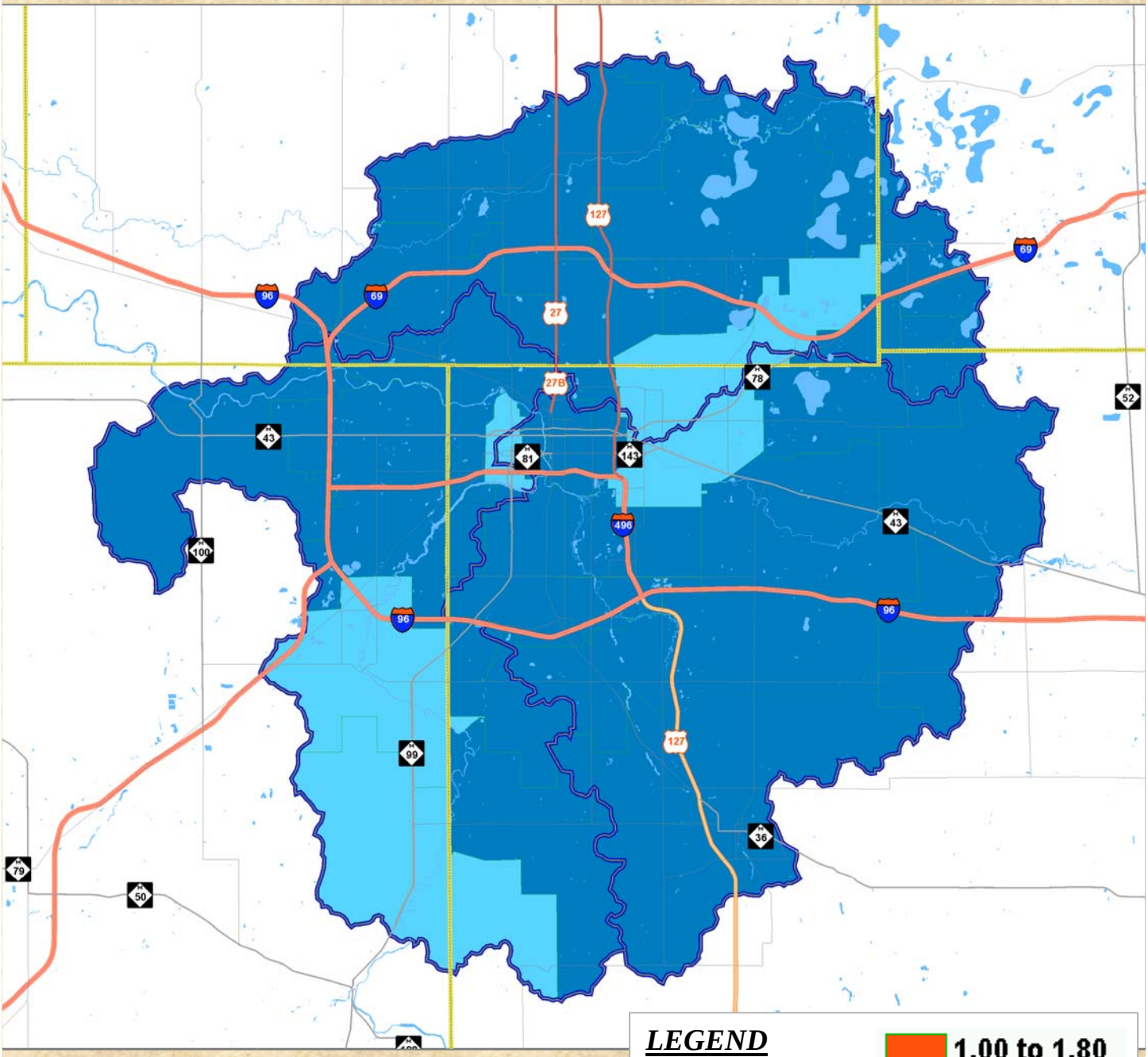
5 = Very Willing

- 1.00 to 1.80
- 1.80 to 2.60
- 2.60 to 3.40
- 3.40 to 4.20
- 4.20 to 5.00
- Other

Note: "Other" areas did not contain enough respondents to show statistically significant results.

How willing would you be to use a low phosphorus or slow release nitrogen fertilizer on your lawn? (Q16f)



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LEGEND

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scale, where:

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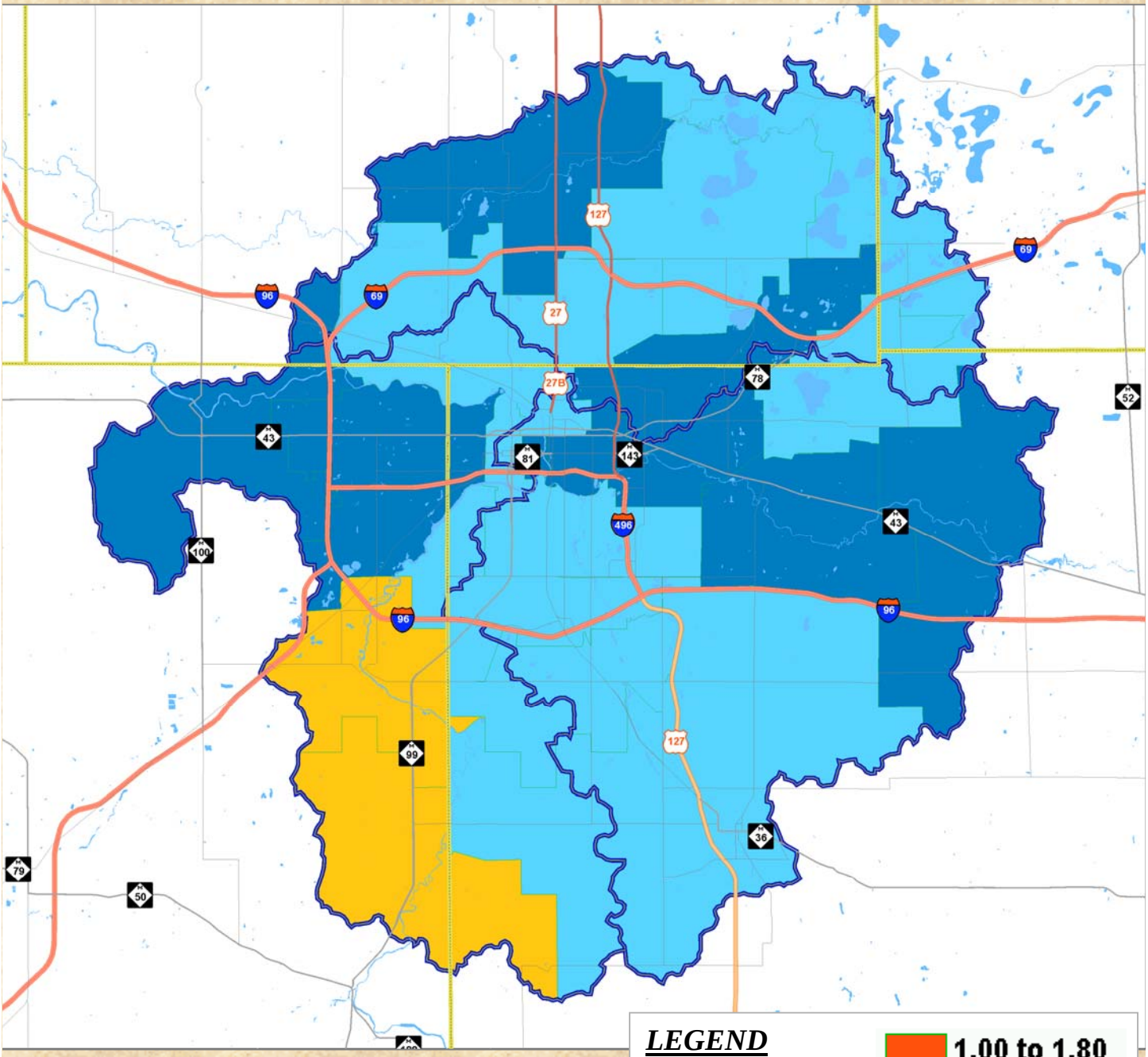
5 = Very Willing

- 1.00 to 1.80
- 1.80 to 2.60
- 2.60 to 3.40
- 3.40 to 4.20
- 4.20 to 5.00
- Other

Note: "Other" areas did not contain enough respondents to show statistically significant results.

How willing would you be to only use lawn service companies that use use environmentally friendly products (Q16g)



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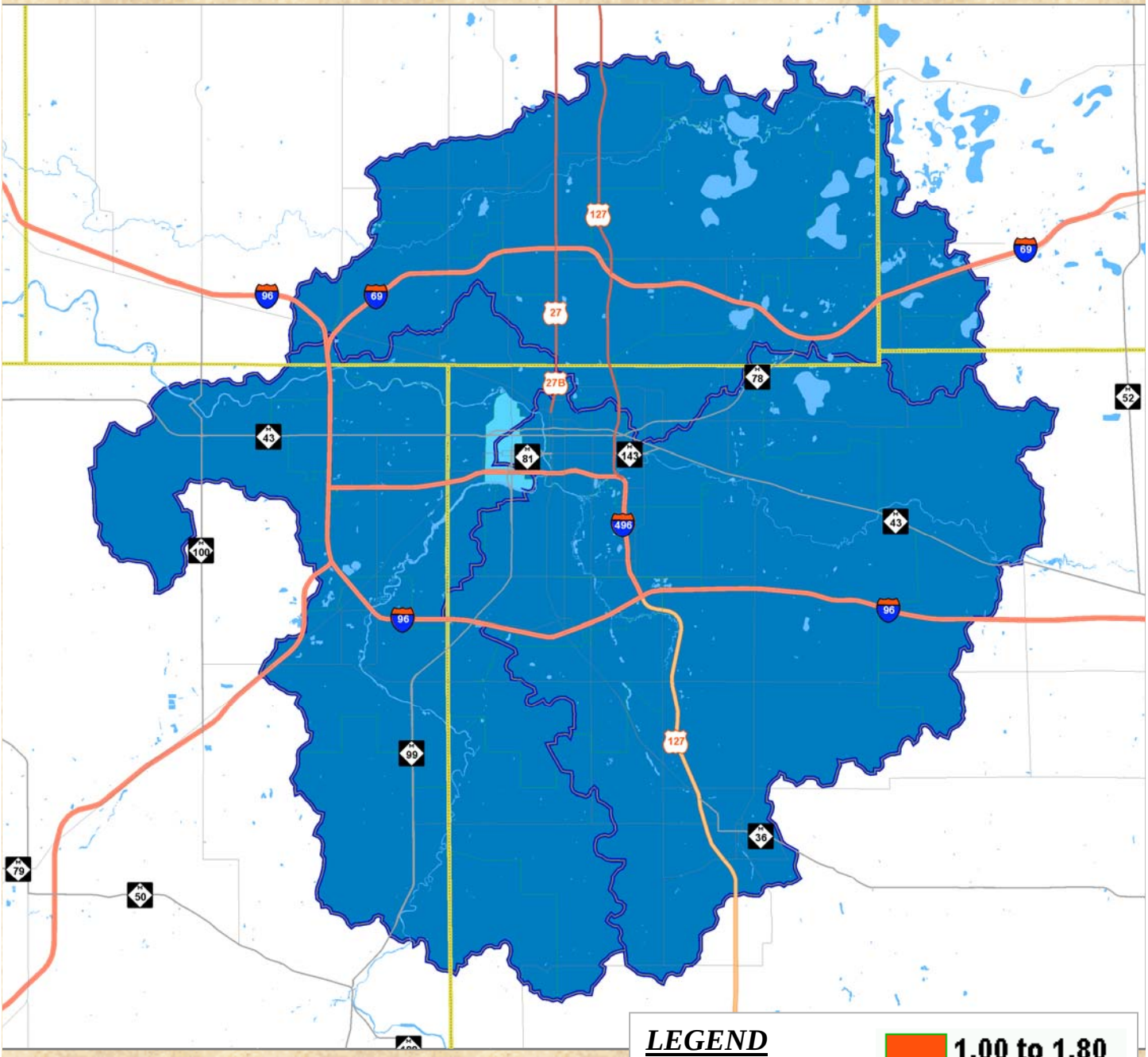
1 = Not Willing
5 = Very Willing

- 1.00 to 1.80
- 1.80 to 2.60
- 2.60 to 3.40
- 3.40 to 4.20
- 4.20 to 5.00
- Other

Note: "Other" areas did not contain enough respondents to show statistically significant results.

How willing would you be to dispose of household hazardous waste, such as motor as motor oil or pesticides, at a community collection day? (Q16h)



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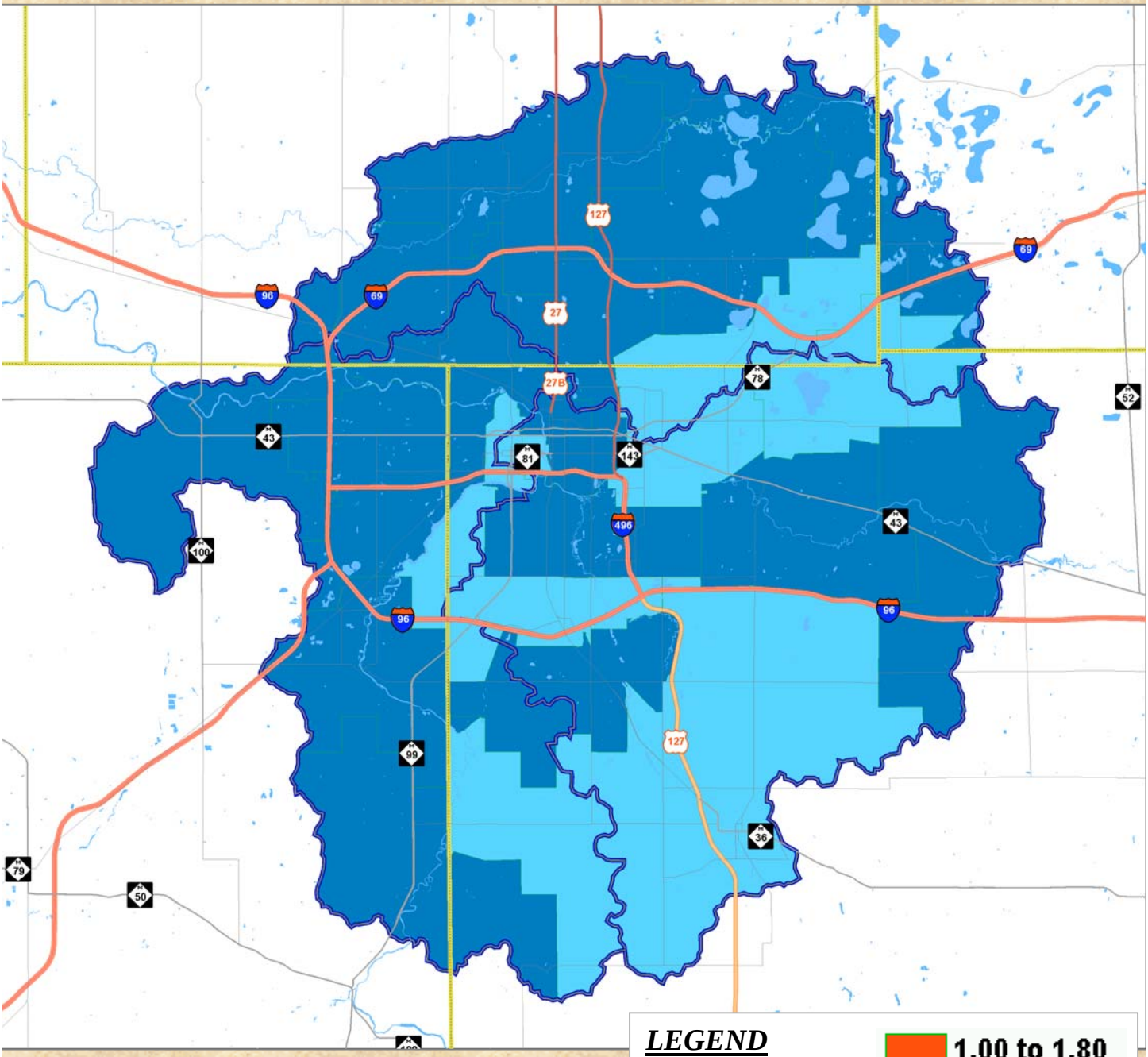
5 = Very Willing

- 1.00 to 1.80
- 1.80 to 2.60
- 2.60 to 3.40
- 3.40 to 4.20
- 4.20 to 5.00
- Other

Note: "Other" areas did not contain enough respondents to show statistically significant results.

How willing would you be to landscape your yard with plants native to Michigan? (Q16i)



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LEGEND

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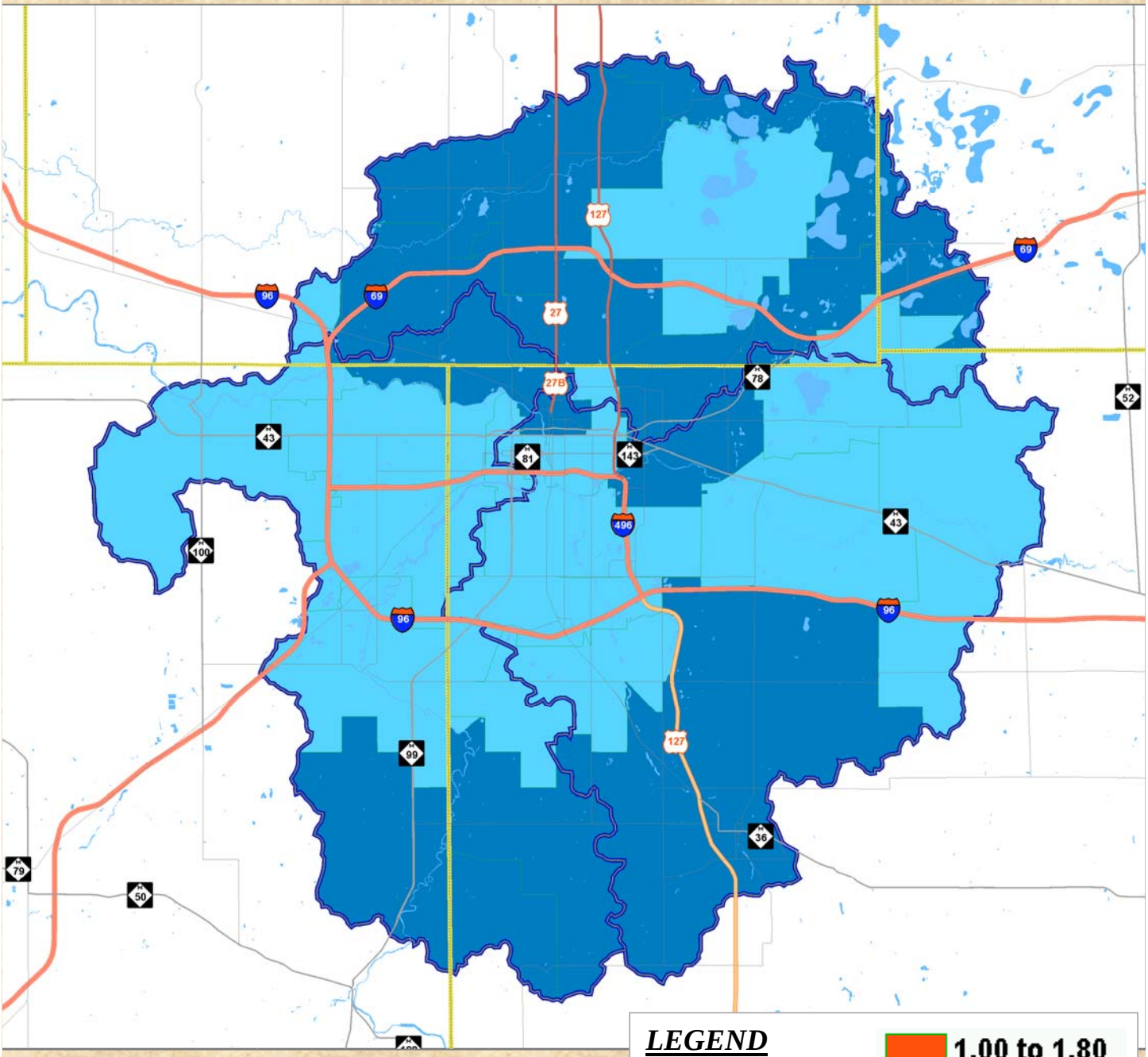
- 1.00 to 1.80
- 1.80 to 2.60
- 2.60 to 3.40
- 3.40 to 4.20
- 4.20 to 5.00
- Other

Note: "Other" areas did not contain enough respondents to show statistically significant results.

How willing would you be to change your lawn watering practices? (Q16j)



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- 1.00 to 1.80
- 1.80 to 2.60
- 2.60 to 3.40
- 3.40 to 4.20
- 4.20 to 5.00
- Other

Note: "Other" areas did not contain enough respondents to show statistically significant results.

Tabular Data
(Crosstabs by Watershed)

Distribution of Survey Respondents by Watershed

Watershed	Number	Percent
Looking Glass	204	30.2 %
Red Cedar	240	35.5 %
Grand River	232	34.3 %
Total	676	100.0 %

Q1. Do you think the quality of water in lakes, rivers, and streams in the community where you live is:

N=676	Watershed			Total
	Looking Glass LGWS	Red Cedar RCWS	Grand River GRWS	
Q1 Think water quality is				
1=Getting much worse	3.9%	7.5%	6.5%	6.1%
2=Getting somewhat worse	19.1%	16.3%	20.7%	18.6%
3=Staying the same	28.9%	28.3%	22.8%	26.6%
4=Getting somewhat better	27.0%	26.3%	26.3%	26.5%
5=Getting much better	3.4%	1.3%	4.3%	3.0%
9=Don't know	17.6%	20.4%	19.4%	19.2%

Q2. How much do you think the way you maintain your home (e.g., lawn care, trash disposal, pet care) affects the quality of water in lakes and streams in the community where you live?

N=676	Watershed			Total
	Looking Glass LGWS	Red Cedar RCWS	Grand River GRWS	
Q2 How maintain home affects water quality				
1=Great effect	17.6%	18.3%	24.1%	20.1%
2=Moderate effect	35.8%	33.8%	34.5%	34.6%
3=Little effect	32.8%	24.6%	18.5%	25.0%
4=No effect	8.8%	12.9%	11.2%	11.1%
9=Don't know	4.9%	10.4%	11.6%	9.2%

Q3. During the past 5 years, have you or someone in your household taken action at your home or in your community to protect water resources?

N=676	Watershed			Total
	Looking Glass LGWS	Red Cedar RCWS	Grand River GRWS	
Q3 Taken action to protect water resources				
1=Yes	33.3%	27.1%	22.0%	27.2%
2=No	56.4%	57.9%	57.8%	57.4%
9=Don't know	10.3%	15.0%	20.3%	15.4%

Q4. During the past year, which ONE of the following do you think contributed the MOST pollution to lakes, rivers and streams in the community where you live?

N=676	Watershed			Total
	Looking Glass LGWS	Red Cedar RCWS	Grand River GRWS	
Q4 Contributed most pollution				
1=Wastewater treatment plant discharges	9.3%	10.0%	12.5%	10.7%
2=Factories/industrial discharges	16.7%	27.1%	29.3%	24.7%
3=Stormwater runoff	26.5%	28.3%	22.8%	25.9%
4=Sewage overflow	4.9%	8.8%	13.8%	9.3%
5=Animal waste	2.9%	2.9%	2.6%	2.8%
6=Construction sites & new development	23.5%	12.1%	11.2%	15.2%
7=Agricultural operations	12.3%	5.8%	5.2%	7.5%
9=Don't know	3.9%	5.0%	2.6%	3.8%

Q5. Please indicate your level of agreement with the following statement: "The quality of local streams and rivers where I live affects the Great Lakes."

N=676	Watershed			Total
	Looking Glass LGWS	Red Cedar RCWS	Grand River GRWS	
Q5 Quality of local streams & rivers affects Lakes				
1=Strongly agree	46.1%	44.2%	43.1%	44.4%
2=Agree	40.2%	34.2%	45.7%	39.9%
3=Neither	5.4%	10.0%	4.7%	6.8%
4=Disagree	2.5%	3.8%	0.9%	2.4%
5=Strongly disagree	2.0%	0.0%	0.4%	0.7%
9=Don't know	3.9%	7.9%	5.2%	5.8%

Q6. Where do you think stormwater (rain water) goes after it enters a storm drain or roadside ditch in your community?

N=676	Watershed			Total
	Looking Glass LGWS	Red Cedar RCWS	Grand River GRWS	
Q6 Where does stormwater go				
1=To lakes & streams without treatment	63.2%	53.3%	50.9%	55.5%
2=To lakes & streams after treatment	9.3%	12.1%	11.6%	11.1%
3=Wastewater treatment plant	14.2%	13.3%	13.4%	13.6%
9=Don't know	13.2%	21.3%	24.1%	19.8%

Q7. Which ONE of the following BEST describes the location where you live?

N=676	Watershed			Total
	Looking Glass LGWS	Red Cedar RCWS	Grand River GRWS	
Q7 Location where you live				
1=Near watershed	26.0%	26.3%	21.1%	24.4%
2=In watershed	38.2%	25.8%	25.4%	29.4%
3=Don't live in watershed	14.2%	15.4%	11.6%	13.8%
9=Don't know/not familiar with term	21.6%	32.5%	41.8%	32.4%

Q8. Where does your household typically wash your vehicle(s) during the summer?

N=676	Watershed			Total
	Looking Glass LGWS	Red Cedar RCWS	Grand River GRWS	
Q8 Where wash vehicle during summer				
1=At home in driveway	21.1%	19.2%	19.4%	19.8%
2=At home on grass	6.4%	3.8%	5.6%	5.2%
3=At carwash	70.1%	72.1%	76.3%	72.9%
4=Other	0.0%	1.3%	1.3%	0.9%
5=Don't wash a vehicle	4.4%	9.2%	3.4%	5.7%

Q9. Do you have a septic system at your home?

N=676	Watershed			Total
	Looking Glass LGWS	Red Cedar RCWS	Grand River GRWS	
Q9 Have a septic system				
1=Yes	46.6%	13.3%	20.7%	25.9%
2=No	51.5%	82.9%	76.7%	71.3%
9=Don't know	2.0%	3.8%	2.6%	2.8%

IF YES to #9:

Q9a. Has your household had your septic system checked or serviced during the past five years?

N=175	Watershed			Total
	Looking Glass LGWS	Red Cedar RCWS	Grand River GRWS	
Q9a Had septic system checked or service				
1=Yes	73.7%	65.6%	79.2%	73.7%
2=No	25.3%	28.1%	16.7%	23.4%
9=Don't know	1.1%	6.3%	4.2%	2.9%

Q10. Do you or other members of your household usually change motor oil, transmission fluid, or radiator fluid for vehicles at your home?

N=676	Watershed			Total
	Looking Glass LGWS	Red Cedar RCWS	Grand River GRWS	
Q10 Usually change vehicle fluid at home				
1=Yes	18.6%	13.8%	10.8%	14.2%
2=No	81.4%	86.2%	89.2%	85.8%

Q11. Where does your household typically dispose of materials, such as old oil/fluids from your vehicle, batteries, pesticides, paints, and other household hazardous wastes?

N=676	Watershed			Total
	Looking Glass LGWS	Red Cedar RCWS	Grand River GRWS	
Q11 Where dispose of hazardous wastes				
1=On the ground	1.0%	0.8%	0.4%	0.7%
2=With regular trash	15.7%	21.3%	18.5%	18.6%
3=Community collection site	72.5%	67.5%	65.9%	68.5%
4=Container at my home	8.3%	6.7%	8.6%	7.8%
6=Other	5.4%	7.5%	5.6%	6.2%
9=Don't know	2.5%	5.8%	5.6%	4.7%

IF "Community Collection Site" was NOT selected on #11:

Q11a. Why doesn't your household typically dispose of your household hazardous waste at a community collection site?

N=203	Watershed			Total
	Looking Glass LGWS	Red Cedar RCWS	Grand River GRWS	
Q11a Why not at community collection				
1=Don't know where one is located	51.9%	35.4%	41.7%	41.9%
2=Don't have time	9.6%	10.1%	12.5%	10.8%
3=No sites near my home	9.6%	12.7%	11.1%	11.3%
5=Other	17.3%	15.2%	19.4%	17.2%
9=No reason given	7.7%	10.1%	5.6%	7.9%

Q12. Do you or other members of your household typically pick up your dog's waste when you go for a walk?

N=676	Watershed			Total
	Looking Glass LGWS	Red Cedar RCWS	Grand River GRWS	
Q12 Pick up dogs waste when go for walk				
1=Yes	27.5%	27.1%	24.6%	26.3%
2=No, but we have a dog	19.1%	6.7%	8.6%	11.1%
3=We do not have a dog	52.0%	65.8%	63.8%	60.9%
9=Don't know	1.5%	0.4%	3.0%	1.6%

Q12a. How does your household typically dispose of your dog's waste?

N=253	Watershed			Total
	Looking Glass LGWS	Red Cedar RCWS	Grand River GRWS	
Q12a How dispose of dogs waste				
1=Throw in ditch	4.2%	1.2%	0.0%	2.0%
2=Regular trash	41.1%	48.1%	54.5%	47.4%
3=Bury in ground	8.4%	12.3%	14.3%	11.5%
4=Flush down toilet	5.3%	13.6%	6.5%	8.3%
6=Do not pick up	15.8%	9.9%	7.8%	11.5%
7=Other	17.9%	9.9%	16.9%	15.0%
9=Don't know/varies	9.5%	7.4%	6.5%	7.9%

Q13. Does your household use a lawn service for mowing, fertilizer and/or pesticide applications?

N=676	Watershed			Total
	Looking Glass LGWS	Red Cedar RCWS	Grand River GRWS	
Q13 Use lawn service				
1=Yes	25.0%	25.4%	27.2%	25.9%
2=No	73.0%	72.5%	72.0%	72.5%
9=Don't know	2.0%	2.1%	0.9%	1.6%

IF YES to #13:

Q13a. Does your household ask your lawn service to use environmentally friendly/organic products and practices?

N=175	Watershed			Total
	Looking Glass LGWS	Red Cedar RCWS	Grand River GRWS	
Q13a Ask service to use environmentally				
1=Yes, and they use environmentally friendly products	49.0%	41.0%	39.7%	42.9%
2=Yes, but they don't offer these services	3.9%	3.3%	1.6%	2.9%
3=No-haven't asked	21.6%	27.9%	31.7%	27.4%
4=No-don't think matters	5.9%	1.6%	1.6%	2.9%
9=Don't know	19.6%	26.2%	25.4%	24.0%

Q14. What does your household (or your lawn service) typically do with your grass clippings and/or leaves?

N=676	Watershed			Total
	Looking Glass LGWS	Red Cedar RCWS	Grand River GRWS	
Q14 What do you do with grass clippings				
1=Leave them on lawn	71.1%	62.9%	68.5%	67.3%
2=Compost them in yard	27.5%	21.7%	15.1%	21.2%
4=Curbside pickup	12.3%	31.7%	22.8%	22.8%
5=Other	7.4%	10.0%	8.2%	8.6%
6=Don't have yard	0.5%	3.3%	2.6%	2.2%
9=Don’t know	1.5%	0.8%	3.4%	1.9%

Q15. Which of the following BEST describes how often your household fertilizes your lawn?

N=676	Watershed			Total
	Looking Glass LGWS	Red Cedar RCWS	Grand River GRWS	
Q15 How often fertilize lawn				
5 or more times per year	3.9%	3.3%	5.2%	4.1%
3-4 times per year	16.7%	19.2%	22.8%	19.7%
1-2 times per year	34.8%	32.5%	34.1%	33.7%
Seldom or never but I have a lawn	39.2%	38.3%	33.6%	37.0%
Not applicable-don't have a lawn	2.9%	5.4%	3.4%	4.0%
Don’t know	2.5%	1.3%	0.9%	1.5%

Q15a. Have you had your soil tested to determine how much and what kind of nutrients your lawn needs?

N=389	Watershed			Total
	Looking Glass LGWS	Red Cedar RCWS	Grand River GRWS	
Q15a Had soil tested				
1=Yes	27.4%	18.9%	18.1%	21.1%
2=No	70.8%	74.2%	75.7%	73.8%
9=Don't know	1.8%	6.8%	6.3%	5.1%

Q15b. Which of the following reasons influence the type of fertilizer or pesticide your household uses most?

N=389	Watershed			Total
	Looking Glass LGWS	Red Cedar RCWS	Grand River GRWS	
Q15b Influence type of fertilizer or pesticide				
1=Previous experience	47.8%	37.1%	47.9%	44.2%
2=Price	23.0%	23.5%	24.3%	23.7%
3=Commercials/product displays	4.4%	6.8%	6.3%	5.9%
4=Recommendations from friends	8.0%	9.8%	11.8%	10.0%
5=Articles in newspapers/ magazines	8.0%	6.8%	9.7%	8.2%
6=Recommendations from store employees	8.0%	12.9%	8.3%	9.8%
7=How safe it is for environment	21.2%	9.8%	16.0%	15.4%
8=Other	11.5%	9.8%	13.9%	11.8%
9=Don't know	12.4%	18.2%	15.3%	15.4%

Q16. Using a 5-point scale where "1" means "not willing" and "5" means "very willing," please indicate how willing would you be to do each of the following by circling the corresponding number below.

N=676	Watershed			Total
	Looking Glass LGWS	Red Cedar RCWS	Grand River GRWS	
Q16a Changing your car washing practices				
1=Not willing	5.4%	5.0%	1.3%	3.8%
2=2	2.5%	1.3%	1.7%	1.8%
3=3	3.9%	5.0%	6.0%	5.0%
4=4	7.8%	9.6%	11.2%	9.6%
5=Very willing	60.3%	55.8%	55.6%	57.1%
9=Don't know/ Not applicable	20.1%	23.3%	24.1%	22.6%
Q16b Promptly picking up & disposing of pet waste				
1=Not willing	5.4%	3.8%	2.6%	3.8%
2=2	3.9%	1.7%	1.7%	2.4%
3=3	4.4%	2.9%	2.6%	3.3%
4=4	1.5%	3.8%	5.6%	3.7%
5=Very willing	26.5%	32.1%	29.7%	29.6%
9=Don't know/ Not applicable	58.3%	55.8%	57.8%	57.2%

Q16. Using a 5-point scale where "1" means "not willing" and "5" means "very willing," please indicate how willing would you be to do each of the following by circling the corresponding number below.

N=676	Watershed			Total
	Looking Glass LGWS	Red Cedar RCWS	Grand River GRWS	
Q16c Having your septic tank serviced				
1=Not willing	2.0%	2.5%	0.9%	1.8%
2=2	2.0%	2.1%	0.0%	1.3%
3=3	5.4%	0.4%	3.4%	3.0%
4=4	5.9%	2.1%	3.0%	3.6%
5=Very willing	31.9%	15.0%	19.8%	21.7%
9=Don't know/ Not applicable	52.9%	77.9%	72.8%	68.6%
Q16d Sweeping excess fertilizer & grass onto lawn				
1=Not willing	3.4%	2.9%	1.3%	2.5%
2=2	1.0%	2.5%	0.9%	1.5%
3=3	2.9%	5.0%	3.9%	4.0%
4=4	8.3%	6.7%	8.2%	7.7%
5=Very willing	60.3%	61.7%	64.7%	62.3%
9=Don't know/ Not applicable	24.0%	21.3%	21.1%	22.0%

Q16. Using a 5-point scale where "1" means "not willing" and "5" means "very willing," please indicate how willing would you be to do each of the following by circling the corresponding number below.

N=676	Watershed			Total
	Looking Glass LGWS	Red Cedar RCWS	Grand River GRWS	
Q16e Having your soil tested				
1=Not willing	8.8%	9.6%	6.0%	8.1%
2=2	9.8%	7.9%	9.9%	9.2%
3=3	15.7%	19.2%	18.1%	17.8%
4=4	10.8%	12.5%	9.9%	11.1%
5=Very willing	36.8%	29.6%	35.8%	33.9%
9=Don't know/ Not applicable	18.1%	21.3%	20.3%	20.0%
Q16f Using a low phosphorus fertilizer				
1=Not willing	3.9%	2.9%	2.6%	3.1%
2=2	1.0%	2.1%	1.3%	1.5%
3=3	8.8%	6.3%	6.5%	7.1%
4=4	10.8%	14.2%	15.5%	13.6%
5=Very willing	50.0%	47.1%	48.3%	48.4%
9=Don't know/ Not applicable	25.5%	27.5%	25.9%	26.3%

Q16. Using a 5-point scale where "1" means "not willing" and "5" means "very willing," please indicate how willing would you be to do each of the following by circling the corresponding number below.

N=676	Watershed			Total
	Looking Glass LGWS	Red Cedar RCWS	Grand River GRWS	
Q16g Only using lawn service companies				
1=Not willing	7.4%	5.8%	7.8%	7.0%
2=2	2.9%	2.1%	0.9%	1.9%
3=3	3.4%	3.3%	6.5%	4.4%
4=4	3.9%	6.7%	9.1%	6.7%
5=Very willing	32.4%	33.3%	28.0%	31.2%
9=Don't know/ Not applicable	50.0%	48.8%	47.8%	48.8%
Q16h Disposing of household hazardous waste				
1=Not willing	2.5%	2.5%	1.3%	2.1%
2=2	2.0%	2.5%	2.2%	2.2%
3=3	4.4%	4.6%	2.6%	3.8%
4=4	7.8%	4.2%	7.8%	6.5%
5=Very willing	72.5%	72.1%	70.3%	71.6%
9=Don't know/ Not applicable	10.8%	14.2%	15.9%	13.8%

Q16. Using a 5-point scale where "1" means "not willing" and "5" means "very willing," please indicate how willing would you be to do each of the following by circling the corresponding number below.

N=676	Watershed			Total
	Looking Glass LGWS	Red Cedar RCWS	Grand River GRWS	
Q16i Landscaping your yard with native plants				
1=Not willing	4.4%	3.3%	2.6%	3.4%
2=2	2.0%	2.9%	2.6%	2.5%
3=3	7.4%	10.4%	11.2%	9.8%
4=4	12.7%	13.3%	15.1%	13.8%
5=Very willing	64.2%	57.1%	53.9%	58.1%
9=Don't know/ Not applicable	9.3%	12.9%	14.7%	12.4%
Q16j Changing your lawn watering practices				
1=Not willing	4.4%	6.3%	5.2%	5.3%
2=2	3.4%	3.3%	3.4%	3.4%
3=3	8.8%	9.6%	7.8%	8.7%
4=4	11.3%	15.8%	10.8%	12.7%
5=Very willing	37.7%	36.7%	39.7%	38.0%
9=Don't know/ Not applicable	34.3%	28.3%	33.2%	31.8%

EXCLUDING DON'T KNOWS/NOT APPLICABLE RESPONSES

Q16. Using a 5-point scale where "1" means "not willing" and "5" means "very willing," please indicate how willing would you be to do each of the following by circling the corresponding number below. (excluding not applicable)

N=676	Watershed			Total
	Looking Glass LGWS	Red Cedar RCWS	Grand River GRWS	
Q16a Changing your car washing practices				
1=Not willing	6.7%	6.5%	1.7%	5.0%
2=2	3.1%	1.6%	2.3%	2.3%
3=3	4.9%	6.5%	8.0%	6.5%
4=4	9.8%	12.5%	14.8%	12.4%
5=Very willing	75.5%	72.8%	73.3%	73.8%
Q16b Promptly picking up & disposing of pet waste				
1=Not willing	12.9%	8.5%	6.1%	9.0%
2=2	9.4%	3.8%	4.1%	5.5%
3=3	10.6%	6.6%	6.1%	7.6%
4=4	3.5%	8.5%	13.3%	8.7%
5=Very willing	63.5%	72.6%	70.4%	69.2%

EXCLUDING DON'T KNOWS/NOT APPLICABLE RESPONSES

Q16. Using a 5-point scale where "1" means "not willing" and "5" means "very willing," please indicate how willing would you be to do each of the following by circling the corresponding number below. (excluding not applicable)

N=676	Watershed			Total
	Looking Glass LGWS	Red Cedar RCWS	Grand River GRWS	
Q16c Having your septic tank serviced				
1=Not willing	4.2%	11.3%	3.2%	5.7%
2=2	4.2%	9.4%	0.0%	4.2%
3=3	11.5%	1.9%	12.7%	9.4%
4=4	12.5%	9.4%	11.1%	11.3%
5=Very willing	67.7%	67.9%	73.0%	69.3%
Q16d Sweeping excess fertilizer & grass onto lawn				
1=Not willing	4.5%	3.7%	1.6%	3.2%
2=2	1.3%	3.2%	1.1%	1.9%
3=3	3.9%	6.3%	4.9%	5.1%
4=4	11.0%	8.5%	10.4%	9.9%
5=Very willing	79.4%	78.3%	82.0%	79.9%

EXCLUDING DON'T KNOWS/NOT APPLICABLE RESPONSES

Q16. Using a 5-point scale where "1" means "not willing" and "5" means "very willing," please indicate how willing would you be to do each of the following by circling the corresponding number below. (excluding not applicable)

N=676	Watershed			Total
	Looking Glass LGWS	Red Cedar RCWS	Grand River GRWS	
Q16e Having your soil tested				
1=Not willing	10.8%	12.2%	7.6%	10.2%
2=2	12.0%	10.1%	12.4%	11.5%
3=3	19.2%	24.3%	22.7%	22.2%
4=4	13.2%	15.9%	12.4%	13.9%
5=Very willing	44.9%	37.6%	44.9%	42.3%
Q16f Using a low phosphorus fertilizer				
1=Not willing	5.3%	4.0%	3.5%	4.2%
2=2	1.3%	2.9%	1.7%	2.0%
3=3	11.8%	8.6%	8.7%	9.6%
4=4	14.5%	19.5%	20.9%	18.5%
5=Very willing	67.1%	64.9%	65.1%	65.7%

EXCLUDING DON'T KNOWS/NOT APPLICABLE RESPONSES

Q16. Using a 5-point scale where "1" means "not willing" and "5" means "very willing," please indicate how willing would you be to do each of the following by circling the corresponding number below. (excluding not applicable)

N=676	Watershed			Total
	Looking Glass LGWS	Red Cedar RCWS	Grand River GRWS	
Q16g Only using lawn service companies				
1=Not willing	14.7%	11.4%	14.9%	13.6%
2=2	5.9%	4.1%	1.7%	3.8%
3=3	6.9%	6.5%	12.4%	8.7%
4=4	7.8%	13.0%	17.4%	13.0%
5=Very willing	64.7%	65.0%	53.7%	61.0%
Q16h Disposing of household hazardous waste				
1=Not willing	2.7%	2.9%	1.5%	2.4%
2=2	2.2%	2.9%	2.6%	2.6%
3=3	4.9%	5.3%	3.1%	4.5%
4=4	8.8%	4.9%	9.2%	7.5%
5=Very willing	81.3%	84.0%	83.6%	83.0%

EXCLUDING DON'T KNOWS/NOT APPLICABLE RESPONSES

Q16. Using a 5-point scale where "1" means "not willing" and "5" means "very willing," please indicate how willing would you be to do each of the following by circling the corresponding number below. (excluding not applicable)

N=676	Watershed			Total
	Looking Glass LGWS	Red Cedar RCWS	Grand River GRWS	
Q16i Landscaping your yard with native plants				
1=Not willing	4.9%	3.8%	3.0%	3.9%
2=2	2.2%	3.3%	3.0%	2.9%
3=3	8.1%	12.0%	13.1%	11.1%
4=4	14.1%	15.3%	17.7%	15.7%
5=Very willing	70.8%	65.6%	63.1%	66.4%
Q16j Changing your lawn watering practices				
1=Not willing	6.7%	8.7%	7.7%	7.8%
2=2	5.2%	4.7%	5.2%	5.0%
3=3	13.4%	13.4%	11.6%	12.8%
4=4	17.2%	22.1%	16.1%	18.7%
5=Very willing	57.5%	51.2%	59.4%	55.7%

Q17. Where would you prefer to receive information about what you can do to protect our lakes and streams?
(multiple responses allowed)

N=676	Watershed			Total
	Looking Glass LGWS	Red Cedar RCWS	Grand River GRWS	
Q17 Where prefer to receive information				
01=Lansing State Journal	58.8%	61.7%	63.8%	61.5%
02=Community newspaper	50.0%	35.0%	39.2%	41.0%
03=Municipal newsletter	27.9%	25.4%	23.3%	25.4%
04=Municipal website	7.8%	9.6%	4.7%	7.4%
05=Government access TV	4.9%	6.3%	6.0%	5.8%
06=Television news	38.2%	42.1%	53.9%	45.0%
07=Radio	21.1%	29.2%	25.0%	25.3%
08=Internet	16.7%	17.5%	14.2%	16.1%
09=Billboards	9.8%	11.7%	13.4%	11.7%
10=MSU Extension Office	23.0%	21.7%	22.0%	22.2%
11=Environmental groups	9.3%	9.2%	12.5%	10.4%
12=Materials from colleges	16.7%	15.0%	13.8%	15.1%
13=Other	3.4%	7.1%	3.4%	4.7%
99=None chosen	2.5%	3.3%	3.9%	3.3%

Q18. Which of the following road signs have you seen in your community?
(multiple responses allowed)

N=676	Watershed			Total
	Looking Glass LGWS	Red Cedar RCWS	Grand River GRWS	
Q18 Signs have seen in community				
1=Identifying rivers	62.3%	50.8%	44.8%	52.2%
2=Indicating entering watershed	62.7%	44.2%	28.0%	44.2%
3=Haven't seen either	21.1%	35.0%	44.8%	34.2%
9=Not provided	0.5%	1.7%	2.6%	1.6%

Q20. Which person in your household MOST frequently does the activities listed below. (excluding not applicable)

N=676	Watershed			Total
	Looking Glass LGWS	Red Cedar RCWS	Grand River GRWS	
Q20a Picks up after your dog				
1=Adult male	40.9%	53.2%	45.3%	46.8%
2=Adult female	54.5%	44.2%	48.0%	48.6%
3=Child 12-17	1.5%	1.3%	6.7%	3.2%
4=Child < 12	3.0%	1.3%	0.0%	1.4%

Q20. Which person in your household MOST frequently does the activities listed below. (excluding not applicable)

N=676	Watershed			Total
	Looking Glass LGWS	Red Cedar RCWS	Grand River GRWS	
Q20b Washes the car				
1=Adult male	71.8%	60.2%	60.5%	64.0%
2=Adult female	27.6%	38.1%	38.4%	34.8%
3=Child 12-17	0.0%	1.1%	1.2%	0.8%
4=Child < 12	0.6%	0.6%	0.0%	0.4%
Q20c Fertilizes the lawn				
1=Adult male	84.0%	70.6%	78.6%	77.4%
2=Adult female	16.0%	28.7%	21.4%	22.3%
3=Child 12-17	0.0%	0.7%	0.0%	0.3%
Q20d Landscaping/gardening				
1=Adult male	55.2%	49.0%	49.7%	51.2%
2=Adult female	44.2%	50.0%	49.2%	47.9%
3=Child 12-17	0.6%	1.0%	1.1%	0.9%

Q20. Which person in your household MOST frequently does the activities listed below. (excluding not applicable)

N=676	Watershed			Total
	Looking Glass LGWS	Red Cedar RCWS	Grand River GRWS	
Q20e Mows the lawn				
1=Adult male	77.5%	74.4%	71.1%	74.3%
2=Adult female	18.0%	23.1%	22.2%	21.2%
3=Child 12-17	4.5%	2.6%	6.7%	4.6%
Q20f Vehicle maintenance				
1=Adult male	88.2%	75.3%	77.7%	80.2%
2=Adult female	11.8%	24.1%	21.0%	19.2%
3=Child 12-17	0.0%	0.6%	1.3%	0.6%
Q20g Disposes of household hazardous				
1=Adult male	77.6%	67.3%	70.3%	71.6%
2=Adult female	22.4%	32.7%	28.6%	28.1%
3=Child 12-17	0.0%	0.0%	1.0%	0.3%
Q20h Scheduling septic tank maintenance				
1=Adult male	77.2%	65.7%	71.7%	73.4%
2=Adult female	22.8%	34.3%	28.3%	26.6%

Q21. Which of the following best describes your race/ethnicity (check all that apply)?

N=676	Watershed			Total
	Looking Glass LGWS	Red Cedar RCWS	Grand River GRWS	
Q21 Race/ethnicity				
1=Asian/Pacific Islander	0.5%	2.5%	0.0%	1.0%
2=Black/African American	9.9%	12.5%	18.4%	13.8%
3=White	85.7%	81.7%	78.2%	81.7%
4=American Indian/Eskimo	1.0%	0.4%	3.0%	1.5%
5=Other	3.9%	3.3%	2.2%	3.1%

Q22. What is your age?

N=676	Watershed			Total
	Looking Glass LGWS	Red Cedar RCWS	Grand River GRWS	
Q22 Age				
Under 35	18.1%	21.9%	16.5%	18.9%
35 to 44	19.2%	18.7%	15.2%	17.7%
45 to 54	20.8%	20.3%	24.1%	21.7%
55 to 64	23.9%	17.0%	20.9%	20.5%
65+	17.9%	22.2%	23.3%	21.3%

Q23. Would you say your total annual household income is:

N=676	Watershed			Total
	Looking Glass LGWS	Red Cedar RCWS	Grand River GRWS	
Q23 Total annual household income is				
1=Under $35,000	14.7%	28.8%	20.3%	21.6%
2=$35,000 to $59,999	22.5%	26.7%	29.7%	26.5%
3=$60,000 to $99,999	28.4%	20.8%	22.0%	23.5%
4=$100,000 to $199,999	13.7%	7.5%	8.6%	9.8%
5=More than $200,000	1.0%	3.8%	1.3%	2.1%
9=Not provided	19.6%	12.5%	18.1%	16.6%

Q24. Your gender?

N=676	Watershed			Total
	Looking Glass LGWS	Red Cedar RCWS	Grand River GRWS	
Q24 Gender				
1=Male	58.3%	54.6%	49.1%	53.8%
2=Female	41.7%	45.4%	50.9%	46.2%

Survey Instrument

2006 Greater Lansing Regional Water Quality Survey

1. Do you think the quality of water in lakes, rivers, and streams in the community where you live is:

____(1) Getting much worse
____(2) Getting somewhat worse
____(3) Staying the same
____(4) Getting somewhat better
____(5) Getting much better
____(9) Don't know

2. How much do you think the way you maintain your home (e.g., lawn care, trash disposal, pet care) affects the quality of water in lakes and streams in the community where you live?

____(1) Great effect
____(2) Moderate effect
____(3) Little effect
____(4) No effect
____(9) Don't know

3. During the past 5 years, have you or someone in your household taken action at your home or in your community to protect water resources?

____(1) Yes – answer 3a ____(2) No ____(9) Don't know

3a. If YES: what action(s) have you or others in your household taken?

_____

4. During the past year, which ONE of the following do you think contributed the MOST pollution to lakes, rivers and streams in the community where you live?

___(1) Wastewater treatment plant discharges
___(2) Factories / industrial discharges
___(3) Stormwater (rain water) runoff into storm drains and roadside ditches
___(4) Sewage overflow
___(5) Animal waste
___(6) Construction sites and new development
___(7) Agricultural operations

5. Please indicate your level of agreement with the following statement: "The quality of local streams and rivers where I live affects the Great Lakes."

___(1) Strongly agree
___(2) Agree
___(3) Neither agree or disagree
___(4) Disagree
___(5) Strongly disagree
___(9) Don't know

6. Where do you think stormwater (rain water) goes after it enters a storm drain or roadside ditch in your community?

____(1) Directly to lakes and streams without treatment
____(2) To lakes and streams after receiving some treatment
____(3) To a wastewater treatment plant
____(9) Don't know

7. Which ONE of the following BEST describes the location where you live? (check one)

____(1) I live near a watershed
____(2) I live in a watershed
____(3) I don't live in a watershed
____(9) Don't know/I'm not familiar with the term "watershed"

8. Where does your household typically wash your vehicle(s) during the summer?

___(1) At home in the driveway
___(2) At home on the grass
___(3) At a carwash
___(4) Other place: _____
___(5) Don't wash a vehicle

9. Do you have a septic system at your home?
___(1) Yes – answer 9a ___(2) No - go to 10 ___(9) Don't know

9a. [If YES] **Has your household had your septic system checked or serviced during the past five years?**
___(1) Yes ___(2) No ___(9) Don't know

10. Do you or other members of your household usually change motor oil, transmission fluid, or radiator fluid for vehicles at your home?
___(1) Yes ___(2) No

11. Where does your household typically dispose of materials, such as old oil/fluids from your vehicle, batteries, pesticides, paints, and other household hazardous wastes? (check all that apply)
___(1) On the ground – answer 11a
___(2) With my regular trash - answer 11a
___(3) At a scheduled community collection site or facility that accepts these materials – go to 12
___(4) I keep it in a container at my home – answer 11a
___(5) Down a storm drain or roadside ditch – answer 11a
___(6) Other: _____

11a. Why doesn't your household typically dispose of your household hazardous waste at a community collection site?
___(1) Don't know where one is located
___(2) Don't have time
___(3) No sites are located near my home
___(4) I don't think household hazardous waste facilities are necessary
___(5) Other: _____

12. Do you or other members of your household typically pick up your dog's waste when you go for a walk?
___(1) Yes – go to 12a
___(2) No, but we HAVE a dog - go to 12a
___(3) No, because we DO NOT have a dog – go to 13

12a. [If you have a dog] **How does your household typically dispose of your dog's waste?**
___(1) Throw it in the ditch
___(2) Dispose with my regular trash
___(3) Bury it in the ground
___(4) Flush it down toilet
___(5) Put it in the street or down a storm drain
___(6) Do not pick up dog waste
___(7) Other: _____

13. Does your household use a lawn service for mowing, fertilizer and/or pesticide applications?
___(1) Yes – answer 13a ___(2) No – go to 14

13a. [If YES] **Does your household ask your lawn service to use environmentally friendly/organic products and practices?**
___(1) Yes. The lawn service uses environmentally friendly products and practices on my lawn.
___(2) Yes. I asked, but the lawn service doesn't offer these services.
___(3) No. I haven't asked, but will in the future.
___(4) No. I don't think using environmentally friendly products matters.
___(9) Don't know.

14. What does your household (or your lawn service) typically do with your grass clippings and/or leaves? (check all that apply)

___(1) Leave them on the lawn/Mulch into lawn
___(2) Compost them in your yard
___(3) Sweep them into the street or into a roadside ditch/stream/wetland
___(4) Curbside pickup by community
___(5) Other: _____
___(6) Do not have a yard

15. Which of the following BEST describes how often your household fertilizes your lawn?

___(1) 5 or more times per year
___(2) 3-4 times per year
___(3) 1-2 times per year
___(4) Seldom or never, but I have a lawn
___(5) Not applicable – I don't have a lawn

15a. [If Your Household Fertilizes Your Lawn] Have you had your soil tested to determine how much and what kind of nutrients your lawn needs?

___(1) Yes ___(2) No

15b. [If You Use Fertilizer] **Which of the following reasons influence the type of fertilizer or pesticide your household uses most?** (check all that apply)

___(1) Previous experience with product
___(2) Price
___(3) Commercials/product displays
___(4) Recommendations from friends
___(5) Articles in newspapers/magazines
___(6) Recommendations from store employees
___(7) How safe it is for the environment
___(8) Other: _____
___(9) don't know

16. Several ways that residents can help reduce pollution of streams and lakes in their community are listed below. Using a 5-point scale where "1" means "<u>not willing</u>" and "5" means "<u>very willing</u>," please indicate how willing would you be to do each of the following by circling the corresponding number below.

	Not Willing				Very Willing	Not Applicable
(A) Changing you car washing practices (using a car wash, washing your car on the grass, or using less soap). ..	1	2	3	4	5	9
(B) Promptly picking up & disposing of your pet's waste.	1	2	3	4	5	9
(C) Having your septic tank serviced every 3-5 years	1	2	3	4	5	9
(D) Sweeping excess fertilizer and grass clippings from paved surfaces back onto lawn.....	1	2	3	4	5	9
(E) Having your soil tested	1	2	3	4	5	9
(F) Using a low phosphorus or slow release nitrogen fertilizer on your lawn.....	1	2	3	4	5	9
(G) Only using lawn service companies that use use environmentally friendly products	1	2	3	4	5	9
(H) Disposing of household hazardous waste, such as motor oil or pesticides, at a community collection day	1	2	3	4	5	9
(I) Landscaping your yard with plants native to Michigan	1	2	3	4	5	9
(J) Changing your lawn watering practices	1	2	3	4	5	9

17. Where would you prefer to receive information about what you can do to protect our lakes and streams? (check all that apply)

___(01) Lansing State Journal
___(02) Community newspaper
___(03) Municipal newsletter
___(04) Municipal website
___(05) Government access TV
___(06) Television news
___(07) Radio
___(08) Internet
___(09) Billboards
___(10) MSU Extension Office
___(11) Environmental groups
___(12) Materials from colleges or universities
___(13) Other: _____

18. Which of the following road signs have you seen in your community? (check all that apply)

___(1) signs identifying rivers
___(2) signs indicating you are entering a watershed
___(3) I haven't seen either of these signs in my community

19. How many people in your household, <u>counting yourself</u>, are?

Under age 10: _____ Ages 20-44: _____ Ages 65+: _____
Ages 10-19: _____ Ages 45-64: _____

20. Which person in your household MOST frequently does the activities listed below.

		Adult MALE	Adult FEMALE	Child Age 12-17	Child Under 12	Not Appl/ Nobody
(A)	Picks up after your dog.	1	2	3	4	9
(B)	Washes the car	1	2	3	4	9
(C)	Fertilizes the lawn	1	2	3	4	9
(D)	Landscaping/gardening	1	2	3	4	9
(E)	Mows the lawn	1	2	3	4	9
(F)	Vehicle maintenance	1	2	3	4	9
(G)	Disposes of household hazardous waste (oil, pesticides, batteries, paint)	1	2	3	4	9
(F)	Scheduling septic tank maintenance	1	2	3	4	9

21. Which of the following best describes your race/ethnicity (check all that apply)?

____(1) Asian/Pacific Islander
____(2) Black/African American
____(3) White
____(4) American Indian/Eskimo
____(5) Other: _____

22. What is your age? _____years

23. Would you say your total annual household income is:

____(1) Under $35,000
____(2) $35,000 to $59,999
____(3) $60,000 to $99,999
____(4) $100,000-199,000
____(5) more than $200,000

24. Your gender?

___(1) Male
___(2) Female

<u>Optional</u>: Would you like the Greater Lansing Regional Committee to keep you informed about environmental and other planning issues in the region?

___(1) Yes: Your e-mail address: _____ Phone number: _____
___(2) No

Thank you for participating in this survey. For more information about water quality issues in the Lansing area please visit <u>www.mywatersheds.org.</u>

Please Return Your Survey in the Envelope Provided to: ETC Institute, 725 W. Frontier Circle, Olathe, KS 66061

Your responses will remain <u>Completely Confidential</u>. The information printed on the sticker to the right will ONLY be used to help identify which areas of the region have concerns about water quality issues. If your address is not correct, please provide the correct information. Thanks.