
Survey Overview

Decision Resources, Ltd., is pleased to present the results of this study to the Joint Education and Public Outreach Committee of the Bassett Creek, Elm Creek, Shingle Creek and West Mississippi Watershed Management Organizations. This section provides a brief introduction to the specifications of the survey and a guide to the organization of the written analysis.

While the most statistically sound procedures have been used to collect and analyze the information presented herein, it must always be kept in mind that surveys are not predictions. They are designed to measure public opinion within identifiable limits of accuracy at *specific points in time*. This survey is in no way a prediction of opinions, perceptions, or actions at any future point in time. After all, in public policy analysis, the major task is to impact these revealed opinions in a constructive fashion.

The Principal Investigator for this study was Dr. William D. Morris; the Project Director overseeing all phases of the research and analysis was Mr Peter Leatherman.

Research Design

This study contains the results of a telephone survey of 400 randomly selected homeowners in the Shingle Creek, Elm Creek, Bassett Creek and West Mississippi Watersheds . Survey responses were gathered by professional interviewers across the community between November 27th and December 12th, 2007.

The average interview took 21 minutes.

All respondents interviewed in this study were part of a randomly generated sample of the four watersheds. In general, random samples such as this yield results projectable to their respective universe within ± 5.0 percent in 95 out of 100 cases.

Interviews were conducted by **Decision Resources, Ltd.**, trained personnel from telephone banks in St. Paul, Minnesota. Approximately twenty percent of all interviews were independently validated for procedure and content by a Decision Resources, Ltd., supervisor. Completed interviews were edited and coded at the company's headquarters in Minneapolis, Minnesota. Statistical analysis and cross-tabulations were produced by the company's CfMC Mentor Analysis System and SPSS 15.0 FOR WINDOWS.

Organization of the Study

The results of this study are presented in the following order:

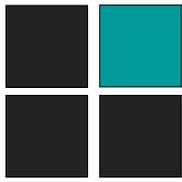
The **Analysis** consists of a written report of the major findings. The results contained herein were also presented verbally to the client.

The **Questionnaire** reproduces the survey instrument as it was used in the interviewing process. This section also includes a response frequency distribution for each question.

Any further questions the reader may have about this study which are not answered in this report should be directed to either Dr. Morris or Mr. Leatherman.

TABLE OF CONTENTS

| | |
|--|-----------|
| Chapter One: Residential Demographics | 4 |
| Residential Demographics | 4 |
| Residential Longevity | 4 |
| Proximity to a Body of Water | 5 |
| Neighborhood Association | 5 |
| Age of Respondent | 5 |
| Children in the Home | 6 |
| Formal Education | 6 |
| Annual Household Income | 6 |
| Use of Lawn Care Company | 7 |
| Gender | 7 |
| Watershed | 7 |
| Summary and Conclusions | 8 |
| Chapter Two: Environmental Knowledge | 9 |
| Environmental Knowledge | 9 |
| Informed about Environmental Issues | 9 |
| Indicators of Clean Water | 9 |
| Impacts on Water Quality | 10 |
| Solutions to Improve Water Quality | 11 |
| Stormwater Run-Off | 15 |
| Environmental Impact Statements | 16 |
| Summary and Conclusions | 19 |
| Chapter Three: Environmental Issues and Behaviors | 21 |
| Environmental Issues and Behaviors | 21 |
| Importance of Clean Water | 21 |
| Willingness to Pay to Clean Up Surface Water | 22 |
| Activities to Improve Surface Water | 23 |
| Paying for Protecting Surface Water Quality | 27 |
| Local City Government Role | 27 |
| Maintaining Yard | 29 |
| Summary and Conclusions | 30 |
| Chapter Four: Communications | 32 |
| Communications | 32 |
| Primary Source of Information | 32 |
| Preferred Source of Information | 33 |
| Sources of Information | 33 |
| Summary and Conclusions | 38 |
| Chapter Five: Concluding Thoughts | 39 |
| Concluding Thoughts | 39 |



Decision
Resources Ltd.

Analysis

Chapter One: Residential Demographics

Residents of the watersheds were asked a series of questions about their demographic backgrounds. These questions were asked for two reasons: first, to validate this sample against the updated 2000 U.S. Census findings; and, second, to track any differences between subgroups and the rest of the population. There were no statistically significant differences between the findings of this survey and the census data. And, throughout the course of this study, subgroup differences will be discussed.

Residential Longevity

Residents were initially asked:

Approximately how many years have you lived in your current city?

The typical respondent lived in their city for 15.0 years:

| | |
|---------------------|-----|
| LESS THAN TWO YEARS | 2% |
| TWO TO FIVE YEARS | 11% |
| SIX TO TEN YEARS | 24% |
| 11 TO 20 YEARS | 31% |
| OVER TWENTY YEARS | 33% |
| DON'T KNOW/REFUSED | 0% |

Thirteen percent resided there for five years or less, while 33% lived there for over 20 years.

“Two to five years” is posted at a higher rate by:

- those not informed about environmental issues
- eighteen to thirty-four year olds

“Six to ten years” is cited more frequently by:

- thirty-five to forty-four year olds
- households with children
- college graduates
- owners of homes valued \$250,000 to \$350,000

“Eleven to twenty years” is mentioned most frequently by:

- residents living on a body of water
- those somewhat informed about environmental issues
- thirty-five to forty-four year olds

“Over twenty years” is posted more often by:

- residents with a body of water in their neighborhood
- over fifty-four year olds
- high school graduates
- men

Proximity to a Body of Water

Residents were queried:

Is there a lake, stream, or wetland in your neighborhood? Do you live on a lake, stream or wetland?

Sixty-six percent report they have a lake, stream, or wetland in their neighborhood, although they do not live on them:

| | |
|--------------------------|-----|
| NO | 21% |
| YES/YES | 13% |
| YES/NO | 66% |
| DON'T KNOW/REFUSED | 1% |

Thirteen percent live on a lake, stream, or wetland, while 21% do not have such water resources in their neighborhood.

“No” is stated more often by:

- thirty-five to forty-four year olds
- high school graduates
- owners of homes valued under \$250,000

“Yes/yes” is selected most often by:

- residents for eleven to twenty years
- college graduates
- owners of homes valued over \$350,000

“Yes/no” is reported at a higher rate by:

- forty-five to fifty-four year olds
- residents for more than twenty years
- owners of homes valued \$250,000 to \$350,000

Neighborhood Association

Respondents were asked:

Do you live in a neighborhood or area governed and maintained by an association?

Twenty-four percent live in a neighborhood or area governed and maintained by an association:

| | |
|--------------------------|-----|
| YES | 24% |
| NO | 74% |
| DON'T KNOW/REFUSED | 3% |

Seventy-four percent do not live in an association-governed area.

Age of Respondent

Respondents were asked:

Which of the following categories contains your present age?

The typical adult respondent is 46.7 years old:

| | |
|-------------|-----|
| 18-24 | 2% |
| 25-34 | 12% |
| 35-44 | 31% |
| 45-54 | 23% |
| 55-64 | 20% |
| 65 AND OVER | 13% |
| REFUSED | 0% |

Fifteen percent report ages under 35 years old, while 13% post ages over 65 years old.

Children in the Home

Residents were queried:

Do you have children under the age of 18 living with you at home?

Forty-two percent report the presence of children under the age of 18 in their homes:

| | |
|--------------------|-----|
| YES | 42% |
| NO | 58% |
| DON'T KNOW/REFUSED | 0% |

Fifty-eight percent are empty-nesters.

Formal Education

Respondents were next asked:

What is the last grade of formal education you completed?

The typical adult resident is a college graduate:

| | |
|----------------------------------|-----|
| LESS THAN HIGH SCHOOL GRADUATION | 1% |
| HIGH SCHOOL GRADUATE | 16% |
| VO-TECH/TECH COLLEGE | 11% |
| SOME COLLEGE | 22% |
| COLLEGE GRADUATE | 42% |
| POST-GRADUATE | 9% |
| REFUSED | 1% |

Seventeen percent are high school graduates or have less than a high school education. Thirty-three percent have post-secondary educational experience, while 51% are college graduates.

Annual Household Income

Residents were queried:

Which of the following categories contains the approximate value of your residential property -- under \$150,000, \$150,000-\$250,000, \$250,000-\$350,000, \$350,000-\$450,000, or over \$450,000?

The median home value in the area is \$262,500.00:

| | |
|---------------------|-----|
| UNDER \$150,000 | 4% |
| \$150,000-\$250,000 | 39% |
| \$250,000-\$350,000 | 40% |
| \$350,000-\$450,000 | 7% |
| OVER \$450,000 | 5% |
| DON'T KNOW | 1% |
| REFUSED | 4% |

Forty-three percent post home values less than \$250,000.00, while 52% report home values over that amount.

Use of Lawn Care Company

Residents were asked:

Do you hire a lawn care company? Is it a full-service lawn care company or do they only apply fertilizer and chemicals and you take care of the mowing and upkeep?

Eighty-six percent do not hire lawn care companies:

| | |
|--------------------|-----|
| NO | 86% |
| YES/FULL-SERVICE | 7% |
| YES/FERTILIZER | 7% |
| DON'T KNOW/REFUSED | 1% |

Seven percent retain full-service lawn care companies, while the same percentage retain companies to only apply fertilizer and chemicals.

Gender

The gender of each respondent was noted:

| | |
|--------|-----|
| MALE | 50% |
| FEMALE | 50% |

Men and women were equally represented in the sample.

Watershed

The watershed of resident was also noted:

| | |
|------------------|-----|
| BASSETT CREEK | 25% |
| ELM CREEK | 25% |
| SHINGLE CREEK | 25% |
| WEST MISSISSIPPI | 25% |

The four watersheds are equally represented in the sample.

Summary and Conclusions

The typical homeowner has resided in their current city for 15.0 years. Thirteen percent have lived there for no more than five years, while 33% have resided there for over 20 years. Seventy-nine percent report there is a lake, stream, or wetland in their neighborhood; thirteen percent actually live on a lake, stream or wetland. Twenty-four percent also live in a neighborhood or area governed and maintained by an association. Fourteen percent hire a lawn care company; seven percent employ a full-service lawn care company, while seven percent hire a company to only apply fertilizer and chemicals.

The typical respondent is 46.7 years old. Fourteen percent post ages under 35 years old, while 13% are at least 65 years old. Forty-two percent have children under 18 living at home. The typical resident has a college education. Seventeen percent have high school educations or less; thirty-three percent report post-secondary educational experience, while 51% are college graduates. The median value of residential property is \$262,500.00. Forty-three percent post values less than \$250,000.00, and 12% mention values over \$350,000.00.

Men and women are equally represented in the sample. Twenty-five percent live in the Bassett Creek Watershed, while identical percentages reside in the Elm Creek Watershed, Shingle Creek Watershed, and West Mississippi Watershed.

Chapter Two: Environmental Knowledge

Watershed homeowners were asked a series of questions about their knowledge of environmental issues and sound practices. First, information levels about environmental issues were gauged. Aspects of indicators of clean surface water and serious negative impacts on surface water quality were discussed. Next, residents were queried about solutions to improve the quality of surface water in lakes and streams. The disposal of storm water run-off was touched upon. Finally, knowledge about specific environmental issues was assessed.

Informed about Environmental

Residents were asked:

How informed do you think you are about environmental issues -- very informed, somewhat informed, not too informed or not at all informed?

Eighty-five percent are either “very informed” or “somewhat informed” about environmental issues:

| | |
|-------------------------------|-----|
| VERY INFORMED | 10% |
| SOMEWHAT INFORMED | 75% |
| NOT TOO INFORMED | 14% |
| NOT AT ALL INFORMED | 1% |
| DON'T KNOW/REFUSED | 0% |

Fifteen percent feel they are “not too informed” or “not at all informed.”

Information levels are higher among:

- residents for eleven to twenty years
- college graduates

They are lower among:

- members of a neighborhood association
- eighteen to thirty-four year olds
- owners of homes valued under \$250,000

Indicators of Clean Water

Respondents were instructed:

I am going to read you a list of statements about clean surface water in a lake or stream, please tell me which one is the best indicator of clean water?

Which would be the second best indicator of clean surface water?

At 60% each, two indicators rank first: “it is a good habitat for wildlife” and “it is safe to eat fish from it:”

| | BEST | SECOND |
|---|-------------|---------------|
| IT IS SAFE FOR PEOPLE TO SWIM IN | 15% | 16% |
| IT IS CLEAR | 15% | 25% |
| IT IS A GOOD HABITAT FOR WILDLIFE | 37% | 23% |
| IT IS SAFE TO EAT FISH FROM IT | 29% | 31% |
| ALL | 3% | 3% |
| SOMETHING ELSE | 1% | 1% |
| DON'T KNOW/REFUSED | 0% | 1% |

At 40%, “it is clear” ranks second.

“Safe for people to swim in” is reported more often by:

- those not informed about environmental issues

“Clear” is indicated more frequently by:

- residents for eleven to twenty years

“Good habitat for wildlife” is posted more often by:

- thirty-five to forty-four year olds
- college graduates
- owners of homes valued \$250,000 to \$350,000
- Bassett Creek Watershed residents

“Safe to eat fish from it” is posted more often by:

- residents with a body of water in their neighborhood
- over fifty-four year olds
- residents for more than twenty years
- high school graduates

Impacts on Water Quality

Residents were asked another two-part question:

Now, I am going to read you a list of activities that impacts the surface water quality in lakes and streams. Please tell me which one has the most negative impact on water quality?

Please tell me which has the second most negative impact on surface water quality?

Two negative impacts rank highest: “agricultural run-off,” at 56%, and “stormwater run-off from roads and pavement,” at 55%:

| | MOST | SECOND |
|--|-------------|---------------|
| STORMWATER RUN-OFF FROM ROADS AND PAVEMENT | 39% | 16% |
| AGRICULTURAL RUN-OFF | 33% | 23% |
| GRASS CLIPPINGS AND LEAVES IN THE STREETS | 6% | 11% |
| FILLING WETLANDS | 8% | 12% |
| SAND AND SALT ON THE ROADS | 11% | 34% |
| ALL | 3% | 4% |
| SOMETHING ELSE | 1% | 1% |
| DON'T KNOW/REFUSED | 0% | 0% |

In second place, “sand and salt on the roads” is at 45%.

- “Stormwater run-off” is a concern among:
- residents with a body of water in their neighborhood
 - those somewhat informed about environmental issues
 - eighteen to thirty-four year olds
 - Elm Creek Watershed residents

- “Sand and salt on the roads” is mentioned more often by:
- over fifty-four year olds

- “Agricultural Run-Off” is stated more often by:
- Elm Creek Watershed residents

- “Grass clippings and leaves” is reported more often by:
- Bassett Creek and Shingle Creek Watershed residents

- “Filling in Wetlands” is cited more frequently by:
- college graduates
 - Bassett Creek Watershed residents

Solutions to Improve Water Quality

Respondents were instructed:

I am going to read you a list of solutions to improve the quality of surface water in lakes and streams. First, please tell me if you have heard of the solution. Then for each solution you have heard of, I would like you to rate it on a scale of 1 to 4, with 1 meaning no impact at all on the quality of surface water in lakes and streams and 4 meaning the most impact on the quality of surface water in lakes and streams.

A list of eight solutions was then read:

Planting native vegetation around or along lakes, streams and ponds?

Twenty-five percent “never heard of” planting native vegetation around or along lakes, streams and ponds:

| | | |
|--------------------|-------|-----|
| 1 | ..... | 2% |
| 2 | ..... | 8% |
| 3 | ..... | 42% |
| 4 | ..... | 23% |
| NEVER HEARD OF | ..... | 25% |
| DON'T KNOW/REFUSED | ..... | 1% |

The average rating of the impact on this solution on the quality of surface water is 3.16, placing it sixth out of the eight solutions.

- “No impact” is cited more often by:
- over fifty-four year olds
 - residents for more than twenty years
 - Shingle Creek Watershed residents
 - men

- “Impact” is cited more often by:
- those very informed about environmental issues

- owners of homes valued \$250,000 to \$350,000
- women

“Never heard of” is stated more often by:

- residents not living near a body of water
- those not informed about environmental issues
- eighteen to thirty-four year olds
- households with children

Using phosphorus-free fertilizer?

Nine percent have never heard of the solution of “using phosphorus-free fertilizer:”

| | | |
|--------------------|-------|-----|
| 1 | ..... | 3% |
| 2 | ..... | 11% |
| 3 | ..... | 32% |
| 4 | ..... | 46% |
| NEVER HEARD OF | ..... | 9% |
| DON'T KNOW/REFUSED | ..... | 1% |

The average rating of the impact on this solution on the quality of surface water is 3.33, placing it fourth out of the eight solutions.

“No impact” is reported at a higher rate by:

- Elm Creek Watershed residents

“Impact” is indicated more often by:

- residents for eleven to twenty years

Creating stormwater ponds to collect run-off and filter stormwater?

Twelve percent have “never heard of” the solution of “creating stormwater ponds to collect run-off and filter stormwater:”

| | | |
|--------------------|-------|-----|
| 1 | ..... | 2% |
| 2 | ..... | 4% |
| 3 | ..... | 38% |
| 4 | ..... | 44% |
| NEVER HEARD OF | ..... | 12% |
| DON'T KNOW/REFUSED | ..... | 1% |

The average rating of the impact on this solution on the quality of surface water is 3.42, placing it second out of the eight solutions.

“Impact” is stated more frequently by:

- residents for eleven to twenty years
- owners of homes valued \$250,000 to \$350,000
- Bassett Creek Watershed residents

“Never heard of” is selected at a higher rate by:

- residents not living near a body of water
- those not informed about environmental issues
- high school graduates

- those using a full-service lawn care company
- West Mississippi Watershed residents
- women

Cleaning up trash and pet waste?

Seven percent “never heard of” the solution of “cleaning up trash and pet waste:”

| | | |
|--------------------|-------|-----|
| 1 | ..... | 3% |
| 2 | ..... | 7% |
| 3 | ..... | 34% |
| 4 | ..... | 50% |
| NEVER HEARD OF | ..... | 7% |
| DON'T KNOW/REFUSED | ..... | 0% |

The average rating of the impact on this solution on the quality of surface water is 3.40, placing it third out of the eight solutions.

“No impact” is stated more often by:

- owners of homes valued over \$350,000
- Shingle Creek Watershed residents

“Impact” is offered at a higher rate by:

- residents for eleven to twenty years
- owners of homes valued \$250,000 to \$350,000
- Bassett Creek Watershed residents

Removing Eurasian water milfoil and other invasive aquatic vegetation from lakes, streams and ponds?

Fifteen percent “never heard of” the approach of “removing Eurasian water milfoil and other invasive aquatic vegetation from lakes, streams and ponds:”

| | | |
|--------------------|-------|-----|
| 1 | ..... | 2% |
| 2 | ..... | 7% |
| 3 | ..... | 40% |
| 4 | ..... | 35% |
| NEVER HEARD OF | ..... | 15% |
| DON'T KNOW/REFUSED | ..... | 1% |

The average rating of the impact on this solution on the quality of surface water is 3.30, placing it fifth out of the eight solutions.

“Impact” is posted more frequently by:

- those very informed about environmental issues
- Bassett Creek Watershed residents
- men

“Never heard of” is cited most frequently by:

- those not informed about environmental issues
- eighteen to thirty-four year olds
- high school graduates
- women

Composting lawn clippings, leaves and yard waste?

Four percent “never heard of” the solution of “composting lawn clippings, leaves and yard waste:”

| | | |
|--------------------|-------|-----|
| 1 | ..... | 2% |
| 2 | ..... | 14% |
| 3 | ..... | 48% |
| 4 | ..... | 31% |
| NEVER HEARD OF | ..... | 4% |
| DON'T KNOW/REFUSED | ..... | 1% |

The average rating of the impact on this solution on the quality of surface water is 3.14, placing it seventh out of the eight solutions.

“No impact” is stated at a higher rate by:

- residents living on a body of water

Planting a rain garden?

A large 45% of the respondents “never heard of” the “planting a rain garden” as a way to improve surface water quality:

| | | |
|--------------------|-------|-----|
| 1 | ..... | 2% |
| 2 | ..... | 13% |
| 3 | ..... | 24% |
| 4 | ..... | 14% |
| NEVER HEARD OF | ..... | 45% |
| DON'T KNOW/REFUSED | ..... | 2% |

The average rating of the impact on this solution on the quality of surface water is 2.93, placing it eighth out of the eight solutions.

“Impact” is cited most frequently by:

- residents living on a body of water
- those very informed about environmental issues

“Never heard of” is mentioned more often by:

- residents with a body of water in their neighborhood
- eighteen to thirty-four year olds
- households with children
- Bassett Creek Watershed residents

Disposing of auto fluids and household chemicals properly?

Only two percent “never heard of” the solution of the “disposing of auto fluids and household chemicals property:”

| | | |
|--------------------|-------|-----|
| 1 | ..... | 1% |
| 2 | ..... | 3% |
| 3 | ..... | 14% |
| 4 | ..... | 81% |
| NEVER HEARD OF | ..... | 2% |
| DON'T KNOW/REFUSED | ..... | 0% |

The average rating of the impact on this solution on the quality of surface water is 3.77, placing it first out of the eight solutions.

“Impact” is posted at a higher rate by:

- Bassett Creek Watershed residents

Stormwater Run-Off

Respondents were told:

The Twin Cities Metropolitan area receives about 30 inches of precipitation in an average year.

They were then asked:

About how much water runs-off a typical residential property in a one inch rainstorm -- 10 gallons, 100 gallons, 200 gallons or 500 gallons?

The typical respondent would estimate water run-off to be 100 gallons, which is the correct response:

| | |
|--------------------|-----|
| 10 GALLONS | 10% |
| 100 GALLONS | 39% |
| 200 GALLONS | 24% |
| 500 GALLONS | 7% |
| DON'T KNOW/REFUSED | 20% |

But, 31% estimate higher run-off amounts.

“10 gallons” is reported more often by:

- over fifty-four year olds
- residents with post-secondary experience
- West Mississippi Watershed residents

“100 gallons” is posted more frequently by:

- those very informed about environmental issues
- those using a lawn care company for only fertilizing
- men

“200 gallons” is indicated more frequently by:

- those somewhat informed about environmental issues
- women

Next, respondents were asked:

Where does the storm water run-off go -- a local lake or stream, into the ground, or to a sewage treatment plant?

Sixty-eight percent report that storm water run-off goes to “a local lake or stream:”

| | |
|----------------------|-----|
| LOCAL LAKE OR STREAM | 68% |
| INTO THE GROUND | 14% |
| SEWAGE TREATMENT | 16% |
| DON'T KNOW/REFUSED | 2% |

Fourteen percent think it goes “into the ground,” while 16% feel it goes to a “sewage treatment plant.”

“Local lake or stream” is reported more often by:

- residents with a body of water in their neighborhood
- college graduates
- owners of homes valued \$250,000 to \$350,000
- Bassett Creek and Elm Creek Watershed residents
- men

“Into the Ground” is cited most frequently by:

- those not informed about environmental issues
- West Mississippi Watershed residents
- women

“Sewage Treatment” is posted more often by:

- residents not living near a body of water
- high school graduates
- residents with post-secondary experience
- owners of homes valued under \$250,000
- those using a full-service lawn care company

Environmental Impact Statements

Residents were instructed:

For each of the following statements, please tell me if you strongly agree with it, somewhat agree, somewhat disagree or strongly disagree with it.

A list of nine statements was then read:

Most lawn care products are safe for the environment.

Seventy-six percent disagree that “most lawn care products are safe for the environment:”

| | |
|--------------------|-----|
| STRONGLY AGREE | 2% |
| AGREE | 21% |
| DISAGREE | 59% |
| STRONGLY DISAGREE | 17% |
| DON'T KNOW/REFUSED | 1% |

Twenty-three percent agree with the contention.

Agreement is higher among:

- residents with a body of water in their neighborhood
- over fifty-four year olds
- residents for more than twenty years

It is lower among:

- thirty-five to forty-four year olds
- residents for eleven to twenty years

Lawn clippings and leaves blown into the street can negatively impact surface water quality in lakes and streams.

Eighty-four percent agree that “lawn clippings and leaves blown into the street can negatively impact surface water quality in lakes and streams:”

| | |
|--------------------------|-----|
| STRONGLY AGREE | 22% |
| AGREE | 62% |
| DISAGREE | 11% |
| STRONGLY DISAGREE | 2% |
| DON'T KNOW/REFUSED | 4% |

Thirteen percent disagree with this statement.

Agreement increases among:

- those somewhat informed about environmental issues
- college graduates
- Bassett Creek Watershed residents

It decreases among:

- residents with post-secondary experience
- those using a full-service lawn care company
- West Mississippi Watershed residents

There is no problem leaving pet waste where it falls.

Ninety percent disagree “there is no problem leaving pet waste where it falls:”

| | |
|--------------------------|-----|
| STRONGLY AGREE | 1% |
| AGREE | 9% |
| DISAGREE | 51% |
| STRONGLY DISAGREE | 39% |
| DON'T KNOW/REFUSED | 0% |

Only ten percent agree.

There are no statistically significant sub-group differences.

Removing vegetation or dumping dirt and garden waste into a wetland area does not harm the wetland.

Eighty-three percent disagree “removing vegetation or dumping dirt and garden waste into a wetland area does not harm the wetland:”

| | |
|--------------------------|-----|
| STRONGLY AGREE | 2% |
| AGREE | 11% |
| DISAGREE | 54% |
| STRONGLY DISAGREE | 29% |
| DON'T KNOW/REFUSED | 4% |

Thirteen percent agree with this statement.

“Agree” is posted at a higher rate by:

- those very informed about environmental issues
- those not informed about environmental issues
- residents with post-secondary experience

“Disagree” is cited more frequently by:

- those somewhat informed about environmental issues

Wetlands are good for the environment.

Ninety-eight percent agree that “wetlands are good for the environment:”

| | |
|--------------------------|-----|
| STRONGLY AGREE | 42% |
| AGREE | 56% |
| DISAGREE | 2% |
| STRONGLY DISAGREE | 1% |
| DON'T KNOW/REFUSED | 0% |

Only three percent disagree with this contention.

Agreement peaks among:

- those somewhat informed about environmental issues
- college graduates
- women

My actions can make a difference in the surface water quality in my community.

Ninety-four percent agree that “my actions can make a difference in the surface water quality in my community:”

| | |
|--------------------------|-----|
| STRONGLY AGREE | 30% |
| AGREE | 64% |
| DISAGREE | 2% |
| STRONGLY DISAGREE | 0% |
| DON'T KNOW/REFUSED | 4% |

Only two percent disagree with this statement.

“Agree” is reported more often by:

- those somewhat informed about environmental issues
- thirty-five to forty-four year olds

Wetlands provide some flood control.

Ninety-four percent agree that “wetlands provide some flood control:”

| | |
|--------------------------|-----|
| STRONGLY AGREE | 19% |
| AGREE | 75% |
| DISAGREE | 1% |
| STRONGLY DISAGREE | 0% |
| DON'T KNOW/REFUSED | 4% |

Only one percent disagree with this contention.

“Agree” is cited more frequently by:

- those somewhat informed about environmental issues
- thirty-five to forty-four year olds
- owners of homes valued \$250,000 to \$350,000

Livestock waste run-off has a negative impact on the quality of lakes and streams.

Ninety-four percent agree that “livestock waste run-off has a negative impact on the quality of lakes and streams:”

| | |
|--------------------------|-----|
| STRONGLY AGREE | 38% |
| AGREE | 56% |
| DISAGREE | 4% |
| STRONGLY DISAGREE | 1% |
| DON'T KNOW/REFUSED | 1% |

Five percent disagree with this statement.

“Agree” is indicated most frequently by:

- college graduates

Aquatic vegetation growing in lakes means the surface water quality is poor.

Seventy-five percent disagree with “aquatic vegetation growing in lakes means the surface water quality is poor:”

| | |
|--------------------------|-----|
| STRONGLY AGREE | 3% |
| AGREE | 15% |
| DISAGREE | 62% |
| STRONGLY DISAGREE | 13% |
| DON'T KNOW/REFUSED | 8% |

Eighteen percent agree with this contention.

Agreement is higher among:

- owners of homes valued under \$250,000
- West Mississippi Watershed residents

It is lower among:

- households with children
- college graduates
- owners of homes valued over \$350,000
- Bassett Creek Watershed residents

Summary and Conclusions

Residents are generally well-informed about environmental issues, with eighty-five percent at least “somewhat informed” about these issues. In considering indicators of clean surface water, two are chosen by 60% of the sample: “it is a good habitat for wildlife” and “it is safe to eat fish from it.” Similarly, majorities of residents view two factors as having the most negative impact on surface water quality: “agricultural run-off” and “stormwater run-off from roads and pavement.”

When evaluating solutions to improve the quality of surface water in lakes and streams, one action stands out: “disposing of auto fluids and household chemicals properly.” Four solutions are viewed as moderately important: “creating stormwater ponds to collect run-off and filter stormwater,” “cleaning up trash and pet waste,” “using phosphorus-free fertilizer,” and “removing Eurasian water milfoil and other invasive aquatic vegetation from lakes, streams and ponds.”

Thirty-nine percent are correct in estimating the typical run-off on residential property in a one inch rainstorm at 100 gallons. But, 31% also place their estimates higher – 200 gallons or 500 gallons. Sixty-eight percent believe the stormwater run-off goes to a local lake or stream. Fourteen percent think it goes into the ground, while 16% feel it goes to a sewage treatment plant.

Large majorities of at least 84% agree with five statements: “lawn clippings and leaves blown into the street can negatively impact surface water quality in lakes and streams,” “wetlands are good for the environment,” “my actions can make a difference in the surface water quality in my community,” “wetlands provide some flood control,” and “livestock water run-off has a negative impact on the quality of lakes and streams.” At least 76% disagree with four statements: “most lawn care products are safe for the environment,” “there is no problem leaving pet waste where it fails,” “removing vegetation or dumping dirt and garden waste into a wetland area does not harm the wetland,” and “aquatic vegetation growing in lakes means the surface water quality is poor.”

Chapter Three: Environmental Issues and Behaviors

Watershed residents were asked a series of questions about environmental issues and environmentally-minded behaviors. The importance of clean water and surface water quality was assessed. Willingness to engage in activities to improve surface water quality was discussed. Acceptance of tax increases for this purpose was judged. Appropriate city government activities to protect surface water were discussed. Finally, yard maintenance was examined in some detail.

Importance of Clean Water

Watershed residents were asked:

Minnesota is the land of 10,000 lakes.

How important is clean water in our state's lakes and streams -- very important, somewhat important, not too important, or not important at all?

Seventy-seven percent think clean water in Minnesota's lakes and streams is "very important:"

| | |
|----------------------|-----|
| VERY IMPORTANT | 77% |
| SOMEWHAT IMPORTANT | 22% |
| NOT TOO IMPORTANT | 1% |
| NOT IMPORTANT AT ALL | 0% |
| DON'T KNOW/REFUSED | 0% |

Twenty-two percent view it as "somewhat important."

There are no statistically significant sub-group differences.

Next, the focus shifts to local communities:

As you consider other issues facing your community, how important is clean surface water in your community's lakes and streams -- the most important issue, a very important issue, a somewhat important issue, or not an important issue at all?

Eighty-two percent see it as "most important" or "very important:"

| | |
|----------------------|-----|
| MOST IMPORTANT | 7% |
| VERY IMPORTANT | 75% |
| SOMEWHAT IMPORTANT | 17% |
| NOT IMPORTANT AT ALL | 0% |
| DON'T KNOW/REFUSED | 0% |

Seventeen percent view clean surface water in their community's lakes and streams as "somewhat important."

"Very important" is cited most frequently by:

- those somewhat informed about environmental issues
- Elm Creek Watershed residents

- “Somewhat important” is indicated at a higher rate by:
- those not informed about environmental issues
 - West Mississippi Watershed residents

**Willingness to Pay to Clean Up
Surface Water**

Respondents were asked:

How much would you be willing to pay each month to clean up the surface water in your local lakes and streams -- how about \$__ per month? How about \$__ per month?

The typical respondent accepts a \$4.78 per month tax or fee increase:

| | |
|--------------------------|-----|
| NOTHING | 15% |
| \$2.00 | 17% |
| \$4.00 | 18% |
| \$6.00 | 17% |
| \$8.00 | 11% |
| \$10.00 | 15% |
| \$12.00 | 1% |
| \$14.00 | 1% |
| DON'T KNOW/REFUSED | 6% |

Only 15% are unwilling to accept any increase, while 17% would accept twice the median increase.

“Nothing” is cited more often by:

- those not informed about environmental issues
- high school graduates
- owners of homes valued under \$250,000

“\$2.00” is stated most frequently by:

- over forty-four year olds
- residents for more than twenty years
- West Mississippi Watershed residents

“\$4.00” is posted more frequently by:

- residents not living near a body of water

\$6.00” is indicated at a higher rate by:

- eighteen to thirty-four year olds

“\$10.00” is stated most frequently by:

- those somewhat informed about environmental issues
- eighteen to thirty-four year olds
- households with children
- college graduates
- owners of homes valued over \$250,000
- Bassett Creek Watershed residents

Activities to Improve Surface Water

Residents were instructed:

Now, I am going to read you a list of activities you can personally do to improve the surface water quality in your local lakes and streams. For each one, please tell me if you are currently doing that activity. Then, for each one you are not currently doing, please tell me if you would be willing to do it if time, money and association rules were not an issue.

Nine activities were then read:

Redirect your downspouts away from hard surfaces.

Eighty-four percent report they are already redirecting their downspouts away from hard surfaces:

| | |
|-----------------------------|-----|
| CURRENTLY DOING | 84% |
| NOT DOING/WILLING | 7% |
| NOT DOING/NOT WILLING | 5% |
| DON'T KNOW/REFUSED | 4% |

An additional seven percent are willing to do so in the future.

“Currently doing” is posted at a higher rate by:

- residents with a body of water in their neighborhood
- forty-five to fifty-four year olds
- residents for more than twenty years
- owners of homes valued \$250,000 to \$350,000
- Bassett Creek Watershed residents
- men

Install a rain barrel.

Only eight percent report installing a rain barrel:

| | |
|-----------------------------|-----|
| CURRENTLY DOING | 8% |
| NOT DOING/WILLING | 51% |
| NOT DOING/NOT WILLING | 30% |
| DON'T KNOW/REFUSED | 12% |

An additional 51% are willing to install a rain barrel.

“Not doing/Willing” is stated more frequently by:

- those somewhat informed about environmental issues
- eighteen to thirty-four year olds

“Not doing/Not willing” is reported at a higher rate by:

- owners of homes valued \$250,000 to \$350,000

Plant a rain garden.

Six percent already planted a rain garden:

| | |
|-----------------------------|-----|
| CURRENTLY DOING | 6% |
| NOT DOING/WILLING | 51% |
| NOT DOING/NOT WILLING | 31% |
| DON'T KNOW/REFUSED | 13% |

Fifty-one percent are willing to plant a rain garden in the future.

“Not doing/Willing” is cited more often by:

- those somewhat informed about environmental issues

“Not doing/Not willing” is mentioned most frequently by:

- residents not living near a body of water
- high school graduates

Convert some of your lawn to native vegetation.

Forty-two percent are currently converting some of their lawn to native vegetation:

| | |
|-----------------------------|-----|
| CURRENTLY DOING | 42% |
| NOT DOING/WILLING | 35% |
| NOT DOING/NOT WILLING | 18% |
| DON'T KNOW/REFUSED | 6% |

Thirty-five percent are willing to convert some of their lawn to native vegetation.

“Currently doing” is posted at a higher rate by:

- residents living on a body of water
- those somewhat informed about environmental issues
- thirty-five to forty-four year olds
- owners of homes valued over \$350,000
- Bassett Creek Watershed residents
- men

“Not doing/Willing” is stated most frequently by:

- residents with a body of water in their neighborhood
- eighteen to thirty-four year olds
- residents for ten years or less
- women

“Not doing/Not willing” is reported at a higher rate by:

- those very informed about environmental issues

Attend an environmental workshop to learn more about what you can do to improve the local water quality.

Eleven percent have attended an environmental workshop to learn more about what they can do to improve the local water quality:

| | |
|-----------------------------|-----|
| CURRENTLY DOING | 11% |
| NOT DOING/WILLING | 52% |
| NOT DOING/NOT WILLING | 33% |
| DON'T KNOW/REFUSED | 3% |

But, another 52% are willing to attend an environmental workshop in the future.

“Currently doing” is reported at a higher rate by:

- residents living on a body of water
- those very informed about environmental issues
- thirty-five to forty-four year olds
- residents for eleven to twenty years
- owners of homes valued over \$350,000

“Not doing/Willing” is selected more frequently by:

- those somewhat informed about environmental issues
- Elm Creek Watershed residents

“Not doing/Not willing” is cited more frequently by:

- those not informed about environmental issues

Keep the street in front of your house free of lawn clippings, leaves and seeds.

Ninety-two percent are already keeping the street in front of their house free of lawn clippings, leaves and seeds:

| | |
|-----------------------------|-----|
| CURRENTLY DOING | 92% |
| NOT DOING/WILLING | 2% |
| NOT DOING/NOT WILLING | 4% |
| DON'T KNOW/REFUSED | 2% |

Two percent are willing to do so in the future.

There are no statistically significant sub-group differences.

Bring auto fluids and household chemicals to a household hazardous waste facility.

Ninety-five percent currently bring auto fluids and household chemicals to a household hazardous waste facility:

| | |
|-----------------------------|-----|
| CURRENTLY DOING | 95% |
| NOT DOING/WILLING | 2% |
| NOT DOING/NOT WILLING | 1% |
| DON'T KNOW/REFUSED | 2% |

Another two percent are willing to dispose of auto fluids and household chemicals to a waste facility in the future.

There are no statistically significant sub-group differences.

Purchase and plant harder to find native plants.

Twenty-one percent are currently purchasing and planting “harder to find” native plants:

| | |
|-----------------------------|-----|
| CURRENTLY DOING | 21% |
| NOT DOING/WILLING | 49% |
| NOT DOING/NOT WILLING | 22% |
| DON'T KNOW/REFUSED | 8% |

An additional 49% are willing to plant harder to find native plants in the future.

“Currently doing” is indicated most frequently by:

- residents not living near a body of water
- residents for eleven to twenty years
- owners of homes valued over \$350,000

“Not doing/Willing” is reported at a higher rate by:

- residents with a body of water in their neighborhood
- those somewhat informed about environmental issues
- eighteen to thirty-four year olds
- households with children
- residents for ten years or less
- Elm Creek Watershed residents

“Not doing/Not willing” is posted at a higher rate by:

- residents not living near a body of water
- those very informed about environmental issues

Sweep your driveway and sidewalks after mowing and fertilizing.

A very large 89% are currently sweeping their driveway and sidewalks after mowing and fertilizing:

| | |
|-----------------------------|-----|
| CURRENTLY DOING | 89% |
| NOT DOING/WILLING | 5% |
| NOT DOING/NOT WILLING | 4% |
| DON'T KNOW/REFUSED | 2% |

Another five percent are willing to do so in the future.

“Currently doing” is mentioned at a higher rate by:

- residents for eleven to twenty years
- owners of homes valued \$250,000 to \$350,000

When an interviewee was not currently doing an activity, he/she was asked a follow-up query:

What would motivate you to undertake some of these activities to improve the surface water quality in your local lakes and streams?

Thirty-three percent would like “‘how to’ mailings,” while 19% would like “more mailings on environmental benefits,” and 11% would favor “‘how to’ workshops:”

| | |
|---|-----|
| UNSURE | 3% |
| NOTHING | 22% |
| "HOW TO" MAILING | 33% |
| "HOW TO" WORKSHOPS | 11% |
| NEIGHBORHOOD EVENT | 6% |
| MORE MAILINGS ON ENVIRONMENTAL BENEFITS | 19% |
| MORE INFORMATION ON WEBSITE ON ENVIRONMENTAL BENEFITS | 3% |
| HAVE VOLUNTEERS AVAILABLE TO HELP | 2% |
| SCATTERED | 1% |

Twenty-two percent report there is “nothing” that would motivate them to undertake these activities.

“How to mailings” is desired more often by:

- those somewhat informed about environmental issues
- owners of homes valued \$250,000 to \$350,000
- Bassett Creek and Elm Creek Watershed residents

“Nothing” is indicated at a higher rate by:

- those not informed about environmental issues
- members of a neighborhood association
- high school graduates
- residents with post-secondary experience
- owners of homes valued under \$250,000
- West Mississippi Watershed residents

“How to workshops” is suggested more frequently by:

- residents for eleven to twenty years

Paying for Protecting Surface Water Quality

Respondents were asked:

Who should pay for protecting the surface water quality in your area, should -- all residents in the city through property taxes, residents whose property drains into the body of water through assessments, or residents who live on the body of water through assessments?

Seventy-eight percent think “all residents in the city through property taxes” should pay:

| | |
|--------------------------|-----|
| ALL RESIDENTS | 78% |
| PROPERTY DRAINS | 7% |
| LIVE ON WATER | 10% |
| SOMETHING ELSE | 1% |
| DON'T KNOW/REFUSED | 5% |

Ten percent believe only “residents who live on the body of water” should pay “through assessments.”

“All residents” is posted most frequently by:

- those somewhat informed about environmental issues
- thirty-five to forty-four year olds
- households with children
- residents for ten years or less
- college graduates
- Elm Creek Watershed residents

“Residents who live on body of water” is cited at a higher rate by:

- residents with a body of water in their neighborhood
- those not informed about environmental issues
- high school graduates
- West Mississippi Watershed residents

Local City Government Role

Respondents were instructed:

For each of the following activities, please tell me if you think your local city government should be involved in it.

A list of four activities was then read:

Inform and educate the public about surface water quality issues.

Ninety-two percent think local government should “inform and educate the public about surface water quality issues:”

| | | |
|--------------------|-------|-----|
| YES | ..... | 92% |
| NO | ..... | 2% |
| DON'T KNOW/REFUSED | ..... | 0% |

Agreement peaks among:

- households with children
- college graduates

Enact and enforce laws regulating how properties can be built or modified to minimize impact on lakes and streams.

Eighty-two percent think local governments should “enact and enforce laws regulating how properties can be built or modified to minimize impact on lakes and streams:”

| | | |
|--------------------|-------|-----|
| YES | ..... | 82% |
| NO | ..... | 16% |
| DON'T KNOW/REFUSED | ..... | 2% |

Sixteen percent do not think this is appropriate action for a local government.

Agreement is higher among:

- college graduates

It is lower among:

- residents with a body of water in their neighborhood

Consider projects such as rain gardens and pervious pavement to clean-up lakes and streams even if it adds more cost to the project.

Seventy-nine percent think local governments should “consider projects such as rain gardens and pervious pavement to clean-up lakes and streams even if it adds more cost to the project:”

| | | |
|--------------------|-------|-----|
| YES | ..... | 79% |
| NO | ..... | 14% |
| DON'T KNOW/REFUSED | ..... | 7% |

Fourteen percent oppose this action.

Agreement increases among:

- residents living on a body of water
- residents for eleven to twenty years
- college graduates
- owners of homes valued \$250,000 to \$350,000
- Bassett Creek Watershed residents

It decreases among:

- those not informed about environmental issues
- West Mississippi Watershed residents

Provide incentives, such as grants to individual property owners to add rain gardens, rain barrels and native vegetation to their property.

Eighty-five percent support local governments “providing incentives, such as grants to individual property owners to add rain gardens, rain barrels and native vegetation to their property:”

| | |
|--------------------|-----|
| YES | 85% |
| NO | 13% |
| DON'T KNOW/REFUSED | 3% |

Thirteen percent oppose this approach.

“Yes” is cited more often by:

- residents living on a body of water
- those somewhat informed about environmental issues
- residents for eleven to twenty years
- college graduates

“No” is mentioned most frequently by:

- residents for ten years or less
- West Mississippi Watershed residents

Maintaining Yard

Respondents were asked:

Let's talk about maintaining your yard....

Which of the following is most important to you in maintaining your yard?

“Overall appearance” is the most important to 68% of the sample in maintaining their yard:

| | |
|----------------------------|-----|
| OVERALL APPEARANCE | 68% |
| MAINTENANCE TIME | 7% |
| PLANNING AND RESEARCH TIME | 3% |
| COST OF MAINTENANCE | 4% |
| RESALE VALUE | 10% |
| UNIFORMITY WITH NEIGHBORS | 8% |
| SOMETHING ELSE | 0% |
| DON'T KNOW/REFUSED | 2% |

Ten percent report “resale value” is most important.

“Overall appearance” is key to:

- Bassett Creek and Elm Creek Watershed residents

“Resale value” is important to:

- forty-five to fifty-four year olds
- Shingle Creek Watershed residents

Next, residents were asked:

How many hours in an average week during the spring, summer and fall, do you spend working on your yard and garden?

The typical resident spends three hours and 50 minutes in an average week, weather permitting, on their yard and garden:

| | |
|---------------------|-----|
| NONE | 12% |
| ONE TO TWO HOURS | 21% |
| THREE HOURS | 11% |
| FOUR HOURS | 21% |
| FIVE TO EIGHT HOURS | 25% |
| NINE OR MORE HOURS | 11% |

Impressively, 36% spend more than five hours working on their yard and garden.

“None” is stated more frequently by:

- those not informed about environmental issues
- members of a neighborhood association
- over fifty-four year olds
- residents for more than twenty years
- owners of homes valued under \$250,000
- Shingle Creek Watershed residents

“One to two hours” is indicated more frequently by:

- members of a neighborhood association
- over fifty-four year olds
- high school graduates
- owners of homes valued under \$250,000
- those using a full-service lawn care company

“Three hours” is selected at a higher rate by:

- residents with a body of water in their neighborhood

“Four hours” is cited more frequently by:

- Elm Creek Watershed residents

“Five to eight hours” is indicated more often by:

- residents living on a body of water
- thirty-five to forty-four year olds
- residents for eleven to twenty years
- owners of homes valued \$250,000 to \$350,000

“Nine or more hours” is mentioned most frequently by:

- those very informed about environmental issues
- residents for more than twenty years
- those using a lawn care company for only fertilizing

Summary and Conclusions

Over three-quarters of the sample regards clean water in our state’s lakes and streams as “very important;” in fact, 99% see it as at least “somewhat important.” Similarly, 82% think, in comparison with other issues facing their community, is “very important.” The typical resident is willing to pay \$4.78 per month or \$57.36 per year to clean up surface water in their local lakes and streams. In general, 78% of the respondents believe “all residents” should pay for protecting the surface water quality in their area through property taxes.

Over 84% report they are currently “redirecting their downspouts away from hard surfaces,” “keeping the street in front of their house free of lawn clippings, leaves and seeds,” “bringing auto fluids and household chemicals to a household hazardous waste facility,” and “sweeping their driveway and sidewalks after mowing and fertilizing.” Between 49% and 52% are willing to “install a rain barrel,” “plant a rain garden,” “attend an environmental workshop to learn more about what they can do to improve the local water quality,” and “purchase and plant harder to find native plants.” To facilitate these new activities, “how to” mailings, more mailings on environmental benefits, and “how to” workshops would be extremely effective.

Residents significantly endorse local city government efforts “to inform and educate the public about surface water quality issues,” “enact and enforce laws regulating how properties can be built or modified to minimize impact on lakes and streams,” “consider projects such as rain gardens and previous pavement to clean-up lakes and streams even if it adds more cost to the project,” and “provide incentives, such as grants to individual property owners to add rain gardens, rain barrels and native vegetation to their property.”

In maintaining their yards, “overall appearance” is the most important aspect for 68% of the homeowners in the sample. Ten percent focus on “retail value.” The typical homeowner spends three hours and 50 minutes in an average week, weather permitting, working on their yards and gardens.

Chapter Four: Communications

Watershed residents were asked a series of questions about their sources of information about surface water quality. First, the primary source was identified and then the most preferred source was ascertained. Then, the reach and impact of a series of specific sources of information were analyzed.

Primary Source of Information

Respondents were initially asked:

What is your primary source of information about surface water quality?

“City newsletter,” at 26%, and the “Star Tribune and Pioneer Press” newspapers, at 22%, lead the list of primary sources of information about surface water quality:

| | |
|----------------------------------|-----|
| NOTHING | 7% |
| CITY NEWSLETTER | 26% |
| LOCAL NEWSPAPER | 7% |
| MAILINGS | 6% |
| INTERNET | 7% |
| WORD OF MOUTH | 3% |
| CABLE TELEVISION | 4% |
| MAGAZINES | 4% |
| STAR TRIBUNE/PIONEER PRESS | 22% |
| UTILITY BILLING | 5% |
| LOCAL TELEVISION NEWS | 7% |
| SCATTERED | 3% |

Seven percent each cite “local newspapers,” “the Internet,” and “local television news.”

“City newsletter” is key to:

- residents not living near a body of water
- thirty-five to forty-four year olds
- residents for eleven to twenty years
- owners of homes valued \$250,000 to \$350,000
- Elm Creek Watershed residents

“Star Tribune/Pioneer Press” is important to:

- over fifty-four year olds
- high school graduates
- those using a full-service lawn care company
- Bassett Creek Watershed residents

Preferred Source of Information

Next, residents were queried:

How would you prefer to receive information about surface water quality?

The top three preferred sources are “city newsletter,” at 26%, “mailings,” at 20%, and “Star Tribune and Pioneer Press newspapers,” at 19%:

| | |
|----------------------------|-----|
| NOTHING | 1% |
| CITY NEWSLETTER | 26% |
| LOCAL NEWSPAPER | 6% |
| MAILINGS | 20% |
| INTERNET | 10% |
| CABLE TELEVISION | 4% |
| MAGAZINES | 2% |
| STAR TRIBUNE/PIONEER PRESS | 19% |
| E-MAIL | 4% |
| LOCAL TELEVISION NEWS | 6% |
| SCATTERED | 3% |

Ten percent prefer the “Internet.”

“City newsletter” is posted at a higher rate by:

- residents not living near a body of water
- thirty-five to forty-four year olds
- Elm Creek Watershed residents

“Mailings” is desired most frequently by:

- members of a neighborhood association
- forty-five to fifty-four year olds
- Shingle Creek Watershed residents

“Star Tribune/Pioneer Press” is posted at a higher rate by:

- over fifty-four year olds
- high school graduates
- those using a full-service lawn care company

“Internet” is indicated more often by:

- thirty-five to forty-four year olds
- households with children
- owners of homes valued over \$350,000
- those using a full-service lawn care company

Sources of Information

Residents were instructed:

For each of the following sources of information about surface water quality, please tell me if it is a major source of information, a minor source of information, or not a source of information at all.

A list of ten sources of information was then read:

Your city's newsletter?

Thirty percent view their city's newsletter as a "major source" of information:

| | |
|--------------------------|-----|
| MAJOR SOURCE | 30% |
| MINOR SOURCE | 40% |
| NOT A SOURCE | 31% |
| DON'T KNOW/REFUSED | 0% |

Seventy percent thinks of their city's newsletter as at least a "minor source" of information.

"Major source" is stated more often by:

- residents not living near a body of water
- owners of homes valued \$250,000 to \$350,000
- Elm Creek Watershed residents

"Not a source" is cited more frequently by:

- those very informed about environmental issues
- members of a neighborhood association
- residents for more than twenty years
- owners of homes valued under \$250,000
- West Mississippi Watershed residents

Your local weekly newspaper?

Eleven percent considers their local weekly newspaper as a "major source" of information:

| | |
|--------------------------|-----|
| MAJOR SOURCE | 11% |
| MINOR SOURCE | 33% |
| NOT A SOURCE | 56% |
| DON'T KNOW/REFUSED | 0% |

Forty-four percent see it as at least a "minor source" of information.

"Minor source" is stated more often by:

- residents living on a body of water
- owners of homes valued over \$350,000
- Elm Creek Watershed residents

"Not a source" is indicated more often by:

- those not informed about environmental issues
- Shingle Creek Watershed residents

The Star Tribune or Pioneer Press?

Twenty-six percent view the "Star Tribune or Pioneer Press" as a "major source" of information:

| | |
|--------------------------|-----|
| MAJOR SOURCE | 26% |
| MINOR SOURCE | 28% |
| NOT A SOURCE | 46% |
| DON'T KNOW/REFUSED | 0% |

Fifty-four percent think the daily newspapers are at least a “minor source” of information about surface water quality.

“Major source” is cited more often by:

- over fifty-four year olds
- high school graduates

“Minor source” is reported most frequently by:

- thirty-five to forty-four year olds
- West Mississippi Watershed residents

The Internet?

Eleven percent think the Internet is a “major source” of information:

| | |
|--------------------------|-----|
| MAJOR SOURCE | 11% |
| MINOR SOURCE | 17% |
| NOT A SOURCE | 73% |
| DON'T KNOW/REFUSED | 0% |

Seventeen percent view the Internet as at least a “minor source” of information.

“Major source” is stated more often by:

- eighteen to thirty-four year olds
- households with children
- residents for ten years or less
- college graduates

“Minor source” is posted more frequently by:

- thirty-five to forty-four year olds
- households with children
- owners of homes valued over \$350,000
- Elm Creek Watershed residents

“Not a source” is indicated more frequently by:

- over fifty-four year olds
- residents for more than twenty years
- high school graduates
- Shingle Creek Watershed residents

Local access cable television programming?

Only four percent think local access cable television programming is a “major source” of information about surface water quality:

| | |
|--------------------------|-----|
| MAJOR SOURCE | 4% |
| MINOR SOURCE | 16% |
| NOT A SOURCE | 80% |
| DON'T KNOW/REFUSED | 0% |

The total reach of this potential information source is 20%.

“Minor source” is posted at a higher rate by:

- those very informed about environmental issues
- over fifty-four year olds
- residents for more than twenty years
- West Mississippi Watershed residents

“Not a source” is posted at a higher rate by:

- households with children
- Elm Creek Watershed residents

Your city's or watershed's website?

Only a small two percent think their city’s or watershed’s website as a “major source” of information about surface water quality:

| | |
|--------------------------|-----|
| MAJOR SOURCE | 2% |
| MINOR SOURCE | 7% |
| NOT A SOURCE | 91% |
| DON'T KNOW/REFUSED | 0% |

Only nine percent, in fact, even view the websites as a “minor source” of information.

“Not a source” is mentioned most frequently by:

- residents not living near a body of water
- over fifty-four year olds
- residents with post-secondary experience
- Bassett Creek Watershed residents

Environmental organizations?

Only four percent think of environmental organizations as a “major source” of information:

| | |
|--------------------------|-----|
| MAJOR SOURCE | 4% |
| MINOR SOURCE | 22% |
| NOT A SOURCE | 74% |
| DON'T KNOW/REFUSED | 0% |

Twenty-six percent view environmental organizations as at least a “minor source” of information about surface water quality.

“Minor source” is indicated at a higher rate by:

- those somewhat informed about environmental issues
- thirty-five to forty-four year olds
- households with children

“Not a source” is stated more often by:

- residents not living near a body of water
- those not informed about environmental issues
- members of a neighborhood association

Flyers in your utility bill?

Ten percent view flyers in their utility bill as a “major source” of information:

| | |
|--------------------------|-----|
| MAJOR SOURCE | 10% |
| MINOR SOURCE | 37% |
| NOT A SOURCE | 53% |
| DON'T KNOW/REFUSED | 0% |

Forty-seven percent think these flyers are at least a “minor source” of information about surface water quality.

“Major source” is cited most frequently by:

- forty-five to fifty-four year olds
- those using a lawn care company for only fertilizing
- Shingle Creek Watershed residents

“Minor source” is posted at a higher rate by:

- residents not living near a body of water
- over fifty-four year olds
- those using a full-service lawn care company
- those using a lawn care company for only fertilizing

“Not a source” is indicated most frequently by:

- those not informed about environmental issues
- eighteen to thirty-four year olds
- Elm Creek Watershed residents

Informal discussions with neighbors and friends?

Six percent regard informal discussions with neighbors and friends as a “major source” of information about surface water quality:

| | |
|--------------------------|-----|
| MAJOR SOURCE | 6% |
| MINOR SOURCE | 38% |
| NOT A SOURCE | 56% |
| DON'T KNOW/REFUSED | 0% |

Forty-four percent view these types of discussions as at least a “minor source” of information.

“Minor source” is posted at a higher rate by:

- residents not living near a body of water
- residents for ten years or less

“Not a source” is indicated most frequently by:

- residents with a body of water in their neighborhood
- residents with post-secondary experience

Lawn and garden stores and nurseries?

Only three percent consider lawn and garden stores and nurseries to be a “major source” of information:

| | |
|--------------------------|-----|
| MAJOR SOURCE | 3% |
| MINOR SOURCE | 21% |
| NOT A SOURCE | 76% |
| DON'T KNOW/REFUSED | 0% |

Twenty-four percent view these sources of information as at least a “minor source” of information.

“Minor source” is cited most frequently by:

- forty-five to fifty-four year olds
- those using a lawn care company for only fertilizing
- West Mississippi Watershed residents

“Not a source” is mentioned more frequently by:

- thirty-five to forty-four year olds
- residents with post-secondary experience

Summary and Conclusions

The two most utilized sources of information about surface water quality are “city newsletters” and “Star Tribune or Pioneer Press” newspapers. Preferred sources of information include “city newsletters” and “Star Tribune or Pioneer Press” newspapers, as expected, in addition to “mailings.”

The greatest reach of any information source about surface water quality is “city newsletters,” at 70%. The “Star Tribune or Pioneer Press” newspapers are depended upon by 54%. Forty-seven percent regard “flyers in utility bills” similarly, while 44% each use “their local weekly newspaper” and “informal discussions with neighbors and friends.” Both “city newsletters” and the “Star Tribune and Pioneer Press” newspapers also have the most impact of any of the sources.

Chapter Five: Concluding Thoughts

The following conclusions can be reached from an analysis of the survey results:

Residents of the watersheds are well-informed about surface water quality issues. In fact, many residents are already taking individual steps to protect local water quality:

- Redirecting downspouts
- Keeping the street in front of their home free of lawn clippings, leaves and seeds
- Bringing auto fluids and household chemicals to a household hazardous waste facility
- Sweeping driveways and sidewalks after mowing and fertilizing

In the future, residents should be urged to undertake the following activities, since an interest in doing so already exists:

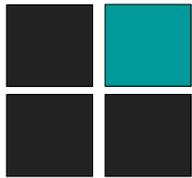
- Installing a rain barrel
- Planting a rain garden
- Attending an environmental workshop
- Purchasing and planting harder to find native plants

Residents show a willingness to accept a fee or tax increase of \$4.78 per month or \$57.36 per year for the cleaning up of surface water in their local lakes and streams. Almost 80% of the respondents think that all residents in the city should pay for protecting local area surface water quality through property taxes.

The main communications vehicles for informing watershed residents about surface water quality issues are:

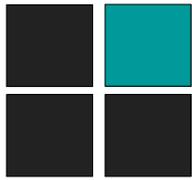
- City Newsletters, which is both very cost-effective and far-reaching
- The “Star Tribune” or “Pioneer Press,” which are much more expensive for ads, as well as more time consuming for the placement of an article
- Flyers in utility bills, again very cost-effective, but more limited in the type of message
- The Internet, more effective if ways of steering users to the website can be implemented

Overall, surface water issues are key to most residents in the areas. The Watershed Management Commissions should experience very little resistance in upgrading its information processes to reach a larger audience with more detailed information, as well as obtaining needed funding, in light of current residential support.



Decision
Resources Ltd.

Survey



Decision
Resources Ltd.

Graphics