The Commonwealth Mass Media Campaign to Reduce Nonpoint Source Pollution

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Television Partners

Fox 56 News

- Ms. Amber Jones

Newspapers

- Cumberland County News
- Harlan Daily Enterprise
- Jackson County Newsgroup
- Middlesboro Daily News
- The Times Journal

Community Partners

- Adair County Rotary Club
- Bell County Rotary Club
- Casey County Rotary Club
- Knox Co. Town and Country Homemakers
- Laurel Rotary Club
- Lincoln County Garden Club
- Mt. Vernon Kiwanis Club
- Somerset Rotary Club
- Whitley County Women's club

Radio Partners

- Clear Channel Radio
- Commonwealth Radio
- East Kentucky Broadcasting
- WANO/WFXY Pineville
- WTLO AM Somerset

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Executive Summary

An agreement was made on September 15, 2006 between the Kentucky Environmental Education Council (KEEC) and Eastern Kentucky University's Department of Communications in which the university was responsible for raising awareness of nonpoint source (NPS) pollution in the Upper Cumberland River Basin (UCRB). The university's public relations campaigns class was charged with planning and conducting a social marketing campaign in the UCRB to inform and educate the general public about NPS pollution and suggest practices that are easily accomplished, inexpensive, and produce results. After a series of unexpected events, the fall 2007 public relations campaign class (PUB 490) was forced to conduct the entire campaign from its beginning and submit the completed report by the revised deadline of December 1, 2007.

The goal of the social marketing campaign was to raise overall awareness of NPS pollution in the UCRB, a region in southeastern Kentucky which includes nineteen counties.

Over the course of twelve weeks, the PUB 490 class accomplished the following:

- Conducted and analyzed a short public pre-test via a questionnaire in a public telethon to a sample of residents in the 19 counties. This determined the preliminary level of knowledge about NPS pollution in the UCRB.
- Purchased and ran public service announcements on television and radio and in newspapers.
- Contacted local meteorologists and other media representatives and requested they include information regarding NPS pollution during local weather and news broadcasts.
- Placed an "Ask Andy" style newspaper column in UCRB newspapers through which the readers could write to Andy to receive tips on water improvements and protection.

- Developed low literacy materials such as brochures and flyers about NPS pollution to place in doctor' offices and other public locations within the 19 counties.
- Traveled to the counties in the UCRB, presenting information regarding NPS pollution to organizations such as garden clubs, women's' clubs, Kiwanis clubs, etc.
- Manned a table at the Fox 56 Family Fun Festival on September 30, 2007 at Evans Orchard in Georgetown, KY. Supplied information to guests about NPS pollution.
- Developed and implemented a post-test survey using a questionnaire and telethon, to determine any change in levels of knowledge regarding NPS pollution in the UCRB.

The data from pre- and post-test indicated no change in awareness of NPS pollution in the sampling population over a course of 14 weeks. Several circumstances, if executed differently, may have led to more positive results.

First, a greater increase in awareness may have been present, had the deadline not been changed from June 30, 2008 to December 1, 2007. A longer grant allotment time would have been more conducive to a well executed and successful campaign.

Second, due to time constraints, the public service announcements for television, newspapers, and radio were already purchased and running in the media before the pre-test occurred. Most of the media budget was allotted for television spots but our research indicated that residents in the UCRB only watch one to two hours of television a day. UCRB residents gathered more information from daily and weekly newspapers than expected. Had there been ample time to complete the research before purchasing air time, more emphasis would have been placed on newspapers to ensure a better media mix.

Third, the pre-test indicates that over 60% of residents attend church services frequently. Therefore, churches would have been a prime target throughout the 19 counties of the UCRB to distribute information and conduct presentations.

Although no visible changes in levels of awareness were present in the post-test findings, the foundation has been established for a slow but noticeable change in the awareness and attitudes regarding NPS pollution in the UCRB.

In addition, the KEEC was responsible for publishing copies of the “Kentucky Best Management Practices for Construction Activities” manual and the Four Rivers Basin Status Report.

The “Kentucky Management Practices for Construction Activities” was completed, but it was done outside the scope of the original contract and therefore was not the responsibility of the KEEC.

Publishing of the Four Rivers Basin Report was changed during the course of the agreement to the Licking River Basin Status Report.

A copy of the Licking River Basin Status Report may be viewed in Appendix V.

I. Introduction & Background

INTRODUCTION:

The KEEC assisted Eastern Kentucky University's Department of Communications in implementing a social marketing campaign in the UCRB to inform and educate the general public about NPS pollution and suggest practices that are easily accomplished, inexpensive, and that produce results.

SOCIAL MARKETING OPPORTUNITY

This campaign is based upon the idea that different types along with frequent uses of media creates peer pressure that over time gives the audience an impression that "everyone" is adopting best management practices with regards to NPS pollution. The desired result is for the general public to participate in practices that will reduce NPS pollution.

The campaign takes advantage of media products that were produced by the Center for Math, Science, and Environmental Education at Western Kentucky University. These products were created under the 2002 Comprehensive Commonwealth Water Education Project 319(h) grant. The ready made products consist of a slogan, logo, TV, radio and print messages which inform the general public about NPS pollution and ways to reduce it through positive behavior changes.

The objective of this campaign was to concentrate on one small watershed using the media in both an extensive and intensive manner. Documentation was gathered throughout the length of the project and would indicate if behavior changed did or did not occur in the time period that it was gathered.

Students from Eastern Kentucky University assisted with the campaign by creating brochures for educating the public about NPS pollution, producing articles for local newspapers

that inform the public about NPS pollution issues, and gave presentations at various civic organizations located in the UCRB. Their efforts coincided with the copious amount of media buys and were meant to enhance the marketing and education efforts of the campaign.

These same students also gathered and interpreted documentation that evaluated the amount of behavioral change that occurred as a result of the campaign.

The UCRB social marketing campaign is the first project of its kind in Kentucky and represents a new direction for facilitating behavioral change that positively impacts Kentucky's watersheds, its environment, and future generations of citizens that live in the Commonwealth.

II. Materials & Methods

A. Geographic Description

B. Description of Methods to Obtain Results

C. Description of Specialized Data Materials

A. Geographic Description

The UCRB is an area consisting of 19 counties in Eastern Kentucky. The region lies at the base of the Appalachian mountain range and the land consists largely of rolling hills that slowly flatten out as you travel westward. The region is also home to a large amount of natural water resources such as lakes, rivers, creeks and streams.

B. Description of Methods to Obtain Results

i. Results Overview

Before our team could efficiently communicate an appropriate message to the citizens of the UCRB, a pre-test was conducted to discover key points about the target audience.

The research process was divided into three sections conducted by three collaborative committees. The first committee determined an accurate sample of the target audience and provided access to this sample. The second committee developed a questionnaire to survey this sample of the target audience. The third committee analyzed the data received from the questionnaire and interpreted it into useful information for the campaign.

In order to measure the degree of the campaign's success over the ten week period, a series of post-test questionnaires was conducted in the same manner as the pretest. The same methodology was used for both the pre and post testing.

ii. Sampling Methodology

Pre-Test:

In order to accurately represent the level of awareness and exposure of NPS pollution among the citizens of the UCRB, a random sampling procedure (based on probability) was applied. The target audience was divided into counties and cities to ensure the sampling included precise percentages of all areas. The sample size was determined in order to conduct the desired research for the campaign.

The target audience for the campaign was the UCRB. The UCRB covers a large portion of southeastern Kentucky and includes the following 19 counties in Kentucky:

1. Adair
2. Bell
3. Casey
4. Clinton
5. Cumberland
6. Harlan
7. Jackson
8. Knox
9. Laurel
10. Letcher
11. Lincoln
12. McCreary
13. Metcalfe
14. Monroe
15. Pulaski
16. Rockcastle
17. Russell
18. Wayne
19. Whitley

A committee divided the individual counties into key cities located in each county. A complete breakdown of the counties and cities can be viewed in Appendix B under the heading *Cities*.

Using information provided by the United States Census Bureau, the committee then researched the populations of each county in the UCRB. The individual populations were added together to determine the total population of the UCRB. When the populations were added, it was determined the total target audience was 456,906.

From there, each individual county population was divided by the total population of the UCRB. For example, the population of Adair County, as provided by the US Census Bureau,

was 17,650. This number was divided by 456,906 to equal .038 or 3.8%. This number told us the citizens of Adair County make up 3.8% of the total population of the target audience. The same procedure was applied to each county to determine the percentage of the total population each county contributed. The results can be found in Appendix B under the heading *Percentage of UCRB Population*.

In order to determine how many questionnaires were needed for completion to represent an accurate sample of the UCRB, we created the following table, inputting the percentages desired for the campaign:

	Men	Women	Total
No Knowledge	N=4		5%
Knowledge			95%
Total	50%	50%	100%

Where N= smallest cell size acceptable

Based on this table, the committee used the following formula to determine the sample size for the campaign:

$$\text{Sample Size} = \frac{\text{N of smallest cell size needed}}{(\text{Its row\%}) \times (\text{its column \%})}$$

$$SS = \frac{4}{.05 \times .50} = \frac{4}{.025}$$ **SS=160**

By inputting in the numbers from the table into the equation, the committee determined 160 completed surveys would accurately represent the total population of the target audience. To make sure the sample size was large enough, the committee added twelve to make the new sample size 172. Using simple mathematics, the committee determined how many surveys should be administered in each county using the formula:

Sample Size x County Percentage=Number of Surveys in the County

Using Adair County as an example, 170 was multiplied by 3.8%, equaling 6.4 surveys to be completed by citizens of Adair County. Because an interviewer could not complete just a fraction of one survey, the answers were rounded off to the nearest whole number. Adair County would have six surveys completed by its citizens. Due to rounding these numbers, the new sample size stood at 171.

The number of surveys to each county was then divided among the cities within the counties, with the most calls being made to the county seat, and fewer calls being made to the smaller towns.

After the committee determined how many surveys were needed and where to conduct them, the next step was to determine how to access the people who could complete them. Because of the distance between the interviewers and subjects, combined with the vastness of the area being sampled, it was determined the most effective way of reaching people was by telephone.

Using a search engine on www.area-codes.com and backing up the results with further searches, the committee was able to easily obtain the area codes for each county. Finding the prefixes for these telephone numbers proved a more complicated process. After failing on multiple attempts to obtain the correct prefixes, the committee determined the most accurate way to find these prefixes would be to look up certain types of businesses in the cities of each

county and use the prefixes from the phone numbers of the businesses. For each city, committee members used the World Wide Web to look up a school, post office, doctor's office, and/or hotel. Using this tactic, the committee came up with a list of telephone prefixes available for viewing in Appendix B under the heading *Prefix*.

In order for the sample to remain random, the last four digits of the phone numbers had to be randomly selected. With the help of Dr. Dirk Schlingmann, Chair of the Department of Mathematics and Statistics at Eastern Kentucky University, the committee generated a list of random numbers using *Wolfram Mathematica*. A phrase was entered into the computer program, yielding 1800 mathematically random four digit numbers which the committee used to complete the telephone numbers.

The committee pursued the help of volunteer students to aid with telephone surveys, with a total of 18 students making up the interviewing staff. The calls were split evenly between the interviewers. Interviewers 1-9 would complete ten surveys each, and interviewers 10-18 would complete nine surveys each. The questionnaire each person was instructed to complete were indicated in charts such as the following:

County	City	Number of Surveys to Complete
Bell	Pineville	3
	Middlesboro	4
Casey	Liberty	3
Total		10

A list of 100 corresponding telephone numbers was provided for the interviewers. A Master List for Call Breakdown can be viewed in Appendix C and a sample call list of telephone numbers is provided in Appendix D.

The committee chairs from the sampling and questionnaire committees met and trained the volunteers on the call sheets and questionnaires. The research was then conducted over a three day period and the results were passed to the analyzing committee.

Post-test:

Due to time constraints and limited personnel, the sample size for the post-test had to be sizably smaller than the pretest.

In order to accurately measure any improvements of NPS pollution in the UCRB, the committee sampled within the original sample population. Calls were only made to households who had completed surveys in the pre-test. It was determined that 40 completed surveys represented 23.4% of the original population, a number that is statistically sound.

Using simple mathematics, the committee determined how many surveys should be administered in each county using the formula:

Sample Size x County Percentage=Number of Surveys in the County

Using Adair County as an example, 40 was multiplied by 3.8%, equaling 1.5 surveys to be completed by citizens of Adair County. Since an interviewer could not complete a fraction of one survey, the answers were rounded off to the nearest whole number. Adair County would have two surveys completed by its citizens.

After the committee determined how many surveys were needed and where to conduct them,, the next step was to determine how to access the people who could complete them. Because of the distance between the interviewers and subjects, combined with the

vastness of the area being sampled, it was determined that the most effective way of reaching people was by telephone.

The committee pursued this with the help of the eight Pub 490 students. Calls were split evenly between the students, with each student completing five surveys. A per county distribution of the post test surveys can be viewed in Appendix O.

A list of corresponding telephone numbers was provided for the interviewers. A sample call list can be viewed in Appendix P. The research was then conducted on November 7, 2007, and the results were passed to the analyzing committee.

iii. Questionnaire Methodology

Pre-test

The questionnaire was developed to research possible relationships between the demographics and lifestyles of the target audience, and their awareness and exposure to NPS pollution. The objective of the campaign is to increase the awareness and exposure to NPS pollution for those living in the UCRB. A series of questions were developed to determine the demographics and psychographics of the target audience as well as a series of questions to measure the target audience's awareness and exposure to NPS pollution.

The dependent variable in the study is whether or not people know what NPS Pollution is. This knowledge was dependent upon one or more independent variables in the study which included demographics, psychographics, awareness, and exposure. By asking a series of questions on each independent variable, a relationship could be seen between the dependent and independent variable.

The first part of the questionnaire determined the demographics of those living in the targeted 19 counties in Kentucky. This series of nine questions determine the subject's gender,

age, income level, education, employment status, etc. These questions made it easier to understand the make-up of the audience.

The next series of questions were created to reveal the psychographics of the target audience. (Psychographics measure the audience's attitudes, values, lifestyles, and opinions.) These questions determined how often the subject watched certain media, if they raised crops, changed their own oil, visited a body of water, etc. This section determined if the subject could be reached through certain media, and also if they had certain lifestyle choices putting them at higher risk for pollution.

In the middle of the psychographic section, the dependent variable is present. This question asked if the subject knows what NPS pollution is. The question was randomly placed in the middle so the subject answered it without realizing it stands alone, and generally did not pay a great deal of attention to it.

The next six questions measured the subject's awareness of water pollution. For example, questions asked if respondents noticed water pollution in their area and if environmental problems were discussed by local media. The last five questions of the survey were dedicated to measuring the subject's exposure to water pollution. For example, respondents were asked if they saw PSA's on television about water pollution and how often community leaders discussed water pollution in their community. It was incredibly important that we pay special attention to awareness and exposure so the audience's experience with the idea of NPS pollution could be gauged.

The questionnaire consisted of 33 multiple-choice questions, each with a "Don't Know" option. This option must be present in order to measure the issue even if someone does not know how to answer the question being asked.

All of the choices to the questions on the survey had a number of points assigned to them. In the awareness and exposure section of the questionnaire, the highest number represents a high awareness and exposure and the lowest number represents a low awareness and exposure. Along with each questionnaire is a coding sheet for analysis purposes.

After the surveys were completed, the data were entered into Statistical Package for the Social Sciences Data Editor for analysis and comparison. The demographics and psychographics of the target audience compared against the awareness and exposure data determined the factors influencing the knowledge of NPS pollution.

Post-test

The post-test questionnaire was developed to re-evaluate the possible relationships between the demographics and lifestyles of the target audience and their awareness and exposure to NPS pollution, as well as measure the success of social marketing campaign. A series of questions were developed to determine the demographics of the target audience, their awareness and exposure to NPS pollution, and the media sources they utilize and trust.

As with the pre-test, the dependent variable in the study is whether or not citizens of the UCRB are familiar with NPS pollution. This knowledge was dependent upon one or more independent variables in the study which included demographics, psychographics, awareness, media, and exposure. By asking a series of questions on each independent variable, a relationship could be seen between the dependent and independent variable.

The first part of the questionnaire determined the demographics of those living in the targeted 19 counties in Kentucky. This series of five questions determine the subject's gender, age, income level, education, employment status, etc. These questions made it easier to understand the make-up of the target audience, and laid the foundation for comparison against the dependent variable.

The psychographics segment from the pre-test survey was almost entirely omitted. The data these questions provided was important in planning the campaign implementation procedures, but was largely irrelevant when it came to measuring the successes of the campaign.

The beginning of the knowledge section presented the dependent variable. This question asked if the subject knew what NPS pollution was. The remaining questions in the knowledge segment of the post-test questionnaire asked the subject to give examples of NPS pollution in order to ensure that they answered the dependent variable question correctly.

The next two questions measured which news medium the subject trusts most to get their news information. This segment allowed us to determine whether or not the correct mediums were used in distributing public service announcements regarding NPS pollution.

The last five questions of the survey were dedicated to measuring the subject's exposure to the public service announcements and other campaign tactics. It was incredibly important that special attention be paid to awareness and exposure so the audience's experiences with the idea of NPS pollution and the success of the campaign could be measured.

The questionnaire consisted of 17 multiple-choice questions, each with a "Don't Know" option. This option must be present in order to measure the issue even if someone does not know how to answer the question being asked.

All of the choices to the questions on the survey had a number of points assigned to them. In the exposure section of the questionnaire, the highest number (3) represents a high level of exposure and the lowest number (1) represents a low level of exposure. Along with each questionnaire was a coding sheet for analysis purposes.

After the surveys were completed, the data were entered into the SPSS Data Editor for analysis and comparison.

iv. Statistical Package for the Social Sciences Methodology/Data Methodology

Pre-test

After creating a random sample of surveys from the residents in the UCRB, the data was entered into the SPSS data program.

The questionnaire was used to collect data, which was then divided into four variables. The variables represented were demographics (DEM), psychographics (PSY), awareness (AWR), and exposure (EXP). For awareness and exposure, each subject surveyed had a score choice of one or three. A score of one was classified as having little or no understanding of the topic. A score of three was classified as having knowledge or understanding of the topic.

When organizing the data in SPSS, the first column was used to identify the interviewer. The second column described the subject number from one to 172 surveys. The third column was set up to identify the subject's phone number. The forth column identified the county in which the subject lives. The fifth through 15th columns were set up to display the answers to the ten demographic questions. The 16th through 26th columns displayed the ten psychographic answers. The 27th column identified our dependent variable (there were two numeric possibilities, one representing "no/I don't know", and three representing "yes"). Columns 28 through 33 displayed the responses to six awareness questions, and columns 34 through 38 displayed the five exposure questions. Abbreviations were used to label the general topics of the questions such as DEM, PSY, DV, AWR, or EXP.

After completing data collection, the information had to be analyzed and interpreted. The coding and analysis group was in charge of logging the data for the class to examine. The first

thing we entered was the variables of our study (i.e. the questionnaire). The question codes were entered (i.e. dem001), and then we labeled so we could identify the question.

Once the data was entered, indexes were constructed to show the values of the five different categories of comprehension. Starting with the awareness index, the data was added for all of the questions to get a sum of all answers. The responses were coded using numerical values. For example, the responses showing high awareness received point values of three, the next highest awareness received a point value of two, and a low level of awareness received a point value of one. When each of the numerical values were added together, the highest score possible per subject was 18. There were six questions with the highest score of each being three. The formula for this was as follows:

6 questions x 3 (the highest value for each) = 18.

In SPSS, it is possible to take the data and make frequencies and cross-tabulations within the data. (Running frequencies allows you to put all of the subject's demographic and psychographic information, found in the survey, into one table.) Using the table, it is possible to classify the subjects by gender, status, and age. By using the cross-tabulations, the demographics and psychographics can then be compared to different indexes created.

Post-test

After creating a random sample of surveys from the residents in the UCRB, the data was entered in the Statistical Package for the Social Sciences data program.

The post test questionnaire was used to collect data, which was then divided into six variables. The variables represented were demographics (DEM), psychographics (PSY), knowledge (KN), media (ME), Dependent Variable (DV), and exposure (EXP). For exposure, each subject surveyed had a score choice of one or three. A score of one was classified as

having little or no understanding of the topic. A score of three was classified as having knowledge or understanding of the topic.

When organizing the data in SPSS, the first column was used to identify the interviewer. The second column described the subject number from one to 40 surveys. The third column was set up to identify the subject's phone number. The forth column identified the county in which the subject lives. Columns five through nine were set up to display the answers to the five demographic questions. The 10th column displayed the psychographic answer. The 11th column identified our dependent variable (there were two numeric possibilities, one representing "no/I don't know", and three representing "yes"). Columns 12 through 14 displayed the responses to three knowledge questions. Columns 15 through 16 displayed the responses to two media questions, and columns 17 through 21 displayed the five exposure questions. Abbreviations were used to label the general topics of the questions such ad DEM, PSY, DV, KN, ME, or EXP.

After completing data collection, the information had to be analyzed and interpreted. The coding and analysis group was in charge of logging the data for the class to examine. The coding group broke down into pairs and began entering the data into the SPSS. The first thing entered were variables of our study (i.e. the questionnaire). The question codes were entered (i.e. dem001), and then labeled so we could identify the question.

Once the data was entered, indexes were constructed to show the values of the six different categories of comprehension. Starting with the exposure index, the data was added for all of the questions to get a sum of all answers. The responses were coded using numerical values. For example, the responses showing high exposure received point values of three, the next highest exposure received a point value of two, and the low level of exposure received a point value of one. When each of the numerical values were added together, the highest score possible per subject was 15. There were five questions with the highest score of each being three. The formula for this was as follows:

5 questions x 3 (the highest value for each) = 15.

In SPSS, it is possible to take the data and create frequencies and cross-tabulations from the data. (Running frequencies allows you to put all of the subject's demographic and psychographic information, found in the survey, into one table.) Using the table, it was possible to classify the subjects by gender, status, and age. By using the cross-tabulations, the demographics and psychographics were compared to different indexes created.

vii. Fox Family Fun Festival Methodology

The first step of organizing the booth for the Fox Fall Family Festival was considering options for children and adult activities and visual aids. In order to increase awareness regarding NPS pollution, the activities needed to be educational as well as entertaining. After brainstorming ideas, the website www.inyourwater.org was utilized.

The website was extremely helpful in locating educational materials for both children and adults. An activity booklet, word scramble and a membership form for the Environmental Protection Agency kids club were pulled from the website to hand out to the children, while flyers, carrying a simple, yet powerful message, were a more useful tool for the adults.

The next step in planning was attempting to draw traffic to our sponsored table. We decided that balloons, activities and setting out free candy for the visitors would be enticing to the children and their parents. The day of the festival, the booth was decorated in an Eastern Kentucky University Department of Communication table wrap. The table had activity booklets that kids could take home, a word scramble that could be done at the table, the EPA kids club information, and the free candy.

All the tools and supplies needed for the day of the festival were gathered and prepared. Materials from the websites www.inyourwater.org and www.epa.gov were printed off and

duplicated, and a trip was made to Wal-Mart to purchase crayons and candy for the children, and containers for the two. The Department of Communications provided the table cover. On the day of the event, helium filled balloons were purchased at Kroger.

The entire PUB 490 class was present at the festival. The class was divided into two groups that split shifts from 10 a.m. to 2 p.m. and 2 p.m. to 6 p.m. The Fox Fall Family Festival was a great opportunity to spread awareness of NPS pollution.

ix. Travel Planning Methodology

At the beginning of the social marketing campaign, no decisions had been made regarding which counties to visit. The travel committee recovered information from a previous campaigns class which worked on the social marketing campaign and found that twelve of the nineteen counties had not yet been visited. From the list of the twelve unvisited counties, the committee narrowed the list down and became more selective as to which counties would be visited.

After reviewing the list of counties in the target area, the committee listed pros and cons of traveling to each county. Distance from Richmond, population, the major city, and the approximate travel time were all considered. After much deliberation, the committee decided it would be most effective to visit the following counties:

1. Adair
2. Bell
3. Casey
4. Harlan
5. Knox
6. Laurel
7. Lincoln
8. Pulaski
9. Rockcastle
10. Whitley

The next step in planning our travel was to develop an initial list of contacts. The committee began by cold-calling the Chambers of Commerce in each county and asking if they had garden clubs, rotary clubs, or any other such club or organization. From there, a list of more specific contacts was generated. This approach proved to be ineffective because many Chambers of Commerce lacked the information needed. The process became extremely frustrating after calling each individual county and receiving little to no information on any type of club or organization that the campaign could reach.

Another classmate soon came on board and began to assist with this process. As a result, he situation was reevaluated and the committee began calling local libraries, mayors' offices, grocery stores, department stores, restaurants, and other telephone numbers obtained from internet search engines and websites. At least twenty numbers were called in each county, with some counties requiring even more attention. Some people were more helpful that others, but the right people were finally contacted and appointments were made for visits into the target areas. What had seemed impossible finally game together.

After making appointments for county visits, the committee contacted meteorologists from the major news stations in Lexington, Kentucky. SInce weather reports are one of the most popular news segments, the committee hoped to get the meteorologists to mention NPS pollution on their broadcasts to help increase the campaign's subjects' exposure to the issue. Research showed that Lexington stations are the predominant television news source for the UCRB, so the committee attempted to contact Bill Meck of LEX 18, Jon James of WTVQ 36, and T.G. Shuck of WKYT 27 and FOX 56. Unfortunately, the only successful meeting was with Bill Meck of LEX 18. The others had conflicting schedules or did not return our several attempts at contact.

x. Organization and Meteorologist Visits

Adair County – Columbia

Kara & Krisitn

Monday 10/29/2007

Rotary Club

Lindsey Wilson College

Approximately 10 guests were present at the presentation. All were receptive to the presentation and actively participated in discussion afterward.

Bell County – Middlesboro

Laura & Glenna

Monday 11/5/2007

Rotary Club

J. Milton's Steakhouse

Nearly 20 rotary club members were present for the November 5 meeting where representatives from the campaign were allowed to speak. A brief presentation was given, and then an active discussion was held afterward. The club was about to embark upon a water clean-up campaign itself, and was extremely interested in ways to improve their efforts.

Casey County

Amanda & Misty

Rotary Club

The Village Restaurant

The representatives were greeted warmly by the Casey County Rotary Club. Following the brief presentation which was well received, Members complimented the representatives on the appearance of the published materials such as the flyer and brochure. They said all materials appeared to be professionally constructed and were extremely helpful.

Harlan County - Harlan
Amanda & Misty
Tuesday 10/23/2007
Harlan County Rotary Club
Western Sizzler

A two and a half hour drive landed two class representatives at a Western Sizzler in Harlan, Kentucky to present the constructed presentation to the Harlan Rotary Club. Although extreme technological difficulties occurred, the presentation went off without a hitch. Members had several questions and were active in discussion following the brief presentation.

Knox County – Barbourville
Erik & Dedra
Thursday 10/18/2007
Knox Co. Town and Country Homemakers
Cooperative Extension

On Thursday, October 18, 2007, Erik Davig and Dedra Brandenburg traveled 70 miles to Knox County for a presentation about water pollution to the Homemaker club. Upon arriving at the Knox County Extension Office, we were told by the Homemaker president Gayle Bartolo,

there was no electricity. We could not use our PowerPoint presentation so by candlelight, we distributed the brochures and made a presentation out of the brochure content. When talking about our social marketing campaign, we learned several of the women from the Homemakers club had seen the campaigns public service announcement on television. This gave us some feedback for our project.

Laurel County – London
Kara and Kristin
Wednesday 10/17/2007
Laurel Rotary Club
Golden Coral

The trip to London, Kentucky marked the first presentation of the social marketing campaign. There were about 20 club members in attendance, most of which were male. All members were receptive and active in the presentation.

Lincoln County – Stanford
Amanda & Misty
11/7/2007
Garden Club
Stanford Baptist Church

On arrival, representatives from the campaign were greeted by Aggie Patterson, a garden club member filling in for their club president. After setting up equipment for our presentation, the garden club, consisting of ten female members, started their meeting with regular club business. We were then introduced as the guest speakers for the meeting.

Our presentation began with passing out flyers and brochures to each member. We then went through our PowerPoint presentation and explained the material we handed out. After the presentation, we had a group discussion about NPS pollution in their area and received awareness feedback.

The garden club members were fully aware of what NPS pollution was and had seen public service announcements on television and in newspapers. They also had a member of the Lincoln County cattle club visit and talk about pollution in their area concerning livestock/farm animals, a NPS pollution factor, and ways to help.

After hearing about the work we did at Fox Family festival we were asked to send the club a copy of the coloring book used for them to make copies to be used for upcoming children events. The women were overjoyed with our presentation and we were invited to come back. They were very impressed with our class materials, wished us luck with our project and appreciated the work we did. Overall, the garden club of Lincoln County was a successful meeting with active member participation.

Pulaski County – Somerset
Laura and Glenna
Monday 10/22/2007
Somerset Rotary Club
Lake Cumberland Regional Medical Center

The class representatives were welcomed by the club president Jack Neely as well as many of the other members, including the hospital's public relations director. We had a few technical difficulties with getting the PowerPoint to pull up, but the problem was overcome by using the backup information we brought along with us. The presentation was given to about 30

to 35 Rotary Club members who were extremely active in giving feedback and having discussion. In addition, we received positive feedback from them on the progress of the campaign.

Rockcastle County – Mount Vernon
Erik & Dedra
Thursday 10/25/2007
Mt. Vernon Kiwanis Club
The Lodge Restaurant

Upon arrival, the class representatives were greeted by Robert Lawson who acted in place of the sick club president and hosted the meeting. The presentation was a success and everyone seemed concerned on the issue. Almost everyone asked at least one question. Some who were farmers told stories of their own encounters with environmentalists and shared with us what they were doing on their farms to help the environment.

Whitley County- Williamsburg
Erik & Dedra
Friday 11/2/2007
Women's Club
Whitley County Public Library

Upon arrival, the representatives from the campaign presented the water project presentation to the Whitley County Women's club. Afterward, the women surprised them with a plate of homemade fudge and a card, thanking them for their time. They also distributed homemade

gingerbread and apple cider. There were several women who knew someone that had attended Eastern Kentucky University and some who were also graduates themselves. Water pollution was informally discussed after the presentation while the refreshments they had prepared were eaten.

C. Description of Specialized Data Materials

i. Brochure Methodology

The compilation of the brochure began with the idea of using best management practices obtained from the Division of Water and pictures of familiar local sites in order to demonstrate the need for a change in our water usage habits. These best management practices included ways to help clean up the water on roads and streets, in residential areas, on construction sites and on agricultural lands.

Pictures for the brochure were taken by students from the PUB 490 class. Images chosen highlighted polluted water along with solid waste being disposed of in local creeks and rivers. Adobe In Design was used by student to create and edit the brochure. The main purpose of the brochure was to give the target audience a take- home guide that taught them how to clean up their water. The brochure was distributed at each of the presentations made in the nineteen counties visited.

The brochure's appearance consists of a glossy tri-fold paper with best management practices on the inside panels and contact information on the back panel. The back panel also included tips to help guide the community in cleaning up the water. The brochure was printed by Eastern Kentucky University's on-campus printing service within a reasonable amount of time. One thousand copies of the brochure were printed and were distributed to the communities of the UCRB.

A copy of the tri-fold glossy brochure is available for viewing in Appendix H.

ii. Flyer Methodology

Due to the visual nature of the flyer and the desired visual result, the document was created using Adobe Photoshop Creative Series 3.

The information on NPS pollution was narrowed down into six points to accommodate the limited space available on the flyer. The points were then broken down into two sections: 1) Facts about NPS pollution and 2) You Can Help!.

The logo for the Commonwealth Water Education Project was pulled from www.inyourwater.org, and modified according to the specifications of the KEEC. The colors for the flyer were then selected from the logo to create a certain level of consistency. A series of boxes, lines and shadows were then employed to finish off the visual appeal of the flyer.

An 8 ½ by 11, four color flyer is available for viewing in Appendix I.

iii. Power Point Presentation Methodology

The power point presentation was created using a template power point presentation from the website http://www.inyourwater.org. From there, it was imported to set the structure for the presentation. The presentation was divided into four main points. These points were Kentucky's precious water resources, threats to our water, land use and its impact on water, and what you can do. The four key points were then elaborated on throughout the presentation.

Pictures were included in the slide show to make the presentation visually appealing, and a detailed script was written to accompany the slides. This script would ensure a consistent message was reaching the target audience.

A full color copy of the presentation and script can be viewed in Appendix K.

IV. Results & Discussion (Pretest)

Presentation of all findings/SPSS Graphs

Table 1: Sample Area of 19 Counties in the UCRB

		Frequency	Valid Percent	Cumulative Percent
Valid	Adair	6	3.5	3.5
	Bell	11	6.4	9.9
	Casey	6	3.5	13.4
	Clinton	4	2.3	15.7
	Cumberland	3	1.7	17.4
	Harlan	13	7.6	25.0
	Jackson	4	2.3	27.3
	Knox	10	5.8	33.1
	Laurel	32	18.6	51.7
	Letcher	9	5.2	57.0
	Lincoln	10	5.8	62.8
	McCreary	6	3.5	66.3
	Metcalfe	3	1.7	68.0
	Monroe	3	1.7	69.8
	Pulaski	16	9.3	79.1
	Rockcastle	5	2.9	82.0
	Russell	9	5.2	87.2
	Wayne	8	4.7	91.9
	Whitley	14	8.1	100.0
	Total	172	100.0	
Missing	System	8		
Total		180		

Table 1 above shows the number of questionnaires completed in each county. The number of surveys was based upon the population of that county. For example, Laurel County has 18.6% of the population in the 19 county area that makes up the UCRB. Therefore, more surveys were completed in Laurel County than in any other county.

Table 2: Sampling Age of Respondents in the UCRB

		Frequency	Valid Percent	Cumulative Percent
Valid	Under 30	24	14.0	14.0
	31-50	58	33.7	47.7
	51-70	68	39.5	87.2
	71 or above	22	12.8	100.0
	Total	172	100.0	
Missing	System	8		
Total		180		

Table 2 above, and Figure 1 below, show the ages of the respondents contacted for a survey. The majority of the respondents, 39.5%, range between 51-70 years of age.

Figure 1: Sampling Age of Respondents in the UCRB

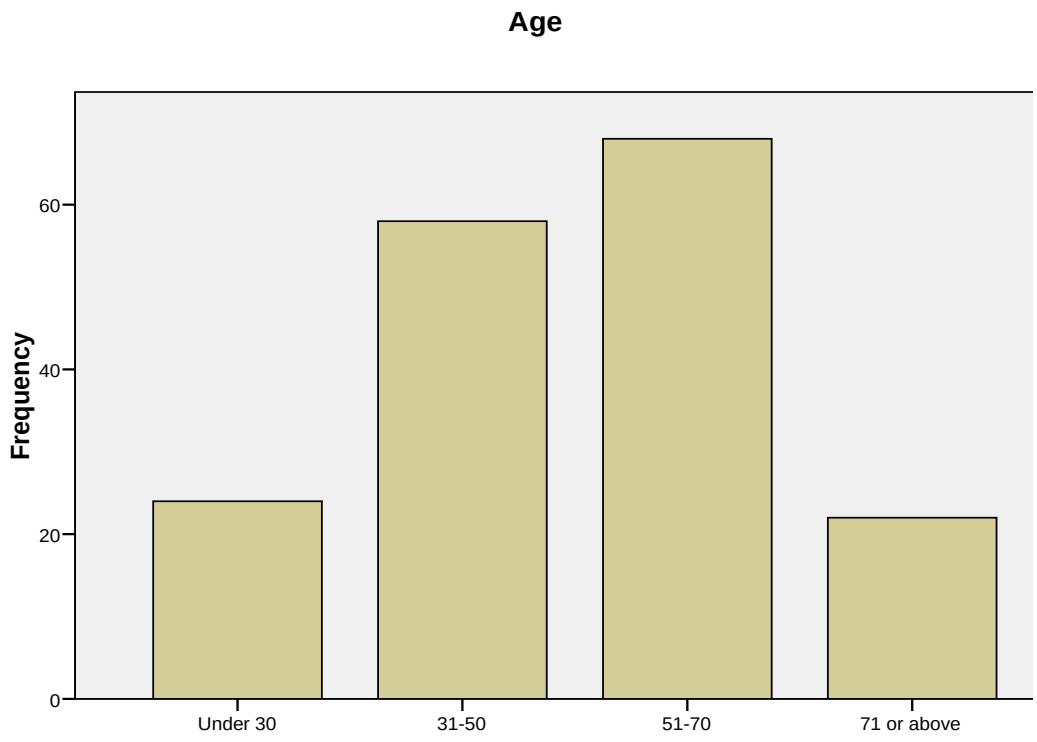


Table 3: Education Level of Sampling Area in the UCRB

		Frequency	Valid Percent	Cumulative Percent
Valid	Less than high school	37	21.5	21.5
	High school/GED	79	45.9	67.4
	College	52	30.2	97.7
	4.0	3	1.7	99.4
	Don't know	1	.6	100.0
	Total	172	100.0	
Missing	System	8		
Total		180		

Table 3 above and Figure 2 below, shows the majority of the population, 45.9%, has a high school or GED education level in the UCRB sampling area. This might mean to successfully communicate the message; the message must be given at a high school comprehensive level.

Figure 2: Education Level in the UCRB

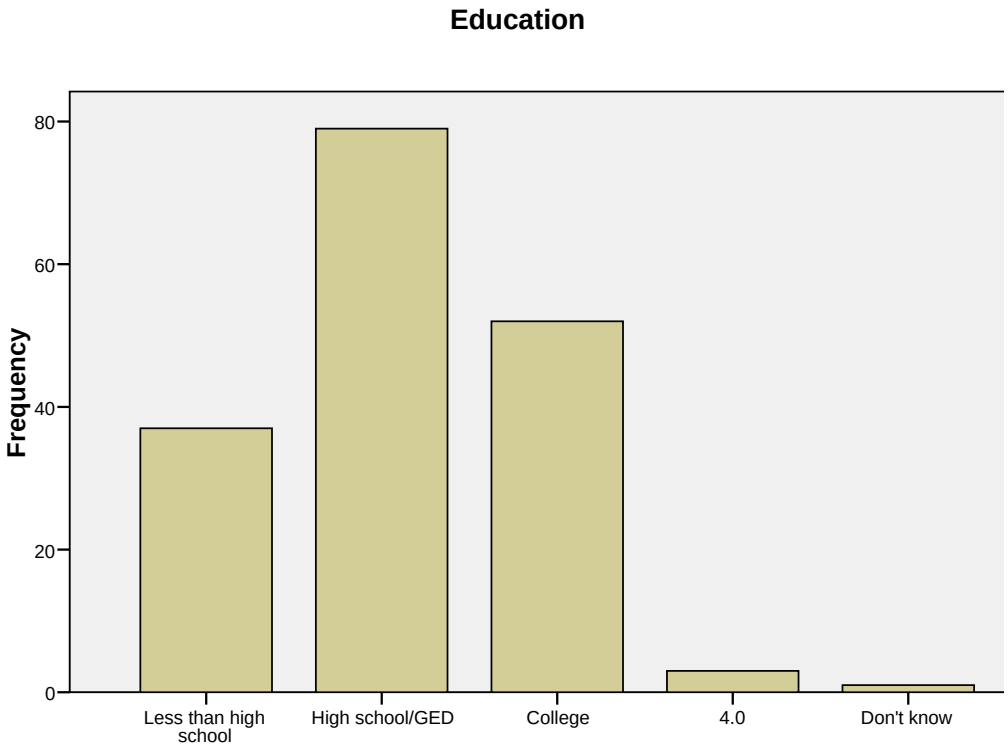


Table 4: Total Household Income Ranges in the UCRB

		Frequency	Valid Percent	Cumulative Percent
Valid	Under 15,000	34	19.8	19.8
	16,000-20,000	20	11.6	31.4
	21,000-30,000	22	12.8	44.2
	Above 30,000	70	40.7	84.9
	Don't know	26	15.1	100.0
	Total	172	100.0	
Missing	System	8		
Total		180		

Table 4 above and Figure 3 below, shows the majority, 40.7%, surveyed respondents earn above $30,000 in household income a year. We do not know the amount of income above $30,000.

Figure 3: Total Household Income Range in the UCRB

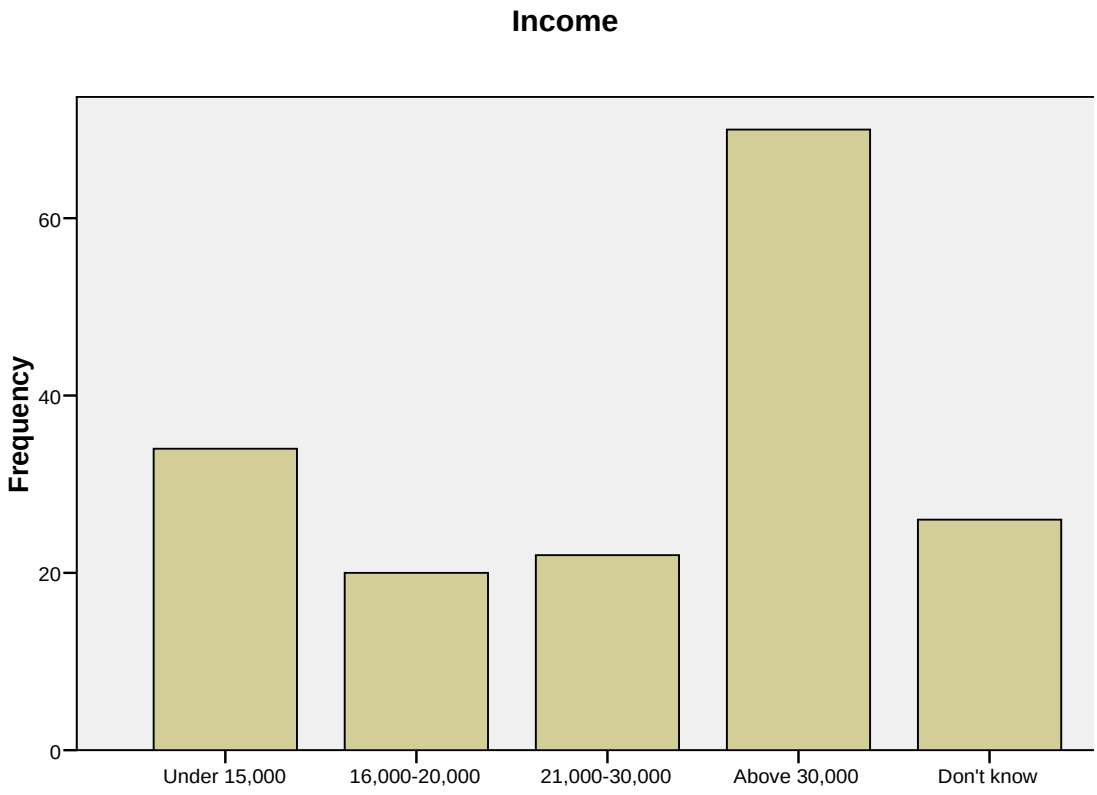


Table 5: Boat Ownership in the UCRB

		Frequency	Valid Percent	Cumulative Percent
Valid	Yes	30	17.4	17.4
	No	142	82.6	100.0
	Total	172	100.0	
Missing	System	8		
Total		180		

Table 5 above and Figure 4 below, shows the majority, 82.6%, of the respondents surveyed do not own a boat. This might indicate, these subjects do not visit a water body in their area for recreation.

Figure 4: Boat Ownership in the UCRB

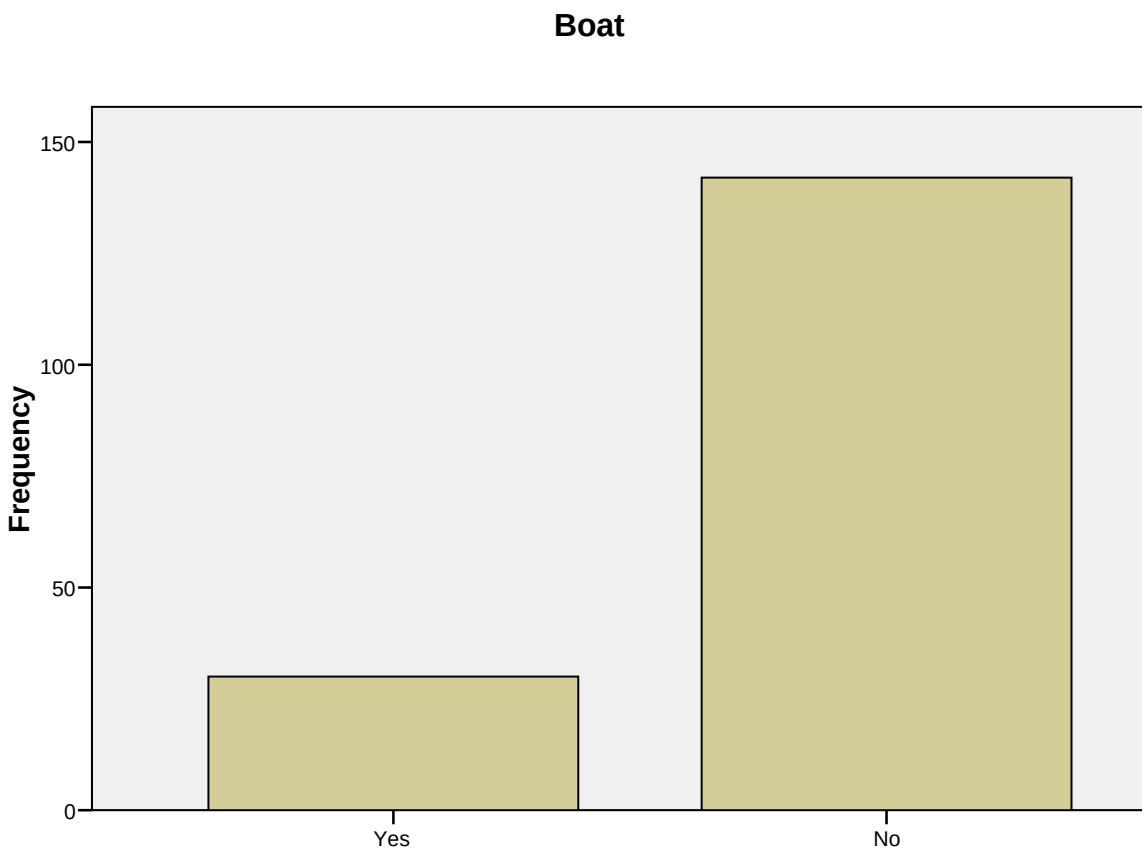
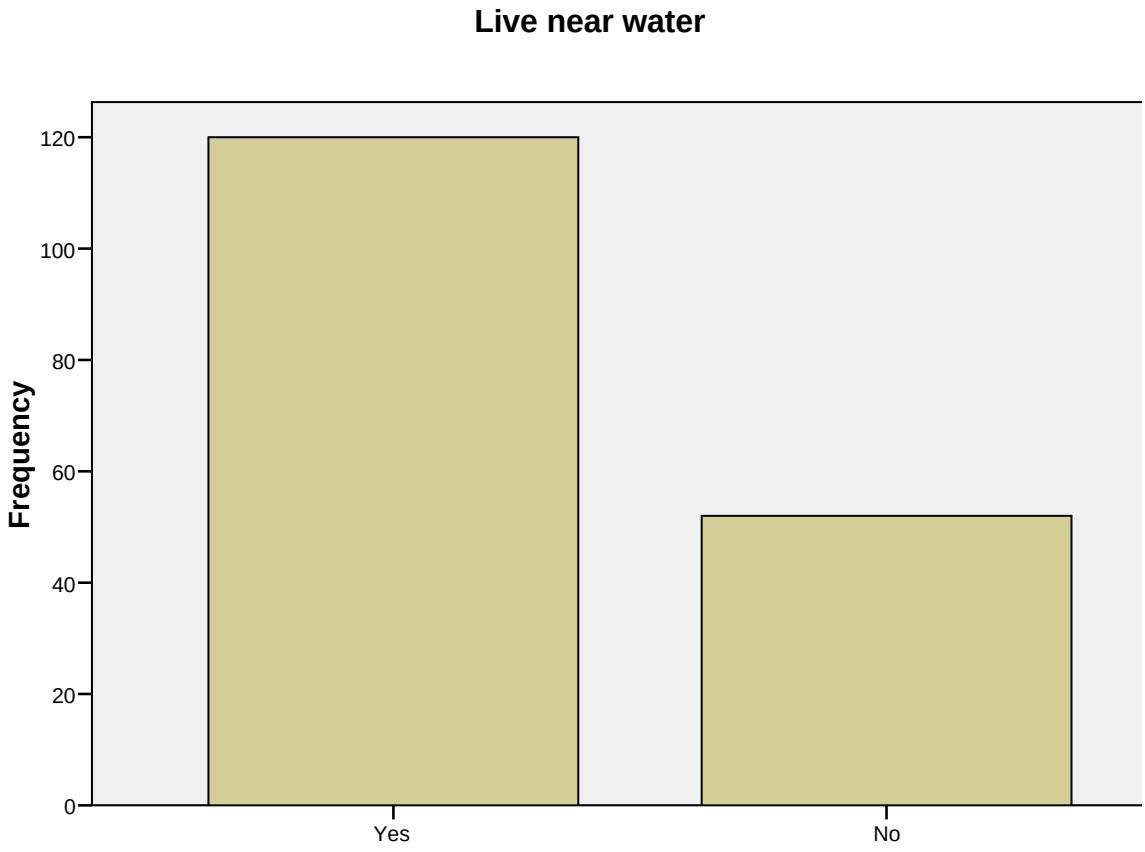


Table 6: Frequency of Surveyed Population Who Live Near Water

		Frequency	Valid Percent	Cumulative Percent
Valid	Yes	120	69.8	69.8
	No	52	30.2	100.0
	Total	172	100.0	
Missing	System	8		
Total		180		

Table 6 above and Figure 5 below, represents the frequency of residents in the UCRB who live near water. More than 69% live near water; therefore, this might indicate these residents' lifestyles have a more direct relationship with NPS pollution.

Figure 5: Frequency of Surveyed Population Who Live Near Water



T**able 7: Frequency of Surveyed Population in the UCRB Who Attend Church**

		Frequency	Valid Percent	Cumulative Percent
Valid	Frequently	102	59.3	59.3
	Sometimes	46	26.7	86.0
	Never	24	14.0	100.0
	Total	172	100.0	
Missing	System	8		
Total		180		

Table 7 above and Figure 6 below, represents the frequency of residents surveyed who attend church. This shows about 60% of the population in the UCRB attend church regularly, therefore churches in the area are excellent places to distribute information.

Figure 6: Frequency of Surveyed Population in the UCRB Who Attend Church

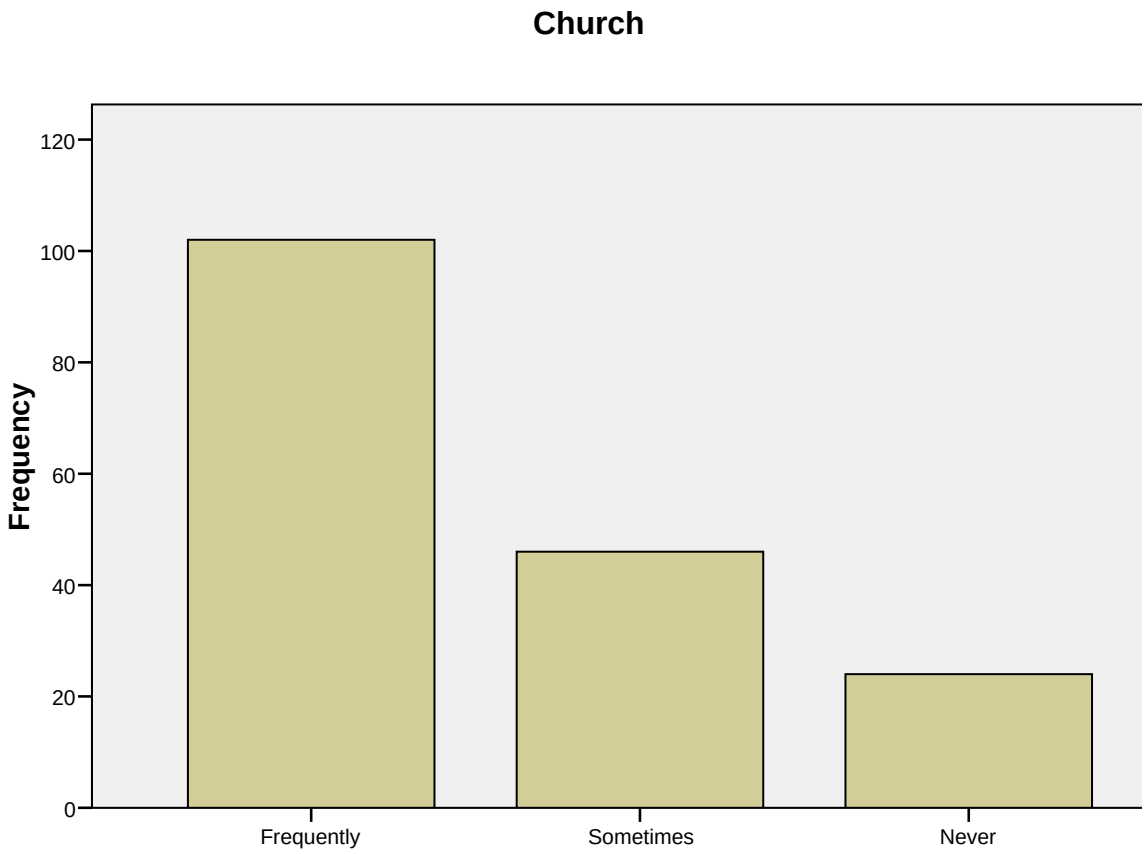


Table 8: Frequency of Surveyed Population with Internet Access

		Frequency	Valid Percent	Cumulative Percent
Valid	Yes	106	61.6	61.6
	No	64	37.2	98.8
	3.0	1	.6	99.4
	Don't know	1	.6	100.0
	Total	172	100.0	
Missing	System	8		
Total		180		

Table 8 above and Figure 7 below, shows 61% of the surveyed population has Internet access. This may indicate these residents are capable of gathering information quickly.

Figure 7: Frequency of Surveyed Population with Internet Access

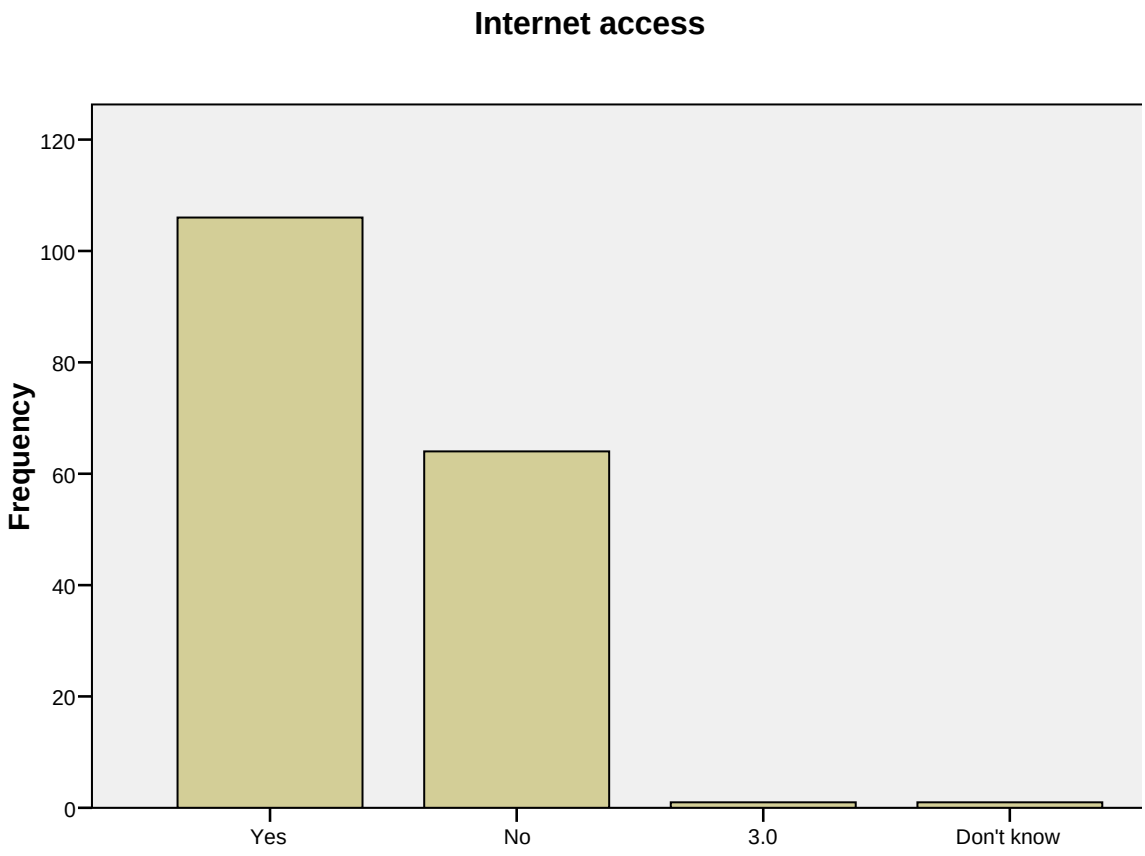


Table 9: Frequency Surveyed Population Who Read Newspapers

		Frequency	Valid Percent	Cumulative Percent
Valid	Daily	67	39.0	39.0
	Weekly	65	37.8	76.7
	Twice or more a month	18	10.5	87.2
	Never	22	12.8	100.0
	Total	172	100.0	
Missing	System	8		
Total		180		

Table 9 above and Figure 8 below represent the frequency of newspaper readership in the surveyed population. Most of the surveyed population reads a daily newspaper and the majority of the population, 76% reads a newspaper frequently. This may indicate newspapers would be an appropriate medium to relay information.

Figure 8: Frequency Surveyed Population Who Read Newspapers

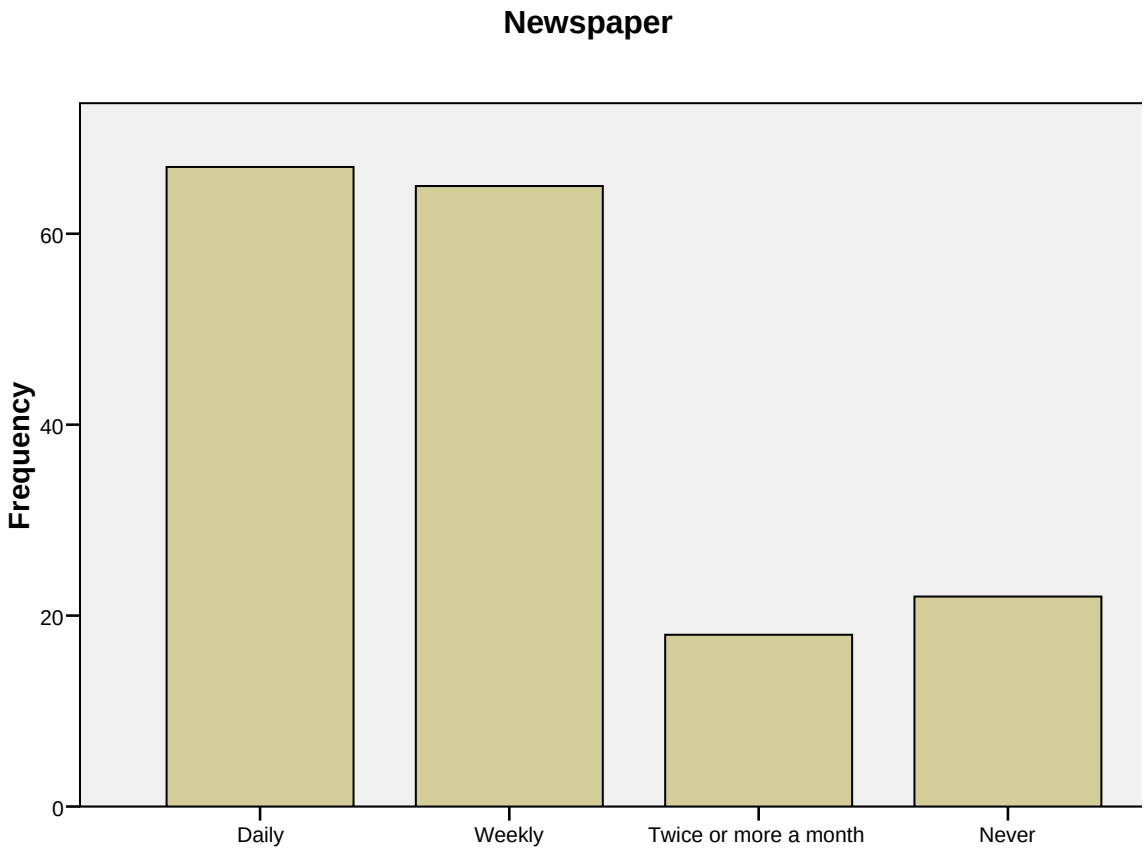


Table 10: Frequency of Television Viewership in the UCRB

		Frequency	Valid Percent	Cumulative Percent
Valid	1 to 2 hours daily	96	55.8	55.8
	3 to 4 hours daily	40	23.3	79.1
	5 or more daily	27	15.7	94.8
	Never	8	4.7	99.4
	Don't know	1	.6	100.0
	Total	172	100.0	
Missing	System	8		
Total		180		

According to Table 10 and Figure 9, the majority of the surveyed population, 55%, in the UCRB only watches one to two hours of television a day. This might mean television wouldn't be a proper medium to distribute our information.

Figure 9: Frequency of Television Viewership in the UCRB

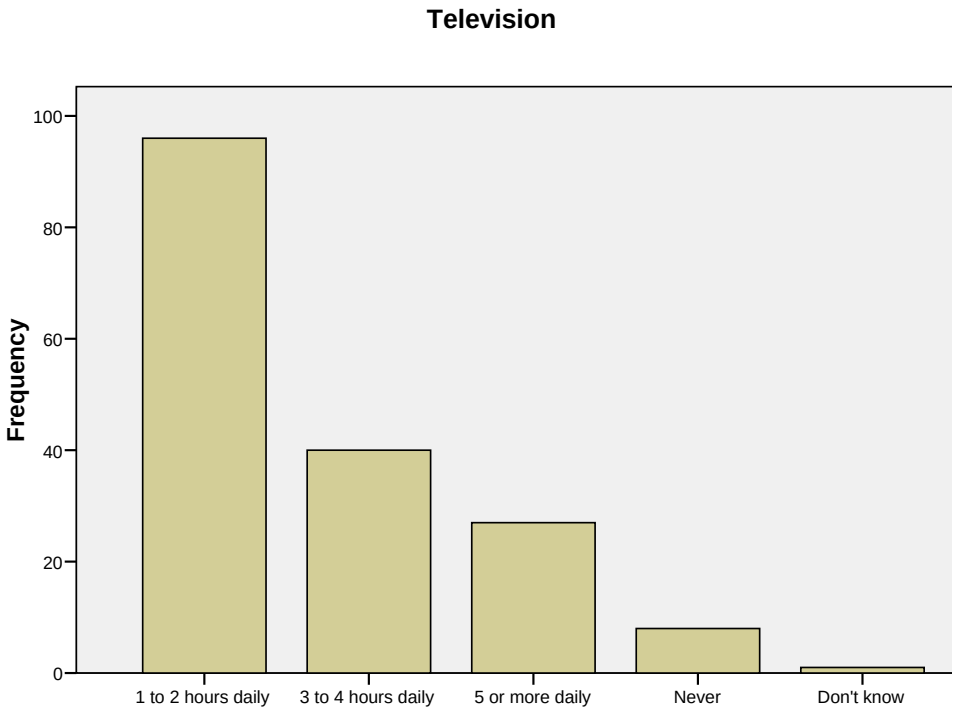


Table 11: Frequency of Surveyed Population Listening to the Radio

		Frequency	Valid Percent	Cumulative Percent
Valid	Less than 1 hour daily	71	41.3	41.3
	1 to 2 hours daily	50	29.1	70.3
	3 or more daily	28	16.3	86.6
	Never	23	13.4	100.0
	Total	172	100.0	
Missing	System	8		
Total		180		

According to Table 11 above Figure 10 below, represent the data of the surveyed population who listen to the radio. The table and figure shows the majority of the surveyed population in the UCRB only listens to the radio an hour or less. This might mean radio would not be a proper medium to distribute our message.

Figure 10: Frequency of Surveyed Population Listening to the Radio

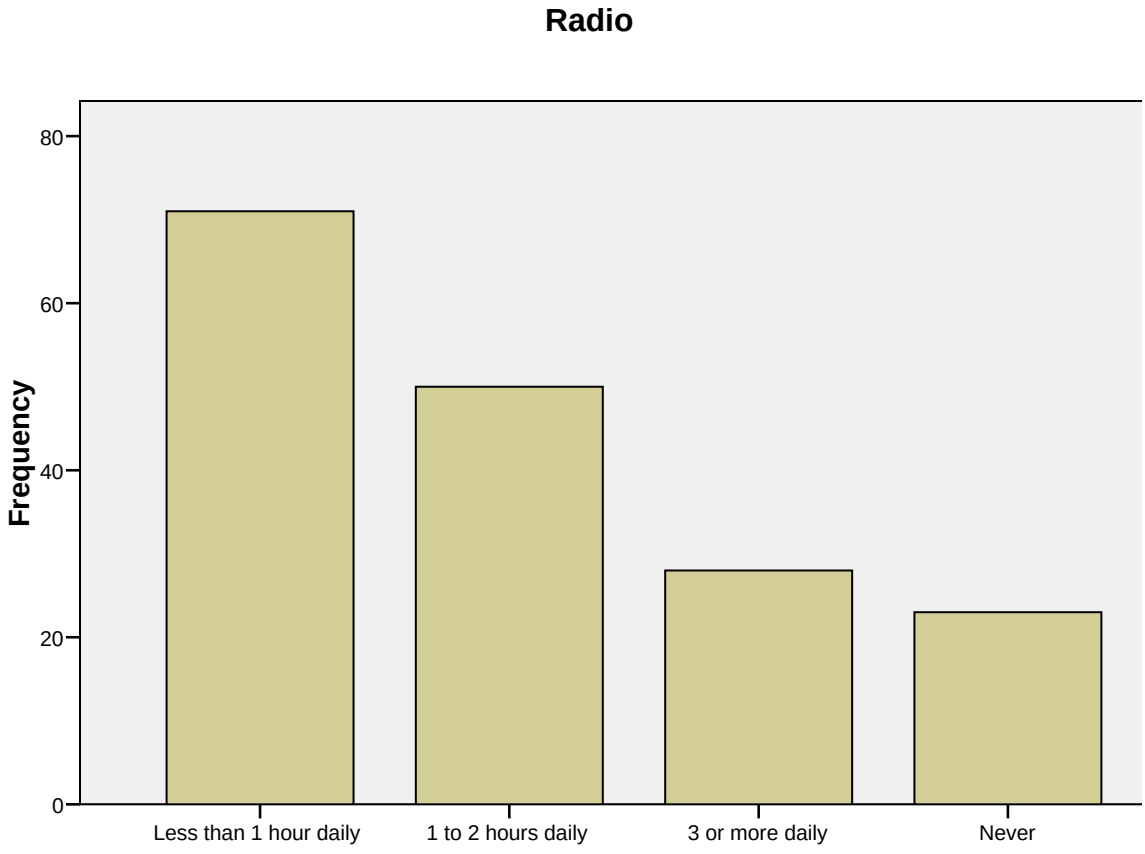


Table 12: Frequency of Surveyed Population on NPS pollution

		Frequency	Valid Percent	Cumulative Percent
Valid	No/Don't know	153	89.0	89.0
	2.0	4	2.3	91.3
	Yes	15	8.7	100.0
	Total	172	100.0	
Missing	System	8		
Total		180		

Table 12 above and Figure 11 below, represents the frequency of the surveyed population in the UCRB who are aware of NPS POLLUTION. According to the results, the majority may be unaware of NPS POLLUTION.

Figure 11: Frequency of Surveyed Population on NPS pollution

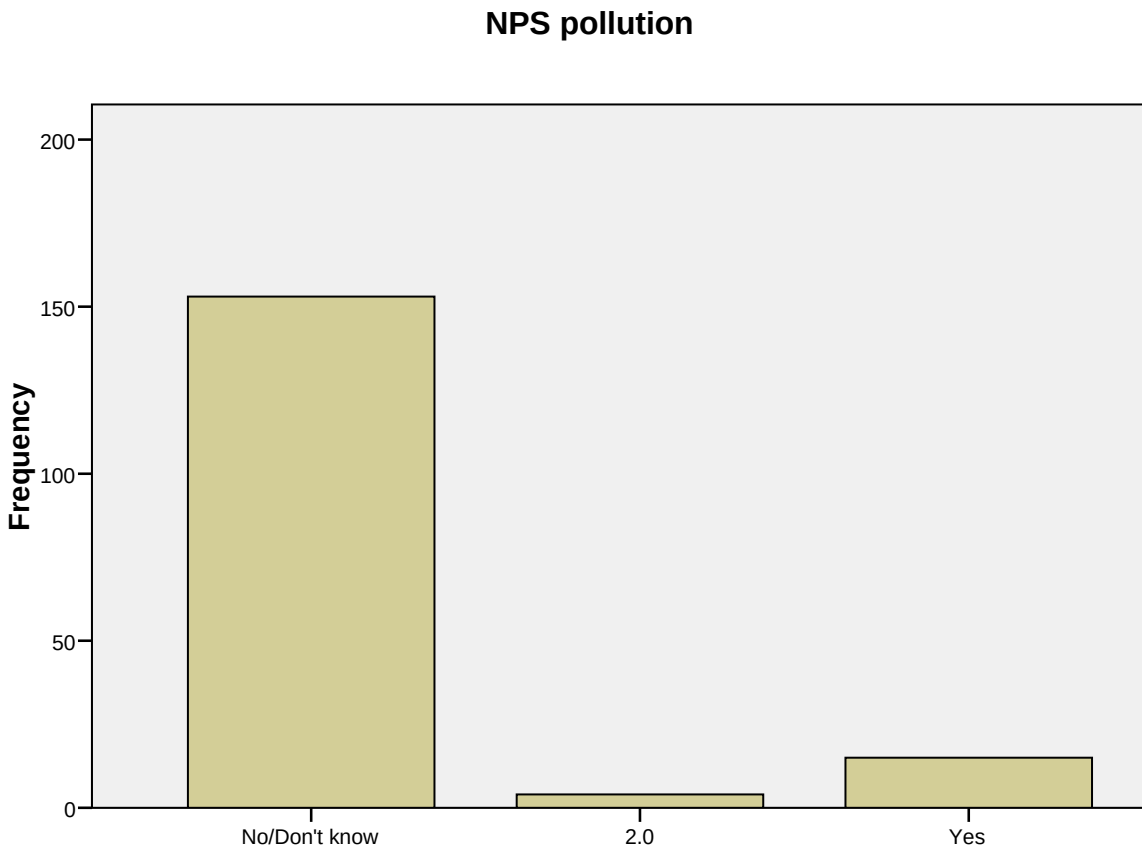


Table 13: Awareness Level of Environmental Organizations in the Surveyed Population

		Frequency	Valid Percent	Cumulative Percent
Valid	No/Don't know	117	68.0	68.0
	2.0	2	1.2	69.2
	Yes	53	30.8	100.0
	Total	172	100.0	
Missing	System	8		
Total		180		

Table 13 above and Figure 12 below shows the majority, 68%, of the sample are unaware of any environmental organizations in their local area. This might indicate environmental organizations are not visiting our sampling area.

Figure 12: Awareness Level of Environmental Organizations in the Surveyed Population

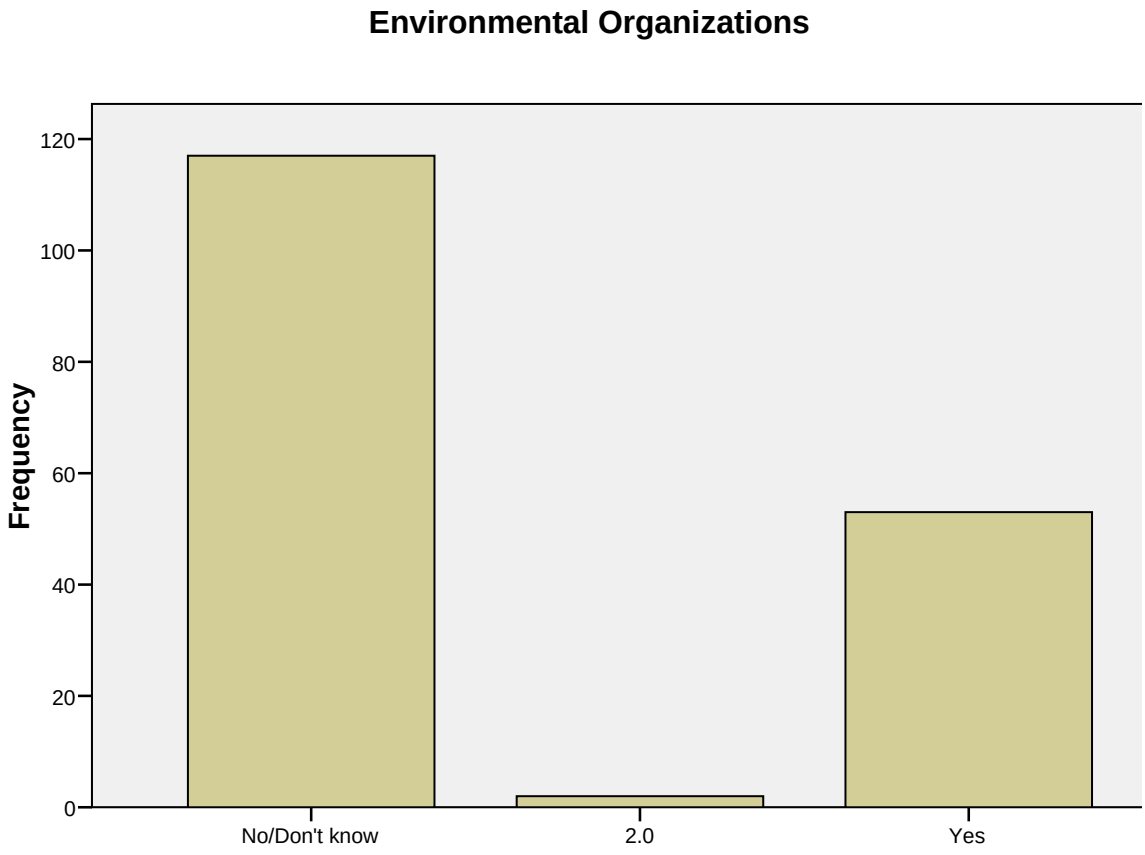


Table 14: Frequency of the Surveyed Population Who Visit KEEC Website

		Frequency	Valid Percent	Cumulative Percent
Valid	Never/Don't know	160	93.0	93.0
	Sometimes	11	6.4	99.4
	Frequently	1	.6	100.0
	Total	172	100.0	
Missing	System	8		
Total		180		

According to Table 14 above and Figure 13 below; the majority of the population in the UCRB, 93%, has never visited the KEEC website. This may indicate that the KEEC is not successfully trafficking visitors from our sampling area to their website.

Figure 13: Frequency of the Surveyed Population Who Visit KEEC Website

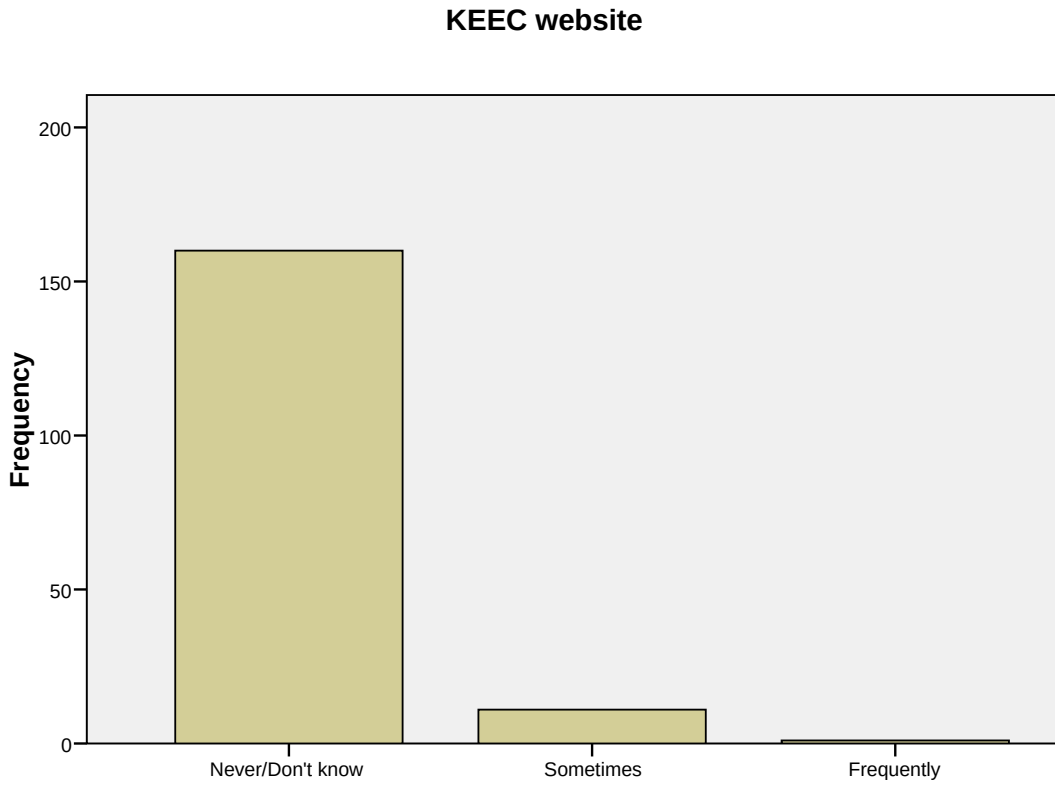


Table 15: Exposure of Community Leaders Speaking on Water Pollution

		Frequency	Valid Percent	Cumulative Percent
Valid	Never/Don't know	106	61.6	61.6
	Sometimes	46	26.7	88.4
	Frequently	20	11.6	100.0
	Total	172	100.0	
Missing	System	8		
Total		180		

Table 15 above and Figure 14 below show the majority of the surveyed populations, 61.6%, have never heard community leaders in their local areas speak about water pollution. This may mean community leaders are not speaking about water pollution in these areas.

Figure 14: Exposure of Community Leaders Speaking on Water Pollution

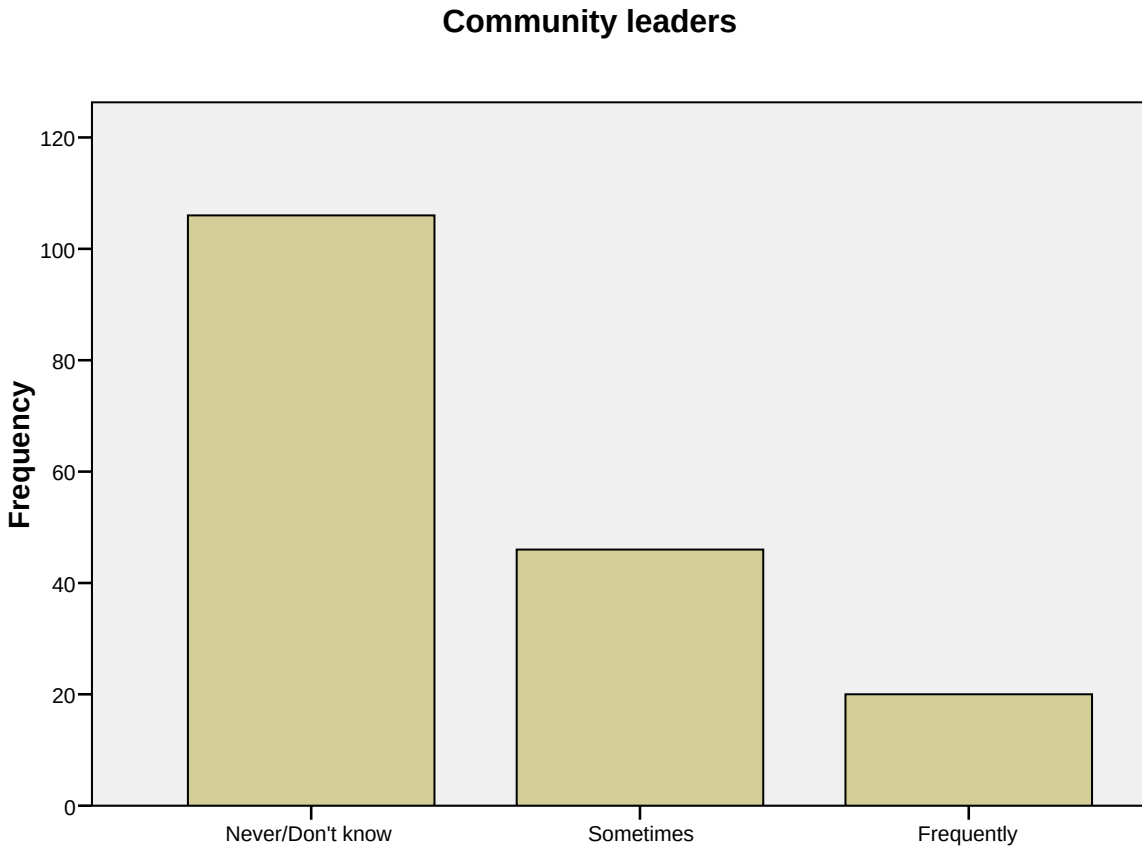


Table 16: Awareness Index of the UCRB Questionnaire

		Frequency	Valid Percent	Cumulative Percent
Valid	Low	50	29.1	29.1
	Medium	68	39.5	68.6
	High	54	31.4	100.0
	Total	172	100.0	
Missing	System	8		
Total		180		

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Table 16 above and Figure 15 below represent the summary of all awareness questions from the questionnaire in an index. This shows the general awareness of pollution in the surveyed population in the UCRB. Overall the awareness index shows 39.5% of the sampling areas are aware of the pollution problem around them.

Figure 15: Awareness Index of the UCRB Questionnaire

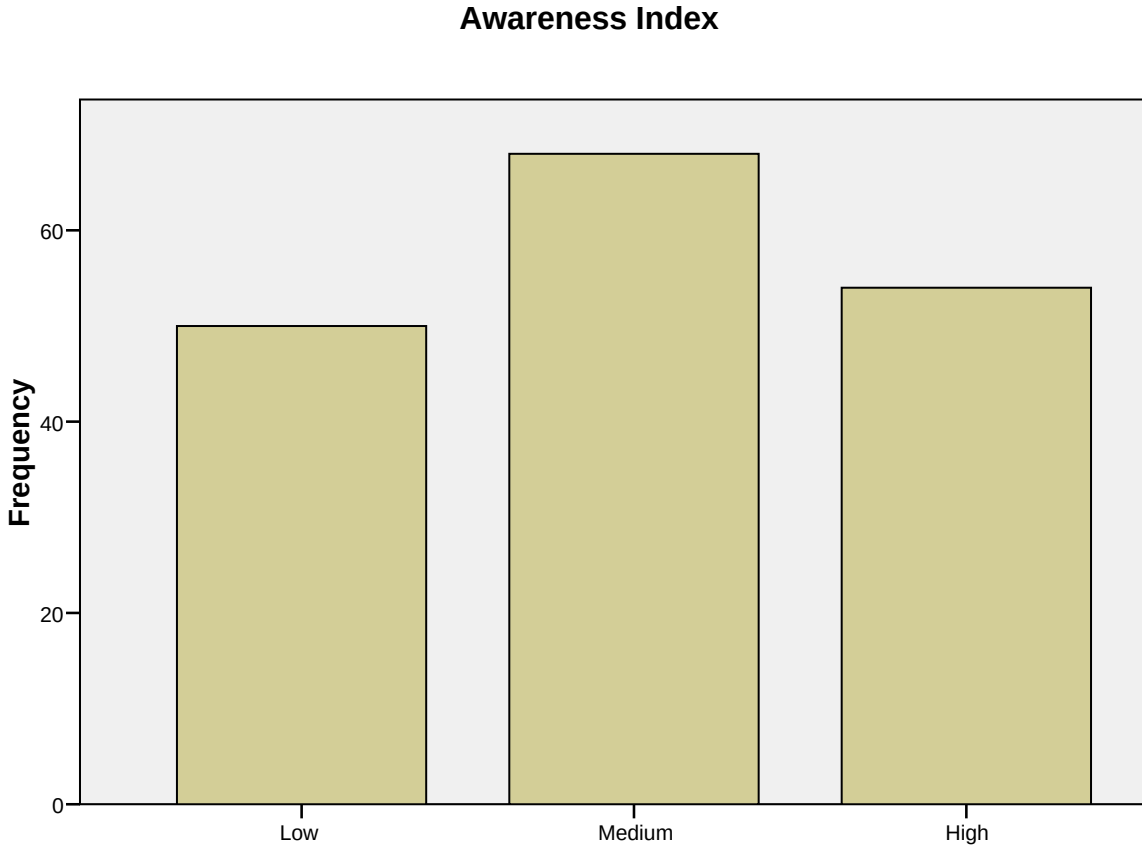
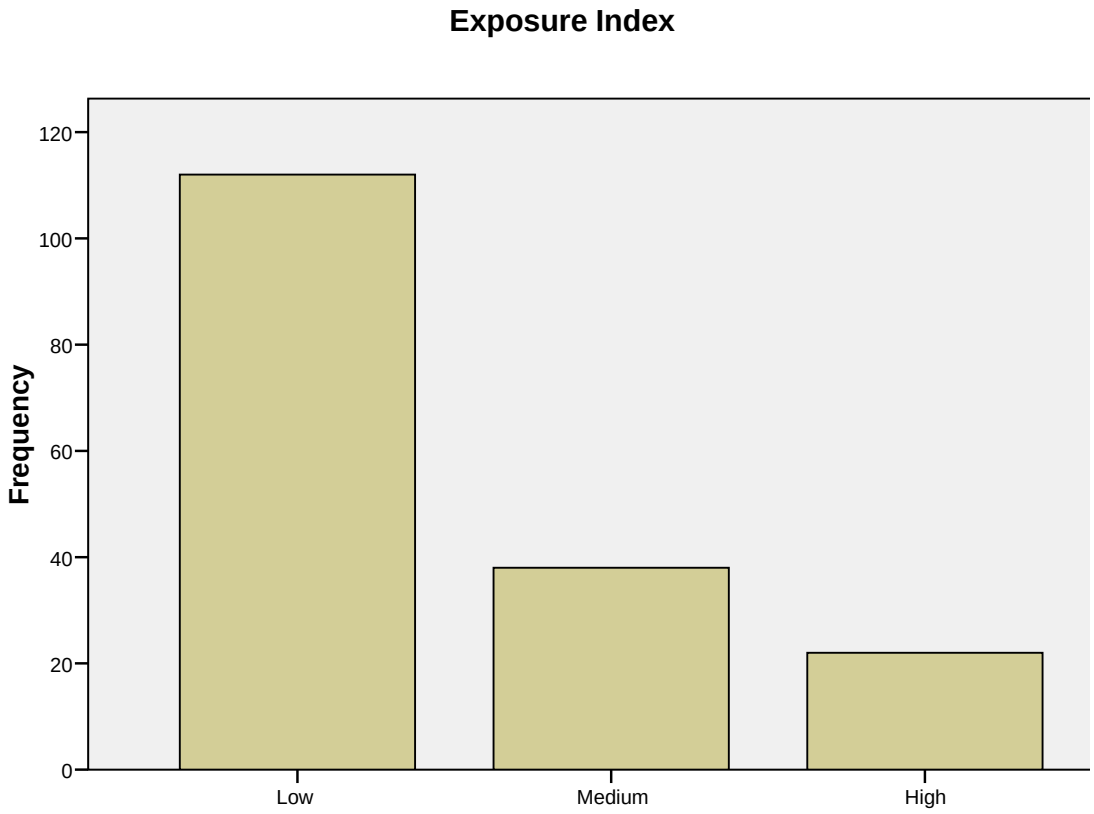


Table 17: Exposure Index of the UCRB Questionnaire

		Frequency	Valid Percent	Cumulative Percent
Valid	Low	112	65.1	65.1
	Medium	38	22.1	87.2
	High	22	12.8	100.0
	Total	172	100.0	
Missing	System	8		
Total		180		

Table 17 above and Figure 16 below represent the summary of all exposure questions from the questionnaire. This shows the general exposure to information regarding water pollution in the surveyed population in the UCRB. Overall 65.1% of the sampling population has low exposure to data materials about water pollution.

Figure 16: Exposure Index of the UCRB Questionnaire



Results & Discussion (Post-Test)

Table 1:
Posttest sample area of 19 counties in the UCRB

		Frequency	Valid Percent	Cumulative Percent
Valid	Adair	2	5.1	5.1
	Bell	3	7.7	12.8
	Casey	1	2.6	15.4
	Cumberland	1	2.6	17.9
	Harlan	3	7.7	25.6
	Jackson	1	2.6	28.2
	Knox	3	7.7	35.9
	Laurel	5	12.8	48.7
	Letcher	2	5.1	53.8
	Lincoln	2	5.1	59.0
	McCreary	1	2.6	61.5
	Metcalfe	1	2.6	64.1
	Monroe	1	2.6	66.7
	Pulaski	5	12.8	79.5
	Rockcastle	1	2.6	82.1
	Russell	2	5.1	87.2
	Wayne	2	5.1	92.3
	Whitley	3	7.7	100.0
	Total	39	100.0	
Missing	System	1		
Total		40		

Table 1 above, shows the number of surveys completed in the post-test from each county. The number of post-test surveys completed was a follow-up to extract a smaller sample from the sample gathered from the pretest. More surveys were completed in Laurel county and Pulaski county than in any other county.

Table 2: Sampling Gender of Respondents in the UCRB

		Frequency	Valid Percent	Cumulative Percent
Valid	Male	12	30.8	30.8
	Female	27	69.2	100.0
	Total	39	100.0	
Missing	System	1		
Total		40		

Table 2 above and Figure 1 below, show the gender of the respondents contacted for a survey. The majority of the respondents were female with a 67.5 percentile.

Figure 1: Sampling Gender of Respondents in the UCRB

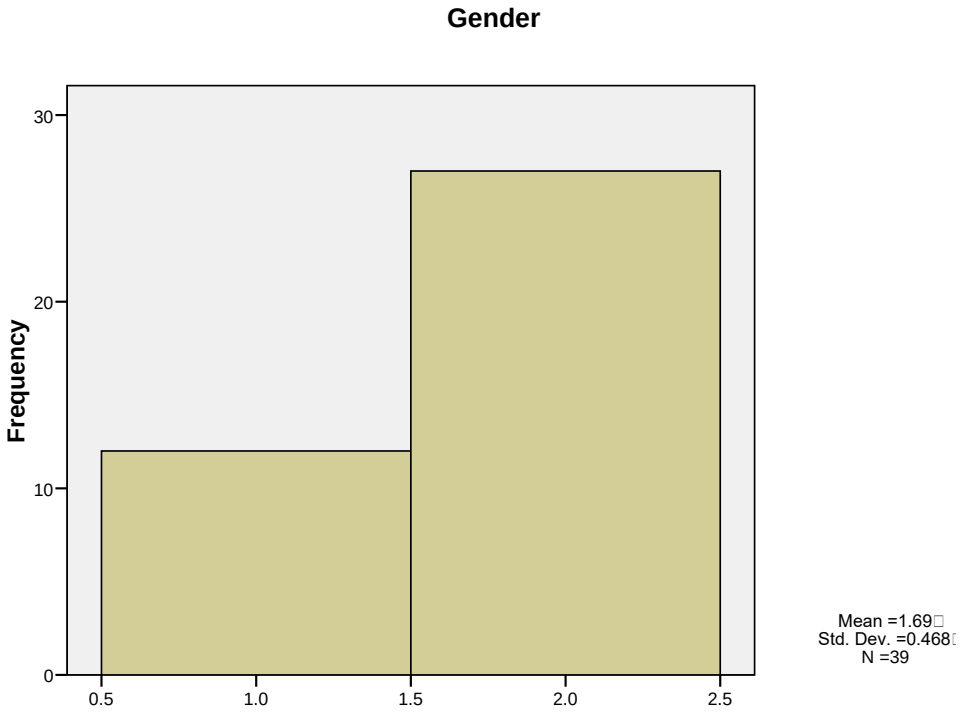


Table 3: Sampling Age of Respondents in the UCRB

		Frequency	Valid Percent	Cumulative Percent
Valid	Under 30	5	12.8	12.8
	31-50	8	20.5	33.3
	51-70	21	53.8	87.2
	71 or above	5	12.8	100.0
	Total	39	100.0	
Missing	System	1		
Total		40		

Table 3 above and Figure 2 below, show the age of the respondents contacted for a survey. The majority of the respondents, 52.5%, range between 51-70 years of age. This result shows the age range being the same as the pretest.

Figure 2: Sampling Age of Respondents in the UCRB

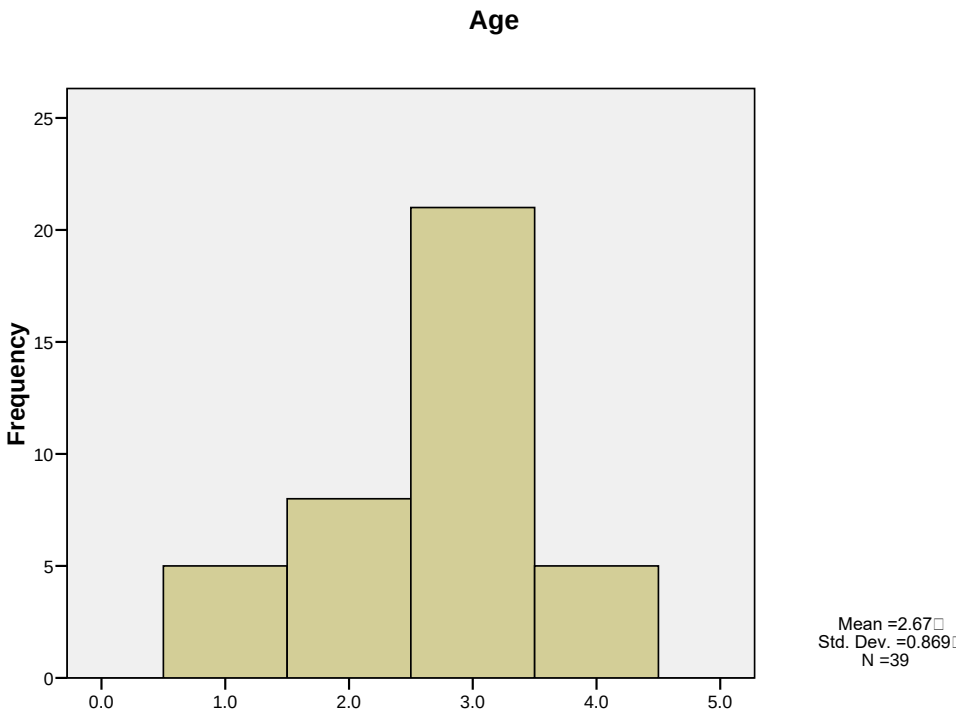


Table 4: Education Level of Sampling Area in the UCRB

		Frequency	Valid Percent	Cumulative Percent
Valid	Less than high school	7	17.9	17.9
	High school/ GED	18	46.2	64.1
	College	14	35.9	100.0
	Total	39	100.0	
Missing	System	1		
Total		40		

Table 4 above and Figure 3 below, show the majority of the population, 45.0% has a high school or GED education level in the UCRB sampling Area. This result shows the education level being the same as the pretest.

Figure 3: Education Level in the UCRB

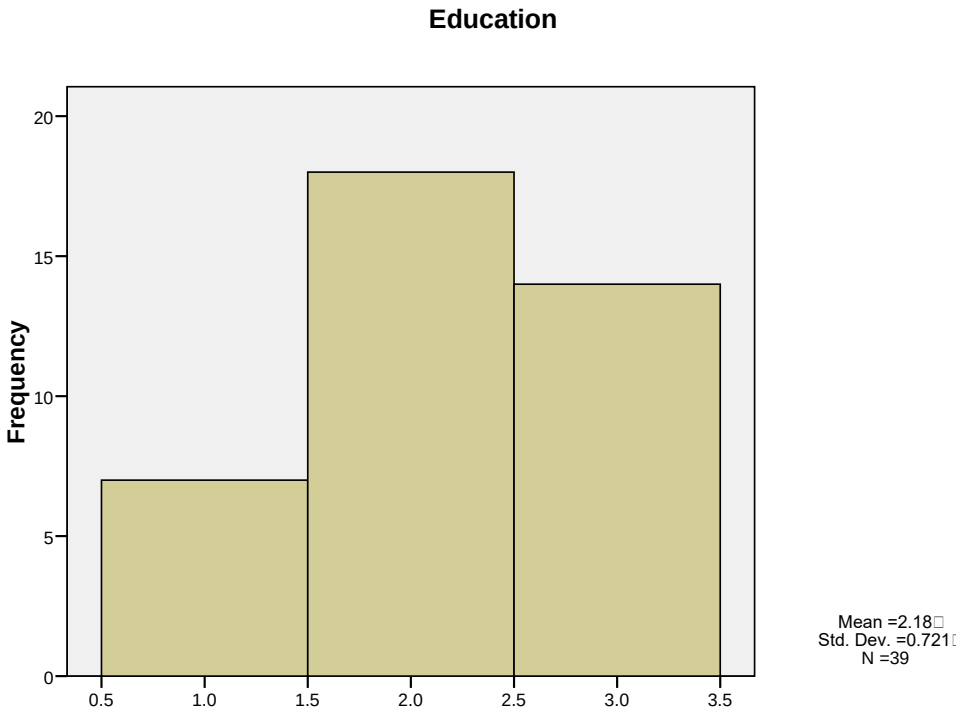


Table 5: Total Household Income Ranges in the UCRB

		Frequency	Valid Percent	Cumulative Percent
Valid	Under 15,000	5	12.8	12.8
	16,000-20,000	5	12.8	25.6
	21,000-30,000	5	12.8	38.5
	Above 30,000	19	48.7	87.2
	Don't know	4	10.3	97.4
	6.0	1	2.6	100.0
	Total	39	100.0	
Missing	System	1		
Total		40		

Table 5 above and Figure 4 below, show the majority, 48.7%, surveyed respondents earn above $30,000 in household income in a year. This result shows the total household income being the same as the pretest.

Figure 4: Total Household Income Range in the UCRB

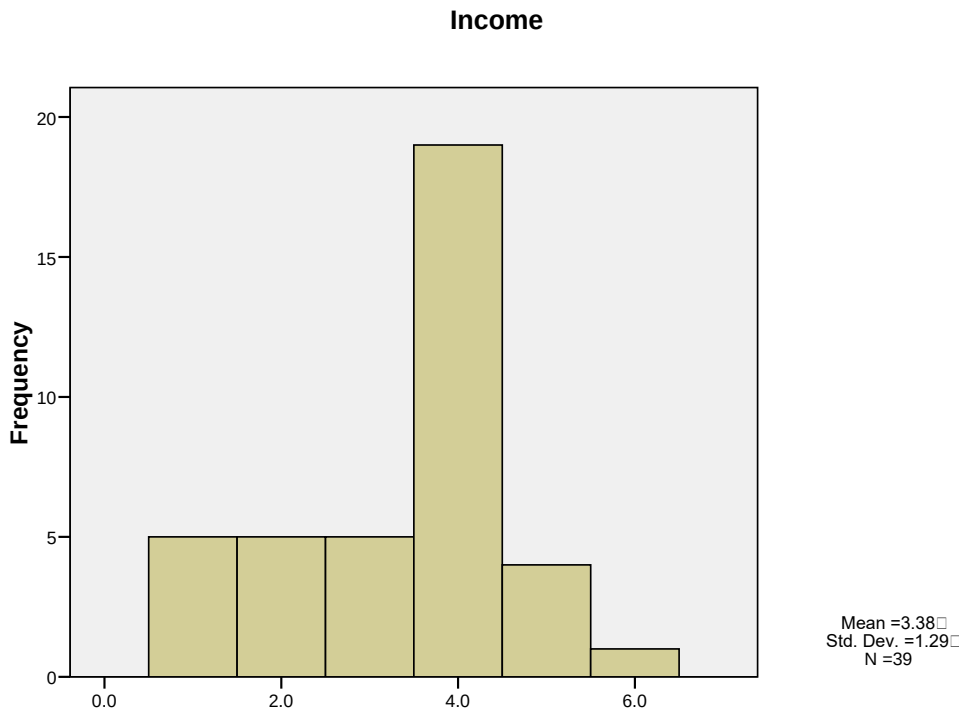


Table 6: Employment in the UCRB

		Frequency	Valid Percent	Cumulative Percent
Valid	Employed	16	41.0	41.0
	Self-employed	3	7.7	48.7
	Unemployed	8	20.5	69.2
	Student	2	5.1	74.4
	Retired	9	23.1	97.4
	Disabled/Don't know	1	2.6	100.0
	Total	39	100.0	
Missing	System	1		
Total		40		

Table 6 above and Figure 5 below, shows the majority, 41.0%, of the respondents surveyed are employed.

Figure 5: Employment in the UCRB

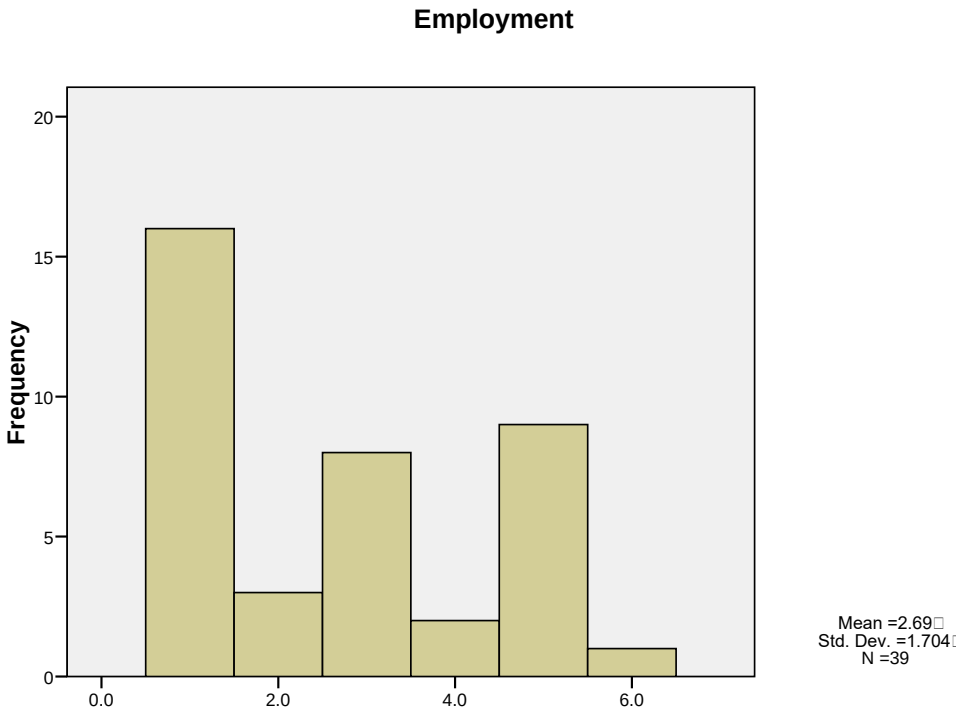


Table 7: Frequency of Surveyed Population with Internet Access

		Frequency	Valid Percent	Cumulative Percent
Valid	Yes	24	61.5	61.5
	No	15	38.5	100.0
	Total	39	100.0	
Missing	System	1		
Total		40		

Table 7 above and Figure 6 below, shows 61.5% have internet access. This result shows households with internet access being the same as the pretest.

Figure 6: Frequency of Surveyed Population with Internet Access

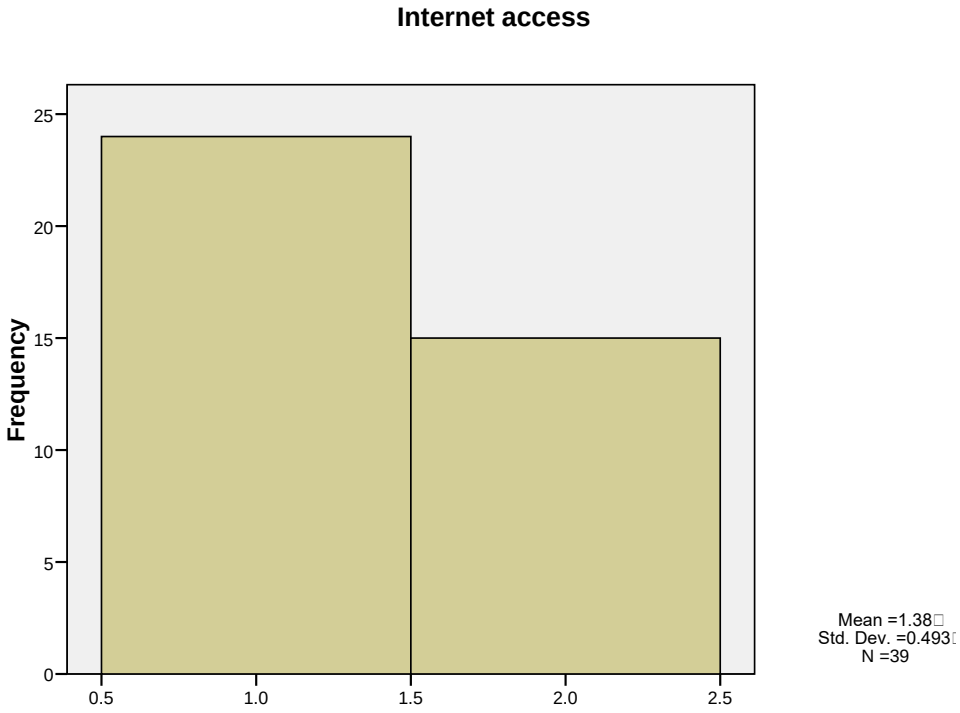


Table 8: Frequency of Surveyed Population on NPS pollution

		Frequency	Valid Percent	Cumulative Percent
Valid	No/Don't know	34	87.2	87.2
	Yes	5	12.8	100.0
	Total	39	100.0	
Missing	System	1		
Total		40		

Table 8 above and Figure 7 below, represents the frequency of the surveyed population in the UCRB who are aware of NPS pollution. This result shows NPS pollution awareness being the same as the pretest.

Figure 7: Frequency of Surveyed Population on NPS pollution

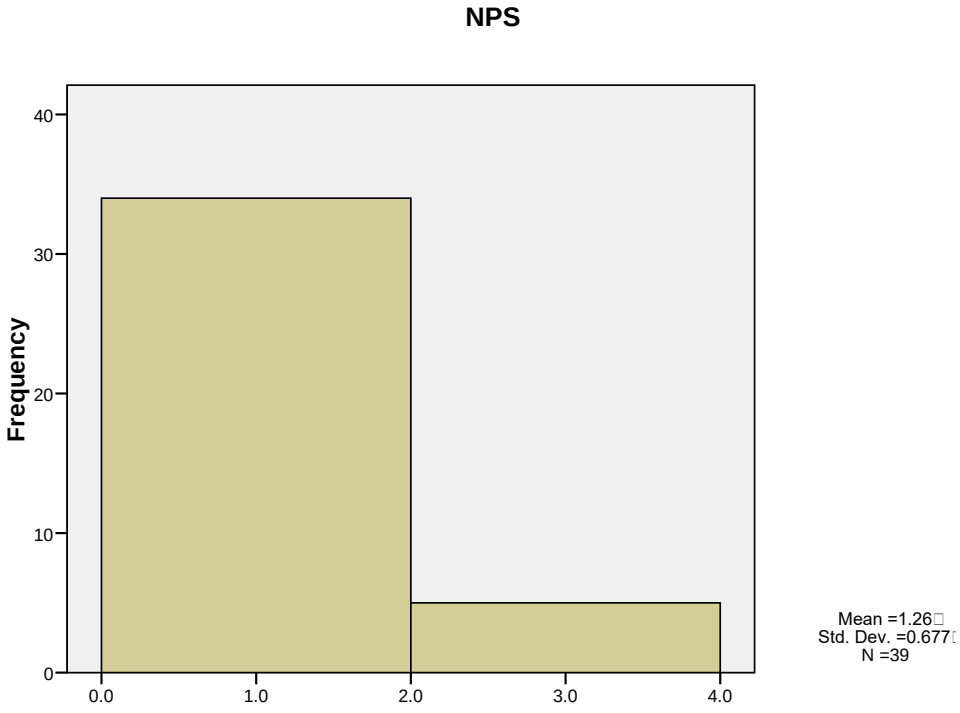


Table 9: NPS Pollution Example Question 1

		Frequency	Valid Percent	Cumulative Percent
Valid	A pipe pouring chemicals into the river	2	40.0	40.0
	Pressure washing your drive way	3	60.0	100.0
	Total	5	100.0	
Missing	System	35		
Total		40		

Table 9 above and Figure 8 below, represents the frequency of the surveyed population in the UCRB who were able to distinguish NPS pollution from point source pollution. According to the results, the majority, 60.0%, were able to distinguish NPS pollution from point source pollution.

Figure 8: NPS Pollution Example Question 1

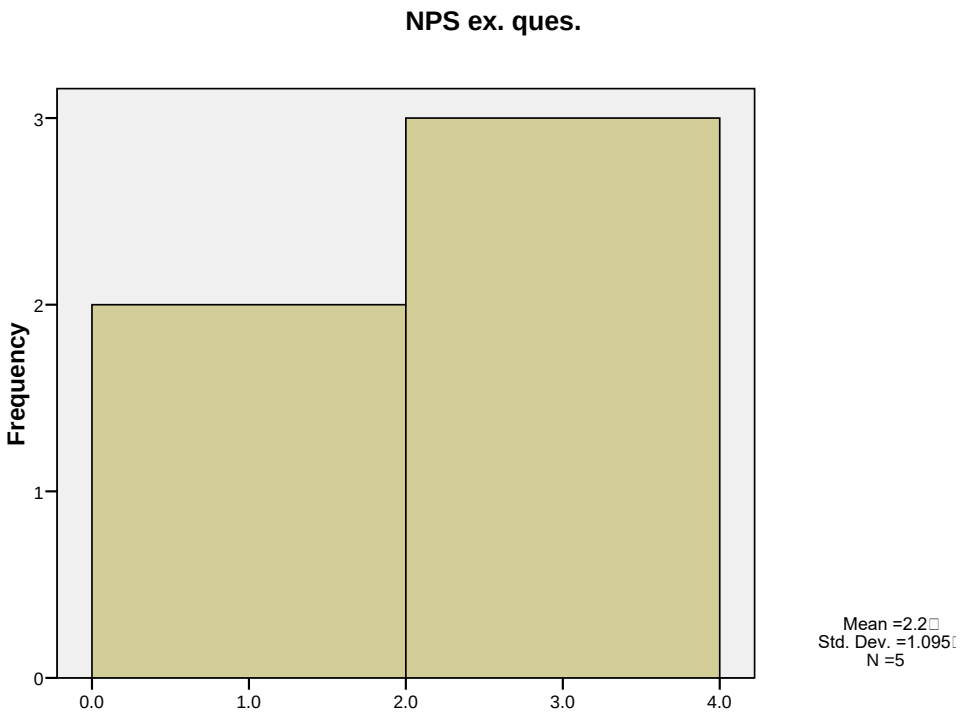


Table 10: NPS Pollution Example Question 2

		Frequency	Valid Percent	Cumulative Percent
Valid	A factory discharging waste through a pipe	1	20.0	20.0
	Animal waste	4	80.0	100.0
	Total	5	100.0	
Missing	System	35		
	Total	40		

Table 10 above and Figure 9 below, represents the frequency of the surveyed population in the UCRB who were able to distinguish NPS pollution from point source pollution. According to the results, the majority, 80.0%, were able to distinguish NPS pollution from point source pollution.

Figure 9: NPS Pollution Example Question 2

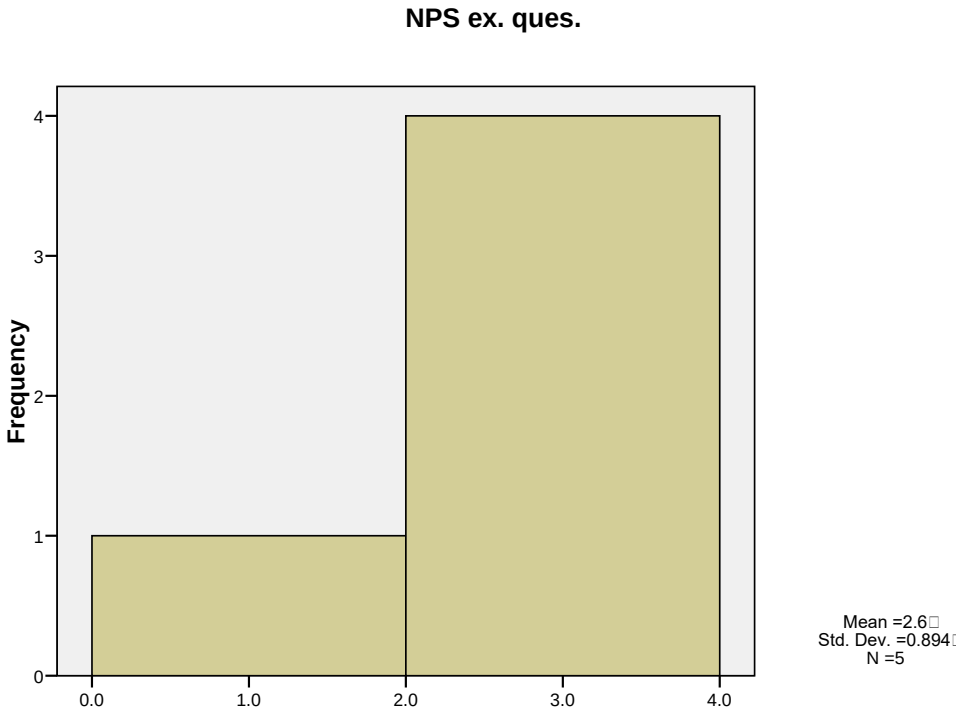


Table 11: NPS Pollution Example Question 3

		Frequency	Valid Percent	Cumulative Percent
Valid	A truck overturning and spilling oil onto the road	2	40.0	40.0
	Oil leaking from a lawn mower	3	60.0	100.0
	Total	5	100.0	
Missing	System	35		
Total		40		

Table 11 above and Figure 10 below, represents the frequency of the surveyed population in the UCRB who were able to distinguish NPS pollution from point source pollution. According to the results, the majority, 60.0%, were able to distinguish NPS pollution from point source pollution.

Figure 10: NPS Pollution Example Question 3

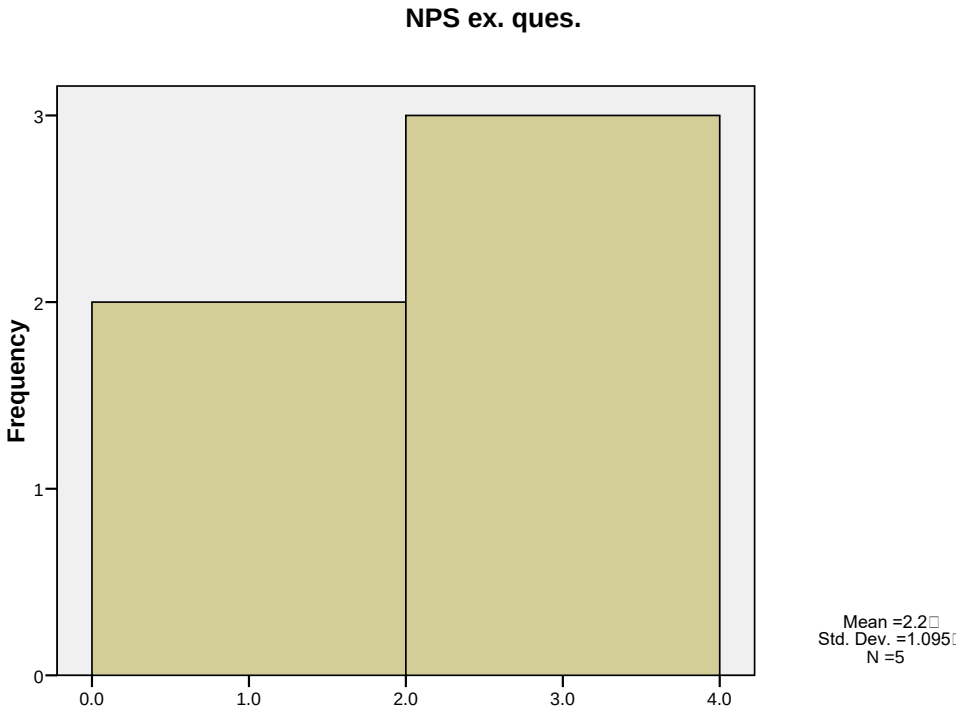


Table 12: Frequency of Surveyed Population on Media Source information

		Frequency	Valid Percent	Cumulative Percent
Valid	Newspaper	13	33.3	33.3
	TV	19	48.7	82.1
	Radio	3	7.7	89.7
	Internet	4	10.3	100.0
	Total	39	100.0	
Missing	System	1		
Total		40		

Table 12 above and Figure 11 below, shows what media source the surveyed population in the UCRB gathers information from. Results show the majority, 48.7%, gather most of their information from television.

Figure 11: Frequency of Surveyed Population on Media Source Information

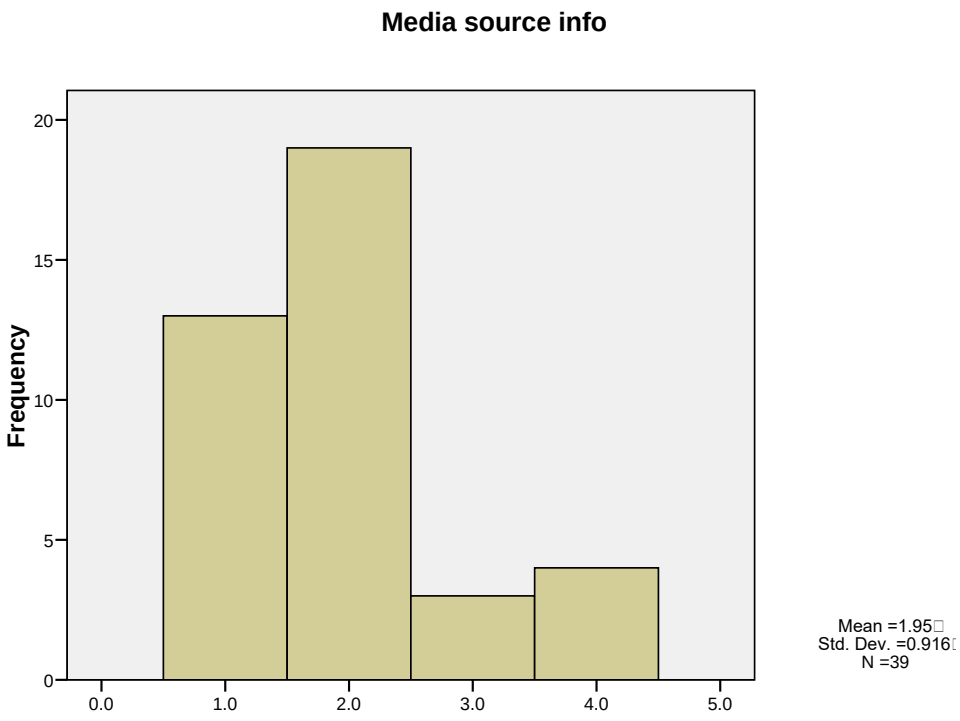


Table 13: Most Trusted Media Source in the UCRB

		Frequency	Valid Percent	Cumulative Percent
Valid	Newspaper	10	25.6	25.6
	TV	23	59.0	84.6
	Radio	3	7.7	92.3
	Internet	1	2.6	94.9
	Don't know	2	5.1	100.0
	Total	39	100.0	
Missing	System	1		
Total		40		

Table 13 above and Figure 12 below, shows the media source most trusted in the UCRB. According to the results, the majority, 59.0%, trust television the most.

Figure 12: Most Trusted Media Source in the UCRB

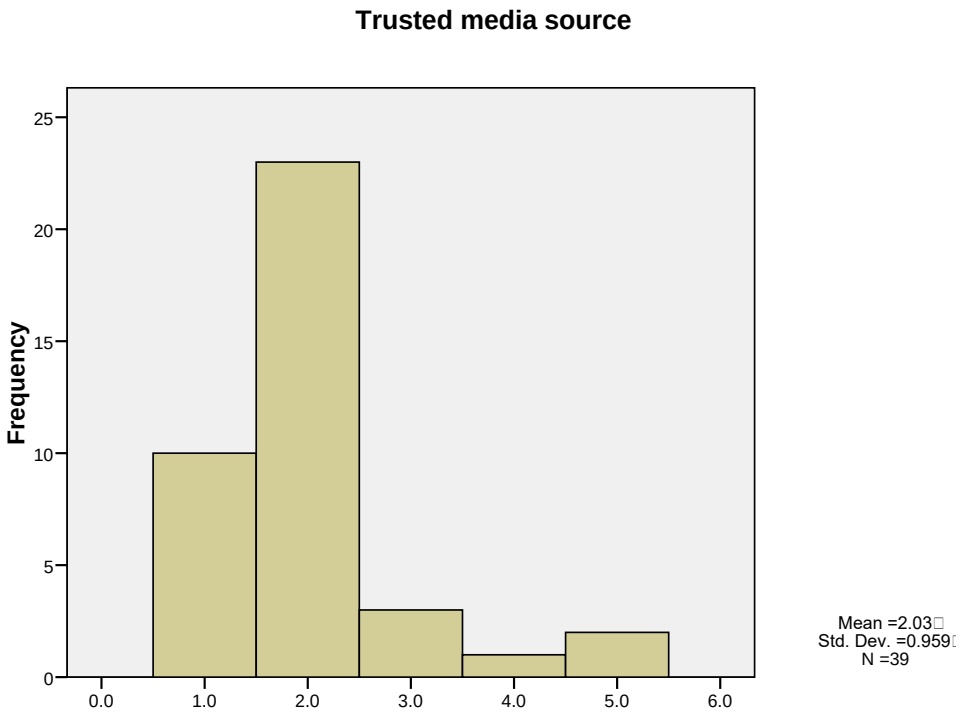


Table 14: Exposure of Public Service Announcements about NPS Pollution on Television

		Frequency	Valid Percent	Cumulative Percent
Valid	No/Don't know	34	87.2	87.2
	Yes	5	12.8	100.0
	Total	39	100.0	
Missing	System	1		
Total		40		

Table 14 above and Figure 13 below, show the majority of the surveyed populations, 87.2%, have never seen any public service announcements about NPS pollution on television. This could mean not enough service announcements are being aired on television.

Figure 13: Exposure of Public Service Announcements about NPS Pollution on Television

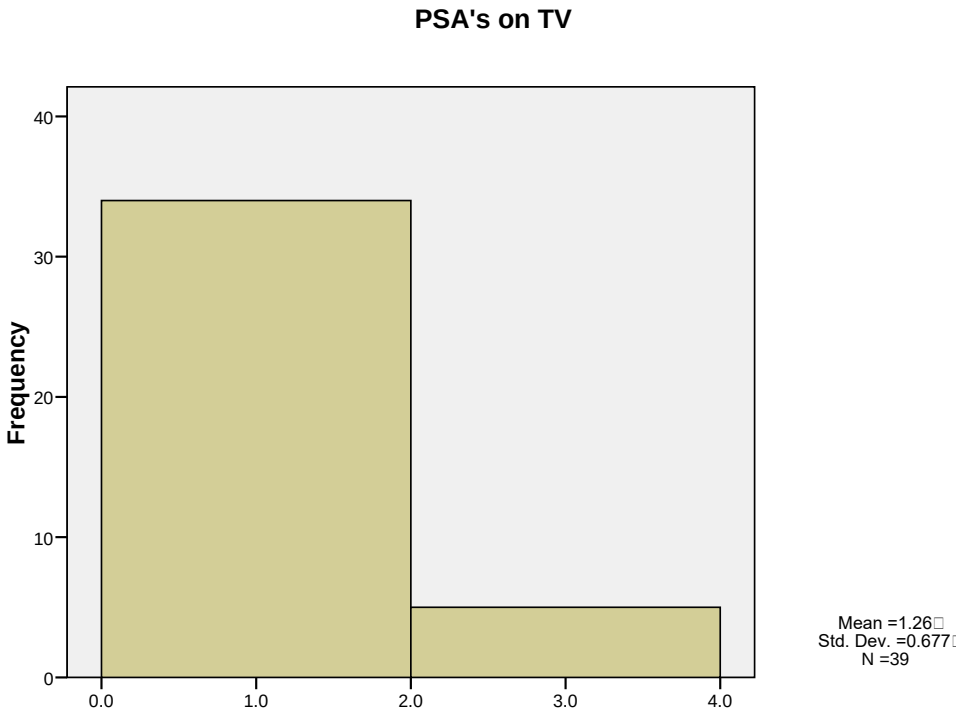


Table 15: Exposure of Public Service Announcements about NPS Pollution in Newspapers

		Frequency	Valid Percent	Cumulative Percent
Valid	No/Don't know	33	84.6	84.6
	2.0	1	2.6	87.2
	Yes	5	12.8	100.0
	Total	39	100.0	
Missing	System	1		
Total		40		

Table 15 above and Figure 14 below, show the majority of the surveyed populations, 84.6%, have never read any public service announcements about NPS pollution in newspapers. This could mean not enough service announcements are being published in local newspapers.

Figure 14: Exposure of Public Service Announcements about NPS Pollution in Newspapers

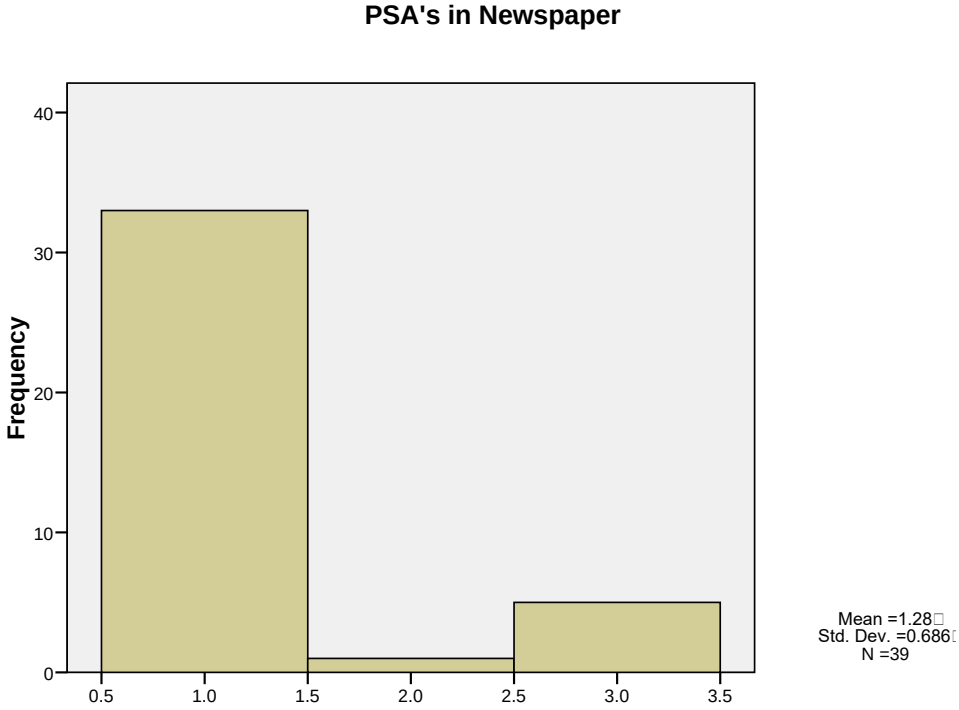


Table 16: Exposure of Public Service Announcements about NPS Pollution on Radio

		Frequency	Valid Percent	Cumulative Percent
Valid	No/Don't know	31	79.5	79.5
	2.0	1	2.6	82.1
	Yes	7	17.9	100.0
	Total	39	100.0	
Missing	System	1		
Total		40		

Table 16 above and Figure 15 below, show the majority of the surveyed populations, 79.5%, have never heard any public service announcements about NPS pollution on radio. This could mean not enough service announcements are being aired on radio.

Figure 15: Exposure of Public Service Announcements about NPS Pollution on Radio

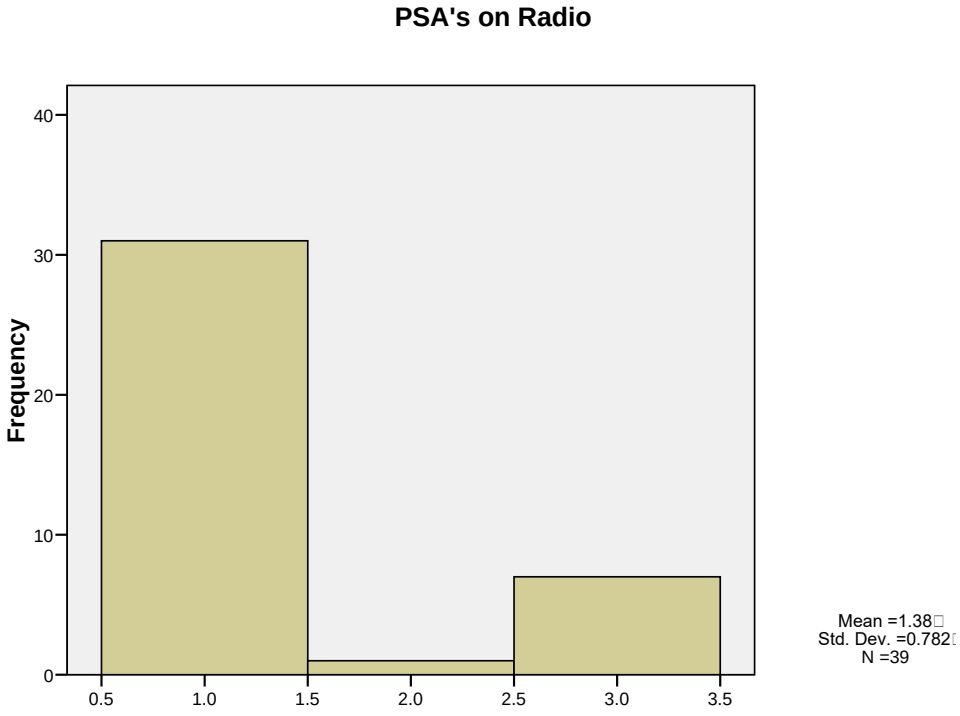


Table 17: Frequency of the Surveyed Population Who Visit KEEC Website

		Frequency	Valid Percent	Cumulative Percent
Valid	Never/Don't know	38	97.4	97.4
	Sometimes	1	2.6	100.0
	Total	39	100.0	
Missing	System	1		
Total		40		

Table 17 above and Figure 16 below, shows the majority of the surveyed population in the UCRB, 97.4%, has never visited the Kentucky Environmental Education Council's website. This may indicate that the KEEC is not successfully in steering visitors from our sampling area to their website.

Figure 16: Frequency of the Surveyed Population Who Visit KEEC Website

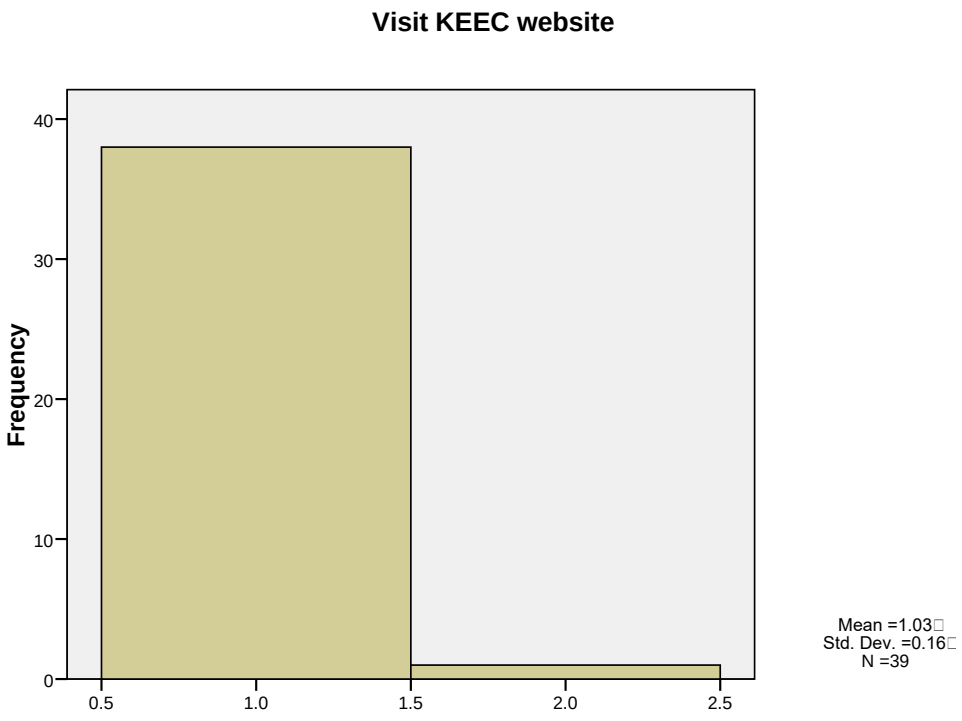


Table 18: Exposure of Community Leaders Speaking on Water Pollution

		Frequency	Valid Percent	Cumulative Percent
Valid	Never/Don't know	27	69.2	69.2
	Sometimes	10	25.6	94.9
	Frequently	2	5.1	100.0
	Total	39	100.0	
Missing	System	1		
Total		40		

Table 18 above and Figure 17 below, show the majority of the surveyed population, 69.2%, have never heard community leaders in their local areas speak about water pollution. This could indicate community leaders are not speaking in these areas.

Figure 17: Exposure of Community Leaders Speaking on Water Pollution

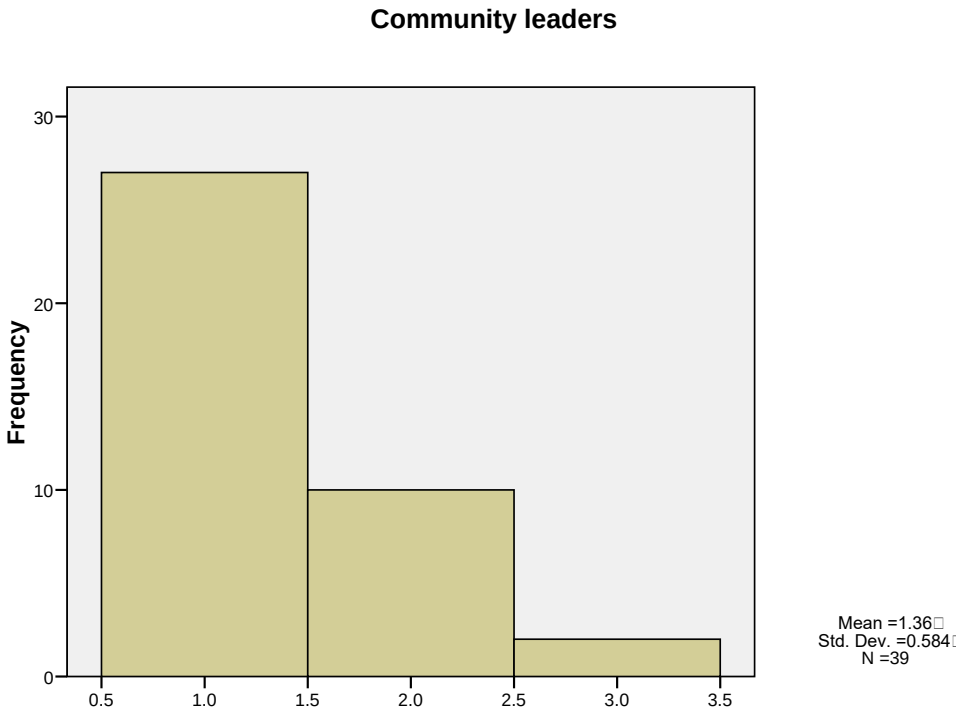


Table 19: Exposure Summary of the UCRB Posttest Questionnaire

		Frequency	Valid Percent	Cumulative Percent
Valid	5.0	24	61.5	61.5
	6.0	3	7.7	69.2
	7.0	4	10.3	79.5
	8.0	3	7.7	87.2
	10.0	2	5.1	92.3
	12.0	3	7.7	100.0
	Total	39	100.0	
Missing	System	1		
Total		40		

Table 19 above and Figure 18 below, represents the summary of all exposure questions from the posttest questionnaire. This shows the general exposure to information regarding water pollution in the surveyed population in the UCRB. Overall, 61.5% of the sampling population has low exposure to data materials about water pollution

Figure 18: Exposure Summary of the UCRB Posttest Questionnaire

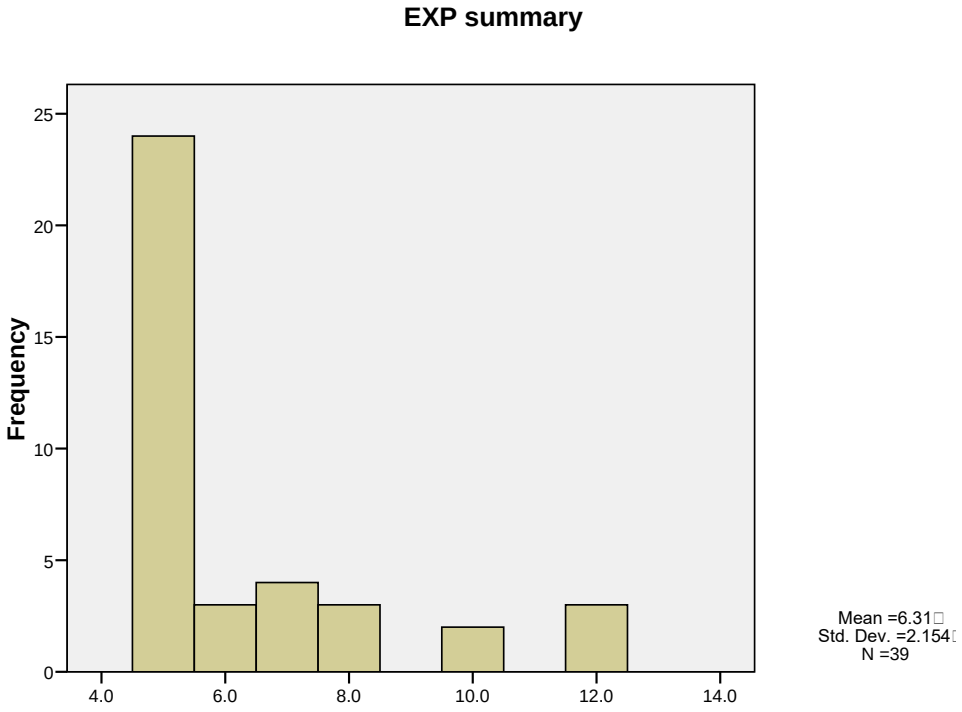


Table 20: Exposure Index of the UCRB Posttest Questionnaire

		Frequency	Valid Percent	Cumulative Percent
Valid	1.0	34	87.2	87.2
	2.0	2	5.1	92.3
	3.0	3	7.7	100.0
	Total	39	100.0	
Missing	System	1		
Total		40		

Table 20 above and Figure 19 below, represents a summarized index of all exposure questions from the posttest questionnaire. This shows the exposure to information regarding water pollution in the surveyed population in the UCRB. Overall, 87.2% of the sampling population has low exposure to data materials about water pollution.

Figure 19: Exposure Index of the UCRB Posttest Questionnaire

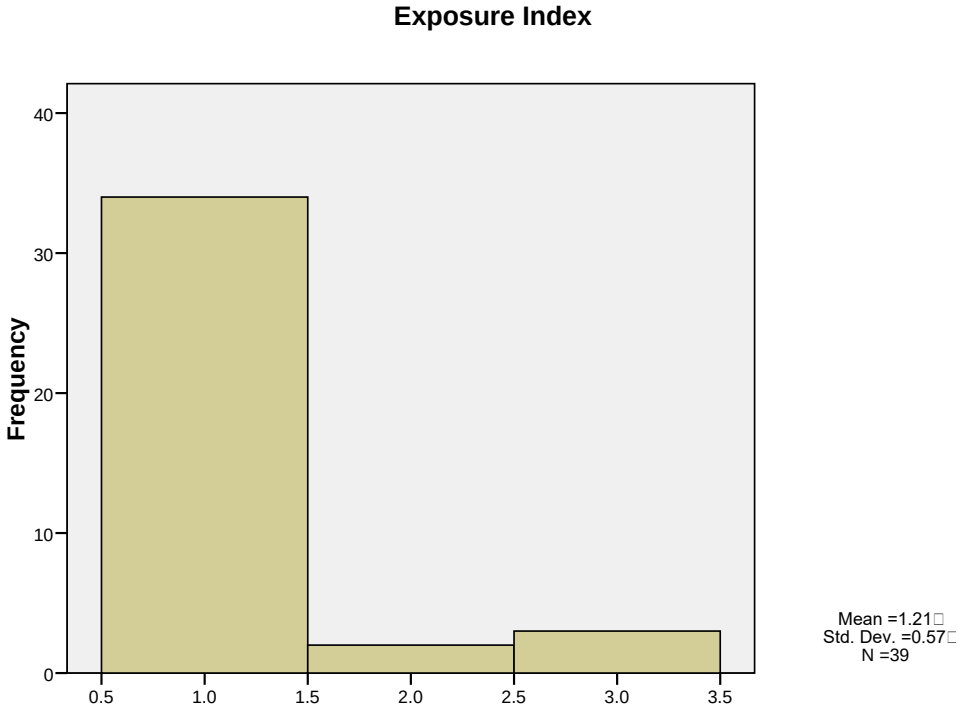


Table 21: Knowledge Summary of the UCRB Posttest Questionnaire

		Frequency	Valid Percent	Cumulative Percent
Valid	5.0	2	40.0	40.0
	7.0	1	20.0	60.0
	9.0	2	40.0	100.0
	Total	5	100.0	
Missing	System	35		
Total		40		

Table 21 above and Figure 20 below, represents a summary of all knowledge questions from the posttest questionnaire. This shows the knowledge to information regarding water pollution in the surveyed population in the UCRB. Overall, 80.0% of the sampling population has high and low knowledge to data materials about water pollution leaving 20% of the sampling population having a middle knowledge to data materials about water pollution.

Figure 20: Knowledge Summary of the UCRB Posttest Questionnaire

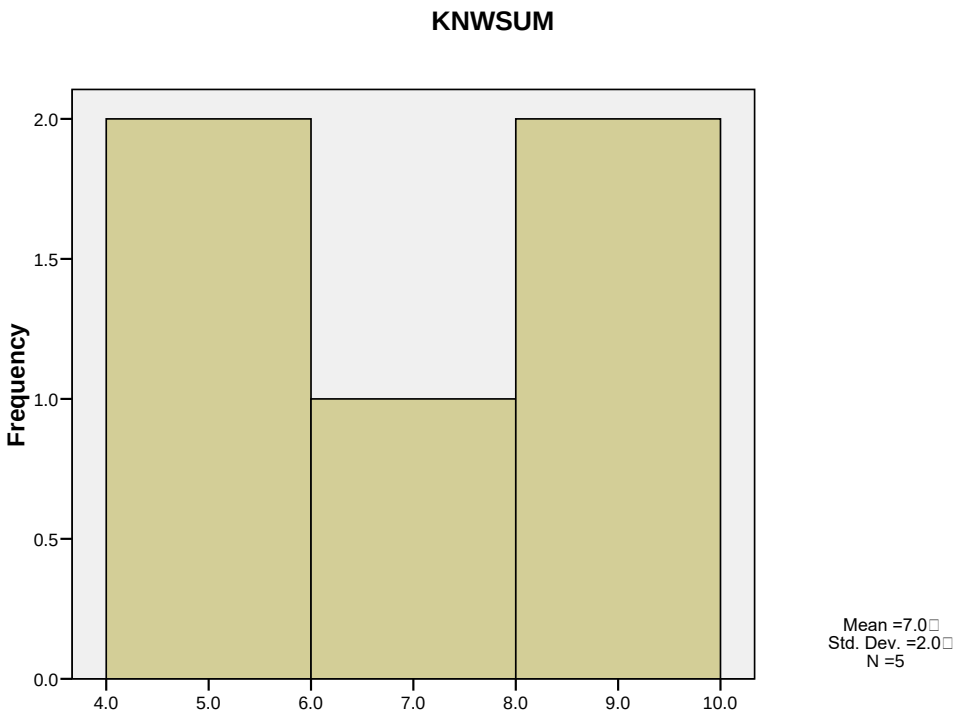
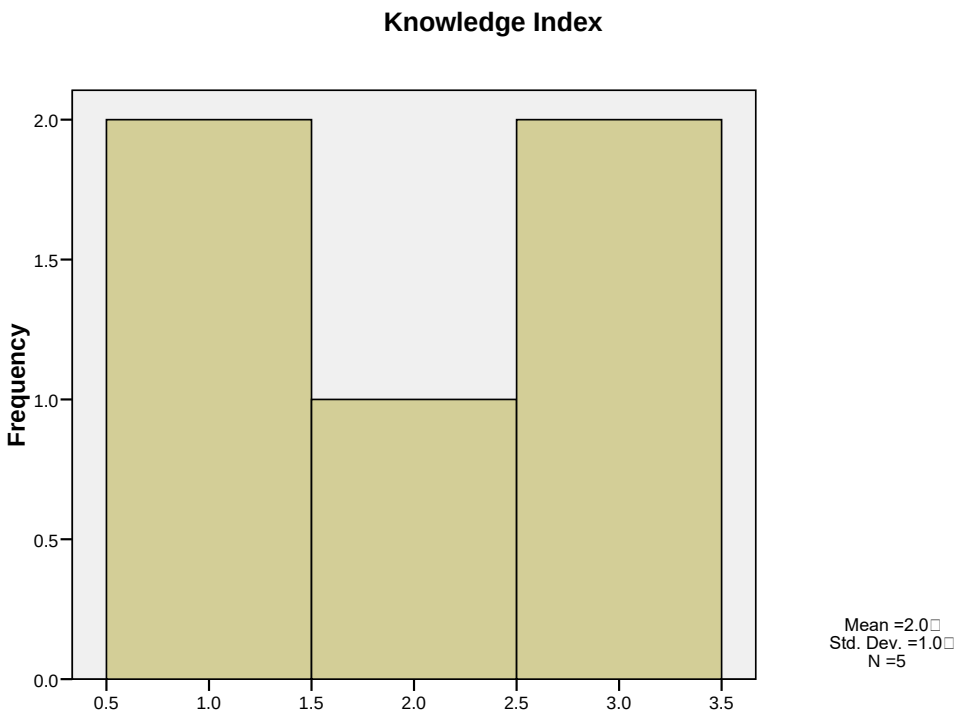


Table 22: Knowledge Index of the UCRB Posttest Questionnaire

		Frequency	Valid Percent	Cumulative Percent
Valid	1.0	2	40.0	40.0
	2.0	1	20.0	60.0
	3.0	2	40.0	100.0
	Total	5	100.0	
Missing	System	35		
Total		40		

Table 22 above and Figure 21 below, represents a summarized index of all knowledge questions from the posttest questionnaire. This shows the knowledge to information regarding water pollution in the surveyed population in the UCRB. Overall, 80.0% of the sampling population has high and low knowledge to data materials about water pollution leaving 20% of the sampling population having a middle knowledge to data materials about water pollution.

Figure 21: Knowledge Index of the UCRB Posttest Questionnaire



V. Conclusions

Based on the data collected in both the pre- and post-tests, the campaign achieved no significant gain in awareness regarding NPS pollution in the UCRB. Post test results indicated key reasons why this may have been the case.

Post-test results indicate that more people trust newspapers to gather their information than was originally anticipated. Due to lack of time before ad placement had to begin, the vast majority of public service announcements placed were aired on television. If more emphasis had been placed on newspapers, exposure to, and awareness of NPS pollution may have increased.

Based on this information, key recommendations can be made:

1) A project of this nature would be more effective and successful if more time were allotted to run public service announcements, conduct personal visits, and let published materials circulate. Changes in general attitudes of a group of people are difficult to expect or even measure in a short ten week period.

2) The campaign would have been more successful if there had been ample time to study the target audience. Because such a short agreement term was in place, there was no time to wait to place public service announcements. PSA's had to be purchased immediately without regard to where the target audience gets most of their information. While it is true that the *majority* of people in the UCRB trust television to gain information, the weight that newspapers carry was overlooked.

That being said, an important lesson emerges. You MUST know your audience well before implementing any type of strategic communication. Failure to do so may result in less success. Target audience research is a very key factor in any social campaign.

While the research data showed little progress, the feedback from trips into the UCRB indicated that our tactics had a firm foundation. Numerous compliments were received regarding the materials used and the message that was put forth and several people indicated that they had seen a few public service announcements on television. The clubs and organizations visited seemed willing to spread the message in their communities. Social change simply takes time.

Eastern Kentucky University plans to continue evaluating the effects of this social marketing campaign on behaviors at its own expense. Their continued efforts will help better determine the long term effects of this social marketing campaign.

Although no visible changes in levels of awareness were present in the post-test findings, the foundation has been established for a slow but noticeable change in the awareness and attitudes regarding NPS pollution in the UCRB.