UNLV
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Clark County Regional Flood Control District

2006 Flood Awareness Survey

Summary of Results

December 2006

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RESEARCH METHODOLOGY

The Clark County Regional Flood Control District (CCRFCD) contracted with the UNLV Cannon Survey Center (CSC) to conduct a flood awareness survey with residents of Clark County. Computer Assisted Telephone Interviewing (CATI) methodology was used for this survey. After a pilot testing session during the last week in September, 2006, the telephone survey was conducted during the period between September 28 and October 20, 2006, the calls were made on various days of the week between the hours of 9:00 a.m. and 7:00 p.m. Each individual interview lasted between 5 and 7 minutes and a total of 790 interviews were completed. In an attempt to decrease the margin of error the CCRFCD contracted with CSC to complete 700 surveys. Seven-hundred and ninety surveys were completed. The additional surveys were conducted because a replicate of new numbers was introduced late in the calling period and the industry standard is to complete a replicate once it has been introduced. Using 2006 figures for Clark County obtained from the Nevada State Demographer (1,818,303) a sample size of 790 yields a margin of error of +/- 3.49% at the 95% confidence level.

In order to obtain a representative sample of the area, numbers were purchased from Survey Sampling, Inc. (SSI). SSI has been providing scientific samples for research since 1977. A list of 8,187 numbers was obtained that included both listed and unlisted working numbers in Clark County.

Random-digit-dialing techniques were used to select respondent households with information developed using the most current telephone exchange data available. (Telephone exchanges may be thought of as the three-digit "prefix" included in any telephone number.) The sampling service maintains a database of "working blocks", where a "block" is a set of 100 contiguous numbers identified by the first two digits of the last four digits of a telephone number. For example, in the telephone number 346-7300, "73" is the block. After the blocks were verified to contain residential phone numbers, phone numbers were randomly generated from each block. This procedure allowed the

inclusion of unlisted numbers and any newly listed numbers that have not been included in the most recently published telephone directories.

The interviewers made up to five attempts on each number. These attempts were made at different times of the day and different days of the week. In addition, all respondents were given the opportunity to complete the survey at another time. Research has shown that offering respondents the opportunity to schedule a pre-planned telephone interview at a later point in time can greatly increase cooperation and willingness to participate in the study.

The Cannon Survey Center has 10 interviewing stations. The interviewing staff, which is comprised of a demographically diverse group of 15 interviewers, received training in interviewing techniques and survey methodology prior to making any calls. The CSC utilizes Sawtooth Technology software for its CATI system.

Prior to the work on the survey, the Cannon staff attended a survey specific training session. Training included a refresher session that covered the following topics: a) interviewer roles and responsibilities; b) importance of maintaining strict confidentiality and general principles of survey administration; c) interviewing procedures, including how to probe survey questions and specific guidelines for probing for numbers, precoded questions and any open-ended questions; d) how to maximize respondent cooperation; e) operation of CATI software and f) general administration procedures. Survey interviewers also received detailed training regarding the specifics of this study which included a project overview, study-specific interviewing procedures, and a detailed discussion of the questionnaire contents. Professional staff members were provided with a detailed explanation of any term or questions that needed a precise definition or clarification, such as the definition of “flooded street.” These definitions were programmed into the CATI system and available to the interviewers on the pages that they need them.

In addition to either the director and/or the data collection supervisor, all interviewers were monitored by phone room supervisors. One field supervisor or senior interviewer was present at all times during the data collection period to

assure the quality and integrity of the data collection process. The phone room supervisor was able to instantaneously address any problems that might arise in the field.

At the conclusion of the interviewing phase, data were cleaned and then analyzed using SPSS 14.0 software. The software is a comprehensive statistical software system that aids the data analysis process at many levels, with procedures ranging form data listings, tabulations, and descriptive to complex statistical analyses. Graphics for screening data, understanding and interpreting analyses, and communicating results are integrated with the statistical procedures.

In addition, in order to include the responses of Non-English speaking respondents, the survey instrument was translated into Spanish. All calls that were coded as a language barrier were turned over to two experienced native speaking Spanish interviewers, who then made follow-up calls in an attempt to complete the interview. There were 185 calls initially coded as a language barrier from this sub-list of 185 Spanish speaking respondents, 89 interviews were completed. This represents 48% of the sub-set and approximately 10% of the completed interviews.

The response rate for the survey was 38%, the cooperation rate was 79%, and the refusal rate was 5%. The dispositions of all calls are listed in the table below.

Table 1: Call Dispositions

Disposition of Call	N (Count)
Complete	787
Partial	3
Eligible: Refusal, Household Level	105
Eligible: Refusal, Known Respondent	1
Eligible: Break-off	26
Eligible: Respondent Never Available	335
Eligible: Ans. Mach, Message	697
Eligible: Phys/Mentally Unable	40
Eligible: Language Unable	59
Eligible: Misc. Unable	12
Busy	135

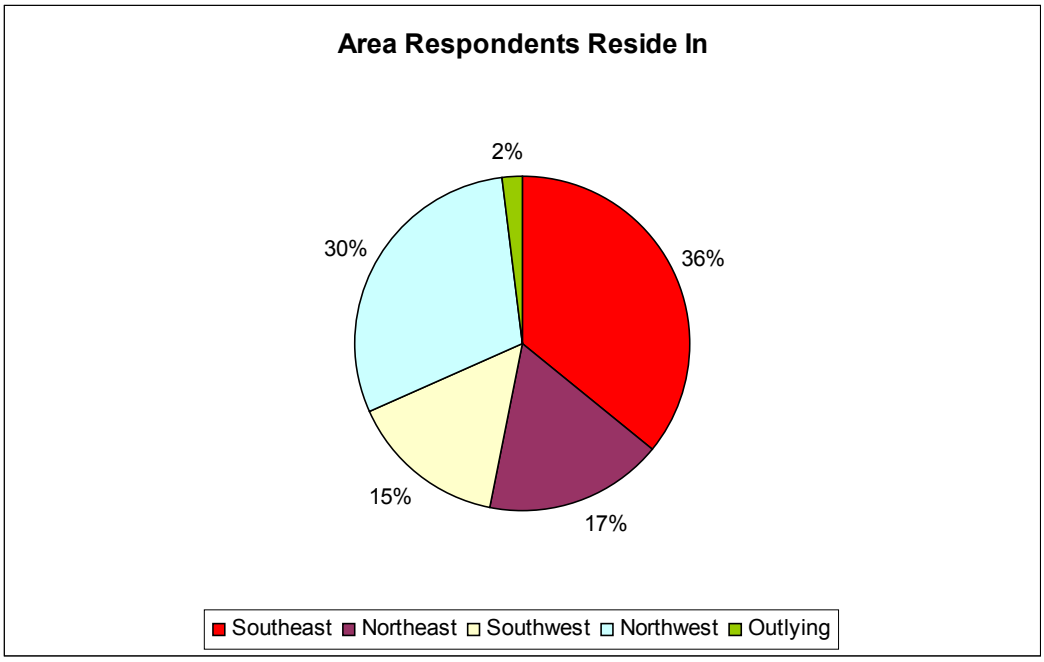
No Answer	1128
Ans. Mach (Don't Know if HU)	528
Technical Phone Problems	114
Fax/Data Line	617
Non-working Number	1112
Disconnected Number	410
Number Changed	12
Cell Phone	14
Call Forwarding	2
Business/Government/Other Org	821
Group Quarter	4
No Eligible Respondent	379
Quota Filled	132
Callback, Resp Not Selected	39
Callback, Respondent Selected	8
Spanish Speaker	96
Never Call	538
TOTAL ATTEMPTED	**8154**
Not Attempted	33
TOTAL SAMPLE	**8187**

PROJECT SUMMARY

Characteristics of the Sample:

As in previous administrations of the survey, five demographic variables were used to create the sub-sets for data analysis. They are "area of Clark County respondent resides in", "length of time in Clark County", "age", "level of education" and "gender". In addition, a sub-set of 89 respondents, (10% of the total) was created by administering the survey in Spanish to non English speaking respondents.

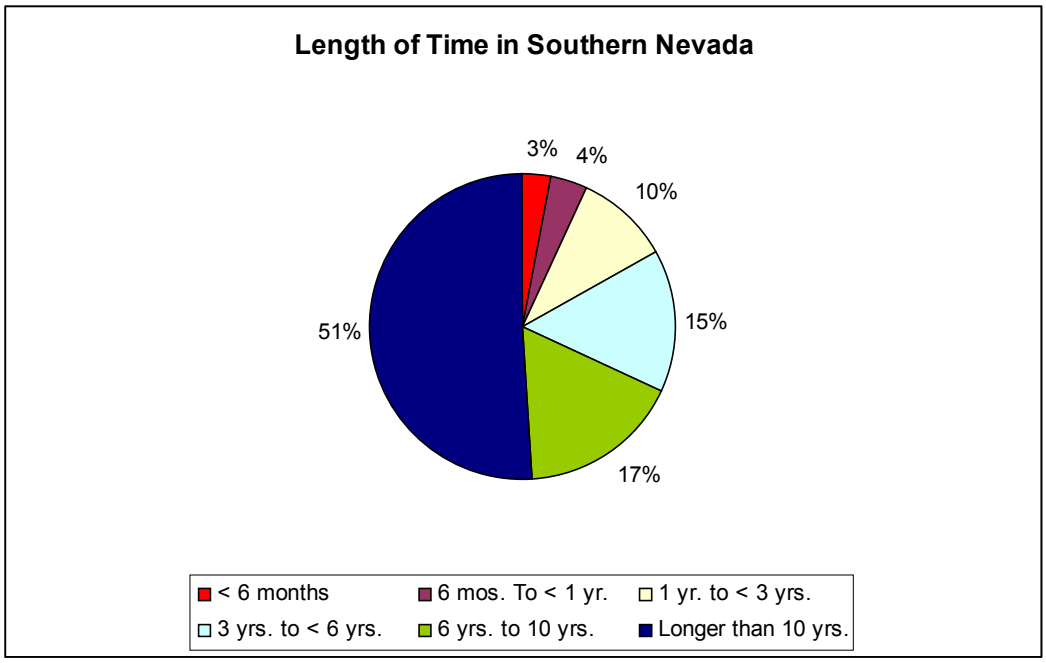
Area of Residency[1]



As can be seen from the graph above, 36% of respondents live in the Southeast section of Clark County (39%, 2005), 30% are from the Northwest (26%, 2005), 17% are from the Northeast (15%, 2005), and 15% are from the Southwest (17%, 2005) region of Clark County. Respondents residing in outlying areas such as Mesquite, Boulder City, and Logandale represent 2 % of the completed surveys (1.4 %, 2005).

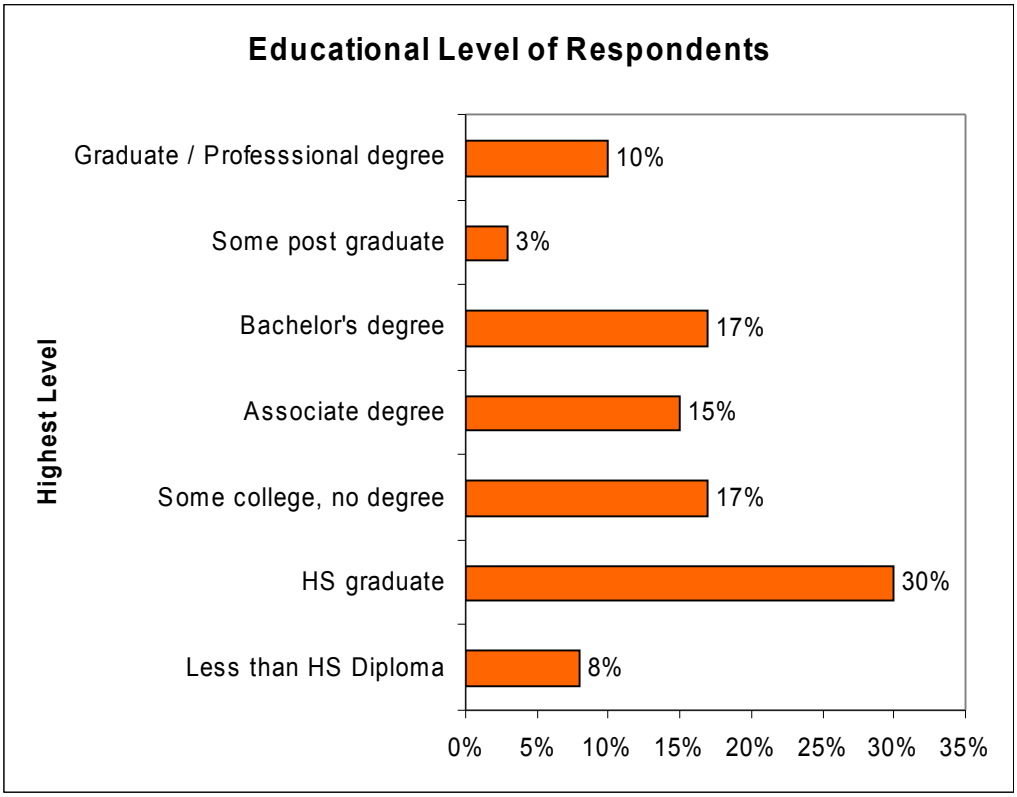
[1] Percentages do not add up to 100%, refusals (3%) are not illustrated.

Length of Time Respondent Has Lived in Southern Nevada



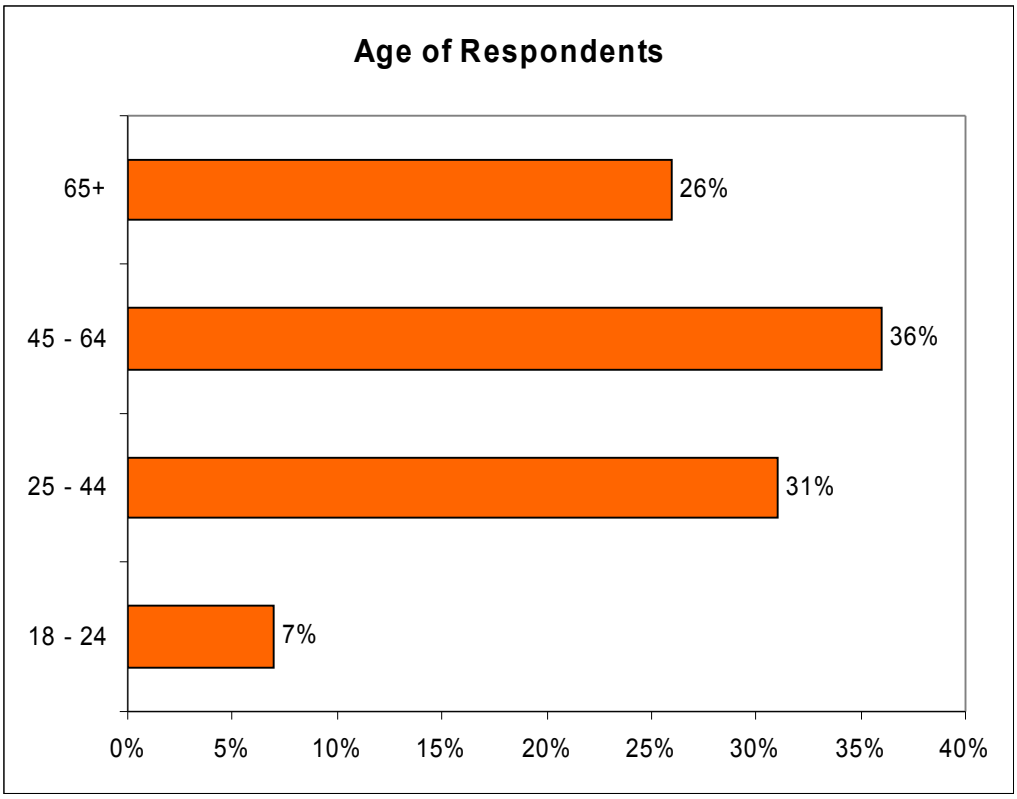
As the graph above indicates, slightly more than half of the respondents (51%) are long time residents of Southern Nevada having lived here longer than 10 years. This is followed by 17% of respondents who have lived here for between 6 and 10 years and 15% who have lived in Southern Nevada between 3 and 6 years. Ten percent have resided in Southern Nevada between 1 and 3 years, and only a very small percentage (7%) indicated that they have lived in Southern Nevada a year or less with 4% indicating that they have lived here between 6 months and a year, and 3% indicated that they have lived here 6 months or less. These percentages are similar to those obtained in last year's administration of the survey and differ by less than one percentage point across all variables.

Educational Level of Respondents



The graph above represents the educational level of the survey participants. As is indicated, the response with the highest incidence is the 30% of respondents who have graduated from high school as their highest level of education; this is followed by 17% of respondents who have attended some college but have not obtained a degree and 17% of respondents who have obtained a Bachelor's degree. The number of respondents with less than a high school diploma (8%) mirrors last year's data (8%, 2005), however, the number of respondents who have obtained a post graduate degree has increased this year by 4 percentage points (10% 2006, 6%, 2005). The other levels of education remain fairly constant to data obtained in past administrations of this survey, with 3% who indicated that they have completed some post graduate work and 15% have obtained an Associate degree.

Age and Gender



Age variables were created that match census variables should there ever be a need to make a comparison. When looking at the age of the respondents, the graph above shows that the largest number of respondents (36%) fall between the ages of 45 and 64. Twenty-six percent of respondents fell into the oldest age stratum (65+), and 31% were between the ages of 25 and 44. Only 7% of respondents were between the ages of 18 and 24. The median age was 52. This is similar to last year's median age of 53.

Gender Distribution

- 48% Male
- 52% female

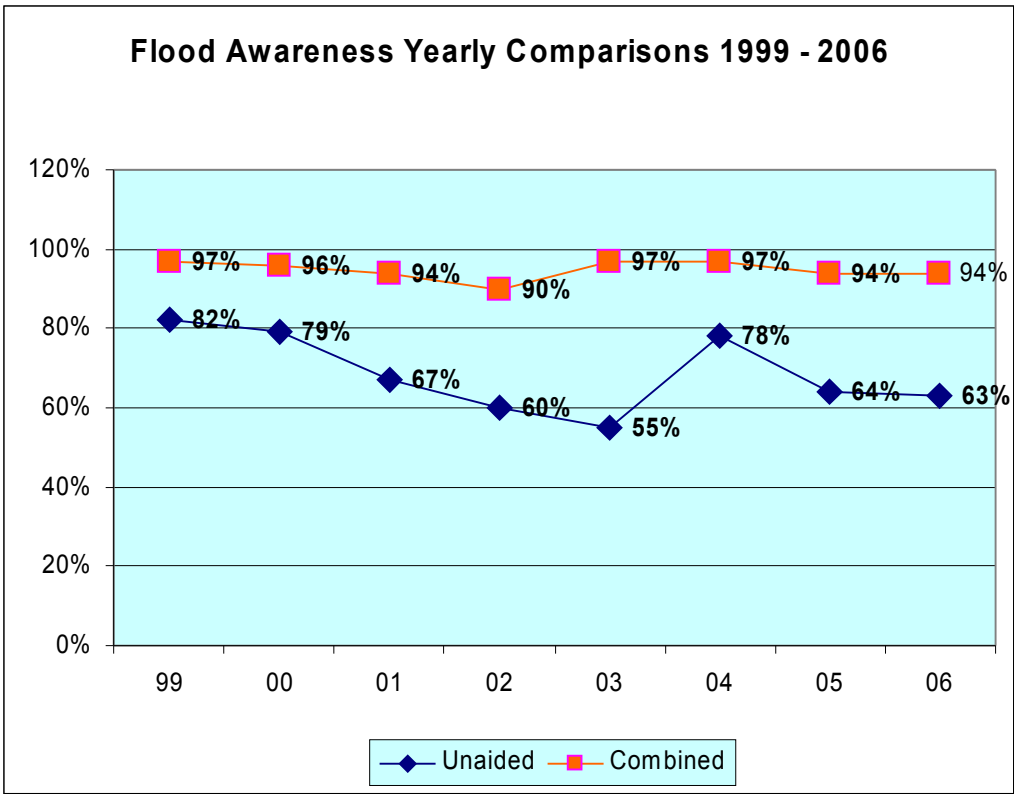
Awareness of Flooding and Weather Related Natural Disasters

Unaided Awareness: The respondents are not told which Clark County Agency that the survey is being conducted for unless they ask and then the information is provided at the conclusion of the survey. This is to intentionally keep the slate clean for the first question in the survey which is "Are you aware of any weather related dangers that can occur in the area?" Seventy-eight percent (N = 613) (77%, 2005) of respondents reported that they were aware of weather related dangers that can occur in the area. These 613 respondents formed the sub-set from which the unaided awareness of flooding was obtained. This group was asked the follow-up question "What types of weather related dangers are you aware of that can occur in the area?" From this group 501 were able to answer "flood" or "flash flood" unaided. This represents 81% of the sub-set and 63% of the entire sample who were able to mention "flood" unprompted. These percentages for unaided awareness are similar to the percentages obtained during the 2005 administration of the survey (83% of the sample and 64% of the subset).

Aided Awareness: Respondents who reported that they were not aware of any weather related natural disasters that can occur in Clark County (N = 171) and respondents who did not mention "floods" of "flash floods" in the unprompted question (N = 112) were asked directly "Are you aware that flash flooding occurs in the area?" Eighty-six percent (N =246) of respondents from this sub-set were aware that flash flooding can occur. This represents an increase of 4 percentage points from the 2005 percentage of aided awareness (82%).

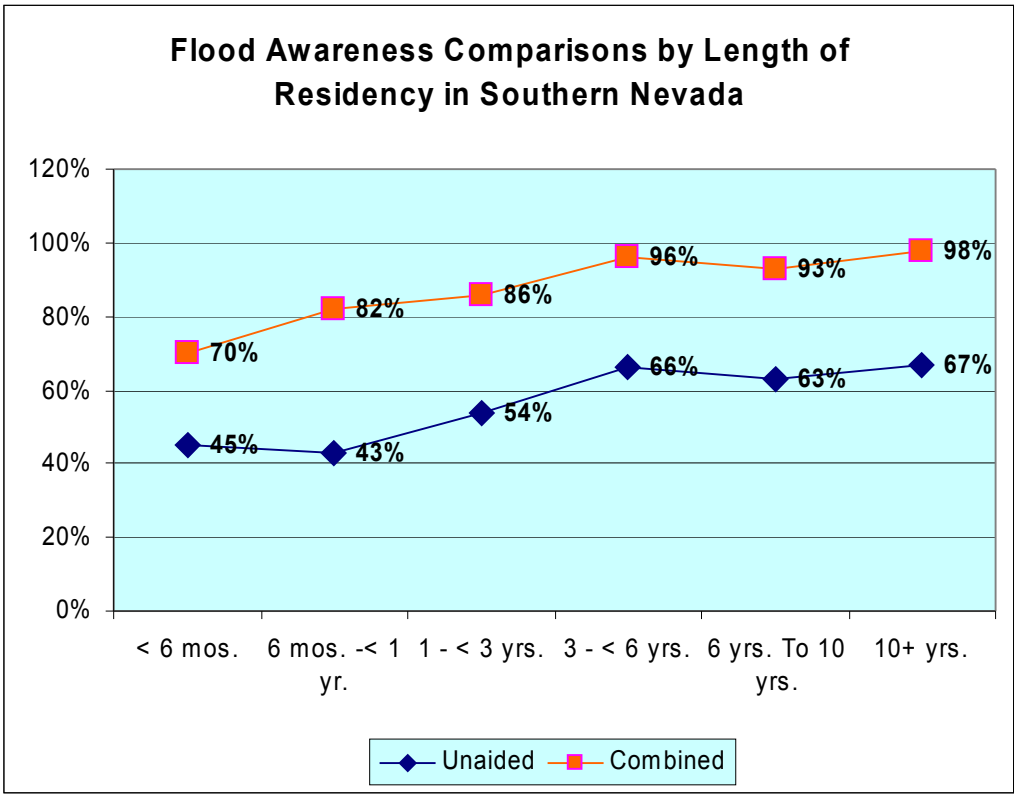
Combined/Total Awareness: When looking at the total number of respondents in both the prompted (N = 242) and unprompted questions (N = 501), 94 percent of respondents were aware that flooding can occur in Clark County. This figure mirrors last years' data (94%).

Awareness of Flooding Comparisons 1999 – 2005



As is indicated by the graph above, the combined awareness (total of prompted and unprompted responses), continues to remain very high and mirrors the data that was collected last year. In the past two administrations of the survey 94% of respondents were able to mention “flood” or “flash flooding” either aided or unaided. Similarly, 63% of the respondents were able to answer “flood” or “flash flooding” unaided during this years administration of the survey as compared to 64% that answered the same during the 2005 administration of the survey.

Awareness of Flooding Among Sub-Populations: Length of Time in Southern Nevada

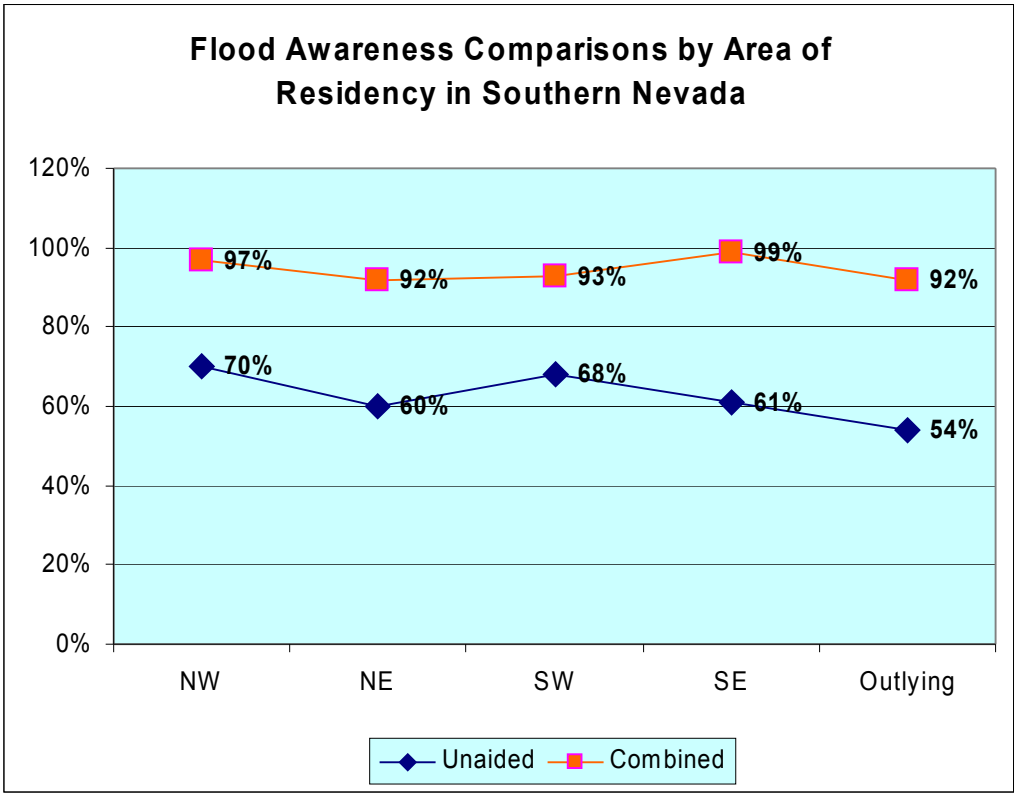


The graph above displays the differences in responses by the length of time that the respondent has lived in Southern Nevada. The graph indicates a consistently high percentage of respondents who have lived here at least three years are able to mention “floods” or “flash flooding” in an aided or unaided situation (combined). Ninety-eight percent of respondents who have lived in Southern Nevada for 10 years or more were able to mention “floods” or “flash flooding” as a weather related danger in an aided or unaided manner; respondents from this group also had the highest incidence of being able to mention “floods” or “flash flooding” unaided (67%).

There are some differences in the responses of the newest residents to Nevada between this years’ data and the 2005 data. In the unaided category 45% (< 6 mos.) and 43% (6 mos. to < 1 yr.) were able to mention “floods” or “flash flooding” compared to the results of 2005 where 63% (< 6 mos.) and 53%

(6 mos. to < 1 yr.) were able to mention the same. Last year's hurricane season (Katrina & Rita) was being heavily reported around the time that the 2005 survey was administered. This may account for why more of Southern Nevada's newer residents were able to mention "floods" or "flash flooding" unaided last year than this year.

Awareness of Flooding Among Sub-Populations: Area of Southern Nevada



When looking at the data by the area of residency, the combined awareness is fairly consistent and the percentages remain high. Nearly all (99%) respondents from the Southeast area were able to mention "flood" or "flash flooding" either prompted or unprompted. This is up 2 percentage points from last year's survey. The Northeast area showed a gain of 4 percentage points from last years data (89%, 2005, 92%, 2006) in combined awareness.

Unaided awareness of flooding is up by several percentage points in two of the areas, down in one area (Southeast) and remained constant in the fourth, (Northwest, 70% 2006, 71%, 2005). The Northwest continued to have the highest percentage of respondents who were able to mention “floods” or “flash flooding” unaided. The biggest increase in unaided flood awareness occurred in the Southwest area. There was an increase in unaided awareness by 13 percentage points (55% 2005, 68% 2006). In the Northeast, unaided awareness increased by 7 percentage points from 53% in 2005 to 60% in 2006. In the Southeast area, 61% of respondents were able to mention “flood” or “flash flooding” unaided as compared to 68% who were able to do the same last year.

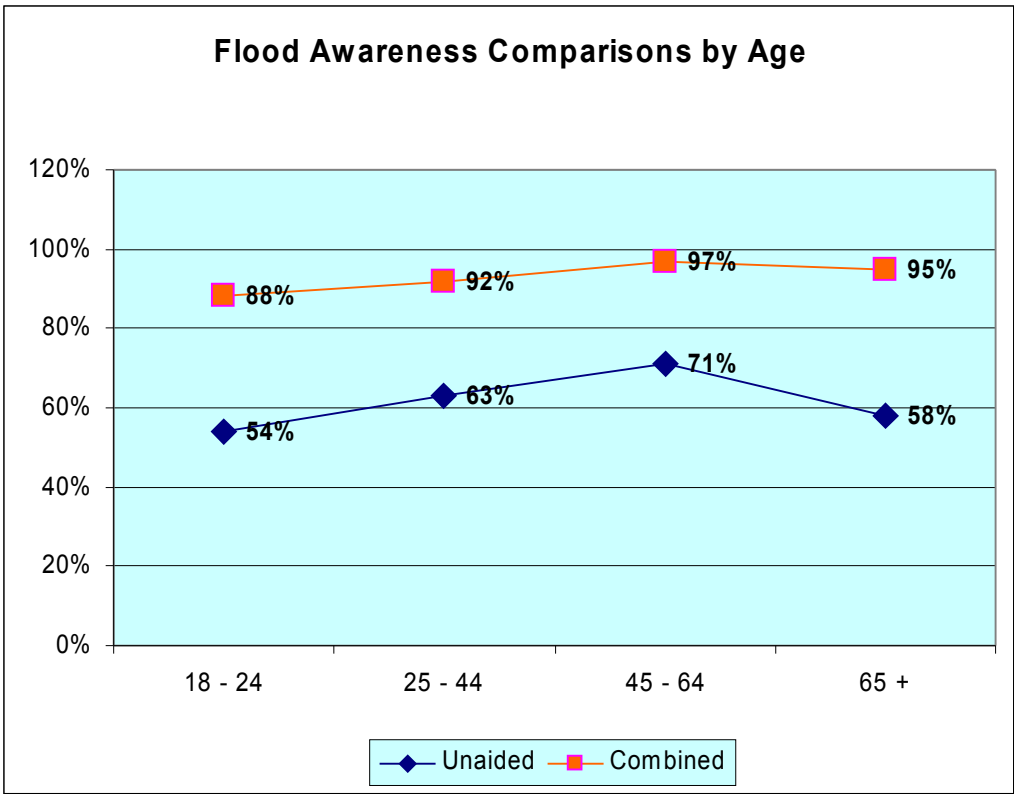
When looking at the outlying areas 54% of respondents were able to mention “floods” or “Flash flooding” unaided, this was the lowest percentage from any of the area subsets. It was also the smallest subset with only 13 respondents.

To identify the area boundaries used to create the area subset for this study, a zip-code map and accompanying table are located at the back of the report. [2]

[2] Please pages 63 (Table 11) and 65

, Zip map.

Awareness of Flooding Among Sub-Populations: Age



As in past administrations of this survey, the youngest members of the sample were the least likely to mention "flood" or "flash flood" either aided or unaided. Fifty-four percent of 18 to 24 year olds were able to mention "floods" unaided, this is up 8 percentage points from the percent who were able to do the same last year (47%, 2005); 88 percent were able to do so in the combined situation, this is similar to last year's combined awareness. The highest incident was among 45 to 64 year old respondents. Seventy-one percent of this subset were able to mention "flood" unaided, and 97 percent were able to do so in the combined situation. These percentages mirror last years figures. In the 65+ group combined awareness is up from 92% in 2005 to 95% in 2006, unaided awareness was similar to last year's data (59%, 2005). Awareness was down among the 25 – 44 year olds. Although combined awareness is still very high (92%), it is down from last years administration (95%), as is unaided awareness (66% 2005, 63% 2006).

Awareness of Flooding Among Sub-Populations: Gender

There is not much difference in flood awareness based on respondent gender. Sixty-five percent of males and 62% of females could mention "floods" or "flash flooding" unaided. In the combined situation 95% of males and 93% of females could mention "floods" or "flash flooding"

Other Weather Related Natural Disasters Mentioned

Respondents who answered that they were aware of weather related natural disasters that can occur in Southern Nevada (N = 613) were asked unprompted to name the types of weather related disasters that they were aware of. Respondents could name more than one weather related natural disaster. The following table shows the responses that were mentioned other than "flood" or "flash flood".

Table 2: Other Types of Disasters Mentioned

Type or Disaster	Percent[3]
Dust / Sand Storms / High Winds	18%
Heavy Rains / Thunder Storms	16%
Heat	14%
Fire / Lightning	9%
Earthquakes	7%
Unable to Specify	.5%

The table above indicates that only a handful of other weather related natural disasters were mentioned. The list of responses generated this year does not differ from the list generated in the previous year's administrations of the survey; however the percentage of respondents that named each has increased for each.

[3] All percents are valid percents based on the subset that responded yes to knowing that weather related natural disasters can occur in the area.

Flood Related Issues

All respondents were asked a series of questions to assess general knowledge of flood related issues. The table below shows the overall frequency results. Respondents were asked to "agree", "somewhat agree" somewhat disagree", or "disagree" with each of the statements. The "agree" and "somewhat agree" responses were combined for the "% agree" score that is reported in the table below.

Table 3: Flood Related Issues

Flood Related Issue	% Agree 2006	% Agree 2005
I know about the dangers of flash flooding	95%	95%
I know about the time of year flash flooding is most likely to occur in the area	81%	81%
I know about safety precautions relating to flash flooding	87%	83%
I know about the resources available to learn more about flash flooding	56%	56%
I know ways in which flooding is being controlled in the area	73%	69%
I know about the availability of flood insurance	74%	75%

The responses again were very similar to last year's responses; however awareness of flood related issues increased by four percentage points for two of the items. This year 87% of respondents indicated that they knew about safety precautions relating to flash flooding, this compared to 83% that knew the same in 2005. Likewise, 73% of respondents knew the ways in which flooding is being controlled in the area compared to 69% that knew the same last year. The other items mirror last year's data.

I Know About the Dangers of Flash Flooding

Ninety-five percent of all respondents indicated that they know about the dangers of flash flooding. When looking at this data among the sub-populations there is some variation and some of it is significant. When looking at the data by the area of Southern Nevada that the respondent resides in, there is not much variation in the data and all areas had in excess of 90% of respondents agreeing with the statement. In two of the areas (Northwest and Southeast) the data does not differ from 2005. In the Southwest, where last year 99% of respondents indicated that they knew about the dangers of flash flooding, this year 94% (- 5 percentage points) knew the same. In the Northeast and the outlying areas the percentage of respondents that agreed with the statement increased at least 5 percentage points (Northeast 89%, 2005, 94% 2006, outlying areas, 86% 2005, 92% 2006).

This year, the data indicates a significant relationship[4] between length of time that the respondent has resided in Southern Nevada and knowledge of the dangers of flash flooding. Whereas last year in all of the area strata between 90% and 96% of respondents indicated that they knew about the dangers of flash flooding, this year the newer residents scored several percentage points lower than respondents who have lived here for longer periods of time. The data shows that knowledge of flash flooding increases with length of time the respondent resides in the area. The percentages are as follows:

- Less than 6 months – 70%
- 6 months to less than a year 82%
- 1 year to less than 3 years – 90%
- 3 years to less than 6 years – 94%
- 6 to 10 years – 94%
- More than 10 years – 99%

[4] Pearson Chi-Square .000.

Also the older the respondent the more likely he/she was to agree with the statement. While 88 percent of the youngest participants (18-24) agreed with the statement 97% of respondents aged 65 or older agreed with the statement. The highest incidence was the 100% of respondents between the ages of 45 and 64 that agreed with the statement. Again the data showed a significant relationship between respondent age and knowledge about the dangers of flash flooding.[5]

There was not much difference based on gender. Ninety-five percent of males agreed with the statement as compared to 94 percent of females.

I Know About the Time of Year Flash Flooding Is Most Likely To Occur In Southern Nevada

Eighty-one percent of all respondents reported that they know about the time that flash flooding is most likely to occur. There is some variation in the sub-populations, when looking at the data by the length of time the respondent has resided in the area and the variation is significant[6]. Only 50 percent of respondents (53%, 2005) who have lived here less than 6 months agreed with the statement. For the most part the percentage increases with the length of time the respondent has lived in the area with the exception of a drop in responses in the 1 year to less than 3 year group (62%); 64 percent of those living here between 6 months and a year also agreed with this statement. Otherwise the agreement in the other sub-groups in this set was between 73 and 89 percent with those living here more than 10 years having the highest percentage of agreement (89%)

When looking at the data by the area that the respondent resides in, the percentage of agreement was between 77 and 89 percent with the lowest incidence in the Northeast portion of the area (as was the case in 2005) and the highest incidence in the Northwest area. In the other areas, 81% or respondents

[5] Pearson Chi-Square .000.
[6] Pearson Chi-Square .000.

in the Southeast and 78% of respondents in the Northwest indicated that they knew the time of year that flash flooding was most likely to occur.

The youngest respondents were less likely to agree with this statement than older respondents. Sixty-three percent of 18 to 24 year old respondents agreed with this statement (this is up 10 percentage points from last year, 53%, 2005) while in the other age groups between 73 and 87 percent of respondents agreed with the statement.

Eighty-one percent of males agreed with the statement and 80 percent of females agreed with the statement. These figures are consistent with last years figures.

I Know About Safety Precautions Relating to Flash Flooding

Eighty-seven percent of all respondents knew about safety precautions relating to flash flooding. This is up slightly from last year (83%, 2005). Respondents that live in the Southeast (93%) were the most likely of any of the subsets to know about safety precautions relating to flash flooding while respondents living in the Northeast (77%) were the least likely. Even though respondents in the Northeast were the least likely to know about the safety precautions relating to flash flooding, there was an increase of 4 percentage points between 2005 (73%) and 2006 (77%). In the Southwest and Northwest 90% of respondents agreed with the statement.

As with some of the other items in this series, there is a significant relationship between the length of time a respondent has lived in the area and knowledge of flood related issues. The same was true for this question.[7] The survey data shows that the longer the respondent has lived in Southern Nevada, the more likely he/she is to know about safety precautions relating to flash flooding. Among those who have lived here less than 6 months only 65 percent agreed with the statement. Conversely, 94 percent of those that have lived here longer than 10 years indicated that they know about safety precautions relating to

[7] Pearson Chi-Square .000.

flash flooding, this figure represents an increase in 6 percentage points over last year (88%, 2005).

When looking at the data by age, 82% of respondents in the 18 – 24 age group indicated that they know about safety precautions relating to flash flooding; 77% of those in the 24 – 44 age stratum indicated the same. This was the lowest occurrence by age. The highest occurrences were in the 45 -64 age group (95%) and in the 65+ age group (91%).

Ninety-one percent of males (up 9 percentage points from 2005) knew about the safety precautions relating to flash flooding while 84 percent of females knew the same.

I Know About Resources Available to Learn More about Flash Flooding

Fifty-six percent of all respondents knew about the resources available to learn more about flash flooding. This is the item in the series with the lowest overall agreement. Respondents who live in the Northwest were the most likely to know (63%) about the resources available to learn more about flash flooding. In the other areas between 51 and 55 percent of respondents were aware of the same.

Only 20% of those who have lived in the area less than 6 months knew about the resources available to learn more about flash flooding, this was the lowest incidence based on length of time in the area. In addition this is down from 36% that knew the same last year. Respondents that have lived in the area the longest (10+ years) were the most likely (64%) to know about the resources available to learn more about flash flooding. The responses from the groups in this subset are as follows:

- Less than 6 months – 20%
- 6 months to less than a year - 36%
- 1 year to less than 3 years – 42% (highest incidence in 2006, 62%)
- 3 years to less than 6 years – 55%
- 6 years to 10 years – 41%

- More than 10 years – 60%

Again there was a statistically significant relationship between the length of time that the respondent has lived in Southern Nevada and knowledge of flood related issues.[8]

There was not much variation in responses based on age; in all of the age categories between 77 and 95 percent of respondents knew about flood related resources. However this range of responses is considerably and significantly higher than the responses from the 2005 survey (53% - 59%)

Fifty-nine percent of males know about the resources available to learn more about flash flooding, while 53% of females know the same.

I Know About Ways Flash Flooding Is Being Controlled In Southern Nevada

Seventy-three percent of all respondents (69%, 2005) knew about ways in which flooding is being controlled in Southern Nevada. There were some differences among the sub-groups. There is a statistically significant relationship between the length of time that a resident has lived in Clark County and their knowledge of the ways that floods are controlled.[9] The longer that the respondent has lived in Southern Nevada, the more knowledgeable he/she is about flood related issues. For example, only 40 percent of residents who have lived in Southern Nevada for less than 6 months knew about the ways that floods are controlled in the area, this percentage more than doubles (83%) for residents who have lived here 10 years or longer. The responses from the other age strata are as follows:

- 6 months to less than 1 year – 47%
- 1 year to less then 3 years – 52%
- 3 years to less than 6 years – 66%
- 6 years to 10 years – 74%

[8] Pearson Chi-Square .000.
[9] Pearson Chi-Square .000.

The same is true for the age variable, the youngest respondents (18 – 24) were the least likely (50%) to be aware of the ways that flooding is controlled in the area while the respondents over 65 were the most likely to aware of the same (62%).

Respondents in the Northeast were the least likely (61%) to know about the ways that flooding is controlled in the area. Seventy-nine percent of respondents from both the Southeast and the Northwest agreed with the statement, while 73% of respondents in the Southeast agreed with the same.

Seventy-five percent of males and 71% of females know about the ways that flash flooding is controlled in the area.

I Know About the Availability of Flood Insurance

Seventy-four percent of respondents indicated that they know about the availability of flood insurance. Respondents in both the Southeast and Northwest areas were the most likely (79%) to know about the availability of flood insurance. In other areas, 72% of respondents in the Southwest, and 69% in the Northeast were aware of the same. These numbers are similar to the data collected last year.

Respondents who have lived here less than 6 months were the least likely (45%) to know about the availability of flood insurance. Conversely, respondents who have lived here the longest (10 years or longer) were the most likely to know about the availability of flood insurance (80%). In the other variables based on the length of time that the respondent has lived in Southern Nevada between 61 and 77 percent of respondents were aware of the same.

There is a statistically significant relationship between age and knowledge about the availability of flood insurance.[10] The youngest respondents (18 – 24) were the least likely to know about the availability of flood insurance (50%) (53%, 2005). Eighty percent of respondents who are between 45 and 64 and those 65 and older knew about the availability of flood insurance. This mirrors last year's

[10] Pearson Chi-Square .000.

data for these age groups. Seventy-seven percent of males and 73 percent of females knew about the availability of flood insurance. The data on gender is also similar to the data collected last year.

Sources for Information

In the next section of the survey respondents were asked to respond "yes" or "no" to a list that was read to them of possible sources where they learned about flash flooding. The following table presents the data in rank order.

Table 4: Rank order of sources for obtaining flood information

Rank	Source	% 2006	% 2005	% 2004
1	Television	87%	87%	93%
2	Newspaper	60%	58%	64%
3	Friends / Relatives	59%	48%	52%
4	Radio	56%	47%	57%
5	Billboards	46%	39%	53%
6	Brochure	24%	26%	26%
7	CCRFCD Website	19%	5%	13%
8	Welcome Home Magazine	8%	5%	5%

As in past years, television (87%) is the main source where respondents learn about flash flooding. Newspapers (60%) also continues to be in the top three ways that respondents are getting flood related information. There was an increase of 11 percentage points in the number or respondents that indicated that their friends and relatives were a source of information about flooding (48%, 2005, 59% 2006). Radio (+9) and billboards (+6) as a source for flood information also showed an increase by several percentage points, and the percentage of those that indicated that *Welcome Home Magazine* was a source for flood information rose from 5% to 8%. The biggest increase was the 14 percentage points in those that indicated that they had learned about flash

flooding from the CCRFCD website (5% 2005, 19%, 2006). Brochures as a source for flood information were down, but only by 2 percentage points (26%, 2005, 24% 2006).

When running crosstabulations on the above list of sources to learn about any differences between where respondents learn about flash flooding based on sub-groups (age, length of time in the valley, area of residence and gender) several statistically significant relationships were found. A statistically significant relationship exists between the age variable and the billboard source and newspaper source variables. In addition, there is a statistically significant relationship between the length of time the resident has lived in the Southern Nevada and the brochure, billboard newspaper, television, and radio as source variables, and the area where the respondent resides and the brochure and newspaper variables.

When looking at each of the information sources the following can be said about the demographic profile of the respondents most likely to obtain information from that source.[11]

a. Brochure: female (26%), aged 65 or older (29%) who has lived Southern Nevada at least 3 years (26%) and currently resides in the Southeast or Northeast (26%) area

b. Billboard: male (48%) between the ages of 24 and 44 (53%) who has lived in Southern Nevada at least 6 years (53%) and currently resides in the Northwest (51%) area

c. Television: female (89%) between the ages of 45 and 64 (91%) who has lived in Southern Nevada at least 6 years (90%) and currently resides in the Northwest (90%) area

[11] Due to the small number of responses in outlying areas, they were omitted from the profile. The percentage reported is the highest within each subset not the entire sample.

d. Radio: male (58%) between the ages of 45 and 64 (61%) who has lived in Southern Nevada 10 years or longer (59%) and currently resides in the Southwest or Northwest (57%) area

e. Newspaper: male or female (60%) aged 65 or older (74%) who has lived in Southern Nevada 10 years or longer (67%) and currently resides in the Southeast (64%) area

f. Welcome Home Magazine: female (10%) between the ages of 18 and 24 (10%) who has lived in Southern Nevada between 1 and 3 years (13%) and currently resides in the Southeast or Northeast (10%) area

g. CCRFCD Website: male (22%) between the ages of 18 and 24 and 65 and older (20%) who has lived in Southern Nevada between 3 and 6 years (20%) and currently resides in the Southeast (23%) area

h. Friends and/or relatives: female (62%) between the ages of 18 and 24 (74%) who has lived in Southern Nevada 1 year to less than 3 years (60%) and currently resides in the Northeast (63%) area.

The highest percentage (69%) of the newest residents indicated that they got information about floods from television, this was followed by 54% who learned about floods from friends and relatives and 40% from the radio. In the youngest age stratum (18 – 24) 84% indicated that they obtained information about floods from television. In addition 74% learned about floods from friends and relatives, and 54% from the radio.

School Age Children

In order to assess the effectives of flood awareness information aimed at school aged children, additional questions were asked of respondents who indicated that they had a child(ren) in elementary school. Sixteen percent of the respondents indicated that they had a child(ren) in elementary school (N = 128). This sample is large enough to be statistically relevant. These respondents were asked two follow-up questions: *did your children bring information about flood awareness home from school in the past year*, and *have your children talked to you about flood safety that he/she learned at school.* Eighteen percent of those with elementary-aged child(ren) indicated that their children did bring materials about flood awareness home in the past year. A higher percentage (21%) indicated that their child(ren) talked about flood safety that was learned at school. In 2005, the number of respondents in this sub group (N = 44) was to small to make a comparison to this year's responses.

Cable Television / Flood Channel

Respondents were asked if they have cable television. Those respondents who answered yes (74%) were then asked if they had ever watched the Flood Channel on cable channels 2 or 4. Forty-three percent of those respondents that have cable television reported that they have watched the Flood Channel. This is similar to the 42% of respondents in 2005 that indicated that they have watched the Flood Channel. Those respondents who had watched the Flood Channel were asked (unprompted) what they remember most from watching it. The following table provides the rank order of responses.

Table 5: Rank order – remembered most from watching Flood Channel

Rank	Item	% 2006	% 2005	% 2004
1	Dangers of flash flooding	40%	42%	26%
2	Safety precautions	29%	19%	25%
2	Unable to specify	29%	19%	20%
4	Ways floods are controlled	14%	9%	4%
5	Other	9%	7%	22%
6	Where to learn more about flooding	4%	6%	2%
7	Time of year flooding occurs	3%	N/A	N/A
8	Availability of flood insurance	2%	N/A	N/A

Other: includes such responses as "cars floating", "rescues" and "devastation"

As can be seen from the table above, what respondents remembered the most from watching the Flood Channel is the dangers of flash flooding. While the ranking of items is consistent with the ranking of items in previous administrations of the survey, there has been an increase of 10 percentage points in the number of respondents who indicated that they remembered learning about safety precautions (19%, 2005, 29%, 2006). More respondents also remembered the ways that flooding is controlled (9%, 2005, 14%, 2006).

Demographic Profile of Flood Channel Viewers:

Those who have lived in the area the longest were the most likely to have watched The Flood Channel. Fifty-eight percent of respondents who have lived here longer than 10 years have watched The Flood Channel. For respondents who have lived here 6 to 10 years the percentage drops to 17% and continues dropping down all the way to less than 1% for those respondents who have lived in Southern Nevada less than 6 months. This pattern mirrors the results that were obtained in 2005. Residents in the Southeast (34%) and the Northwest (32%) are the most likely to have watched the Flood Channel. In the Southwest 19% of respondents indicated that they have watched the Flood Channel, and 13% of those in the Northeast indicated the same.

When looking at other demographic variables, those that have watched the Flood Channel are most likely to have a high school education (32%). They are between the ages of 45 and 64 (42%). There were an equal number of males (50%) and females (50%) that indicated that they have watched the Flood Channel.

Experience with Flooded Roads

For the next part of the survey, respondents were read a definition of a flooded street *(a street or road where water covers the street from curb to curb, and you can't see the pavement)* and then asked if either as a driver or as a passenger of a vehicle they had ever encounter a flooded street while on a road. Seventy-three percent (N = 578) of respondents reported that they had encountered a flooded street. This percentage is up from the 68 percent who reported the same in 2005. Respondents who had encountered a flooded street were read four statements and asked which one best described their response to encountering a flooded street.

(1) Turned back and took an alternate route
(2) Waited for the water to go down and then drove through it
(3) Drove through it and made it
(4) Drove through it and got stuck

Statements 1 and 2 are considered good or appropriate choices, while Statements 3 and 4 are considered poor or inappropriate choices.

Respondents who answered that they drove through it and made it or drove through it and got stuck were asked to define why they made that choice.

Good or Appropriate Choices

Sixty-eight percent of respondents made a good or appropriate choice when encountering a flooded road in Clark County. This is similar to the 67% that did the same in 2005 and the 63 percent who did so in 2004. By far the largest percentage of respondents who made a good or appropriate choice (61%) "turned back and took an alternate route". Seven percent "waited for the

water to go down then drove through it". These figures mirror the responses that were obtained in the 2005 administration of the survey.

Those who have lived here the longest (10 years or longer) were the most likely to turn around and take an alternate route (60%). Only 2 percent of those who have lived here under a year and 6 percent of those who have lived here between 1 and 3 years did the same. Those who turned around and took an alternate route are more likely to live in the Southeast (36%) than in any other part of the Valley (Northwest 32%, Southwest 14%, Northeast 16%, 2% outlying areas). When looking at the responses by age in the 18 – 24 age group only 48% turned around and took an alternate route, this compared to 66% in the 24 – 44 age group, 70% in the 45 – 64 age group and 73% in the 65+ age group. The responses of males (51%) and females (49%) were fairly consistent regarding turning around and finding an alternative route, however 60% of females decided to wait for the water to go down before driving through it, while 40% of males did the same.

Poor or Inappropriate Choices

Twenty-nine percent (23% 2005) of respondents made a poor or inappropriate choice when encountering a flooded street or road in Clark County.[12] From this group 28% drove through it and made it (22%, 2005) while 1 percent (N = 7) drove through it and got stuck. Those that drove through it and got stuck were female (86%), between the ages of 24 and 44 (43%), and live in the Northeast (72%).

The most often cited reason why a poor choice was made was "didn't think it was unsafe to do so" (58%). This is down 3 percentage points from those that didn't think it was unsafe to do so in 2005 (61%). Eleven percent were "in a hurry" (13%, 2005), 7% "didn't know any better" (5%, 2005), and 3% thought "it would be fun" (3% 2005). There was considerable progress made in 18 – 24

[12] Two percent of respondents reported that they did not remember what they did when encountering a flooded road or street.

year old age group in 2005 86% of this sub set indicated that they didn't think it was unsafe to drive on a flooded street, this year 67% of the sub set answered that they didn't think it was unsafe, a decrease of 19 percentage points.

When looking at the answers of the 100 respondents that indicated that they didn't know it was unsafe to drive through flood water, 35% were between the ages of 45 -64. They also live in the southeast (68%) and have done so for longer than 10 years (54%). Fifty-one percent were female and 49% were male.

Flood Insurance

Some additional questions relating to flood insurance were added to the survey in 2005. This is the first year that comparative data is available on the four additional data points. This series of questions was asked of all respondents. In addition to asking whether the respondent was aware if flood insurance is available to everyone, respondents were also asked if flood insurance was only available to those living in a flood zone, if flood insurance will only cover the structure of a residence, whether flood insurance will cover the contents of a residence, whether flood insurance costs the same whether or not the residence is in a flood zone, and whether there was a requirement to buy flood insurance if the residence is in a flood zone.

Table 6: Flood insurance issues

Issue	% Correct 2006	% Correct 2005
Flood insurance is available to everyone	60%	63%
Flood insurance will only cover structural damage	26%	32%
Flood insurance is only available to those living in a flood zone	53%	61%
Flood insurance available to cover damage to the contents of a residence	58%	64%
Flood insurance costs the same regardless of whether or not the residence is in a flood zone	52%	52%

If you live in a flood zone you must buy flood insurance	39%	35%

The table above shows the correct responses to the series of questions on flood insurance. This is the one area of the survey that did not see an increase in awareness this year. As is indicated above, the highest incidence in this section of the survey is the percentage of respondents that know "flood insurance is available to everyone" (60%, 63%, 2005); this is similar to last year's findings. Fifty-eight percent were also aware that "flood insurance covers both contents and structure" (64%, 2005). About half of the respondents (53%) knew that flood insurance is not just available to those that live in a flood zone, this is down 8 percentage points from the percent that knew this in 2005. About half (52%) also knew that flood insurance costs are dependent on the location of the residence. More respondents this year (39%) than last year (35%) knew that if you live in a flood zone you must buy flood insurance. Item 4 (*flood insurance will cover both structure and content)* and item 2 (*flood insurance will only cover structural damage only*) are similar in content but the results are different whereas 58% correctly responded to item 4, only 26% responded correctly to item 2.

This section of the survey had a very high percentage of "don't know" responses on each of the items. All of them had at least 21% "don't know" responses. The items with the highest percentage of "don't know" responses were: flood insurance will only cover damage to the structure of a residence (40% "don't know"), the cost of flood insurance is the same regardless of whether or not the residence is in a flood zone (35% "don't know"), and flood insurance is available to cover damage to the contents of a residence (29% "don't know"). These high percentages of don't know responses are indicative of an area in which public awareness needs to be increased.

Flood insurance is available to everyone.

Sixty percent of all respondents agreed that flood insurance is available to everyone. Respondents who reside in the Southeast (64%) were the most likely to agree with the statement while respondents in the Southwest (54%) and

outlying areas (39%) were the least likely to agree. Sixty-one percent of respondents in the Northeast and the Northwest agreed with the statement.

When looking at the data by length of time in Clark County, there are some differences. Respondents who have lived in Southern Nevada between 6 months and a year were the most likely (72%) to respond correctly to this statement. Fifty-nine percent of those who have lived here 1 year to less than three years responded correctly as did 53% of those who have lived here between 3 years to less than 6 years. In addition, 65% of those who have lived in Southern Nevada for 6 – 10 years knew that flood insurance is available to everyone, as did 61% of those who have lived here longer than 10 years. The lowest incidence was the 35% of respondents who have lived here less than 6 months.

Similar to last year, the youngest respondents (18-24) were the most likely (72%) to correctly respond to the statement. Likewise 62% of the 45-64 year olds responded correctly as did 57% of the other age groups.

Males (63%) were more likely than females (56%) to know that flood insurance is available to everyone.

Flood insurance will only cover damage to the structure of a residence.

This question was added in 2005. The baseline data indicated that only 32% percent of respondents were aware that flood insurance *will* cover damage to more than the structure of a residence. This year that percentage was even lower (26%) Forty percent of respondents did not know how to answer this question. They either did not understand the question as written or this is a content area that the public may need to be made more aware of.

When looking at the data by the sub-groups, the youngest respondents (18-24) were the most likely to respond incorrectly (53%) however they were the most likely to provide an answer (24% responded don't know). In all of the other age strata a third of the respondents answered correctly, while over 40% of

respondents were not able to provide an answer. Respondents in the 24 – 44 age group were the most likely to respond correctly (29%).

When looking at the data by area there was not much variance, approximately a quarter of respondents in each of the geographic areas knew that flood insurance would cover more than structural damage.

There were some differences in the data based on length of time the respondent has resided in the area. The highest incidences of correct responses was the 31% of respondents who have lived in Southern Nevada for 6 to 10 years and the 30% of respondents who have lived here for 6 months or less. The lowest incidence or correct responses was from the 19% of respondents who have lived in the area for 1 year to less than 3 years.

Males (36%) were more likely than females (32%) to respond correctly to the statement.

Flood insurance is only available to those who live in a flood zone.

This question was added to the survey in 2005. There was a decline in the percentage of respondents who correctly disagreed with the statement this year (53%, 2006, 61%, 2005) indicating their awareness that flood insurance is *not* only available to those who live in a flood zone.

There is not much variance in the responses based on area, however, respondents in the Northwest were the least likely (48%) to respond correctly to the statement. In the other areas, 55% of those in the Southeast and 58% of those in both the Northeast and the Southwest knew that flood insurance *is* available to those who do not live in a flood zone.

When looking at the data by the length of time the respondent has lived in the area, in each group at least 40% responded correctly with the lowest incidence of correct responses (40%) in the group of respondents that have lived in the area 6 months or less. Those that responded correctly most often (57%) have lived in Southern Nevada for longer than 10 years.

Likewise with the age variable 40% of the youngest respondents (18-24) responded correctly compared to 58% of the 45 – 65 year olds. Fifty-five percent of those over 65 responded correctly as did 48% of those between the ages of 24-44.

Males were more likely (55%) than females (51%) to respond correctly.

Flood insurance is available to cover damage to the contents of a residence.

This is also one of the questions that was added to the 2005 instrument. Overall 58 percent of respondents correctly agreed with the statement that flood insurance is available to cover damage to the contents of a residence. This is down 6 percentage points from last year. There is some disparity among the responses of those in the various sub-groups. When looking at the area that the respondent resides in, those least likely to know that flood insurance is available to cover damage to the contents of a resident live in the Northwest (56%) and those most likely to know live in the Northeast (65%).

In all of the "length of time" sub-groups at least 50% of respondents correctly answered the question. Respondents who have lived here between 6 and 10 years were the most likely to agree (63%) with the statement while those who have lived here between 6 months and a year were the least likely (50%). When looking at the data by age, the youngest respondents (18 – 24) were the most likely (74%) of any of the age groups to respond correctly to this statement while the 45 – 64 year olds were the least likely (54%).

Male respondents (61%) were more likely than female respondents (55%) to know that flood insurance is available to cover the contents of a residence.

The cost of flood insurance is the same regardless of whether or not the residence is in a flood zone.

This question was also added to the instrument in 2005. Fifty-two percent of respondents disagreed with the statement indicating they knew that the cost of flood insurance was *not* the same regardless of whether or not the residence is in a flood zone. This is the same percentage that responded correctly last year. The oldest respondents (65 and older) were the least likely (46%) respondents from any of the age groups to respond correctly to this statement; the youngest respondents (18 – 24) were the most likely to respond correctly (58%). When looking at the data by the area that the respondent lives in, the Northeast had the lowest incidence of correct responses (48%), while the Northwest had the highest (54%).

Sixty percent of respondents who have lived in Nevada less than 6 months correctly answered this question (highest incidence of correct answers) compared to 41% of those who have lived in the area between 1 and 3 years (lowest incidence of correct answers). Fifty-three percent of all residents who have lived here at least 6 years knew that the cost of flood insurance is dependent of the area of the residence.

Males (55%) were more likely than females (47%) to respond correctly.

If you live in a flood zone you must buy flood insurance.

Thirty-nine percent of respondents knew that if you live in a flood zone you must purchase flood insurance. The responses for this item are up 4 percentage points from last year's administration of the survey (35%, 2005). When looking at the data by the age sub-group, the 24 – 44 year olds were the most likely to respond correctly (44%), and in the oldest age group (65+) were the least likely (32%) to respond correctly. In the other age groups 38% of the 18 – 24 year olds and 40% of the 45 – 64 year olds responded correctly.

Those respondents who have lived here the longest (36%) and those who have lived here less than 6 months (35%) were among the least likely to respond correctly to this question. The highest incidence of correct responses was the 47% from the group who has lived in the area between 6 months and a year.

When looking at the data by area of town, respondents in the Northeast were far more likely to respond correctly to this question (58%) than those in other areas (32% Northwest, 30% Southwest, 39% Southeast).

Males (47%) were more likely than females (35%) to know that you must buy flood insurance if you live in a flood zone.

Streets "are" or "are not" a part of the flood control system.

The data shows that the awareness that "streets are a part of the flood control system" is consistent with the data collected last year. This year 63% of respondents were aware that this is true as compared to 62% in 2005 and 56% in 2004 that were aware of the same. Twenty-four percent of respondents did not know that streets are a part of the flood control system, while 13% responded that they "didn't know".

There were some differences in responses among the sub-groups. Among the group of males who answered the survey, 66% knew that streets are a part of the flood control system, this compared to 59% of females who were aware of the same.

Respondents in the youngest group (18 – 24) and the oldest group (65+) had a slightly higher percentage (66%) of respondents that were aware that streets are a part of the flood control system than those in the other age strata. The same is true for the newest residents (less than 6 months) and the oldest residents (longer than 10 years) whose percentages of awareness (65%) were higher than those in the other length of time groups. There is very little variance in the data based on the area that the respondent resides in.

“Some” or “All” of the urban runoff that travels through the flood control system drains into Lake Mead.

This question was added to the survey this year to see if respondents were aware that all of the urban runoff that travels through the flood control system drains into Lake Mead. Of the respondents who were able to answer the question, the percentage that think “all” (38%) and those that think “some” (40%) of the urban runoff that travels through the flood control system drains into Lake Mead is fairly consistent. 22% responded did not know how to answer the question. Within the age groups, 46% of youngest respondents (18-24) correctly answered this question, this compared to about 40% of respondents in the other age groups that did the same. In all of the categories of respondents that have lived in Southern Nevada 3 years or less about 30% were able to respond correctly; the percentage increases to about 42% for those that have lived in the area for more than 3 years. Males (44%) were more likely than females (37%) to respond correctly. There was not much variance based on the area that the respondent resides in.

The urban runoff and rainwater that travels through the flood control system is “treated” “untreated”.

Forty-four percent of respondents correctly responded that the urban runoff and rainwater that travels through the flood control system is “untreated”. Thirty percent answered incorrectly and 21% reported that they did not know. The percentage of respondents who correctly answered this question is down 20 percentage points from last year (64%, 2005), and the number of respondents who were unable to respond (don’t know) increased 9 percentage points this year. One reason for this may be a change in question wording. Last year the question read *the stormwater and urban runoff that travels through the flood control channels and storm drains is “treated” “untreated”.* In an attempt to simplify the question, the information that the respondent may have needed to

respond correctly may have been omitted (i.e., rainwater vs. stormwater, and flood control system vs. flood control channels and storm drains). There is no way to determine this from this year's data, but the question can be asked randomly in both forms next year to discern differences.

Respondents who knew that the urban runoff was untreated (N = 345) were asked a follow up question to assess any changes in behavior apparent from having the knowledge. The follow-up question was "*as a result of knowing that urban runoff and rainwater are NOT treated have you changed any behaviors that would help protect the environment"?* One-hundred and thirty-one respondents have changed a behavior as a result of having this knowledge. This number represents 55% of those respondents who knew that urban runoff is untreated. Even though fewer respondents were able to respond correctly this year, the 55% that made a behavior change represent an increase of 34 percentage points from the respondents that made a behavior change last year (21% made a behavior change in 2005). The 131 respondents who reported that they had changed a behavior were asked what behavior that they had changed.

Table 7: Behavior changes- knowing urban runoff is untreated

Rank	*Behavior Change*	*Percent 2006*	*Percent 2005*
1	Proper disposal of general waste	46%	19%
2	Proper disposal of chemicals	41%	38%
3	Use a commercial carwash	24%	10%
4	Proper disposal of oil	33%	10%
5	Proper clean/up disposal of pet waste	22%	3%
6	Use of organic fertilizers	19%	3%
7	Other	16%	29%

There has been a considerable increase in the activities that respondents are doing as a result of knowing that urban runoff is untreated. As in last year's administration of the survey, the respondents were not read the list above, but

their answers were coded into the above categories by the interviewer based on the response. As in last years survey, many of the behavior changes reported by the respondents were in the manner in which they are disposing of waste, from general waste to chemicals. Forty-one percent of respondents indicated that they are disposing of chemical waste properly; this includes such items as pesticides and fertilizers. Up 77 percentage points from 19% in 2005 to 46% in 2006 is the percentage of respondents that reported that they are disposing of general waste properly; not only does this include where they are not disposing of waste (gutters and drains) but also what is being disposed of (toner cartridges, used propane tanks, batteries). More than twice as many respondents indicated that they are using a commercial car was (10%, 2005, 24% 2006) and three times more respondents are disposing of oil properly (10%, 2005, 33%, 2006). In addition, whereas only 3% of respondents in 2005 indicated that they properly cleaned-up and disposed of pet waste, 22% indicated the same this year. Likewise last year 3% of respondents reported that they were using organic fertilizers, 19% reported the same this year.

All respondents were asked the following three questions which were new to the survey this year.

(1) If you knew what to do, would you be willing to change your behavior if you know it would improve water quality?

Ninety percent of respondents indicted that they would be willing to make a behavior change to improve water quality if they knew what to do. Females (92%) are more willing to make a change than males (87%). Likewise, younger respondents are more likely than older respondents to be willing to change a behavior to improve water quality. Among the 18-24 year olds, 94% indicated that they would change a behavior, this compared to 83% of those aged 65 or older who are willing to do the same. Chi square analysis indicates that there is

a statistically significant relationship between gender and age and the willingness to change a behavior to improve water quality.[13]

(2) Would you like to know more about how to keep the environment clean?

Seventy-three percent of respondents indicated that they would like to know more about how to keep the environment clean. Again, there is a statistically significant relationship between age and gender and the desire to know more about how to keep the environment clean.[14] Among female respondents, 79% indicated that they want more information, this compared to 66% of males who want more information on how to keep the environment clean. Likewise with age, 80% of the 18 – 24 year olds in the sample want more information on keeping the environment clean compared to only 59% of those aged 65 or older who want the same.

(3) Where would you like to go to get information on how to keep the environment clean?

Table 8: Sources for environmental information

Rank	Source of Information	Percent (%)
1	Internet/Website	31%
2	Library	8%
3	TV	7%
4	Newspaper/Magazines	6%
4	Don't Know	6%
6	Mail	5%
7	School	3%
8	Grocery Store	2%
8	Brochures/Fliers	2%

The table above shows the most often given responses to this open ended question. There were a myriad of responses. Among the responses that are not categorized above are: city hall, children, utility bills, parks, and the water district.

[13] Pearson Chi-Square for age is .007 and for gender is .019.
[14] Pearson Chi-Square .000 for both variables.

Do you know how to find out if you live in a flood zone?

Fifty-three percent of the respondents reported that they know how to find out whether or not they live in a flood zone. This is up from the 50% that reported the same last year. The profile of the typical respondent who knows how to find out if he/she lives in a flood zone is a male (57%) between the ages of 45 and 64 (60%) who lives in the Southeast (55%) or Northwest (56%), and has lived in Southern Nevada at least 6 years (56%). The youngest respondents (18 - 24) were the least likely (38%) to know how to find out if they live in a flood zone.

Do you know if you live in a flood zone?

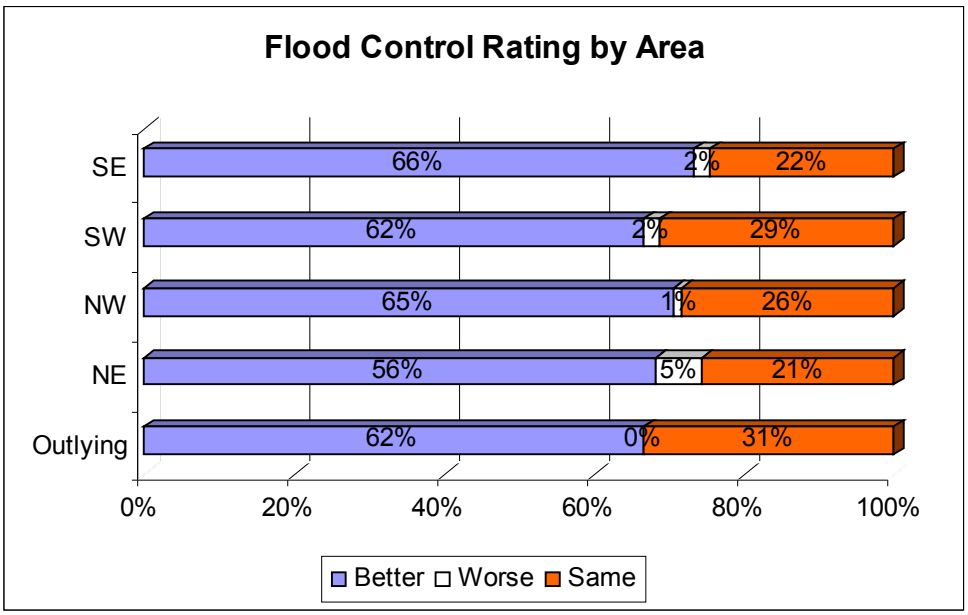
Ten percent of respondents (N = 76) reported that they live in a flood zone. This is up from 4% of respondents in 2005 that knew if they lived in a flood zone and mirrors 2004 data where 10% of respondents reported living in a flood zone.

Do you have flood insurance?

Since flood insurance is available to everyone, not just those who live in a flood zone, this question was asked of all respondents. Eight percent of all respondents (N = 65) reported that they have flood insurance. Of the 76 respondents who reported that they live in a flood zone and are therefore required to purchase flood insurance, 17 respondents reported that they have flood insurance. This represents 22 percent of those that live in a flood zone and are required to have flood insurance that actually have it.

Since you became a resident of Southern Nevada, do you think the way flood control is being handled in our valley has gotten better, gotten worse, or stayed about the same?

Sixty-three percent of respondents feel that since the time that they have become residents of Southern Nevada the way that flood control is handled has gotten better. Twenty-five percent think that it has stayed the same and 10 percent are not sure. Only 2 percent of respondents think that the way flood control is handled has got worse. These figures are similar to last year's figures.

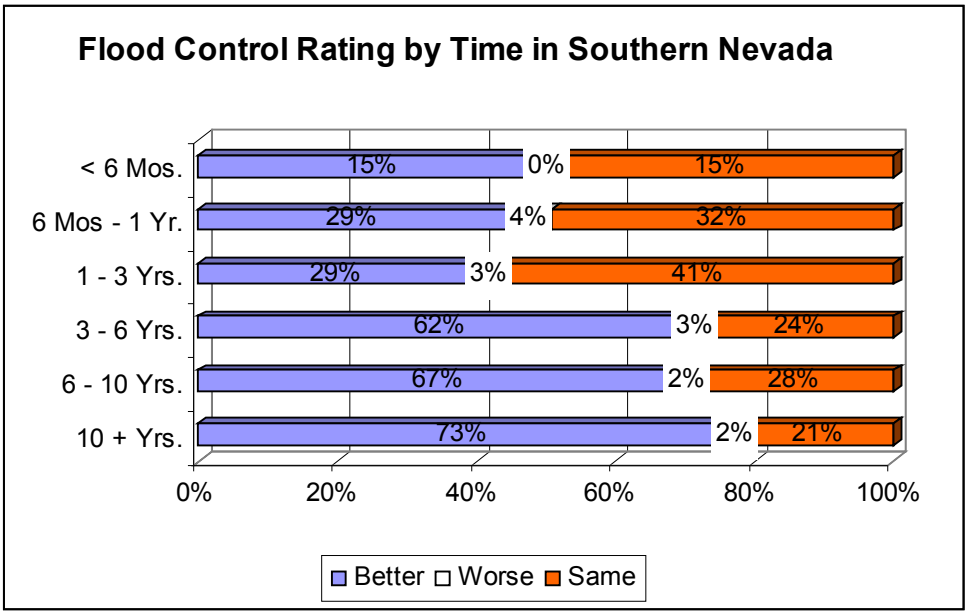


The graph[15] above depicts the flood control rating by area. As the graph shows, there is not much variance in the answers based on the area the respondent resides in. Respondents in the Northeast are the least likely (56%) to agree that the way that floods are being controlled has gotten better. In the other areas in excess of 60% of respondents think that flood control has gotten better since moving to Southern Nevada. Only a very small percentage in any of the areas has indicated that flood control has gotten worse with the highest incidence in the Northeast (5%). Between 21% (NE) and 31% (outlying) of respondents in

[15] The total percentage in this graph and the following two graphs do not add up to 100%, the missing percentages represent the "not sure" responses.

all areas think that the way that floods are being controlled has stayed about the same since residing in Southern Nevada.

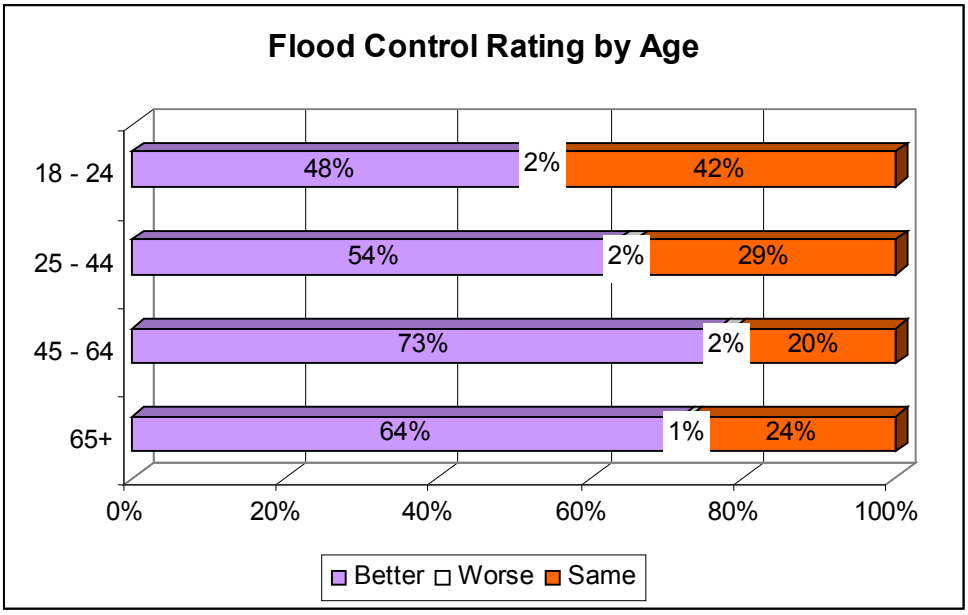
Flood Control Rating by Length of Time Resided in Southern Nevada



The graph[16] above shows the flood control rating by the length of time that the respondent has resided in Southern Nevada. As is indicated above, those respondents who have lived here 10 years or longer were the most likely (73%) to think that the way that flood control is being handled has gotten better. It is not a surprise that those who have lived here a year or less would not have much of a time frame from which to judge flood control, however 15% of respondents in this group did answer that flood control has gotten better since residing in Southern Nevada. Seventy percent of respondents in this group answered that they were "not sure". Only 4% or fewer of respondents in any of the groups indicated that flood control has gotten worse since moving here. There is a statistically significant relationship between the length of time that a respondent has lived in Southern Nevada and the ability to rate flood control.[17]

[16] Percentages do not add up to 100%, "not sure" responses are not included on the graph.
[17] Pearson Chi-Square .000.

Flood Control Rating by Age

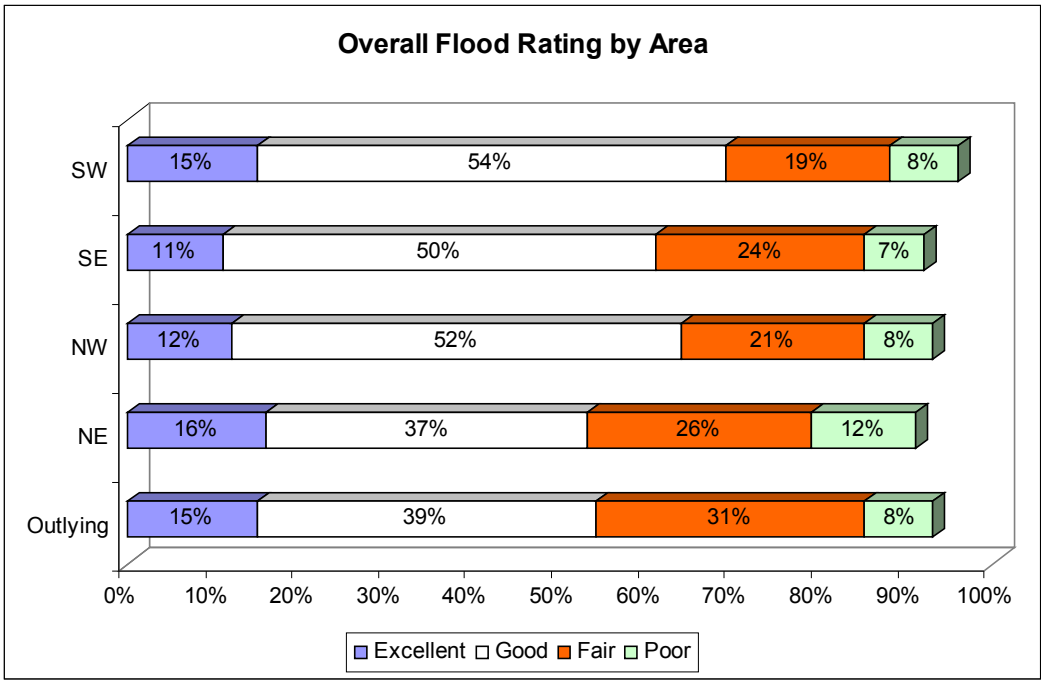


Among the 45 to 64 year olds, 73% have indicated that flood control in Southern Nevada has gotten better since becoming a resident. This was the highest incidence among any of the age strata. In the 18 – 24 age stratum, 48% thought that flood control has gotten better, this was the lowest incidence. In the other groups 64% of those aged 65 or older and 54% of those between the ages of 25 and 44 thought that flood control has gotten better. Again, only a very small percentage indicated flood control had gotten worse. The youngest respondents (18 – 24) were the most likely (42%) to think that flood control has stayed about the same since becoming a resident of southern Nevada.

Overall, how would you rate the way flood control is being handled in Southern Nevada?

The survey results show overall that 61% of respondents positively rate the way that flood control is being handled in Southern Nevada; 12% gave flood control an "excellent" rating, while 49% gave flood control a "good" rating. The 61% overall rating is up 4 percentage points from the 57% that rated flood control overall positively last year. Twenty-two percent rated flood control "fair", while 8% gave flood control a "poor" rating. Eight percent of the respondents did not know how to rate flood control overall.

Overall Flood Control Rating by Area



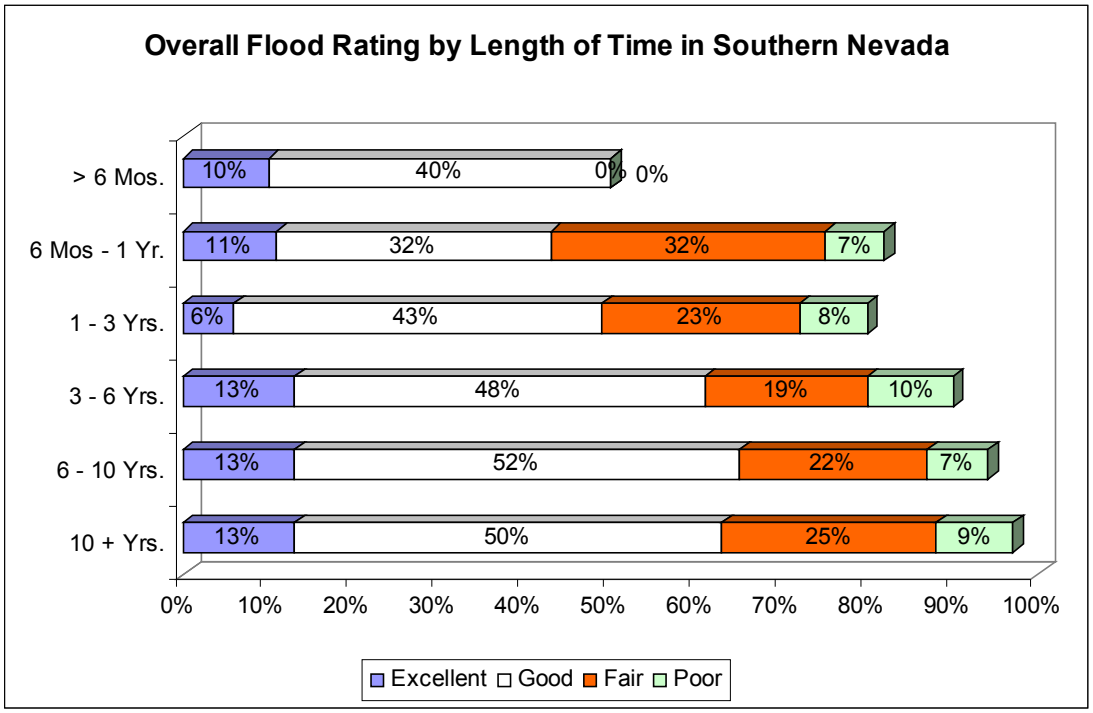
When looking at the graph above[18] which depicts the data by area, there is not much disparity. Respondents in the Northeast were the least likely (53%) to rate flood control as "good" or "excellent". In the Northwest, Southwest, and Southeast at least 61% of respondents rated flood control as "good" or

[18] The total percentage in this graph and the following two graphs do not add up to 100%, the missing percentages represent the "don't know" responses.

“excellent”. In outlying areas 54% rated flood control as either “good” or excellent.

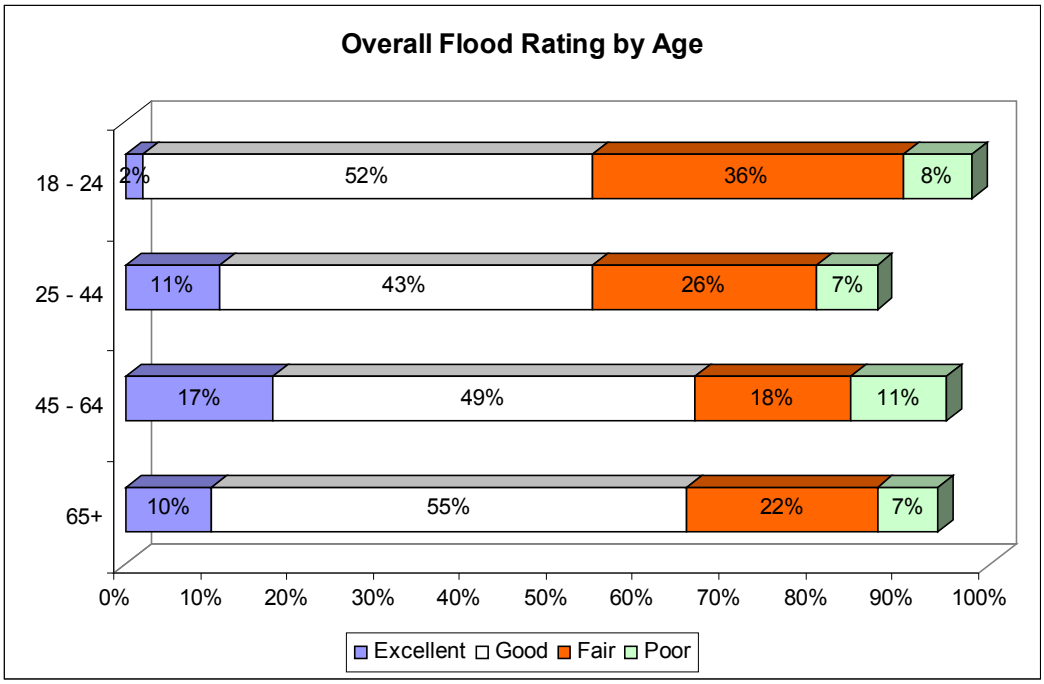
Even though the overall flood control ratings were the lowest in the Northeast and outlying areas, the overall ratings increased by 13 and 11 percentage points respectively from last year. In the Southeast and the Northwest overall acceptance is similar to the overall acceptance in the areas last year. In the Southwest, overall acceptance is down 7 percentage points from last year.

Flood Control Rating by Length of Time Resided in Southern Nevada



The graph above depicts the data by the length of time the respondent has lived in the area. As is indicated those who have lived here less than six months had difficulty responding to an overall rating and nearly 50 percent answered that they “did not know”. When looking at the other length of residency variables, once a respondent has lived in the area at least 3 years a preponderance of them rated flood control overall positive, with the highest incidence (65% “good” or “excellent”) from those who have lived in Southern Nevada between 6 and 10 years.

Flood Control Rating by Age



The graph above, which depicts the data by the age of the respondent shows that the older the respondent is, the more likely he/she is to rate flood control overall, as “good” or “excellent”. Sixty-six percent of those in the 45 – 64 age group and 65% of those aged 65 or older rated flood control as “good” or “excellent”. This is compared to 54% of respondents under age 45 that did the same.

Spanish Speaking Respondents

Last year (2005) was the first year that data was collected from Spanish speaking respondents. During last year's administration of the survey only 24 interviews were conducted with Spanish speakers, this year 89 surveys were conducted with Spanish speakers. The data from this subset is statistically significant at +/- 7.7% at the 95% confidence interval.

Characteristics of Respondents:

Ten percent of the surveys were conducted with Spanish speaking respondents (N=89). The typical Spanish speaking respondent in this survey was female (74%) between the ages of 45 – 64 (39%), had attained an education level of less than a high school graduate (47%, 3% in the overall sample). Twenty-seven percent have lived in the area between 3 and 6 years and an additional 23% are long-term residents and have been in the area 10 years or longer. Five percent have been in Southern Nevada 6 months or less. While 24% of respondents in this subset refused to provide a zip code (less than 1% in the overall sample), the highest incidence was the 39% that indicated that they live in the Northeast. Seventeen percent live in the Northwest, while 14% live in the Southeast and 7% in the Southwest.

Unaided and aided awareness:

Sixty-seven percent of respondents in the Spanish speaking sub-group (78% in the overall sample) were aware of weather related dangers that can occur in the area. This is up from the 54% who were aware of the same in 2005. Of these, 43 respondents were able to mention "flood" or "flash floods" unprompted. This represents 48% of the subset as compared to a third of the subset in last year's administration of the survey. When prompted, an additional 30 respondents were aware that flash flooding can occur in the area, thus

combined awareness for the Spanish speaking subset was 82% (94% in the overall sample of all 790 respondents).

Flood Related Issues

Table 9: Flood Related Issues: Spanish Speakers vs. English Speakers

Flood Related Issue	% Agree English	% Agree Spanish	+/- Spanish
I know about the dangers of flash flooding	97%	78%	+15
I know about the time of year flash flooding is most likely to occur in the area	85%	49%	-8
I know about safety precautions relating to flash flooding	93%	42%	+21
I know about the resources available to learn more about flash flooding	60%	22%	Not asked[19]
I know ways in which flooding is being controlled in the area.	80%	19%	+6
I know about the availability of flood insurance	80%	32%	+7

The table above shows the differences in the responses of the English speaking respondents and the Spanish speaking respondents and the increase or decrease in percentage points between the 2005 data and this year's Spanish responses. There is a large disparity between the answers in the two groups, indicative of the Spanish speaker's general lack of knowledge on flood related issues, however there has been an increase in knowledge on all issues except the time of year that flooding occurs (-8 percentage points).

This year, the percentage of Spanish speaking respondents that indicated that they know about safety precautions relating to flash flooding doubled from 21% in 2005 to 42% in 2006, yet this percentage is still less than half that of the English speakers (93%).

[19] This question was inadvertently omitted from the Spanish version of the survey in 2005.

There was also a gain of 15 percentage points in the percentage of respondents that know about the dangers of flash flooding (63%, 2005 78%, 2006). This is the issue that the Spanish speaking and English speaking subsets are closest on.

The issue with the biggest gap in knowledge is knowledge about the ways in which flooding is being controlled in the area; 80% of respondents in the English speaking subset indicated that they know this as compared to only 19% in the Spanish speaking subset that indicated that they know the same.

Sources of Information

In the next section of the survey respondents were asked to respond "yes" or "no" to a list that was read to them of possible sources for learning about flash flooding. Again the responses from this sub-set were different from the English speaking respondents.

Table 10: Sources of obtaining flood information

Source	% English	% Spanish	+/- Spanish
Television	87%	89%	-11
Newspaper	65%	24%	+11
Friends / Relatives	59%	58%	-8
Radio	57%	44%	+5
Billboards	48%	35%	Unable to compare[20]
Brochure	25%	23%	Unable to compare
CCRFCD Website	20%	8%	Unable to compare
Welcome Home Magazine	8%	14%	Unable to compare

The table above shows the differences in the responses of the English speaking respondents and the Spanish speaking respondents and the increase

[20] In this and the following three categories, comparison is not possible, there were too few responses in 2005.

or decrease in percentage points between the 2005 data and this year's Spanish responses. Among both subsets television is the best way to deliver flood information as is indicated by the high percentage in both groups that reported that they had learned about flooding via that medium. In the Spanish speaking subset 89% indicated that they have learned about flash flooding from watching television as compared to 87% in the English speaking subset. Newspapers, the CCRFCD Website, and radio have the biggest disparity among responses. Whereas only 8% of English speaking respondents indicated that they have learned about flash flooding from *Welcome Home Magazine* 14% of Spanish speaking respondents indicated the same.

Forty-eight percent (N = 41) of Spanish speaking respondents have cable television compared to 78% of the English speaking respondents. Last year 63% of the Spanish speaking respondents indicated that they had cable television. From the group with cable television only 6 respondents reported to have ever watched the Flood Channel. This represents 15% of the subset as compared to 45% of the English speaking respondents who have watched the Flood Channel. However, the data may not be truly representative of the Hispanic television market. According to Telemundo in Las Vegas, Spanish programming is available both on cable and regular television. In order to provide a more finite picture of this sub group additional questions should be added to next years survey to discern the percentage of respondents who may have learned about flooding on regular television.

Encounters with a Flooded Road:

Thirty-one percent (N = 28) of Spanish speaking respondents reported that they had at some time encountered a flooded street or road either as a driver or passenger in Southern Nevada; this compared to seventy-eight percent of the English speaking respondents that reported the same. Half of the respondents in the Spanish group made a good or appropriate choice and turned around and

took an alternate route this is compared to 62% of the English speaking respondents that did the same.

Table 10: Flood Insurance Issues: Spanish Speakers vs. English Speakers

Flood Related issue	% English Speakers	% Spanish Speakers
Flood insurance is available to everyone	54%	48%
Flood insurance will only cover the structure of a residence	25%	25%
Flood insurance is only available to those who live in a flood zone	56%	44%
Flood insurance is available to cover damage to the contents of a residence	58%	57%
The cost of flood insurance is the same regardless of whether or not the residence is in a flood zone	52%	44%
If you live in a flood zone you must buy flood insurance	35%	58%

The table above shows the differences in the correct responses between the English speaking respondents and those who do not speak English. The knowledge gap with regards to flood insurance issues is less than the knowledge gap in other flood related issues. With 2 of the items (*flood insurance will only cover the structure of a residence* and *flood insurance is available to cover damage to the contents of a residence*) there is no or very little difference in the responses of the English speaking and Spanish speaking respondents. Fifty-eight percent of the Spanish speaking respondents knew that if you live in a flood zone you must buy flood insurance compared to only 35% of the English speaking respondents they knew the same. This is similar to the responses that were obtained last year for this survey item.

Streets "Are" or "Are Not" a part of the flood control system

- 66% of English speaking respondents answered correctly.
- 37% of Spanish speaking respondents answered correctly.

"Some" or "All" runoff and rainwater drains into Lake Mead

- 38% of English speaking respondents answered correctly
- 44% of Spanish speaking respondents answered correctly

The urban runoff and rainwater that travels through the flood control system is "treated" or "untreated".

- 45% of English speaking respondents answered correctly
- 30% of Spanish speaking respondents answered correctly

Table 11: Behavior changes- knowing urban runoff is untreated

Behavior Change	*% English Speakers*	*% Spanish Speakers*
Proper disposal of general waste	46%	51%
Proper disposal of chemicals	41%	25%
Use a commercial carwash	24%	18%
Proper disposal of oil	33%	14%
Proper clean/up disposal of pet waste	22%	7%
Use of organic fertilizers	19%	7%
Other	16%	7%

The table above shows the differences in behavior changes as a result of knowing that urban runoff is untreated between the English and Spanish Speaking respondents. As is indicated above, more than half (51%) of the Spanish speaking respondents properly disposed of general waste, this is compared to 46% of the English speaking respondents. It was the highest

incidence in both groups, and the one behavior change that had a higher percentage in the Spanish speaking sub group. Twenty-five percent of the Spanish speakers also properly disposed of chemicals (41% English speakers), and 18% used a commercial car wash (24% English speakers). Fourteen percent of Spanish speakers indicated that they properly disposed of oil as compared to 33% of the English speaking subgroup. Only 7% of the Spanish speakers indicated that they properly dispose of pet waste or use organic fertilizers as a result of knowing that urban runoff is untreated, and an additional 7% supplied some other answer.

If you knew what to do, would you be willing to change your behavior if you know it would improve water quality?

- Ninety percent of English speaking respondents are willing to change a behavior to improve water quality
- Eighty-five percent of Spanish speaking respondents are willing to change a behavior to improve water quality.

Would you like to know more about how to keep the environment clean?

- Ninety-seven percent of Spanish speaking respondents would like to know more about how to keep the environment clean.
- Seventy percent of English speaking respondents would like to know more about how to keep the environment clean.

Where would you like to get information on how to keep the environment clean?

Table 12: Sources for environmental information

Rank	Source of Information	Percent (%)
1	Schools	21%
2	Grocery store	18%
3	Brochures/Fliers	12%
4	TV	7%
4	Mail	7%
6	Internet	2%%

The table above shows the most often given responses to this open ended question. There were a myriad of responses. Among the responses that are not categorized above are: radio, utility bills, banks, and the water district. In the sample of 790 respondents, the internet was the most often cited source where respondents want to obtain information on how to keep the environment clean 31% compared to only 2% in the Spanish speaking sub set. Schools was the number one source cited by the Spanish subset (21%) as compared to only 2% in the English subset. More Spanish speakers would also like to get information at grocery stores also (18% vs. 2%) In addition 12% of the Spanish speakers want to get environmental information from brochures and fliers, 7% from both TV and direct mail.

Flood Control Rating:

Forty percent of Spanish speaking respondents indicated that since they have been a resident of Southern Nevada that the way flood control is being handled has got better; 66% of the English speakers indicated the same. This is similar to last year's responses. About a quarter of both subsets think that since they have lived in Southern Nevada flood control is about the same. Six percent of the Spanish speaking subset and 2% of the English speaking subset indicated that since they have lived in Southern Nevada flood control has got worse. Thirty

percent of the Spanish speakers could not answer this question as compared to 7% of the English speakers who could not answer this question.

Overall Flood Control Rating:

Forty-five percent of the Spanish speaking respondents rated flood control overall positive; 34% rated flood control overall negative and 22% did not know how to respond to this question. Among the English speaking subset, 63% rated flood control overall positive, 31% rated it negative and only 6% were unable to respond.

Conclusions

In general, the tendencies for the survey this year indicate an overall increase in most of the subject areas and overall awareness remains extremely high. Combined/total awareness remains steady with 94% of respondents indicating that they are aware that flooding or flash flooding is a weather related disaster that can occur in Southern Nevada. The data indicates that after about three years of residency in Southern Nevada respondents have assimilated the flood awareness message, and a preponderance of residents (96%) are aware of flooding. There are 26 percentage points between the combined awareness scores of those who have lived in the area less than 6 months (70%) and those who have lived in the area for at least 3 years (96%). The difference between the 3 year residents (96%) and those who have lived in the area 10 years or longer differs by only 2 percentage points and ultimately reaches a level of almost one-hundred percent awareness (98%) for long term-residents.

Not only are the area's newest residents not aware of flooding in general, they are less knowledgeable on the flood related issues and the most likely to make a poor or inappropriate choice when encountering a flooded street or road. They also know less than the other groups about flood insurance issues. However, 85% of this group indicated they would be willing to make a behavior change to improve water quality and, 73% would like information about how to keep the environment clean. Efforts should continue to reach this population. They are best reached via television and radio.

Awareness of the flood related issues that have been assessed since 1999[21] remain for the most part consistently high. Residents in Southern Nevada "know about the dangers of flash flooding" (95%) and about "the time of year that flash flooding occurs (81%). These figures have remained constant for the past two years. There has been a gain of 4 percentage points in the number of

[21] See Table 3, page 17.

residents who know “about safety precautions relating to flash flooding”, and “the ways that flooding is being controlled”.

One issue remains consistently just over 50% in awareness. That issue is “I know about the resources available to learn more about flash flooding”. This number has also remained constant for the past two years (56%). Some effort should be put into increasing the percentage of people who know about how to learn more about flash flooding. The general population is best reached via television (87%) or newspapers (60%).

Awareness of flood insurance issues is lower than that of the other flood related issues. Most of these questions were added to the survey in 2005 during the very heavily reported hurricane season. This year there was a downward pattern on most of the insurance questions[22] with the biggest disparity in the number of respondents who knew that flood insurance was not just available to those living in a flood zone (61% 2005, 53% 2006). Many respondents were not able to provide an answer to this series of questions; sometimes as many as 40% of the respondents could not provide an answer. More effort should be put forth to provide information about flood insurance to the public. In addition the wording of these questions may need to be revamped next year.

In one series of the questions asks the respondents were asked it they would like to know more about how to keep the environment clean, 73% indicated that they would. They were further asked to indicate how they would like to go to get information on keeping the environment clean. Unprompted, 31% said they would like to receive information via the internet. While the internet was ranked 7th (19%) in the list of sources where respondents had received information about flooding, there was an increase by 13 percentage points in the percentage of respondents that want to use this medium for information and this may be a way for the District to provide information not only about keeping the environment clean, but also information about flood insurance.

One major area of improvement was in the number of respondents who changed a behavior as a result of knowing that urban runoff and rainwater are

[22] Please see Table 6 page 32 for flood insurance issues and percentages.

not treated.[23] Fifty-five percent of the respondents that knew that urban runoff is not treated indicated that they have made a behavior change. This is up 34 percentage points from the 21% of respondents that made a behavior change in 2005. Efforts at providing this information to the public appear to be working, and public education efforts should be continued. Based on the survey results, the primary message that respondents are getting is how to properly dispose of general waste (46%) and other chemicals (41%), but there were large percentages of behavior changes in all of the items mentioned.

The data collected in this year's 2006 Flood Awareness Survey indicates that the District's Public Information Program has had success in prompting residents to make behavior changes to help protect the environment. Further, 73% of respondents indicated that they would like more information about how to keep the environment clean.

Statistically Significant Factors

Although all of the variables and sub-groups provide insight into flood awareness, several of the relationships were statistically significant. These statistically significant relationships were primarily between the lengths of time that the respondent has resided in Southern Nevada and several variables relating to knowledge about flood issues. There is a statistically significant relationship between the length of time that a respondent has lived in the area and their "knowledge about the dangers of flash flooding", "the time of year that flash flooding occurs", "safety precautions relating to flash flooding", "the resources available to learn more about flash flooding", and the "ways in which flooding is being controlled in the area". Sixteen percent of the sample members have lived in Clark County three years or less. Clearly efforts to reach the newest residents should continue. Seventy-five percent of the newest residents indicated that they had learned about floods from television and 15% from the CCRFCD website, later in the survey when asked how they would like to receive information about keeping the environment clean 25% said the internet or

[23] Please see Table 7 page 40.

website, this was the highest incident among the newest residents. Only 6% answered television. This finding should be viewed in two ways; the effectiveness of the television campaign is apparent by the high percentage of respondents that have acquired information about flooding from it, this vehicle should continue to be used to reach this segment of the population. Secondly, when the respondent takes a proactive approach to obtaining information he/she is more likely to go to the internet.

There is also a statistically significant relationship between age and knowledge about the availability of flood insurance. To cite what this means in percentages there are 30 percentage points difference between the youngest respondents (18-34, 50%) and all respondents who are at least 45 (80%) about the availability of flood insurance. When this population was asked how it would like to obtain information about improving the environment the highest incidence was in the use of the internet (32%), in addition 13% of respondents in this group indicated that they would got o a library to obtain information about improving the environment. As with the other groups, respondents between the ages of 18 and 24 are learning about flooding via television (84%). Again the existing television campaign should continue with enhancements to the CCRFCD website for additional information.

Awareness levels in excess of 90% are extremely difficult to achieve in marketing brand awareness, and the District has achieved such. The efforts and programs in place should continue, with some modifications aimed at Spanish speaking residents, Clark County's newest residents, and residents in the 18 – 24 age group.

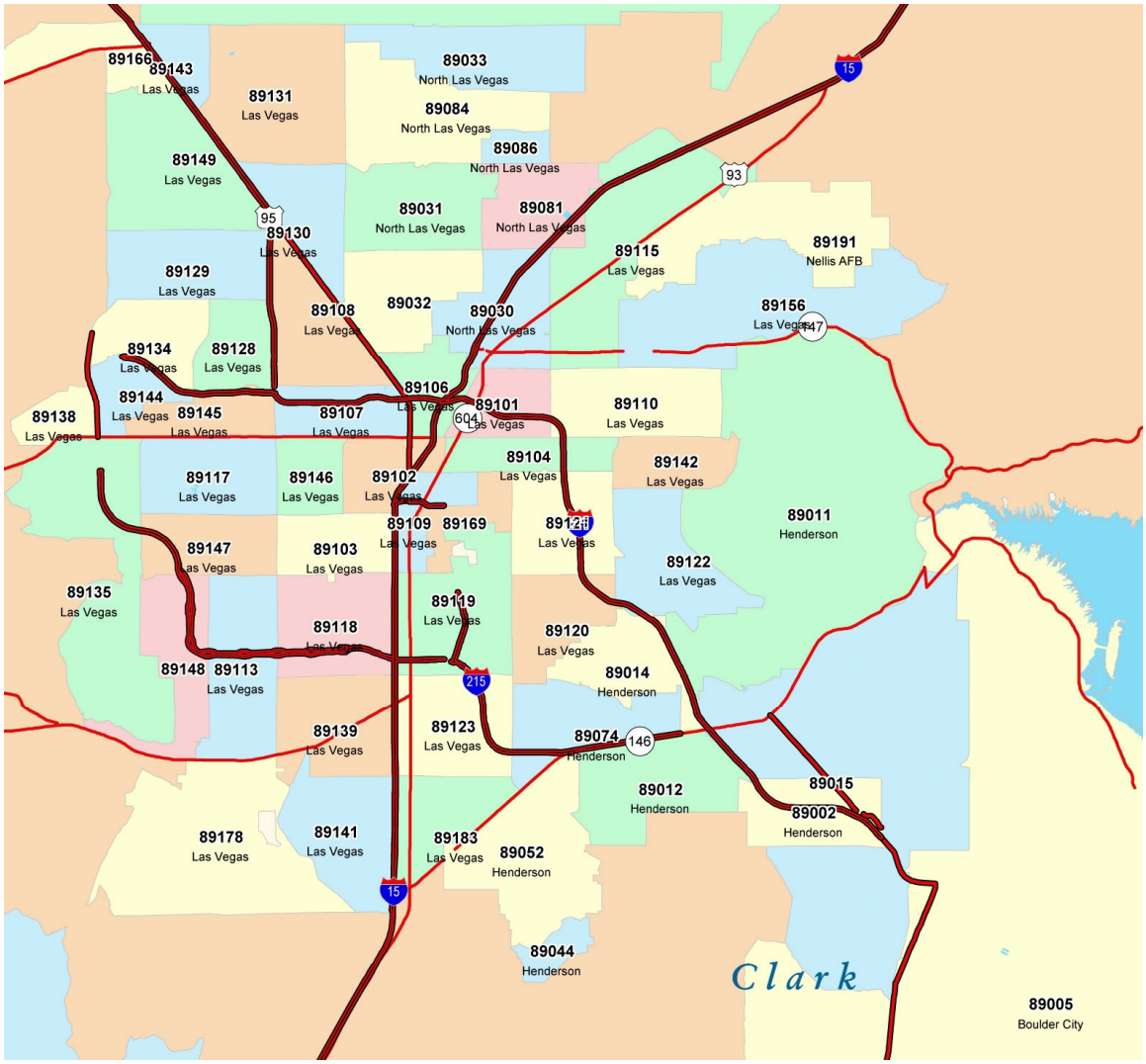
Addendum 1: Zip table and map

Table 11: Zip codes by area

Number	Zip	Area
3	89148	Southwest
16	89147	Southwest
6	89146	Southwest
1	89146	Southwest
7	89139	Southwest
8	89135	Southwest
10	89118	Southwest
24	89117	Southwest
7	89113	Southwest
12	89103	Southwest
19	89102	Southwest
1	89183	Southeast
12	89142	Southeast
7	89141	Southeast
27	89123	Southeast
21	89122	Southeast
30	89121	Southeast
13	89120	Southeast
14	89119	Southeast
6	89109	Southeast
15	89104	Southeast
14	89074	Southeast
30	89052	Southeast
6	89044	Southeast
25	89015	Southeast
15	89014	Southeast
17	89012	Southeast
1	89009	Southeast
9	89002	Southeast
2	89011	Outlying
1	89006	Outlying
10	89005	Outlying
12	89149	Northwest
15	89145	Northwest
8	89144	Northwest
5	89143	Northwest
1	89138	Northwest
19	89134	Northwest
23	89131	Northwest

14	89130	Northwest
18	89129	Northwest
13	89128	Northwest
33	89108	Northwest
20	89107	Northwest
10	89084	Northwest
8	89081	Northwest
28	89031	Northwest
19	89156	Northeast
22	89115	Northeast
36	89110	Northeast
9	89106	Northeast
16	89101	Northeast
10	89032	Northeast
22	89030	Northeast
1	89915	Unable to Identify
1	89404	Unable to Identify
1	89184	Unable to Identify
2	89178	Unable to Identify
1	89170	Unable to Identify
2	89169	Unable to Identify
1	89090	Unable to Identify

Zip Code Map


89166
89143
Las Vegas
89131
Las Vegas
89033
North Las Vegas
89084
North Las Vegas
89086
North Las Vegas
89149
Las Vegas
89031
North Las Vegas
89081
North Las Vegas
89130
Las Vegas
89129
Las Vegas
89108
Las Vegas
89032
89030
North Las Vegas
89115
Las Vegas
89191
Nellis AFB
89156
Las Vegas
89134
Las Vegas
89128
Las Vegas
89144
Las Vegas
89145
Las Vegas
89138
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89107
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89123
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89074
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89012
Henderson
89015
89002
Henderson
89178
Las Vegas
89141
Las Vegas
89183
Las Vegas
89052
Henderson
89044
Henderson
Clark
89005
Boulder City
15
93
95
604
147
215
146

Addendum 2

2006 Survey Instrument

Hello, my name is [YOUR NAME] I am calling from UNLV. We are conducting a short survey on behalf of a Clark County public agency. We not selling anything, or asking for donations. All of your responses will remain confidential, and your responses are valuable to our research.

May I please speak with a Clark County resident in your household who is at least 18 years of age or older and has celebrated the most recent birthday in your household?

[IF RESPONDENT ASKS, THE SURVEY WILL TAKE APPROXIMATELY FIVE TO SEVEN MINUTES DEPENDING ON HIS OR HER RESPONSES.]

[IF RESPONDENT ASKS, THE NAME OF THE AGENCY WILL BE REVEALED AT THE END OF THE SURVEY.]

INTERVIEWER: Press 1, AND THEN CLICK NEXT TO CONTINUE

Hello, this is [INTERVIEWER NAME] calling from UNLV's Cannon Survey Center. We called a few days ago and I'm calling to finish the survey that we started.

INTERVIEWER: Press 1, AND THEN CLICK NEXT TO RESTART

Question QA
Can you please tell me your zip code?

INTERVIEWER TYPE "9999" for refuse

Question QB
How long have you lived in Southern Nevada?

[2.5][24] Less than 6 months
[3.5] 6 months to less than 1 year
[10] 1 year to less than 3 years
[15.4] 3 years to less than 6 years
[17.2] 6 to 10 years
[51] Longer than 10 years
[.3] DK

[24] Numbers in blue brackets are valid percents unless otherwise noted.

Question Q1
Are you aware of any weather related dangers that can occur in the area?

[77.6] Yes
[21.6] No
[.8] Not Sure

Question Q2UNAIDED
What types of weather related dangers are you aware of that can occur in the area?

[INTERVIEWER: DO NOT READ THE CATEGORIES USE FOR CODING PURPOSES ONLY!]

[63.4] Floods / Flash Floods
[17.8] Dust storms / High winds
[16.1] Heavy Rain / Thunder Storms
[14.2] Heat
[9.0] Fire / Lightening
[6.6] Earthquake
[.5] Unable to specify
[3.9] Other

Question Q2AIDED
Are you aware that flash flooding can occur?

[85.1] Yes
[14.5] No
[.3] Not Sure

Question Q3KNOW

Now I'm going to read a few statements and I'd like to know if you "Agree", "Somewhat Agree", "Disagree" or "somewhat Disagree" with each.

I KNOW . . . [25]
about the dangers of flash flooding
about the time of year flash flooding is most likely to occur
about safety precautions relating to flash flooding
about resources available to learn more about flash flooding
about ways in which flooding is controlled in the area
about the availability of flood insurance

[25] Please see frequency tables in addendum 3, page 83 for percentages.

Question Q4SOUR
From the list I am going to read, please tell me either "YES" or "NO" if you have learned about flash flooding from that source.

[24.4] Brochure
[46.3] Billboard
[87.7] Television
[55.6] Radio
[60.1] Newspaper
[8.4] Welcome Home Magazine
[18.5] Clark County Regional Flood Control District Website
[58.6] Friends and/or other relatives

Question Q5KID
Do you have children in elementary school?

[INTERVIEWER: That's kindergarten through 5th grade]

[16.2] Yes
[83.8] No

Question Q5KID2
Did your school age child(ren) bring information about flood awareness home from school within the past year?

[18.0] Yes
[75.0] No
[7.0] Not Sure

Question Q5KID3
Has your child talked to you about flood safety that he/she learned at school?

[21.1] Yes
[77.3] No
[1.6] Not Sure

Question Q6INSUR[26]
How much do you agree or disagree with the following statements about flood insurance?

Flood insurance is available to everyone
Flood insurance will only cover damage to the structure of a residence
Flood insurance is only available to those who live in a flood zone
Flood insurance is available to cover damage to the contents of a residence

[26] Please see frequency tables in addendum 3, page 87 for percentages.

The cost of flood insurance is the same regardless of whether or not the residence is in a flood zone
If you live in a flood zone you must buy flood insurance

Question Q7FLST
INTERVIEWER: READ THE FOLLOWING VERBATIM BEFORE ASKING THE QUESTION:

[For the next two questions, a flooded street or road is defined as one where water covers the street from curb to curb and you can't see the pavement.]

Have you ever encountered a flooded street or road as either a driver or a passenger of a vehicle while on a road.

[73.0] Yes
[26.8] No
[.1] Not Sure

Question Q7FLST2
Thinking back to the last time you came to a flooded street, which of the following statements best describes what you or the driver did?

[INTERVIEWER: ONLY READ THE FIRST FOUR "RED' CHOICES]

[61.4] Turned back and took an alternate route
[6.9] Waited for the water to go down, and then drove through it
[28.7] Drove through it and made it
[1.2] Drove through it and got stuck
[.9] Don't remember
[.9] Other

Question QFLST3
Why did you drive through it?

[INTERVIEWER: DO NOT READ RESPONSES, USE FOR CODING ONLY]

[10.4] I was in a hurry
[57.8] Didn't think it was unsafe to do so
[2.9] Thought it would be fun to do
[6.9] Didn't know any better
[1.7] Not sure
[19.7] Other
[.06] Refuse

Question Q8FC
I am going to read a couple of statements please tell me which of is true?

[INTERVIEWER READ THE FIRST TWO 'RED" CHOICES ONLY!]

[63.5] Streets ARE a part of the flood control system
[24.1] Streets ARE NOT a part of the flood control system
[13.4] Don't know

Question Q9RW
Which of the following statements is true?

[INTERVIEWER READ THE FIRST TWO 'RED" CHOICES ONLY!]

[40.4] SOME of the urban runoff and rainwater that travels through the flood control system drains into Lake Mead
[38.2] ALL of the urban runoff and rainwater that travels through the flood control system drains into Lake Mead
[21.4] Don't know

Question Q9RW2
Which of the following statements is true?

[INTERVIEWER READ THE FIRST TWO 'RED" CHOICES ONLY!]

[29.7] The urban runoff and rainwater that travels through the flood control system IS treated.
[43.7] The urban runoff and rainwater that travels through the flood control system IS NOT treated.
[26.5] Don't know
[.1] Refuse

Question QRW3
As a result of knowing that the urban runoff and rainwater are NOT treated, have you changed any behaviors that would help protect the environment?

[38.0] Yes
[57.7] No
[4.3] Not Sure

Question Q9RW4
What have you done as a result?

[INTERVIEWER: DO NOT READ CATEGORIES USE FOR CODING ONLY]

[41][27] Proper disposal of chemicals
[46] Proper disposal of general waste
[33] Proper disposal of oil
[22] Proper disposal/clean up of pet waste
[24] Use of a commercial car wash
[19] Use of organic fertilizers
[.09] Unable to specify
[16] Other

Question Q10BEH
If you knew what to do, would you be willing to change your behavior if you knew it would improve water quality?

[89.5] Yes
[6.7] No
[3.8] Not Sure

Question Q11INFO

Would you like to know more about how to keep the environment clean?

[72.7] Yes
[25.6] No
[1.8] Not Sure

Question Q11INFO2
Where would you like to go to get information on how to keep the environment clean?
[open ended]

Question Q12ZONE
Do you know how to find out if you live in a flood zone?

[52.9] Yes
[42.7] No
[4.4] Not Sure

Question Q12ZONE2
Do you live in a flood zone?

[9.6] Yes
[73.0] No
[17.3] Not Sure Refuse

[27] Percentages are valid from the subset.

Question Q12ZONE3
Do you have flood insurance?

[8.2] Yes
[86.6] No
[5.2] Not Sure

Question Q13RATE
Since you have lived in Southern Nevada, do you think the way flood control is being handled in the area has gotten better, worse, or stayed about the same.

[62.7] Better
[2.0] Worse
[25.1] Stayed about the same
[10.3] Not Sure

Question Q14RATE
Overall, how would you rate the way flood control is being handled in Southern Nevada?

Would you say. . .

[12.2] Excellent
[48.7] Good
[22.8] Fair
[8.2] Poor
[8.1] Not Sure
Refuse

Question Q15TV
Do you have cable television?

[74.3] Yes
[25.4] No
[.3] Not Sure

Question Q15TV2
Have you ever watched the "THE FLOOD CHANNEL" on Cable channels 2 or 4?

[42.8] Yes
[55.7] No
[1.4] Not Sure
[.2] Refuse

Question Q15TV4
What do you remember most from watching the program?

[INERVIEWER: DO NOT READ RESPONSES - USE FOR CODING ONLY & SELECT ALL THAY APPLY]

[40.0][28]The dangers of flash flooding
[.03] Time of year flooding occurs
[29.0] Safety precautions that can be taken
[.04] Where to learn more about flooding
[14] Ways flooding is controlled
[.02] Availability of flood insurance
[.09] Other
Not Sure

Question Q16DEM1
I just have a couple more questions for statistical purposes only.

[INTERVIEWER: TYPE IN "999" FOR REFUSE]

Could you please tell me in what year you were born?
[Variable recoded see report page 5.]
Question Q16DEM2
What is the highest level of education that you have completed?

[7.6] Less than HS graduate
[29.7] HS graduate
[17.5] Some college/trade school
[14.7] Two year college
[16.7] Four year college
[2.8] Post graduate work
[9.9] Post graduate degree
[.04] Don't know
[.08] Refuse

Question Q16DEM3
Interviewer record gender

[48] Male
[52] Female

[28] Percentages are valid from the subset.

Addendum 3

Spanish Instrument

Hola, mi nombre es _____ estoy llamando de UNLV. Estamos haciendo un estudio de parte del Departamento de el condado de Clark una agencia publica. No estamos vendiendo nada o preguntar por ninguna donacion. Todas sus respuestas son confidencial, y sus respuestas son muy importante para este estudio.

Por favor puedo hablar con alguien en la casa major de 18 anos de edad o que ha celebrado el cumpleanos mas reciente?

1. Cual es su sexo?
Masculino
Femenina

2. Cual es su codigo postal?
Ponga “99999” si no tiene respuesta

3. Cuanto tiempo tiene viviendo en el sur de Nevada?
Menos de 6 meses
6 meses o mas pero menos de 1 ano
1 ano o mas pero menos de 3 anos
3 anos o mas pero menos de 6 anos
6 – 10 anos
Mas de 10 anos
No se
Negar la pregunta

4. Esta usted consciente de los peligros de clima que pueden occurrir el su area?
Si
No
No se
Negar la pregunta

5. Que tipo de peligros de clima sabe usted que puede ocurrir en su area?
Inundación
Tormenta de polvo / Mucho viento
Lluvia / Tormenta
Calor
Fuego / Relámpago
Terremotos
No puede especificar
Otro

6. Esta consciente que inundaciones pueden ocurrir.
Si
No
No se
Negar la pregunta

7. Ahora, voy ha leer unas declaraciones y quiero saber si usted-
“Esta de acuerdo”, “Mas o menos”, “No esta de acuerdo” o “Mas o menos no esta de acuerdo”, “No se”, “Negar la pregunta”, con cada uno.
Yo se. . .
De los peligros de inundaciones
Mas o menos el tiempo del ano que inundaciones ocurren
De las precauciones de seguridad relacionado a inundaciones
De los diferentes lugares adonde puedo aprender de inundaciones
Como aprender de diferente maneras de controlar inundaciones en el area
Del seguro para inundación disponible

8. De la lista que voy ha leer por favor diga “Si” o “No” si ha aprendido de inundaciones por estos recursos.
Si, No, No se, o Negar la pregunta
Folleto
Anuncios
Televisión
Radio
Periodico
La revista “Bienvenidos A su Casa”
Internet de Condado de Clark para inundaciones
Familia o amigos

9. Tiene hijos atendiendo primaria?
Guarderia asta quinto grado
Si
No
Negar la pregunta

10. Sus hijos que van a la escuela traen información sobre inundaciones a la casa en el ultimo ano?
Si
No
No se
Negar la pregunta

11. Alguna vez le han hablado sus hijos de precauciones de seguro que pueden tomar para inundación que aprendieron en la escuela?
Si

No
No se
Negar la pregunta

12. Cuanto esta de acuerdo o no esta de acuerdo con estas siguiente declaraciones de seguro para inundación?
De acuerdo, Mas o menos de acuerdo, un poco de acuerdo, no esta de acuerdo, no se, negar la pregunta
Seguro de inundación esta disponible para todos
Seguro de inundación solo cubre danos a propiedades residenciales
Seguro de inundación es solo disponible en zonas a donde ocurren
Seguro de inundación es disponible para cubrir danos de una residencia
Seguro de inundación cuesta lo mismo sin tener en cuenta en que zona esta
Si vive usted en una zona de inundación tiene que comprar esa clase de seguro

13. Alguna vez a tropezado por una calle inundada con agua como el conductor o pasajero.
Si
No
No se
Negar la pregunta

14. Se puede acordar de la ultima vez que esta una calle indundada de agua, cual de esta declaraciones describe lo que usted o el conductor ha hecho.
Se dio una vuelta o se fue por otra calle
Espero que el agua se bajo y después manejo a traves de la calle
Manejo bien a traves de la calle
Manejo a traves la calle y se quedo parado por el agua
No me acuerdo
Otro
Negar la pregunta

15. Por que manejo por la calle inundada de agua?
Esta de prisa
No pensaba que fuera peligroso
Pensaba que fuera algo divertido para hacer
No esta seguro
No se
Otro
Negar la pregunta

16. Voy ha leer unas declaraciones por favor diga cual es verdad?
Calles son parte del sistema de control para inundación
Calles NO son parte del sistema de control para inundación
No se
Negar la pregunta

17. Cual de estas declaraciones son verdad?
ALGUNA agua que calle de lluvia va por el sistema de control para inundación y llega al Lago de Mead
TODA el agua que calle de lluvia va por el sistema de control para inundación y llega al Lago de Mead
No se
Negar la pregunta

18. Cual de estas declaraciones son verdad?
El agua que calle de lluvia va por el sistema de control para inundación es tratado
El agua que calle de lluvia va por el sistema de control para inundación NO esta tratado
No se
Negar la pregunta

19. Conociendo que el agua de la lluvia no es tratado, ha cambiado su comportamiento para proteger el ambiento del planeta?
Si
No
No se
Negar la pregunta

20. Que ha hecho usted como un resultado?
Propiamente disponer de quimicos
Propiamente disponer de basura
Propiamente disponer de aceite
Propiamente disponer de basura de animales
Usar un auto lavado publico
Usar fertilizantes organico
No puedo especificar
Otro

21. Si usted supiera que hacer, fuera dispuesto a cambiar sus maneras para mejorar la calidad del agua?
Si
No
No se
Negar la pregunta

22. Usted quisiera saber mas de cómo ayudar para mantener el ambiente del planeta limpio?
Si
No
No se

Negar la pregunta

23. Adonde quisiera ir usted para información de cómo mantener el ambiente del planeta limpio?

24. Sabe usted como encontrar si vive en una zona de inundación?
Si
No
No se
Negar la pregunta

25. Vive usted en una zona de inundación?
Si
No
No se
Negar la pregunta

26. Tiene usted seguro de inundación?
Si
No
No se
Negar la pregunta

27. Como usted vive en el sur de Nevada, piensa que la manera que controlan la inundación se ha mejorado, peor, o se ha quedado igual.
Mejor
Peor
Quedado igual
No se
Negar la pregunta

28. En total, como piensa que han manejado el sistema de inundación en el sur de Nevada?
Excelente
Bien
Igual
Mal
No se
Negar la pregunta

29. Tiene cable en su televisión?
Si
No
No se
Negar la pregunta

30. Alguna vez ha mirado el canal de “El SISTEMA DE INUNDACION” en canal de cable 2 o 4?
Si
No
No se
Negar la pregunta
31. De que se recuerda mas mirando programa?
Los peligros de la inundación
Los tiempos del ano que ocurre inundación
Las precauciones de seguro que pueden tomar
Adonde ir para aprender de inundación
Diferentes maneras de controlar inundación
Seguro de inundación disponible
Otro
No se
Negar la pregunta

Tengo no mas unas preguntas mas solo por razones del estudio.
Ponga”99999” si niega la pregunta

32. Por favor me puede decir en que ano nacio usted?

33. Cual es el nivel de educación que ha terminado?
Parte de la escuela secundaria
Todos los estudios de la escuela secundaria
Algunos Estudios Universitarios/Tecnicos
Dos anos de Universidad
Cuatro anos de Universidad
Trabajo de postgraduado
Titulo de postgraduado
No se
Negar la pregunta

Muchas gracias por contestar las preguntas para el estudio y tenga buen dia.

Addendum 4: SPSS Frequency File/Flood Data 2006

Frequency Tables

Interviewer Record Gender

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Male	375	47.5	47.5	47.5
	Female	415	52.5	52.5	100.0
	Total	790	100.0	100.0	

Area Reside In

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Southeast	269	34.1	34.7	34.7
	Northeast	131	16.6	16.9	51.6
	Southwest	112	14.2	14.5	66.1
	Northwest	227	28.7	29.3	95.4
	Outlying	13	1.6	1.7	97.0
	Refuse	23	2.9	3.0	100.0
	Total	775	98.1	100.0	
Missing	System	15	1.9		
Total		790	100.0		

How long have you lived in Southern Nevada?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Less than 6 mos.	20	2.5	2.5	2.5
	6 mos. to less than 1 yr.	28	3.5	3.5	6.1
	1 yr. to less than 3 yrs.	79	10.0	10.0	16.1
	3 yrs. to les than 6 yrs.	122	15.4	15.4	31.5
	6 to 10 yrs.	136	17.2	17.2	48.7
	10+ years	403	51.0	51.0	99.7
	Not Sure	2	.3	.3	100.0
	Total	790	100.0	100.0	

Are you aware of any weather related dangers?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	613	77.6	77.6	77.6
	No	171	21.6	21.6	99.2
	Not Sure	6	.8	.8	100.0
	Total	790	100.0	100.0	

Floods / Flash Floods

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0	289	36.6	36.6	36.6
	Floods / Flash Floods	501	63.4	63.4	100.0
	Total	790	100.0	100.0	

Duststorms / High winds

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0	649	82.2	82.2	82.2
	Duststorms / High winds	141	17.8	17.8	100.0
	Total	790	100.0	100.0	

Heavy Rain / Thunder Storms

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0	663	83.9	83.9	83.9
	Heavy Rain / Thunder Storms	127	16.1	16.1	100.0
	Total	790	100.0	100.0	

Heat

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0	678	85.8	85.8	85.8
	Heat	112	14.2	14.2	100.0
	Total	790	100.0	100.0	

Fire / Lightning

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0	719	91.0	91.0	91.0
	Fire / Lightning	71	9.0	9.0	100.0
	Total	790	100.0	100.0	

Earthquake

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0	738	93.4	93.4	93.4
	Earthquake	52	6.6	6.6	100.0
	Total	790	100.0	100.0	

Unable to specify

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0	786	99.5	99.5	99.5
	Unable to specify	4	.5	.5	100.0
	Total	790	100.0	100.0	

Other

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0	759	96.1	96.1	96.1
	Other	31	3.9	3.9	100.0
	Total	790	100.0	100.0	

Are you aware that flash flooding can occur?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	246	31.1	85.1	85.1
	No	42	5.3	14.5	99.7
	D/K	1	.1	.3	100.0
	Total	289	36.6	100.0	
Missing	System	501	63.4		
Total		790	100.0		

I know about the dangers of flash flooding.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Agree	732	92.7	92.7	92.7
	Somewhat Agree	21	2.7	2.7	95.3
	Disagree	16	2.0	2.0	97.3
	Don't Know	21	2.7	2.7	100.0
	Total	790	100.0	100.0	

I know about the time of year flash flooding is more likely to occur.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Agree	534	67.6	67.6	67.6
	Somewhat Agree	103	13.0	13.0	80.6
	Somewhat Disagree	17	2.2	2.2	82.8
	Disagree	72	9.1	9.1	91.9
	Don't Know	64	8.1	8.1	100.0
	Total	790	100.0	100.0	

I know about safety precautions relating to flash flooding.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Agree	610	77.2	77.2	77.2
	Somewhat Agree	78	9.9	9.9	87.1
	Somewhat Disagree	9	1.1	1.1	88.2
	Disagree	47	5.9	5.9	94.2
	Don't Know	46	5.8	5.8	100.0
	Total	790	100.0	100.0	

I know about resources available to learn more about flash flooding.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Agree	334	42.3	42.3	42.3
	Somewhat Agree	107	13.5	13.5	55.8
	Somewhat Disagree	27	3.4	3.4	59.2
	Disagree	225	28.5	28.5	87.7
	Don't Know	97	12.3	12.3	100.0
	Total	790	100.0	100.0	

I know about ways in which flooding is controlled in the area.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Agree	449	56.8	56.8	56.8
	Somewhat Agree	128	16.2	16.2	73.0
	Somewhat Disagree	30	3.8	3.8	76.8
	Disagree	97	12.3	12.3	89.1
	Don't Know	86	10.9	10.9	100.0
	Total	790	100.0	100.0	

I know about the availability of flood insurance.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Agree	541	68.5	68.5	68.5
	Somewhat Agree	46	5.8	5.8	74.3
	Somewhat Disagree	12	1.5	1.5	75.8
	Disagree	114	14.4	14.4	90.3
	Don't Know	76	9.6	9.6	99.9
	Refuse	1	.1	.1	100.0
	Total	790	100.0	100.0	

Brochure

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	193	24.4	24.4	24.4
	No	593	75.1	75.1	99.5
	D/K	4	.5	.5	100.0
	Total	790	100.0	100.0	

Billboard

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	366	46.3	46.3	46.3
	No	419	53.0	53.0	99.4
	D/K	5	.6	.6	100.0
	Total	790	100.0	100.0	

Television

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	688	87.1	87.1	87.1
	No	99	12.5	12.5	99.6
	D/K	3	.4	.4	100.0
	Total	790	100.0	100.0	

Radio

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	439	55.6	55.6	55.6
	No	345	43.7	43.7	99.2
	D/K	6	.8	.8	100.0
	Total	790	100.0	100.0	

Newspaper

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	475	60.1	60.1	60.1
	No	309	39.1	39.1	99.2
	D/K	6	.8	.8	100.0
	Total	790	100.0	100.0	

Welcome Home Magazine

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	66	8.4	8.4	8.4
	No	715	90.5	90.5	98.9
	D/K	9	1.1	1.1	100.0
	Total	790	100.0	100.0	

Clark County Regional Flood Control District Website

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	146	18.5	18.5	18.5
	No	639	80.9	80.9	99.4
	D/K	5	.6	.6	100.0
	Total	790	100.0	100.0	

Friends and/or other relatives

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	463	58.6	58.6	58.6
	No	326	41.3	41.3	99.9
	D/K	1	.1	.1	100.0
	Total	790	100.0	100.0	

Do you have a child in elementary school?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	128	16.2	16.2	16.2
	No	662	83.8	83.8	100.0
	Total	790	100.0	100.0	

Did your school age children bring informationa bout flood awareness home from school within the past year?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	23	2.9	18.0	18.0
	No	96	12.2	75.0	93.0
	D/K	9	1.1	7.0	100.0
	Total	128	16.2	100.0	
Missing	System	662	83.8		
Total		790	100.0		

Has your child talked to you about flood safety that he/she learned at school?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	27	3.4	21.1	21.1
	No	99	12.5	77.3	98.4
	D/K	2	.3	1.6	100.0
	Total	128	16.2	100.0	
Missing	System	662	83.8		
Total		790	100.0		

Flood insurance is available to everyone.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Agree	420	53.2	53.2	53.2
	Somewhat Agree	50	6.3	6.3	59.5
	Somewhat Disagree	12	1.5	1.5	61.0
	Disagree	140	17.7	17.7	78.7
	Don't Know	167	21.1	21.1	99.9
	Refuse	1	.1	.1	100.0
	Total	790	100.0	100.0	

Flood insurance will only cover damage to the structure of a residence.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Agree	199	25.2	25.2	25.2
	Somewhat Agree	67	8.5	8.5	33.7
	Somewhat Disagree	23	2.9	2.9	36.6
	Disagree	183	23.2	23.2	59.7
	Don't Know	317	40.1	40.1	99.9
	Refuse	1	.1	.1	100.0
	Total	790	100.0	100.0	

Flood insurance is only available to those who live in a flood zone.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Agree	140	17.7	17.7	17.7
	Somewhat Agree	31	3.9	3.9	21.6
	Somewhat Disagree	17	2.2	2.2	23.8
	Disagree	401	50.8	50.8	74.6
	Don't Know	200	25.3	25.3	99.9
	Refuse	1	.1	.1	100.0
	Total	790	100.0	100.0	

Flood insurance is available to cover damage to the contents of a residence.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Agree	395	50.0	50.0	50.0
	Somewhat Agree	62	7.8	7.8	57.8
	Somewhat Disagree	13	1.6	1.6	59.5
	Disagree	88	11.1	11.1	70.6
	Don't Know	231	29.2	29.2	99.9
	Refuse	1	.1	.1	100.0
	Total	790	100.0	100.0	

The cost of flood insurance is the same regardless of whether or not the residence is in a flood zone.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Agree	94	11.9	11.9	11.9
	Somewhat Agree	15	1.9	1.9	13.8
	Somewhat Disagree	20	2.5	2.5	16.3
	Disagree	383	48.5	48.5	64.8
	Don't Know	276	34.9	34.9	99.7
	Refuse	2	.3	.3	100.0
	Total	790	100.0	100.0	

If you live in a flood zone you must buy flood insurance.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Agree	284	35.9	35.9	35.9
	Somewhat Agree	21	2.7	2.7	38.6
	Somewhat Disagree	12	1.5	1.5	40.1
	Disagree	308	39.0	39.0	79.1
	Don't Know	164	20.8	20.8	99.9
	Refuse	1	.1	.1	100.0
	Total	790	100.0	100.0	

Have you encountered a flooded street or road as either a driver or a passenger of a vehicle while on a road?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	577	73.0	73.0	73.0
	No	212	26.8	26.8	99.9
	Not Sure	1	.1	.1	100.0
	Total	790	100.0	100.0	

Thinking back to the last time you came to a flooded street, which of the following statements best describes what you or the driver did?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Turned back and took an alternate route	355	44.9	61.4	61.4
	Waited for the water to go down, then drove through it	40	5.1	6.9	68.3
	Drove through it and made it	166	21.0	28.7	97.1
	Drove through it and got stuck.	7	.9	1.2	98.3
	Don't remember	5	.6	.9	99.1
	Other	5	.6	.9	100.0
	Total	578	73.2	100.0	
Missing	System	212	26.8		
Total		790	100.0		

Why did you drive through it?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	I was in a hurry.	18	2.3	10.4	10.4
	Didn't think it was unsafe to do so.	100	12.7	57.8	68.2
	Thought it would be fun to do.	5	.6	2.9	71.1
	Didn't know any better.	12	1.5	6.9	78.0
	Not sure	3	.4	1.7	79.8
	Other	34	4.3	19.7	99.4
	Refuse	1	.1	.6	100.0
	Total	173	21.9	100.0	
Missing	System	617	78.1		
Total		790	100.0		

Streets "Are" "Are NOT" part of the flood control system

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Streets are a part of the flood control system	494	62.5	62.5	62.5
	Streets are NOT a part of the flood control system	190	24.1	24.1	86.6
	Don't know	106	13.4	13.4	100.0
	Total	790	100.0	100.0	

"Some" "All" runoff & rainwater drains into Lake Mead

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	SOME runoff & rainwater drains onto Lake Mead	319	40.4	40.4	40.4
	ALL runoff & rainwater drains into Lake Mead	302	38.2	38.2	78.6
	3	169	21.4	21.4	100.0
	Total	790	100.0	100.0	

Urban runoff is "TREATED" "UNTREATED"

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	The urban runoff and rainwater that travels through the flood control system is treated	235	29.7	29.7	29.7
	The urban runoff and rainwater that travels through the flood control system is NOT treated	345	43.7	43.7	73.4
	3	209	26.5	26.5	99.9
	4	1	.1	.1	100.0
	Total	790	100.0	100.0	

As a result of knowing that the urban runoff and rainwater are NOT treated, have you changed any behaviors that would help protect the environment?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	131	16.6	38.0	38.0
	No	199	25.2	57.7	95.7
	Not Sure	15	1.9	4.3	100.0
	Total	345	43.7	100.0	
Missing	System	445	56.3		
Total		790	100.0		

What have you done as a result?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0	735	93.0	93.0	93.0
	Proper disposal of chemicals	55	7.0	7.0	100.0
	Total	790	100.0	100.0	

What have you done as a result?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0	729	92.3	92.3	92.3
	Proper disposal of general waste	61	7.7	7.7	100.0
	Total	790	100.0	100.0	

What have you done as a result?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0	746	94.4	94.4	94.4
	Proper disposal of oil	44	5.6	5.6	100.0
	Total	790	100.0	100.0	

What have you done as a result?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0	761	96.3	96.3	96.3
	Proper disposal/clean up of pet waste	29	3.7	3.7	100.0
	Total	790	100.0	100.0	

What have you done as a result?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0	758	95.9	95.9	95.9
	Use of a commercial car wash	32	4.1	4.1	100.0
	Total	790	100.0	100.0	

What have you done as a result?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0	765	96.8	96.8	96.8
	Use of organic fertilizers	25	3.2	3.2	100.0
	Total	790	100.0	100.0	

What have you done as a result?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0	778	98.5	98.5	98.5
	Unable to specify	12	1.5	1.5	100.0
	Total	790	100.0	100.0	

What have you done as a result?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0	771	97.6	97.6	97.6
	Other	19	2.4	2.4	100.0
	Total	790	100.0	100.0	

you knew what to do, would you be willing to change your behavior if you knew it would improve water quality?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	707	89.5	89.5	89.5
	No	53	6.7	6.7	96.2
	Not Sure	30	3.8	3.8	100.0
	Total	790	100.0	100.0	

Would you like to know more about how to keep the environment clean?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	574	72.7	72.7	72.7
	No	202	25.6	25.6	98.2
	Not Sure	14	1.8	1.8	100.0
	Total	790	100.0	100.0	

Do you know how to find out if you live in a flood zone?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	418	52.9	52.9	52.9
	No	337	42.7	42.7	95.6
	D/K	35	4.4	4.4	100.0
	Total	790	100.0	100.0	

Do you live in a flood zone?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	76	9.6	9.6	9.6
	No	577	73.0	73.0	82.7
	D/K	137	17.3	17.3	100.0
	Total	790	100.0	100.0	

Do you have flood insurance?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	65	8.2	8.2	8.2
	No	684	86.6	86.6	94.8
	D/K	41	5.2	5.2	100.0
	Total	790	100.0	100.0	

Since you have lived in Southern Nevada, do you think the way flood control is being handled in the area has gotten better, worse, or stayed about the same.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Better	495	62.7	62.7	62.7
	Worse	16	2.0	2.0	64.7
	Stayed about the same	198	25.1	25.1	89.7
	Not sure	81	10.3	10.3	100.0
	Total	790	100.0	100.0	

Overall, how would you rate the way flood control is being handled in Southern Nevada?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Excellent	96	12.2	12.2	12.2
	Good	385	48.7	48.7	60.9
	Fair	180	22.8	22.8	83.7
	Poor	65	8.2	8.2	91.9
	Not sure	64	8.1	8.1	100.0
	Total	790	100.0	100.0	

Do you have cable television?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	587	74.3	74.3	74.3
	No	201	25.4	25.4	99.7
	D/K	2	.3	.3	100.0
	Total	790	100.0	100.0	

Have you ever watched the "THE FLOOD CHANNEL" on Cable channels 2 or 4?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	252	31.9	42.8	42.8
	No	328	41.5	55.7	98.5
	Not sure	8	1.0	1.4	99.8
	Refuse	1	.1	.2	100.0
	Total	589	74.6	100.0	
Missing	System	201	25.4		
Total		790	100.0		

What do you remember most from watching the program?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0	688	87.1	87.1	87.1
	The dangers of flash flooding	102	12.9	12.9	100.0
	Total	790	100.0	100.0	

What do you remember most from watching the program?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0	782	99.0	99.0	99.0
	Time of year flooding occurs	8	1.0	1.0	100.0
	Total	790	100.0	100.0	

What do you remember most from watching the program?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0	717	90.8	90.8	90.8
	Safety precautions that can be taken	73	9.2	9.2	100.0
	Total	790	100.0	100.0	

What do you remember most from watching the program?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0	780	98.7	98.7	98.7
	Where to learn more about flooding	10	1.3	1.3	100.0
	Total	790	100.0	100.0	

What do you remember most from watching the program?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0	754	95.4	95.4	95.4
	Ways flooding is controlled	36	4.6	4.6	100.0
	Total	790	100.0	100.0	

What do you remember most from watching the program?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0	786	99.5	99.5	99.5
	Availability of flood insurance	4	.5	.5	100.0
	Total	790	100.0	100.0	

What do you remember most from watching the program?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0	767	97.1	97.1	97.1
	Other	23	2.9	2.9	100.0
	Total	790	100.0	100.0	

What do you remember most from watching the program?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0	717	90.8	90.8	90.8
	Not sure	73	9.2	9.2	100.0
	Total	790	100.0	100.0	

What do you remember most from watching the program?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0	790	100.0	100.0	100.0

What is the highest level of education that you have completed?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Less than HS graduate	60	7.6	7.6	7.6
	HS graduate	235	29.7	29.7	37.3
	Some college/trade school	138	17.5	17.5	54.8
	Two year college	116	14.7	14.7	69.5
	Four year college	132	16.7	16.7	86.2
	Post graduate work	22	2.8	2.8	89.0
	Post graduate degree	78	9.9	9.9	98.9
	Don't know	3	.4	.4	99.2
	Refuse	6	.8	.8	100.0
	Total	790	100.0	100.0	

first500

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	No	284	35.9	36.1	36.1
	Yes	503	63.7	63.9	100.0
	Total	787	99.6	100.0	
Missing	System	3	.4		
Total		790	100.0		

Spanish

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	No	701	88.7	89.1	89.1
	Yes	86	10.9	10.9	100.0
	Total	787	99.6	100.0	
Missing	System	3	.4		
Total		790	100.0		

Spanish = 0 (FILTER)

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Not Selected	86	10.9	10.9	10.9
	Selected	701	88.7	89.1	100.0
	Total	787	99.6	100.0	
Missing	System	3	.4		
Total		790	100.0		

Any questions regarding this research project or summarized results or for further information please contact:

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