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UNIVERSITY OF NEVADA LAS VEGAS

Clark County Regional Flood Control District
2009 Flood Awareness Survey

Summary of Results

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TABLE OF CONTENTS

RESEARCH METHODOLOGY

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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 first week in October, 2009, the telephone survey was conducted during the period between October 1 and November 4, 2009, the calls were made on various days of the week between the hours of 11:00 a.m. and 8:00 p.m. Each individual interview lasted between five and seven minutes and a total of 840 interviews were completed. Using 2007 figures for Clark County obtained from the Nevada State Demographer, it included approximately 1,701,331 adults over the age of 18 residing in Clark County. Interviewers from the CSC made 22,727 call attempts to complete the 840 interviews. A sample size of 840 yields a margin of error of +/- 3.38% at the 95% confidence level.

In order to obtain a representative sample of the area, telephone numbers were purchased from Survey Sampling, Inc. (SSI). SSI has been providing scientific samples for research since 1977. A list of 7,971 numbers were obtained which included both listed and unlisted working numbers in Clark County.

Random-digit-dialing techniques were used to select respondent households with information developed to use 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 continuous 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 nine (9) 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 (CSC) has 15 interviewing stations. The interviewing staff, which is comprised of a demographically diverse group of 23 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 17.0 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 experienced native speaking Spanish interviewers, who then made follow-up calls in an attempt to complete the interview. There were 89 calls initially coded as a language barrier. From this sub-list of 89, 54 were identified as Spanish speaking respondents, and 49 interviews were completed. This represents 91% of the sub-set and approximately 6% of the completed interviews.

From the sample of 7,971 numbers, 2,733 numbers were not eligible because they were either “fax/data lines” (N = 408), “disconnected numbers” (N = 1335), “non working numbers” (N = 428), “business or group quarters” (N = 449), “cell phones” (N =7), and “no eligible respondent” (N = 106). These disposition codes are defined by the American Association of Public Opinion Researchers (AAPOR). From the list of 5,238 eligible numbers, 840 interviews were completed. Calculating the response rate using AAPOR, Response Rate 6 (RR6)[1] which is the number of complete and partial interviews divided by the number of interviews (complete or partial), plus the number of non-interviews (refusal and break-off plus non-contacts others), plus all cases of unknown eligibility and an estimate of what proportion of the cases of unknown eligibility

[1] Response Rate 6: RR6= (I + P)/(I+P)+(R + NC + O)

actually are eligible, yields a response rate of 26%. The disposition of all numbers is provided in the table below.

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Table 1: Call Dispositions

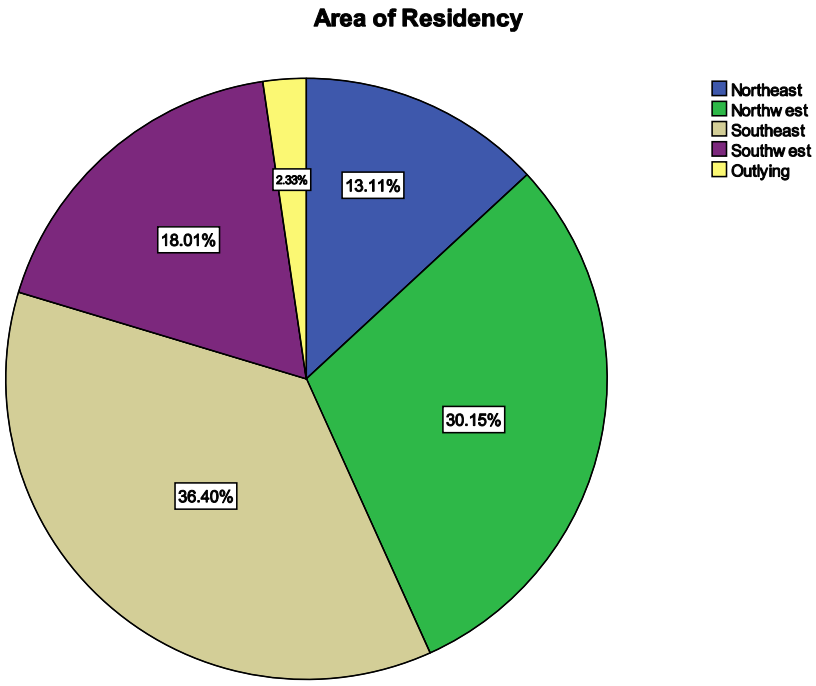
Disposition of Call	N (Count)
Complete	**838**
Partial	**14**
Eligible: Refusal, Household Level	**416**
Eligible: Refusal, Known Respondent	**7**
Eligible: Hard Refusal	**124**
Eligible: Break-off	**271**
Eligible: Respondent Never Available	**61**
Eligible: Ans. Mach, Message	**24**
Eligible: Ans. Mach, No Message	**917**
Eligible: Phys/Mentally Unable	**35**
Eligible: Language Unable	**35**
Eligible: Misc. Unable	**2**
Busy	**176**
No Answer	**1057**
Ans. Mach (Don't Know if HU)	**641**
Technical Phone Problems	**76**
Fax/Data Line	**408**
Non-working Number	**428**
Disconnected Number	**1335**
Number Changed	**3**
Cell Phone	**7**
Call Forwarding	**16**
Business/Government/Other Org	**449**
Group Quarter	
No Eligible Respondent	**106**
Quota Filled	
Callback, Respondent Not Selected	**279**
Callback, Respondent Selected	**46**
Spanish Speaker	**54**
Never Call	**130**
TOTAL ATTEMPTED	**7971**
Not Attempted	**1604**
TOTAL SAMPLE	**9575**

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 51 respondents, (7% of the total) was created by administering the survey in Spanish to non-English speaking respondents.

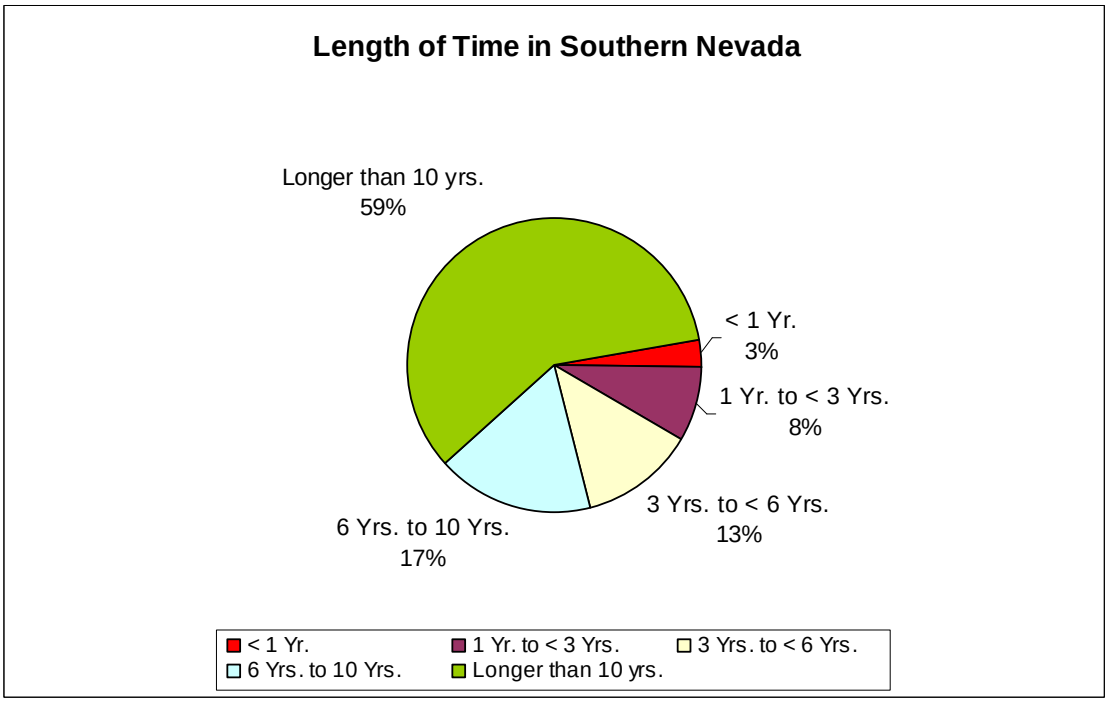
Area of Residency[2]



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

As can be seen from the graph above, 36% (N = 297) of respondents live in the Southeast section of Clark County (38%, 2007), 30% (N = 246) are from the Northwest (27%, 2008), 13% (N = 107) are from the Northeast (15%, 2008), and 18% (N = 147) are from the Southwest (16%, 2008) region of Clark County. Respondents residing in outlying areas such as Mesquite, Boulder City, and Logandale represent 2% (N = 19) of the completed surveys (2 %, 2008).

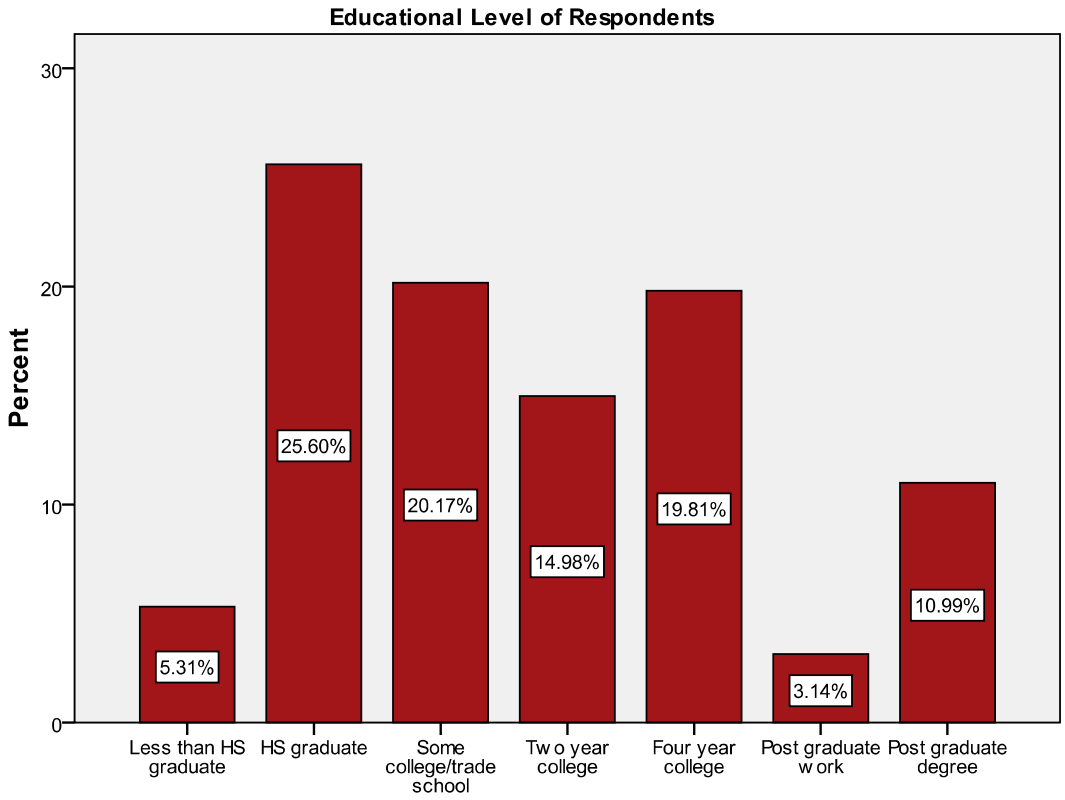
Length of Time Respondent Has Lived in Southern Nevada



As the graph above indicates, more than half of the respondents (59%) are long time residents of Southern Nevada having lived here longer than 10 years (N = 480). This is followed by 17% of respondents who have lived here for between 6 and 10 years (N = 140) and 13% who have lived in Southern Nevada between 3 and 6 years (N = 104). Eight percent (8%) have resided in Southern Nevada between 1 and 3 years (N = 68), and only a very small percentage (3%) indicated that they have lived in Southern Nevada a year or less (N = 26) with 1% of these indicating that they have lived here 6 months or less. These percentages

are similar to those obtained in last year's administration of the survey with the exception of long time residents which increased from 53% in 2008 to 59% in 2009.

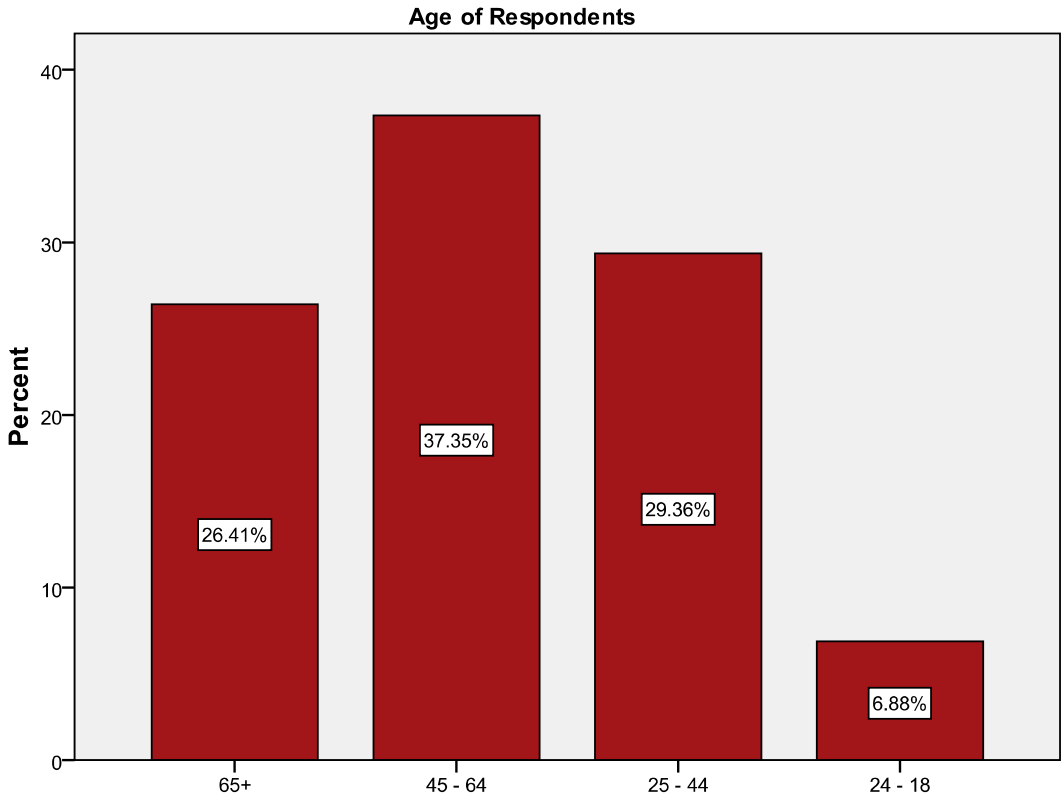
Educational Level of Respondents



The graph above represents the educational level of the survey participants. As is indicated, the response with the highest incidence is the 26% of respondents who have graduated from high school as their highest level of education; this is followed by 20% of respondents who have attended some college but have not obtained a degree and 20% of respondents who have obtained a Bachelor's degree. The percentage of respondents with less than a high school diploma (5%) is the same as the 2008 data; the number of respondents who have obtained a post graduate degree (11%) is similar to the data collected in 2008 (12%) In addition, 3% have completed some post

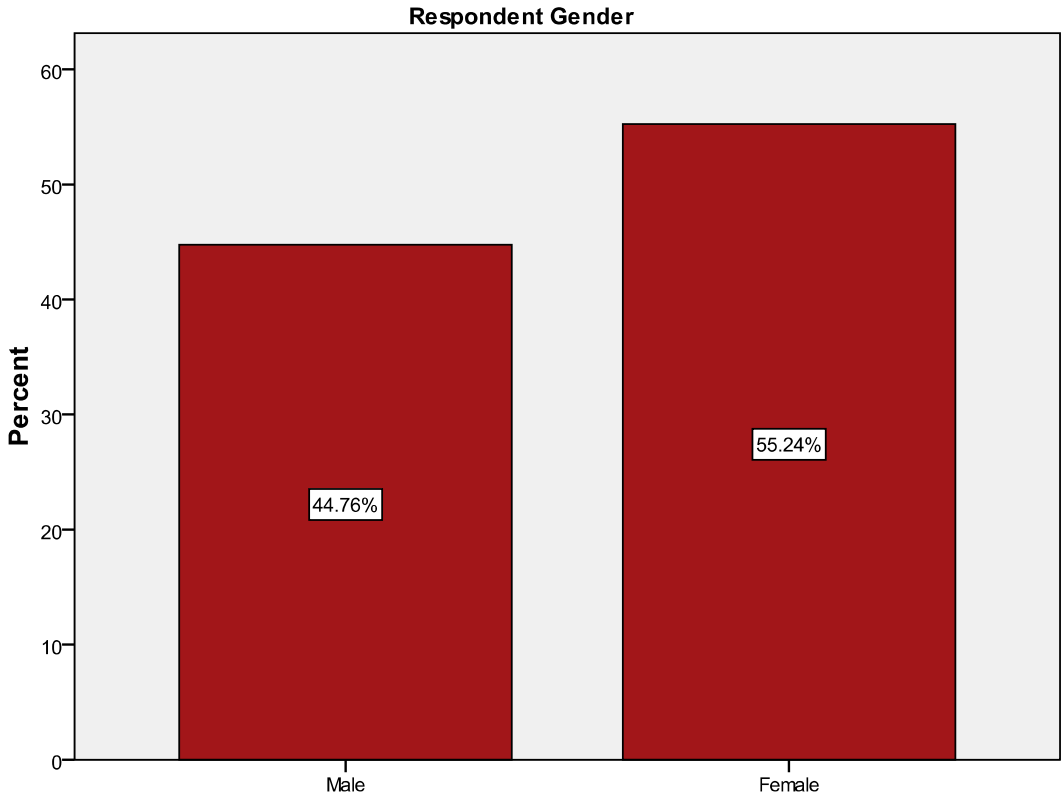
graduate work but not obtained a post graduate degree, and 15% have completed a two year college degree.

Age and Gender



When looking at the age of the respondents, the graph above shows that the largest percentage of respondents (37%) fall between the ages of 45 and 64 (N = 304). This is followed by 29% who are between the ages of 25 and 44 (N = 239). Twenty-six percent (26%) of respondents fell into the oldest age stratum (N = 215). Seven percent of respondents were between the ages of 18 and 24 (N = 56). The median age was 52. This is a year older than the median age obtained in the 2008 administration of the survey, in addition the mean age was 52 and the mode was 48.

Gender Distribution



- 45% Male (N = 376)
- 55% female (N = 464)

Awareness of Flooding and Weather Related Natural Disasters

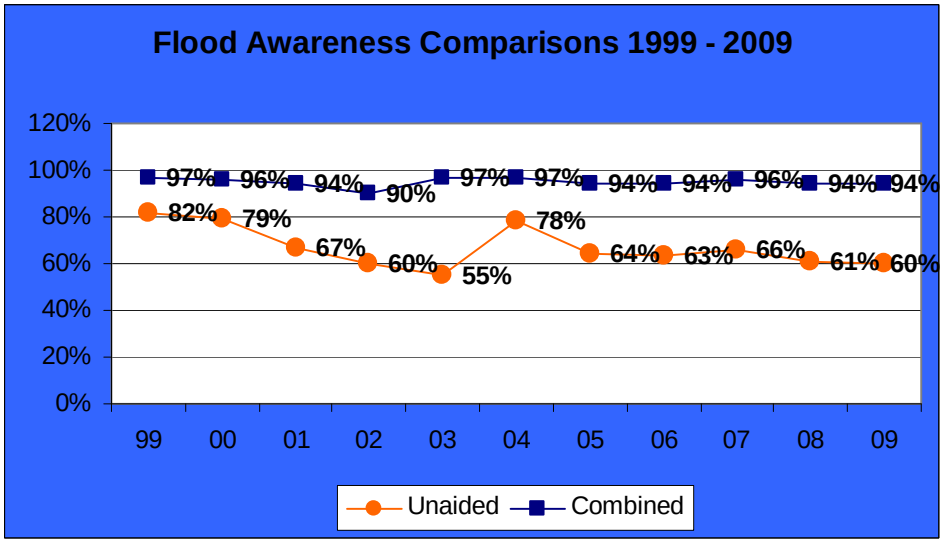
Unaided Awareness: Unless they ask, the respondents are not told for which Clark County Agency that the survey is being conducted. If respondents do inquire, the information is provided to them at the conclusion of the survey. This is to intentionally keep the slate clean for the first question in the survey which is "Are you aware of any weather related dangers that can occur in the area?" Seventy-four percent (N = 622) (74%, 2008) of respondents reported that they were aware of weather related dangers that can occur in the area. These 622 respondents form the sub-set from which the unaided awareness of flooding data

is determined. 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 506 were able to answer "flood" or "flash flood" unaided. This represents 81% of the sub-set and 60% of the entire sample who were able to mention "flood" unprompted.

Aided Awareness: Respondents who reported that they were not aware of any weather related natural disasters that can occur in Clark County (N = 207) and respondents who did not mention "floods" or "flash floods" in the unprompted question (N = 117), or those that had no response (N = 7) were asked directly "Are you aware that flash flooding occurs in the area?" Eighty-four (84%) percent (N =282) of respondents from this sub-set were aware that flash flooding can occur. This is similar to the data collected in 2008 (86%).

Combined/Total Awareness: When looking at the total number of respondents who are aware of flooding (N = 788), 506 of the responses are unaided responses, and 282 are received after prompting the respondent about flooding. Ninety-four percent (94%) of respondents are aware that flooding can occur in Clark County. This figure mirrors the figure for combined awareness that was obtained in the 2008 administration of the survey (94% combined awareness).

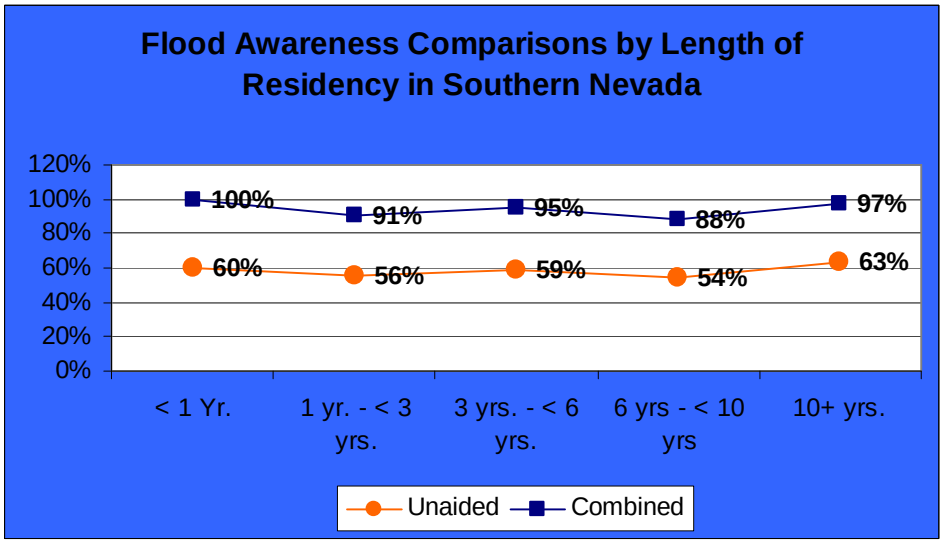
Awareness of Flooding Comparisons 1999 – 2009



As is indicated by the graph above, the combined awareness (total of prompted and unprompted responses), continues to remain very high at 94%. In the eleven years the data has been collected combined awareness has never gone below 90%; in three years, 1999, 2003 and 2004 a high of 97% was obtained for combined awareness. This year (2009) the 94% score is consistent with the mean generated for the past ten years (94.8 %).

When looking at the data for respondents who are able to answer "flooding" or "flash flooding" unaided this year (2009), 60% of the sample did so. In the eleven years that the data has been collected the percentage of respondents who could mention "flooding" of "flash flooding" unaided has fluctuated between a high of 82% in 1999 to a low of 55% in 2003. This year's percentage of 60% is consistent with the mean generated for the past eleven years (66.8%) The data in both of these categories has remained consistent for the past five years.

Awareness of Flooding Among Sub-Populations: Length of Time in Southern Nevada [3]

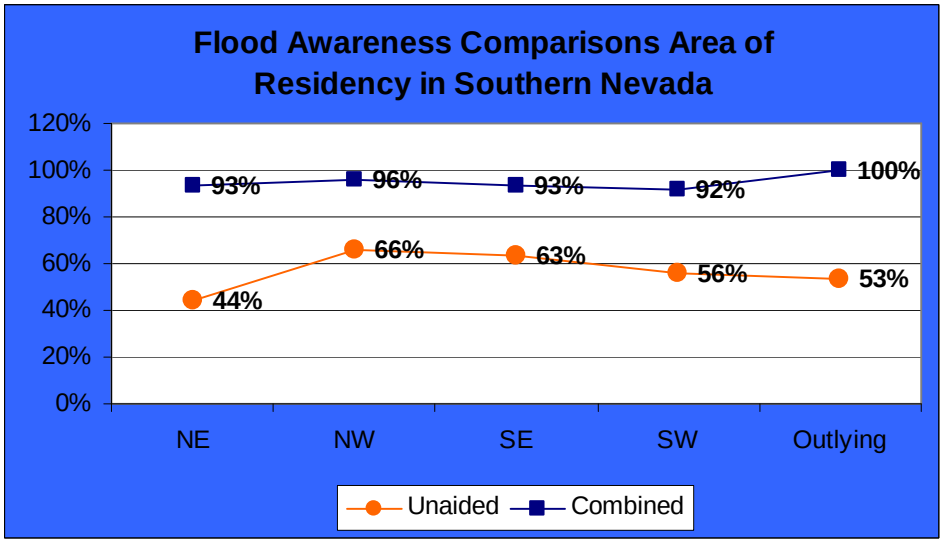


The graph above displays the differences in responses by the length of time that the respondent has lived in Southern Nevada. The graph indicates a consistently high percentage of respondents in all of the length of residency groups are able to mention "floods" or "flash flooding" in an aided or unaided (combined) situation. Percentages for combined awareness range from a low of 88% for those who have lived here between six and ten years to 100% for the newest residents (those who have been here less than a year). This is probably a result of the size of this sub-group. There are only 25 respondents in this group, compared to between 68 (1 to < 3 years) and 481 (longer than 10 years) respondents in the other strata. The percentages for those who have lived in the area for 10 years or longer remained consistently high at 97%.

When looking at unaided awareness by the length of time that the respondent has resided in Southern Nevada, the percentages range from a low of 54% for the respondents who have lived here between six and ten years, to a high of 63% for those who have resided in the area longer than 10 years.

[3] For this graph and all similar graphs unaided data compiled for total number in the group and combined is compiled for the total number of aided and unaided responses in the group.

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



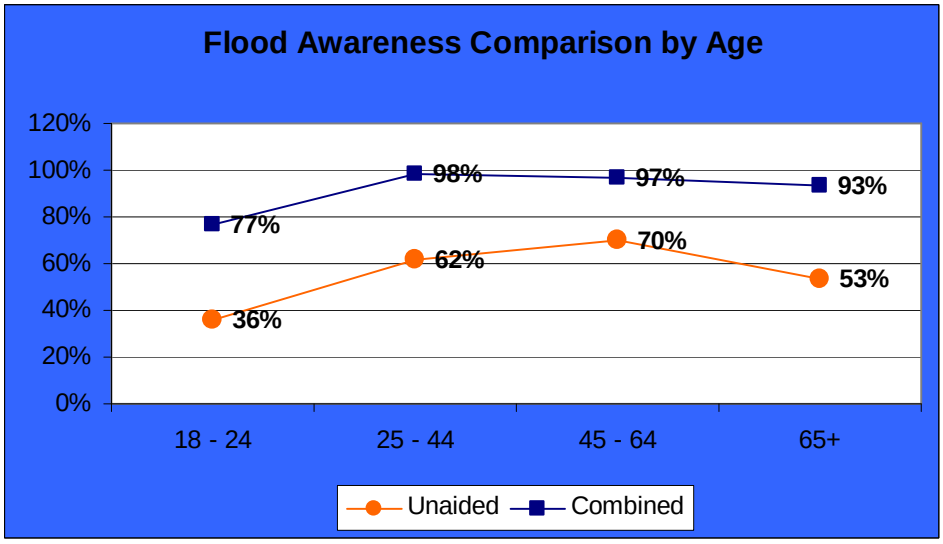
When looking at the data by the area of residency, the combined awareness is fairly consistent; the percentages remain high with combined awareness in all of the geographic areas between 92% (Southwest) and 100% (outlying areas)[4]. Ninety-six percent (96%) of the respondents living in the NW area of the Valley were able to mention "flood" or "flash flooding" in the combined manner. In the Northeast 93% and in the Southeast 93% were able to mention "flood" or "flash flooding" either aided or after being prompted.

When looking at unaided awareness the highest incidence occurs in the Northwest where 66 percent of the respondents are able to mention "flood" or "flash flooding" unaided. Among the other areas, 44 percent of respondents from the Northeast (the lowest incidence), 63 percent from the Southeast and 56 percent from the Southwest are able to mention "flood" or "flash flooding" unaided. In the outlying areas 53% could mention "flood" or "flash flooding" unaided.

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. [5]

[4] The total number of respondents in the outlying areas is very small (N = 19).
[5] Please see pages 73 (Table 14) and 75, Zip map.

Awareness of Flooding Among Sub-Populations: Age



Those in the youngest age stratum only had 36% of its members able to mention "flood" or "flash flooding" unaided. This is a decrease by 14 percentage points between 2008 (50%) and 2009 (36%). Further, the data shows that the relationship between unaided awareness of flooding and age is statistically significant.[6] Those who are in the oldest age strata (65+, 53%) and the youngest age strata (18 – 24, 36%) have the least mention of "flood" or "flash flooding" unaided. They also have the least mention of "flood" or "flash flooding" after being prompted (18- 24, 93%) and 65 and older 77%. In the oldest age strata combined awareness is down 19 percentage points in 2009. .

The highest unaided incident was among 45 to 64 year old respondents. Seventy percent (70%) of this subset are able to mention "flood" or "flash flooding" unaided, and 97% are able to do so in the combined situation. The highest incident of combined awareness was 98% in the 25 – 44 age group followed closely by 97% in the 45 – 64 age group.

Awareness of Flooding Among Sub-Populations: Gender

There is not much difference in flood awareness based on respondent gender. Sixty percent (60%) of males and 61% of females could mention "floods"

[6] Pearson Chi-Square Sig. at .000.

or “flash flooding” unaided. In the combined situation 94% of both males and females could mention “floods” or “flash flooding”. This data mirrors the data collected in 2008.

Other Weather Related Natural Disasters Mentioned

Respondents who answered that they are aware of weather related natural disasters that can occur in Southern Nevada (N = 517) are asked unprompted to name the types of weather related disasters that they are aware of. Respondents could name more than one weather related natural disaster. The following table shows the responses that are mentioned other than “flood” or “flash flood”.

Table 2: Other Types of Disasters Mentioned[7]

Type or Disaster	Percent 2009	Percent 2008	Percent 2007
Dust / Sand Storms / High Winds	36%	40%	55%
Heavy Rains / Thunder Storms	12%	20%	29%
Heat	21%	27%	35%
Fire / Lightning	10%	14%	26%
Earthquakes	10%	11%	9%
Cold/Snow	2%	N/A	N/A
Unable to Specify	.5%	2%	2%
Other	5%	5%	3%

The table above indicates the other weather related natural disasters that are mentioned. The list of responses generated this year does not differ much from the lists generated in the previous year’s administrations of the survey;

[7] All percents are valid percents based on the subset that responded yes to knowing that weather related natural disasters can occur in the area. Percentages exceed 100; question allowed for multiple responses.

however the percentage of respondents that named each is not as high this year (2009) as last year.

There was one category “cold/snow” that was mentioned for the first time last year by five respondents and was attributed to urban sprawl and residents living closer to the mountains edges. This year 2% percent of respondents who were aware that weather related incidents occur in Southern Nevada mentioned snow/cold (N = 12). This is probably due to the memorable five inch snowfall that occurred in Las Vegas in December of 2008.

Included in the responses of those who provided some “other” kind of weather related disasters that can occur in our area are drought (N = 2) contamination, tornados, hail, and ultra violet radiation.

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 are asked to “agree”, “somewhat agree” somewhat disagree”, or “disagree” with each of the statements. The “agree” and “somewhat agree” responses are combined for the “% agree” score that is reported in the table below.

Table 3: Flood Related Issues

Flood Related Issue	% Agree 2009	% Agree 2008	% Agree 2007
I know about the dangers of flash flooding	**97%**	**98%**	**97%**
I know about the time of year flash flooding is most likely to occur in the area	**83%**	**88%**	**84%**
I know about safety precautions relating to flash flooding	**89%**	**93%**	**89%**
I know about the resources available to learn more about flash flooding	**61%**	**67%**	**63%**
I know ways in which flooding is being controlled in the area	**78%**	**79%**	**79%**
I know about the availability of flood insurance	**79%**	**85%**	**77%**

The data shows that the flood related issue questions had a decrease, for the most part, back to the 2007 level. The item that continues to have the highest response is "I know about the dangers of flash flooding". The percentage of respondents who agreed with this statement is 97%, indicating that nearly all residents in Southern Nevada are aware of the dangers of flash flooding. This percentage has remained consistently high for the last three years.

The item that continues to get the lowest percentage is "I know about the resources available to learn more about flash flooding"; 61% agreed with this statement this year, this is a decrease of 5 percentage points. This might be an area for the Flood District to address in its marketing efforts.

I Know About the Dangers of Flash Flooding

Ninety-seven percent (97%) of all respondents indicated that they know about the dangers of flash flooding (N = 808). When looking at this data among

the sub-populations there is not much variation in the responses. 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 at least 93% of respondents agreeing with the statement. In the Southeast, nearly all (99%) of the respondents indicated that they know about the dangers of flash flooding. This was the highest occurrence and was followed by 97% from the Northwest who knew the same. In the Southwest 93% indicated that they know about the dangers of flash flooding as did 95% in the Northeast. All 19 respondents from outlying areas reported knowing about the dangers of flash flooding.

When looking at the data by the length of time that the respondent has resided in Southern Nevada, there is variance in the data, in all groups between 75% and 99% indicated knowledge of the dangers of flash flooding. The highest percentage (99%) was from the oldest residents (ten years or longer).The lowest percentage (76%) was obtained from the respondents who have lived in the Southern Nevada for less than a year. This finding is the opposite of the 2008 finding where all of the newest respondents (less than 6 months) reported they knew about the dangers of flash flooding. Because this group is typically so small the responses of this group were merged into a new group of respondents who have lived in Southern Nevada for a year or less. The percentages of all groups are as follows:

- Less than a year – 76%
- 1 year to less than 3 years – 91%
- 3 years to less than 6 years – 97%
- 6 to 10 years – 92%
- More than 10 years – 99%

The age variable also produced some variance this year while it had not done so in 2008. In the age strata, 84% who reported that they are aware of the dangers of flash flooding fell in the youngest age strata (18 – 24). In addition, 95% of those between the ages 25 and 44 also indicated that they know about the dangers of flash flooding.

There was not much difference based on gender. Ninety-seven percent (97%) of males and 96% of females agreed with the statement.

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

Eighty-three percent (83%) of all respondents reported that they know about the time that flash flooding is most likely to occur (N = 689). 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. The newest residents (1 yr. or less) are the least likely to know about the time of year that flooding occurs; only 56% know so. Among the other length of residency stratum, the respondents who have lived here the longest (10+ years) are the most likely to know the time of year that flooding occurs (90%). The percentages of all groups are as follows:

- Less than a year – 56%
- 1 year to less than 3 years – 76%
- 3 years to less than 6 years – 77%
- 6 to 10 years – 74%
- More than 10 years – 90%

When looking at the data by the area that the respondent resides in, the percentage of agreement is between 81 and 89 percent with the lowest incidence in the Southwest portion of the valley and the highest incidence in the outlying areas of the Valley.

The youngest respondents agree with this statement fewer times than older respondents. Fifty-two percent (52%) of 18 to 24 year old respondents agreed with this statement; this is down 12 percentage points from 2008. In the other age strata between, 81 and 88 percent of the respondents indicated that they know about the time of year that flash flooding is most likely to occur. The highest occurrence is 88% of those in the 45- 64 age group. The responses for all age groups are as follows:

- 18 - 24 –52%
- 25 - 44 – 81%
- 45 - 64 – 88%
- 65+ – 87%

Eighty-three percent (83%) of both males and females agreed with the statement. These figures indicate a decrease of five percentage points from the 2008 data.

I Know About Safety Precautions Relating to Flash Flooding

Eighty-nine percent (89%) of all respondents knew about safety precautions relating to flash flooding (N = 741). This is down three percentage points from last year (92%, 2008) and back to the percentage reported in 2007. When looking at the data by the area that the respondent resides, the percentages range from a low of 74% in the Southwest to a high of 94% in the Southeast. In the Northwest 87% of the respondents know about safety precautions relating to flash flooding while in both the Northeast 89% indicated the same.

When looking at the data by the length of time that the respondent has lived in the Valley, the highest percentage is obtained from respondents who have lived in the area for at 10 years or longer (94%) and the lowest percentage is obtained from those who have lived in the area for less than a year (72%). The percentages of all groups are as follows:

- Less than a year – 72%
- 1 year to less than 3 years – 83%
- 3 years to less than 6 years – 86%
- 6 to 10 years – 85%
- More than 10 years – 94%

When looking at the data by age, the older the respondent, the more likely they are to indicate knowledge of safety precautions relating to flash flooding. Only 62% of respondents in the 18 – 24 age group indicated that they know about safety precautions relating to flash flooding; this is the lowest occurrence, this is down 20 percentage points from 2008 (82%). Eighty-five percent (85%) of those in the 25 – 44 age stratum indicated the same, this is also a decrease of six percentage points from the 2008 data (91%, 2008). In the 44 – 64 age strata and the 65+ group 94% indicated that they know about safety precautions relating to flash flooding, these percentages are similar to the data collected in 2008 on this question.

The responses for all age groups are as follows:

- 18 - 24 –62%
- 25 - 44 – 85%
- 45 - 64 – 94%
- 65+ – 94%

Eighty-nine percent (89%) of both males and females indicated that they know about the safety precautions relating to flash flooding.

I Know About Resources Available to Learn More about Flash Flooding

Sixty-one percent (61%) of all respondents know about the resources available to learn more about flash flooding (N = 497). Once again, this is the item in the series with the lowest overall agreement; however, there is a decrease by six (6) percentage points from the 2008 data (67%).

Seventy percent of Southeast respondents know about the resources available to learn more about flash flooding. The lowest occurrence is in the Southwest where less than half (47%) of the respondents reported knowing about the resources available to learn more about flash flooding. In the Northeast, 62 percent of respondents are aware of the same, as is 52% in the Northwest, and 53% in the outlying areas.

Forty percent (40%) of those who have lived in the area less than a year are aware of the resources available to learn more about flash flooding, this is the lowest incidence based on length of time in the area. Respondents who have lived in the area the longest (10+yrs.) are most likely (65%) 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 a year – 40%
- 1 year to less than 3 years – 55% (+ 19 percentage points)
- 3 years to less than 6 years – 63%
- 6 to 10 years – 58% (-19 percentage points)
- More than 10 years – 65% (-7 percentage points)

There is some variation in responses based on age. Among those in the youngest age strata (18 -24) only 43% know about the resources available to learn about flash flooding. In the oldest age strata (65+) 56% know about the available resources as do 66% in the 46 – 64 age strata and 62% in the 25 – 44 age strata.

Sixty-one percent (68%, 2008) of males know about the resources available to learn more about flash flooding, while 61% of females know the same (66%, 2008).

I Know About Ways Flash Flooding Is Being Controlled In the Area

Seventy-eight percent (78%) of all respondents (79%, 2008) know about ways in which flooding is being controlled in the area (N = 646). The data for this item is fairly consistent with the 2008 data. There are some differences among the sub-groups. The longer the respondent has lived in Southern

Nevada, the more knowledgeable he/she is about the ways that flooding is being controlled. For example, only 56 percent of residents who have lived in Southern Nevada for less than a year know about the ways that floods are controlled in the area, this percentage increases to 86% for residents who have lived here 10 years or longer. The responses from the length of residency strata are as follows:

- Less than a year – 56%
- 1 year to less than 3 years – 66%
- 3 years to less than 6 years – 71%
- 6 to 10 years – 72%
- More than 10 years – 86%

There is a statistically significant relationship between age and knowledge of the ways that flooding is controlled in the area.[8] When looking at the data by age, 45% of the youngest respondents (18 – 24) are aware of the ways that flooding is controlled in the area. While this is the lowest occurrence, it is still an increase of 12 percentage points from the 2008 data (33%). The most likely to be aware of the way floods are controlled (86%) are in the 45 – 64 age strata. In addition, eighty-two percent (82%) of the respondents 65 and older and 74% of those between the ages of 25 and 44 indicated awareness of the ways in which flooding is controlled in the area.

Eighty-four percent of respondents in the Southeast know about the ways that flooding is controlled in the area. Those least likely to know the way flooding is controlled live in the Northwest (67%). In the other groups, 68% in the Northwest and 74% in both the Southwest and outlying areas know the ways that flooding is controlled in the area.

Seventy-nine percent (79 %) of males and 78% of females know about the ways that flash flooding is controlled in the area.

[8] Pearson Chi-Square significant at .000

I Know About the Availability of Flood Insurance

Seventy-nine percent (79 %) of respondents indicated that they know about the availability of flood insurance (N = 646). This is down 6 percentage points from 2008 (85%), but not down as low as 2007 (74%).

Respondents in the Southeast area (85%) and those in the outlying areas (95%) are the most likely to know about the availability of flood insurance. In other areas, 66% of residents in the Southwest, 73% of the respondents from the Northwest, and 62% in the Northeast are aware of the same.

When looking at the data by the length of time the respondent has lived in the area. The highest incidence is 85% from those who have lived in the area the longest. In all of the other area of residence strata the percentage of those who know about the availability of flood insurance is between 71 and 81 percent. The responses from the area strata are as follows:

- Less than a year – 72%
- 1 year to less than 3 years – 81%
- 3 years to less than 6 years – 75%
- 6 to 10 years – 71%
- More than 10 years – 85%

The youngest respondents (18 – 24) are the least likely to know about the availability of flood insurance (57%), however, there is a four percent increase in awareness this year (53%, 2008). Eighty-five percent (85%) of respondents who are between 45 and 64 know about the availability of flood insurance. This is the highest occurrence, however, this is down 4 percentage points from 2008 (89%). In addition, 84% of those 65+ and 73% of those 25 – 44 know about the availability of flood insurance.

Eighty-two percent (82%) of females and 75 percent of males know about the availability of flood insurance.

Sources for Flood Information

In the next section of the survey, respondents are 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	% 2009	% 2008	% 2007
1	Television	88%	90%	90%
2	Newspaper	58%	58%	60%
2	Friends / Relatives	58%	56%	54%
4	Radio	56%	57%	60%
4	Billboards	56%	53%	51%
6	Brochure	26%	26%	21%
7	CCRFCD Website	21%	20%	20%
8	Welcome Home Magazine	8%	5%	6%

The rank order of items is the very similar to the order obtained in 2008 with the exception of friends/relatives and radio have switched positions this year. As in past years, television (88%) is the main source where respondents learn about flash flooding. Newspapers (58%) also continues to be in the top three ways that respondents are getting flood related information along with friends and relatives (58%). This is followed by 56% who indicated that they obtain information about floods from the radio. Also in the fourth ranked position is the 56% who obtain information about floods from billboards. Ranked at the bottom of the list of sources were brochures (26%), the CCRFCD Website (21%) and finally *Welcome Home Magazine* (8%).

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.[9]

a. Brochure: female (57%), between the ages of 45 and 64 (31%) who has lived Southern Nevada three to six years (30%) and currently resides in the Northeast (38%) area

b. Billboard: female (56%) between the ages of 45 and 64 (66%) who has lived in Southern Nevada ten years or longer (63%) and currently resides in the Northwest (60%) area.

c. Television: female (56%) who are 18 - 64 years of age (93%) who have lived in Southern Nevada at least six years (86%), and lives in the Northwest part of the Valley (95%)

d. Radio: Female (55%) between the ages of 25 and 64 (67%) who has lived in Southern Nevada ten years or longer (59%) and currently resides in the Northeast (60%) area.

e. Newspaper: female (59%) aged 65 or older (70%) who has lived in Southern Nevada 10 years or longer (64%) and currently resides in the Southeast (67%) area.

f. Welcome Home Magazine: female (58%) between the ages of 18 – 24 (9%) who has lived in Southern Nevada one – three years (9%) and currently resides in the Northeast (8%) area.

[9] 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.

g. CCRFCD Website: Female (59%) between the ages of 45 and 64 (26%) who has lived in Southern Nevada for ten years or longer (25%) and currently resides in the Southwest (26%) area.

h. Friends and/or relatives: Female (59%) between the ages of 18 and 24 (73%) who has lived in Southern Nevada three to six years (62%) and currently resides in the Northeast (62%) area.

School Age Children

In order to assess the effectives of flood awareness information aimed at school aged children, additional questions are asked of respondents who indicated that they had a child(ren) in elementary school. Sixteen percent (16%) of the respondents indicated that they have a child (ren) in elementary school (N = 137). This sample is large enough to be statistically relevant. These respondents are 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 (18%) of those with elementary-aged child(ren) indicated that their children did bring materials about flood awareness home in the past year (N = 25). This is an increase of 4 percentage points from the 2008 data (14%). All but one of the 25 respondents who indicated that their children brought home materials about flood awareness from school further indicated that that their child(ren) talked about flood safety that was learned at school. This represents 17.5% of the subset of respondents with school age children. This is an increase of 5.5 percentage points from the data collected in 2008 (12%).

Hundred Year Flood Zone

Awareness of Living in a Flood Zone?

Eight percent (N = 67) of respondents reported that they live in a flood zone. This is the same as the data collected in 2008. Forty-five percent (N = 378) reported that they do not live in a hundred year flood zone, and 47% are not sure whether or not they live in a flood zone (N = 394). This is a substantial increase in awareness of whether or not one lives in a flood zone. During the 2008 administration of the survey more than half (62%) were not sure whether or not they resided in a flood zone. However, there remains a discrepancy in understanding that if you live in a flood zone you must buy flood insurance. Sixty-seven respondents said they live in a flood zone and only 15 answered (unprompted) that they have flood insurance. After being read a description of flood insurance 40 of the 67 reported having flood insurance. That still leaves 27 or 40% of the respondents who live in a flood zone that reported they do not have flood insurance. This further emphasized the District's need to address the issue of flood insurance in its flood awareness messaging. Unless the respondent owns the property outright, they are required to purchase a flood insurance policy if they live 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. Twelve percent (N = 101) of all respondents reported that they have flood insurance. This mirrors the data obtained in 2008 (12%). Of the respondents who reported that they live in a flood zone and are therefore required to purchase flood insurance, 15 respondents reported that they have flood insurance. This represents 22% of those that live in a flood zone and are required to have flood insurance that actually have it. Sixty-seven percent (N = 45) of those who reported living in a flood zone reported that they do not have flood insurance and 10% (N = 7) are not sure.

Flood insurance is a separate policy from homeowners insurance to cover flood damage from a weather related event. Do you have such a policy?

This question was added in 2007 to try to determine if respondents are truly cognizant of what flood insurance is. All respondents were read this definition of flood insurance. "*Flood insurance is a separate policy from homeowners insurance to cover flood damage from a weather related event"* and asked *"Do you have such a policy?"* After hearing the definition of flood insurance 141 respondents (17 %) indicated that they have flood insurance. The cross tabulations below show the movement in responses from the unaided question (Do you have flood insurance) to the aided question (Flood insurance is a separate policy from homeowners insurance to cover flood damage from a weather related event).

Flood Zone Residents (N= 67)

Flood Zone Residents: Aided and Unaided Awareness of Having Flood Insurance Cross tabulation

Count

		Flood insurance is a separate policy from homeowners insurance to cover flood damage from a weather related event. Do you have such a policy?			Unaided Total
		Yes	No	Not sure	
Do you have flood insurance	Yes	*15*	*0*	*0*	*15*
	No	*6*	*37*	*2*	*45*
	Don t Know	*0*	*3*	*4*	*7*
Total		*21*	*40*	*6*	*67*

To read this and the following cross tabulations; the rows represent the unaided responses and the columns represent the aided responses. Thus the 15 respondents who unaided answered that they live in a flood zone did not change

their responses after hearing a description of what flood insurance is. Of the 47 who unaided said they did not have flood insurance, 6 moved to yes (the correct response for someone living in a flood zone) and 37 continued to say no and two were not sure. Finally of the 7 respondents who initially were not sure whether or not they had flood insurance four remained unsure and three indicated that they do not have flood insurance.

Non Flood Zone Residents (N= 378)

Non-Flood Zone Residents: Aided and Unaided Awareness of Having Flood Insurance Cross Tabulation

Count

		Flood insurance is a separate policy from homeowners insurance to cover flood damage from a weather related event. Do you have such a policy?			Unaided Total
		Yes	No	Not sure	
Do you have flood insurance	Yes	*40*	*3*	*2*	*45*
	No	*29*	*279*	*6*	*314*
	Don t Know	*2*	*8*	*9*	*19*
Total		*71*	*290*	*17*	*378*

Again, the rows represent the unaided responses and the columns represent the aided responses. Of the 40 respondents who do not live in a flood zone and are not required to purchase flood insurance who initially said that they had flood insurance, three changed their response to no and two to not sure after hearing a description of flood insurance. Of the 314 respondents who unaided responded that they do not have flood insurance, after being read a description of flood insurance 279 indicated that they do not have flood insurance, 29 reported that they do have flood insurance and six were not sure. Initially 19 respondents were not sure whether or not they had flood insurance, after hearing

a description of flood insurance nine remained unsure, eight responded negatively and two indicated that they do have flood insurance.

Respondents Not Certain If they Live in a Flood Zone (N = 394)

Uncertain of Flood Zone Status: Aided and Unaided Awareness of Having Flood Insurance Cross Tabulation

Count

		Flood insurance is a separate policy from homeowners insurance to cover flood damage from a weather related event. Do you have such a policy?			Unaided Total
		Yes	No	Not sure	
Do you have flood insurance	Yes	*29*	*6*	*8*	*43*
	No	*19*	*276*	*14*	*309*
	Don t Know	*4*	*15*	*23*	*42*
Total		*52*	*297*	*45*	*394*

Three-hundred and ninety four respondents were not sure whether or not they reside in a flood zone. In the unaided question (Do you have flood insurance) 43 responded yes, After being read a description of flood insurance 29 responded yes, six responded no and eight were not sure. Initially 309 respondents reported that they do not have flood insurance. After hearing the description, 276 said that they do not have flood insurance, 19 indicated that they have flood insurance and 14 were not sure. Forty-two respondents were not sure whether or not they had flood insurance in the unaided question. After hearing a description of flood insurance 23 were still unsure, fifteen reported that they did not nave flood insurance and four said that they did have flood insurance.

Flood Insurance Issues

This series of questions is asked of all respondents. The respondents are asked whether each of the statements read to them is true or false. This is different than in other years when respondents to agree or disagree with each of the statements. In addition to asking whether the respondent knew if flood insurance is available to everyone, respondents are also asked if flood insurance is only available to those living in a flood zone, whether flood insurance costs the same whether or not the residence is in a flood zone. They are also asked if homeowners insurance covers flood damage from a storm and whether there is a requirement to buy flood insurance if the residence is in a flood zone.

The following table shows the results obtained. There is no comparative data. This is new benchmark data for changing the question from an agree/disagree question to a true/false question.

Table 5: Flood insurance issues

Question	Correct	Incorrect	Unable to Answer
Flood insurance is available to everyone (True)	**65%**	**23%**	**12%**
Flood insurance is only available to those who live in a flood zone (False)	**73%**	**15%**	**12%**
The cost of flood insurance is the same whether or not you live in a flood zone (False)	**55%**	**15%**	**30%**
If you live in a flood zone you must buy flood insurance (True)	**30%**	**55%**	**15%**
Homeowners insurance covers flood damage from a storm (False)	**67%**	**18%**	**14.5%**

Item 1, "*flood insurance is available to everyone".* Sixty-five percent (N = 543) responded correctly, 23% (N = 197) answered incorrectly and 12% (N = 97) are not sure whether the answer was true or false.

Item 2, "*Flood insurance is only available to those who live in a flood zone" received the highest percentage of correct responses. Seventy-three percent (N = 610) responded correctly. Fifteen percent did not know the answer (N = 129) and 12% (N = 100) did not provide a response*

Item 3, *"flood insurance costs the same regardless of whether or not the residence is in a flood zone" – 55% (N = 464) responded correctly, 15% (N = 124) answered incorrectly and 30% (N 251) did not know how to respond. This item had double the percentage of non-responders than the other items.*

Item 4, *"if you live in a flood zone you must buy flood insurance"* produced the lowest number of correct responses. Thirty percent (N = 248) knew the answer, while 55% did not respond correctly (N = 461); 15% (N = 129) were unable to respond.

Item 5, *"homeowners insurance covers flood damage from a storm" was answered correctly by 67% (N = 562). Eighteen percent (N = 154) did not know the answer and 14.5% (N = 122 were unable to respond either true or false.)*

Experience with Flooded Roads

For the next part of the survey, respondents 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-four percent (N = 619) of respondents reported that they had encountered a flooded street. This percentage is similar to the percentage that reported the same in 2008 (76%). Respondents who had encountered a flooded street 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 are asked to define why they made that choice.

Good or Appropriate Choices

Seventy percent (N = 426) of respondents made a good or appropriate choice when encountering a flooded road in Clark County. This is up three percentage points from 2008 (67%). By far the largest percentage of respondents who made a good or appropriate choice (64 %) "turned back and took an alternate route" (N = 393). Seven percent (7%) "waited for the water to go down then drove through it" (N = 33).

When looking at the data by how long a respondent has lived in the area and deciding to take an alternate route when encountering a flooded road or street, the highest occurrence is the 69% of those who have lived in the area for one to three years. Among the other length of residency groups 64% of those who have lived here six to ten years turned around and took an alternate route when encountering a flooded road or street, as did 65% of those who have been here longer than 10 years. The lowest occurrence was the 60% who have been in the area between three and six years.

There was not much variance in who decided to take an alternate route when encountering a flooded street by age. In all of the age strata between 61 percent (65+ group) and 67 percent (45 – 64) turned around and took an alternate route. In the 25 – 44 age group 64% turned around and took an alternate route as did 62% in the 18 – 24 age group.

When looking at the data by the area of the valley that the respondent resides in the highest incidence is the 68% (N = 67) in the Southwest area who turned around and took an alternate route; the lowest was 62% (N = 141) in the Southeast who did the same, as did 66% (N = 8114) in the Northwest and 66% (N = 68) in the Northeast. Females (67%) are somewhat more likely than males

(61%) to turn around and take an alternate route when encountering a flooded street or road.

Among the 33 respondents who indicated that they would wait for the water to go down then drive through it, 11 are from the Southeast part of the Valley, 22 have lived in the area longer than ten years, 19 are female and 14 are older than age 65. These are the highest occurrences from each of the stratum.

Poor or Inappropriate Choices

Thirty percent (33% 2008) of respondents made a poor or inappropriate choice when encountering a flooded street or road in Clark County. From this group of 184 respondents, 171 drove through it and made it (93% of the subset and 28% of the sample) while 13 individuals drove through it and got stuck (7% of the subset and 2% of the sample). Those that drove through it and made it are mostly male (55%), between the ages of 45 but not older than 64 years of age (39%) live in the Southeast (39%), and have lived in the area 3 to 6 years (31%). Those that drove through it and got stuck were mostly female (N = 11, 92%), between the ages of 45 but not older than 64 years of age (42%) live in the Southeast (54%), and have lived in the area 3 to 6 years (15%).

The 184 individuals who made a poor or inappropriate choice when encountering a flooded street were asked why. The most often cited reason why a poor choice was made was “didn’t think it was unsafe to do so” (55%, N = 100). This is up 3 percentage points from those that didn’t think it was unsafe to do so in 2008 (52%); this after an increase of 14 percentage points between 2007 and 2008. Nine percent (N = 17) were “in a hurry”, 6% “didn’t know any better” and 2% (N = 4) thought “it would be fun”.

Twenty-seven percent of the individuals (N = 49) provided some “other” reason why they decided to drive through the flooded roadway. There are answers provided this year that have never been included in the past decade that this survey has been administered. Eighteen respondents (37 % of the subset) reported that they decided to drive through the water because they were in a large vehicle. This response has not been previously given.

Eleven respondents (22%) reported that they had no other option but to drive through the water. Eight respondents (16%) reported that they could see that the water was not deep and eight respondents reported that they drove through very cautiously.

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" has increased over the data collected in 2008. This year 62% (N = 518) of respondents are aware that this is true as compared to 57% in 2008. Twenty-eight percent (N = 231) of respondents did not know that streets are a part of the flood control system, while 11% (N = 91) responded that they "didn't know". When looking at the data by the gender of the respondent females 55% (N = 287) are more likely than males (45%, N = 231) to answer correctly.

There is a statistically significant relationship between age and this question.[10] Those over age 65 are the least likely within their age strata to respond correctly (58%) and those in the youngest age group (18 – 24) are the most likely to respond correctly within their age strata (75%).

There is not too much variance in the data based on the length of time that the respondent has lived in the area; the lowest occurrence is the 59% who have lived here between 6 – 10 years and the highest occurrence is the 66% who have lived in the area between one and three years. In the other groups approximately 63% are aware that streets are a part of the flood control system.

When looking at the data by area 59% from the Southwest know that streets are a part of the flood control system as do 63% from the Southeast, 65% from the Northwest and 60% from the Northeast.

[10] Pearson Chi Square significant at .003.

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

The percentage who correctly answered that “all” of the urban runoff that travels through the flood control system drains into Lake Mead increased by 10 percentage points this year and has produced a three year high. Forty-six percent (N = 387) responded correctly while in 2008 only 36% responded correctly and in 2007 the percentage was 37%). Forty percent (N = 337) responded incorrectly that “some” of the runoff drains into Lake Mead“. Fourteen percent (N = 115) did unable to provide a response.

Within the age groups, 55% of youngest respondents (18-24) correctly answered this question; this was the highest occurrence as it was last year when 43% of the 18 – 24 year olds answered that “all” of the urban runoff that travels through the flood control system drains into Lake Mead. In the other age groups 40% of those aged 65 and older, 48% between the ages of 45 - 64 and 51% between the ages of 25 – 45 answered that “all” of the urban runoff drains into Lake Mead.

When looking at the data by how long the respondent has lived in the area 56% of those who have lived in the area for less than a year correctly answered that “all” of the urban runoff travels to Lake Mead. This was the highest occurrence. The lowest incidence was the 45% of all respondents who have lived in the area for at least 6 years. In the three to six year stratum 52% correctly responded as did 46% of those who have lived in the area for three to six years.

Females (59%) are more likely than males (41 %) to respond correctly.

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

Fifty-four percent of respondents (N = 449) correctly responded that the stormwater and urban runoff that travels through the flood control system is untreated. This is an increase by 8 percentage points from the data collected in

2008 (46%). Twenty-nine percent (N = 245) responded incorrectly, and 17% (N = 115) were unable to respond.

Females (59 %) are significantly[11] more likely to know the answer to this than males (40%). When looking at the data by age, the younger the respondent, the more likely he/she is to know that the urban runoff and stormwater that travels through the flood control system is untreated. In the youngest age strata (18 – 24) 55% responded correctly, followed by 38% in the 25 – 44 strata, 26% in the 45 – 64 strata and only 19% in the 65+ group responded correctly. The relationship between age and knowing that stormwater is untreated is statistically significant.[12] When looking at the data by how long the respondent has lived in Southern Nevada, the longer the residency the more likely the respondent is to answer correctly with responses ranging from 8% to 55%.

Have you changed any behaviors to help protect the environment and Lake Mead?

This question was new in 2008 year and replaces an old version which *read "As a result of knowing that urban runoff and rainwater are NOT treated, have you changed any behaviors that would help protect the environment".* Since the structure of the question was changed in 2008, there is comparative data this year. The data is quite diverse and provides good insight into the area resident's insight and response to our environment.

Fifty-six percent (N = 469) reported that they have made behavior changes to help protect the environment and Lake Mead. This percentage mirrors the data collected in 2008 on this question. The respondents who answered affirmatively are asked to define what they had done. The question was asked open ended and interviewers coded the responses into pre-set categories.

[11] Pearson Chi-Square .000
[12] Pearson Chi-Square .000.

Table 6: Behavior changes to protect the environment and Lake Mead

Rank	Behavior Change	2009	2008
1	Water Conservation	28%	28%
2	Proper disposal of general waste	27%	27%
3	Proper disposal of chemicals	18%	22%
4	Desert landscaping	11%	10%
4	Use a commercial car wash	11%	11%
4	Use of green products	11%	9%
7	General recycling	10%	11%
7	Proper Disposal of oil	10%	22%
9	Reuse bags	8%	13%
9	Reporting of clogged storm drains	8%	3%
11	Use of organic fertilizers	5%	5%
12	Proper disposal of pet waste	4%	10%
13	Composting	3%	2%
14	Littering	2%	N/A
14	Stopped boating/ using gas engines	2%	N/A
14	Unable to specify	2%	3%
15	Solar or hybrids	1%	N/A
15	Other	1%	12%

The number one thing that people are doing to help the environment and Lake Mead is some form of water conservation (28%, N = 129). This was also the number one item in the 2008 administration of the survey. This was followed by 27% (N = 125) who indicated that they are properly disposing of general waste and properly disposing of chemicals (18%).

Three items are ranked forth, representing 11% of the subset (N = 49). Those items are desert landscaping, use of a commercial carwash rather than

washing in the driveway, and the use of green products. This was followed by two activities representing 10% of the subset (N = 42). These activities are general recycling and the proper disposal of oil. Next, eight percent (N = 37) of the respondents reported that they are reusing bags and reporting clogged storm drains. Five percent (N = 21) are using organic fertilizers. The other items all had 4% or fewer responses.

The list was categorized as far down as possible to enrich the picture of environmental activities that residents of Clark County are doing to protect the environment and Lake Mead. As a result there were some activities that were not previously listed. Those include respondents who indicated that they stopped "littering", those who reported that they are not boating as often or have even sold their boats or have stopped using gasoline engines, and finally several respondents indicated purchasing hybrid vehicles or solar panels.

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

All participants were asked this question. Ninety-two percent (N = 771) answered yes, they would be willing to change a behavior if they knew it would improve water quality. This is slightly lower than percentage obtained for this item in 2008 (95%). There seems to be a genuine willingness to make behavior changes to help the environment.

Ninety-two percent of both males and females indicated that they are willing to change a behavior to help improve water quality. Only 4% are not willing to make a behavior change to improve water quality and an additional 4% are not sure whether or not they would make a behavior change to improve water quality.

The data also shows that the youngest respondents are the most willing to make a behavior change to improve water quality. Ninety-two (92 %) of those in the youngest age group (18 – 24) are willing to make a behavior change. This percentage drops to 93% for the 25 – 45 age group, 95% for the 46 – 64 age group and finally to 87% in the oldest age group (65+).

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

Sixty-seven percent (N = 565) of respondents indicated that they would like to know more about how to keep the environment clean; this is down slightly from the 69% who reported the same in 2008. There are some differences in the desire to know more about how to keep the environment clean and the age of the respondent. Less than half (49%) of those in the oldest age cohort (65+) want to know more about how to keep the environment clean compared to approximately 75% in all of the other age groups who want the same. Among female respondents, 71% indicated that they want more information, this compared to 65% of males who want more information on how to keep the environment clean. The percentage of males who want to know more about how to keep the environment clean is up 5 percentage points from 2008 (60%).

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

This question was asked open ended to respondents who indicated that they would like more information on how to keep the environment clean (N = 565). The table below shows the most often given responses to this open ended question.

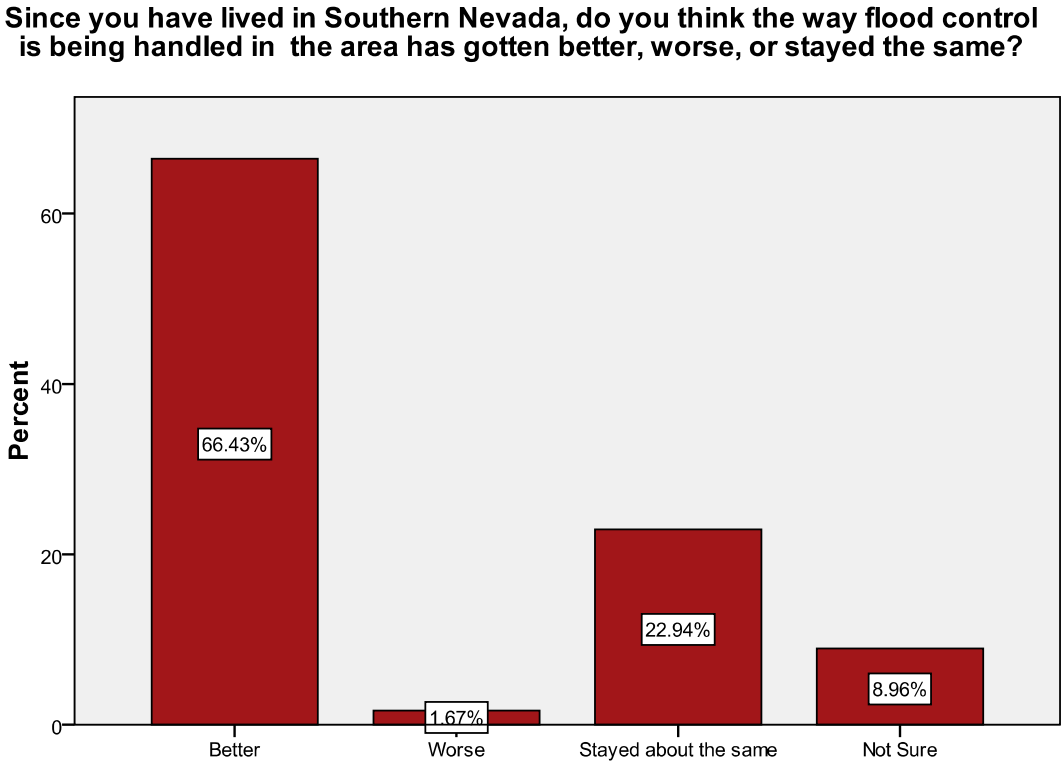
Table 7: Preferred sources for environmental information

Rank	Source of Information	Percent 2009	Percent 2008
1	Internet/Website/Email	56%	54%
2	Mail	25%	24%
3	TV/Radio	23%	15%
4	Newspaper/Magazines	10%	7%
5	Brochure/Flyers	7%	7%
5	Library	7%	5%
7	Government source	3%	5%
8	Not Sure	5%	2%
9	Stores	1%	3%

The most mentioned source for receiving environmental information was the Internet mentioned by 305 respondents (56 %). This was also mentioned first in 2008, and there has been an increase of 2 percentage points from the 2008

data (54%). This was followed by 25% (N = 139) who prefer to receive information by direct mail and 23% who prefer receiving environmental information via television or the radio. Ten percent mentioned newspapers and magazines, while 7% mentioned both brochures or flyers and the library. All of the other sources had 5% of less of the respondents who mentioned 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?



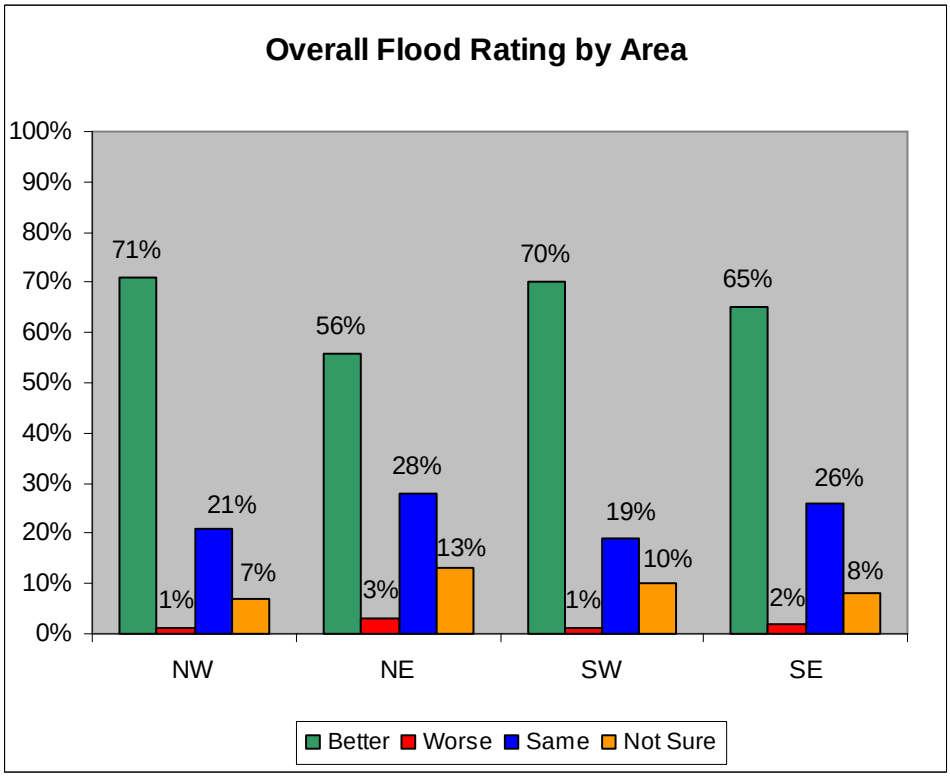
Sixty-six percent (N = 556) of respondents feel that since the time that they have become residents of Southern Nevada the way that flood control is

handled has gotten better. This is up three percentage points from 2008 (63%) Twenty-two percent (N = 192) think that it has stayed about the same and 9% (N = 75) are not sure. Only 2% (N = 14) of respondents think that the way flood control is handled has got worse. These figures are similar to last year's figures.

When looking at the data by gender 70% of females (up 8 percentage points) and 64% of males (down 2 percentage points) indicated that flood control has gotten better since moving to Southern Nevada.

Flood Control Ratings

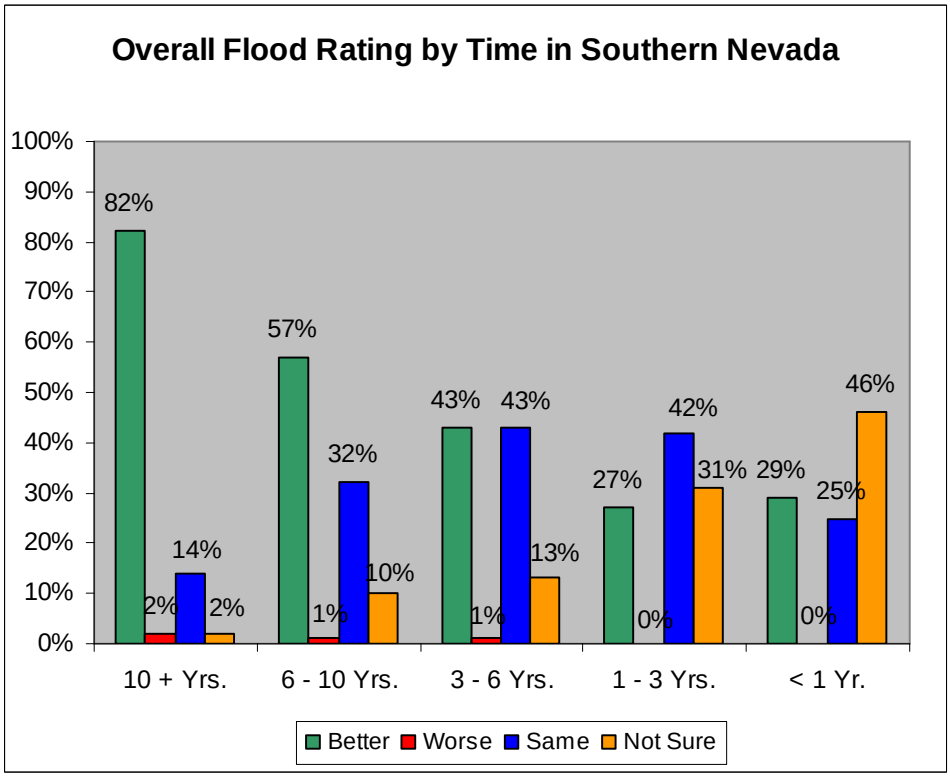
Flood Control Rating by Area



The graph above depicts the flood control rating by area. As the graph shows, there is some variance in the answers from respondents based on the area of the Valley that they live in. Those in the NW (71%) and SW (70%) are the most likely to think that flood control has gotten better. This is followed by 65% in

the SE who think that flood control has gotten better. The lowest occurrence is the 56% in the NE who think the same. This may be a result of respondents in the area being among the newest. In all of the areas between 19 and 28 percent think that flood control has stayed the same, while in all of the areas between 7 and 13 percent are not sure whether or not flood control has gotten better or worse. Only a very small percentage in any of the areas indicated that flood control has gotten worse. The percentages range from 1 to 3 percent. This represents only 13 respondents survey wide who think flood control is getting worse.

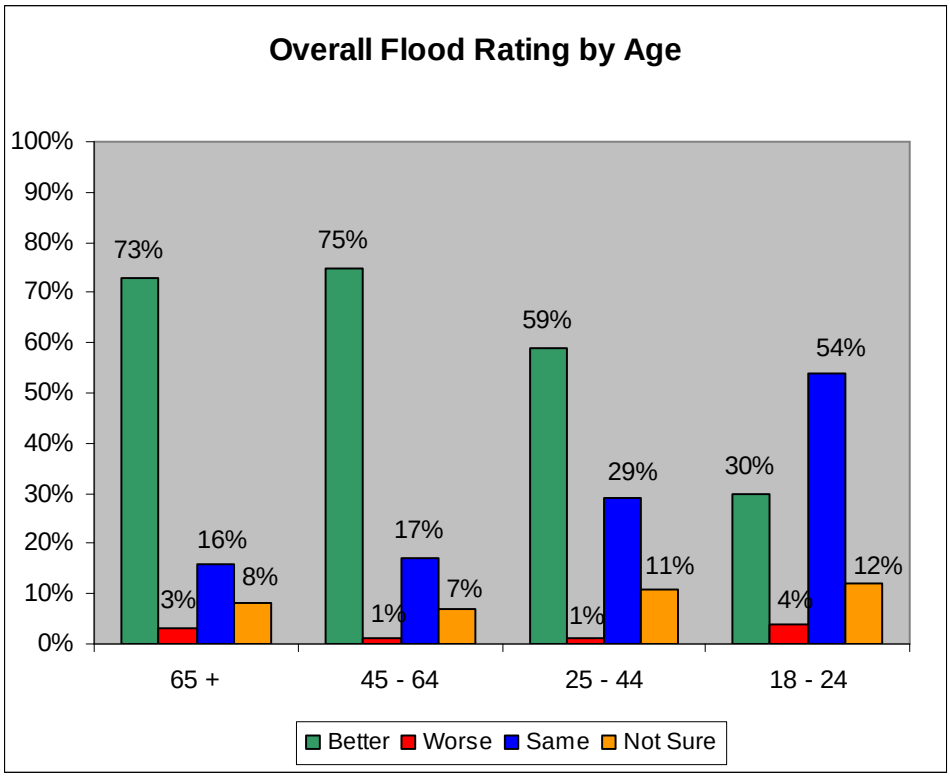
Flood Control Rating by Length of Time Resided in Southern Nevada



The graph 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 are the most likely (82%) to think that the way that flood control is being handled has gotten better. Fifty-seven percent (57%) of those who have lived in the area for six to ten years think

that the way flood control is being handled has gotten better; the percentage for those who think the same among those who have lived here for three to six years is 43%. Not surprising is that the newest residents had the smallest percentage of respondents who reported that flood control has gotten better. They have not lived here long enough to understand the improvements that have occurred to flood control in the Valley. Twenty-seven percent of respondents who have lived here one to three years and 29% of those who have lived here a year or less reported flood control has gotten better.

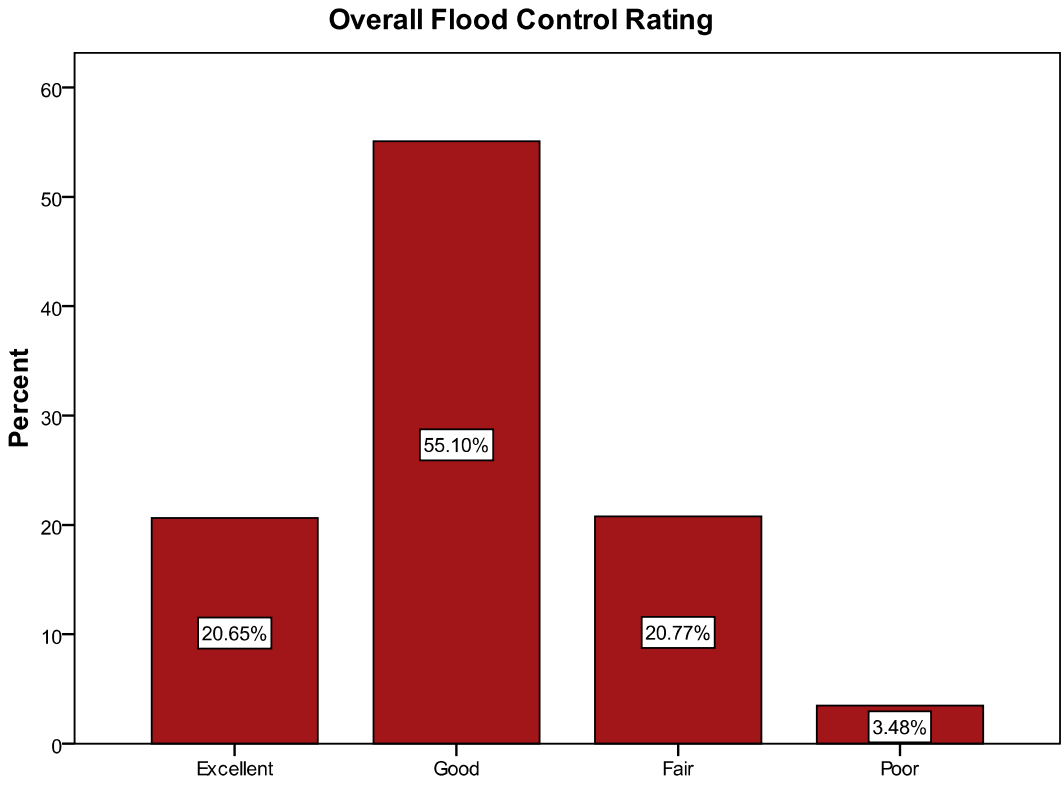
Flood Control Rating by Age



Older respondents are the most likely to think that flood control has gotten better since living here. Seventy-three percent of the 65+ respondents and 75% of the 45 – 64 group reported such. In the 25 – 44 age group 59% reported that flood control has gotten better. The lowest occurrence is the 30%

in the 18 – 24 age group who think that flood control has gotten better. Most respondents (54%) in this age group reported that flood control has stayed the same.

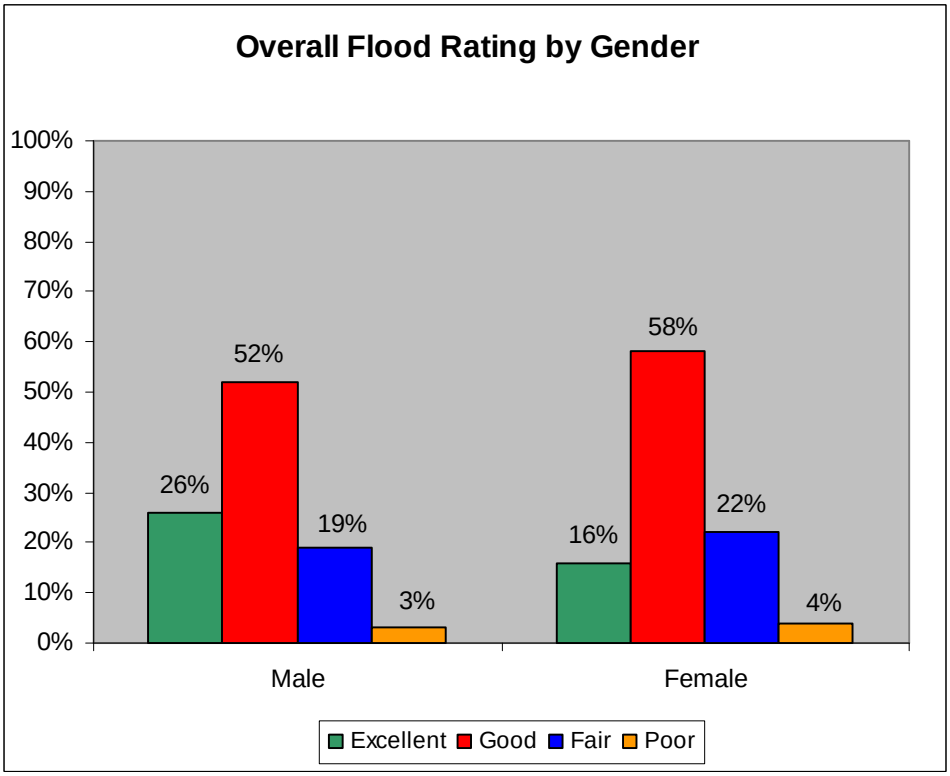
Overall, how would you rate the way flood control is being handled in Southern Nevada?



The survey results show overall that 76% of respondents positively rate the way that flood control is being handled in Southern Nevada; 20% gave flood control an "excellent" rating, while 55% gave flood control a "good" rating. The overall rating is up twelve percentage points from the data collected in 2008 (64%). This gain is most prevalent in the percentage who rated flood control as excellent. In 2008, 12% thought that flood control overall was excellent. This year nearly 21% rated overall flood control as excellent.

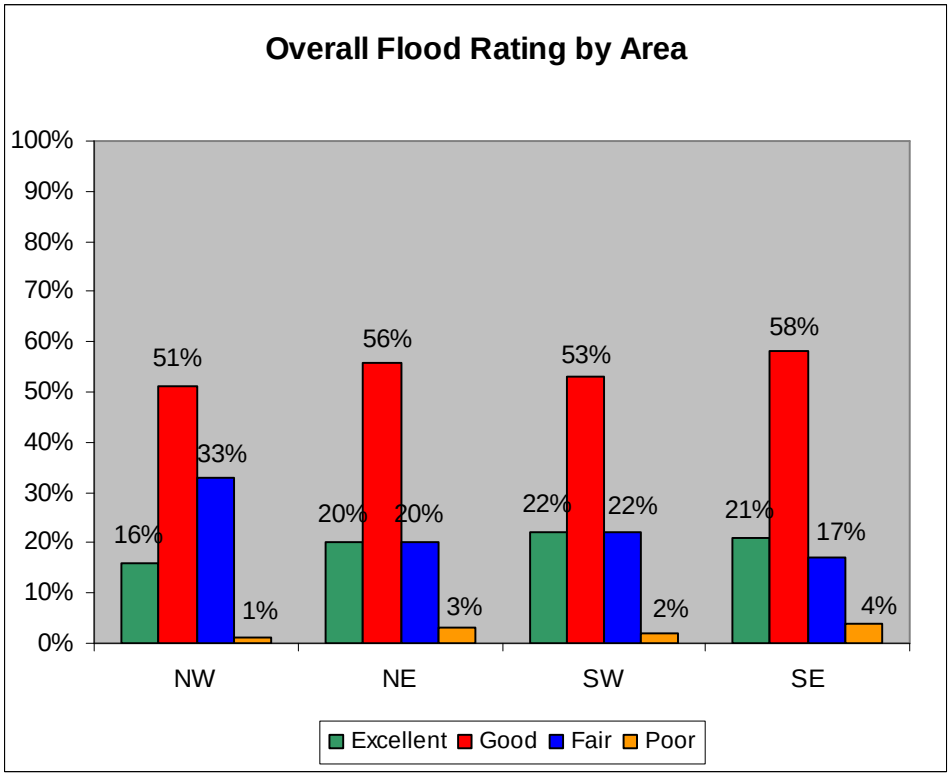
Twenty-one percent (21%) rated flood control “fair”, while 3% gave flood control a “poor” rating (6%, 2008).

Overall Flood Control Rating by Gender



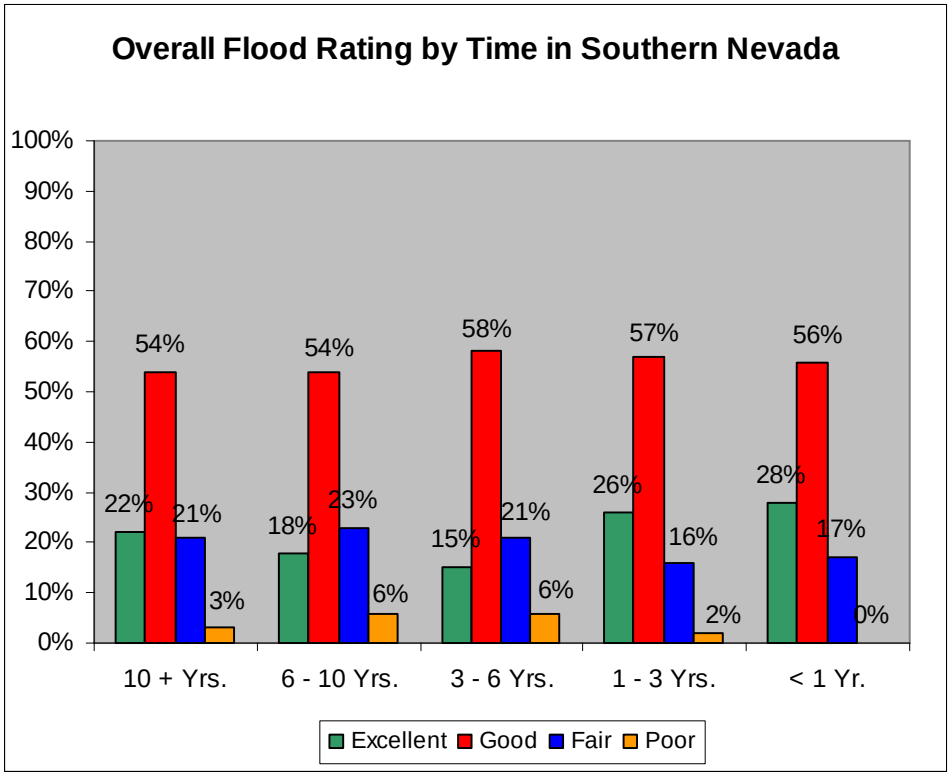
Males (26%) were more likely than females (16%) to rate flood control overall as excellent. In addition 58% of females and 52% of males rated overall flood control as good. Twenty-two percent of females and 19% of males rated flood control “fair” and four percent of females and three percent of males rated flood control as “poor”

Overall Flood Control Rating by Area



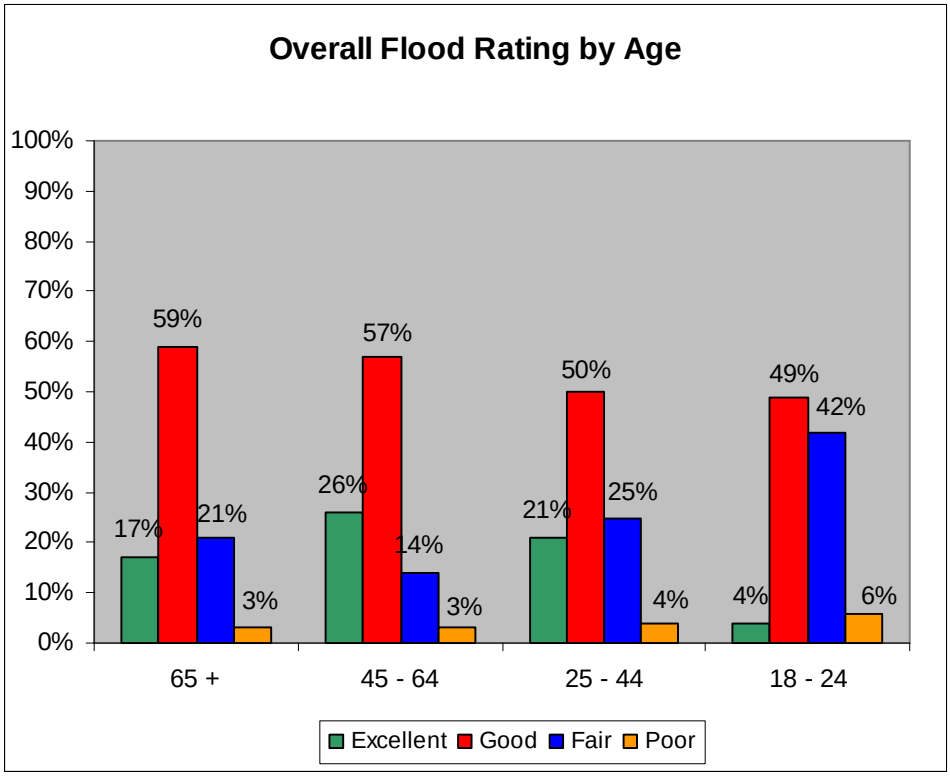
When looking at the graph above which depicts the data by area, there is not too much disparity in the answers. The range of "excellent" responses is from 16% in the NW to 22% in the SW. Those who rate flood control "good" (58%) live in the SE, but the range is very close. In all areas between 51% and 58% rated flood control "good". When looking at the negative responses, a third (33%) from the NW rated flood control "fair". In all of the areas between one and four percent rated flood control overall "poor".

Overall Flood Control Rating by Length of Time in Southern Nevada



The data shows that there is not much difference in how respondents rated flood control overall based on how long they have lived in Southern Nevada. In all of the groups between 54% and 58% rated flood control overall as "good" with the highest occurrence (58%) obtained from those who have lived here three to six years. Those who rated flood control overall as "excellent" ranged from a low of 15% in the group of respondents who have lived here for three to six years to a high of 28% for those who have lived here less than a year. In all of the groups between 16% and 23% rated flood control overall as "fair", and between 2% and 6% rated flood control overall as "poor".

Overall Flood Control Rating by Age



The graph above depicts the data by the age of the respondent. Those in the youngest age group (18 – 24) were the least likely to rate overall flood control positively (53%), while those in the 45 – 64 age group were the most likely (83%). In the other age strata 71% of the 25 – 44 year olds and 76% of those in the 65+ stratum rated overall flood control positively.

Cable Television / Flood Channel

Respondents are asked if they have cable television, and specifically asked to exclude DISH or satellite TV. Those respondents who answered yes (73%) are then asked if they have ever watched the Flood Channel on cable channels 2 or 4. Thirty-nine percent (39%) of those respondents that have cable television reported that they have watched the Flood Channel. This mirrors exactly the data collected in 2008. Those respondents (N = 238) who have

watched the Flood Channel are asked (unprompted) what they remembered most from watching it. The following table provides the rank order of responses.

Table 8: What remembered most from watching Flood Channel

Item	% 2009	% 2008	% 2007
Dangers of flash flooding	41%	45%	48%
Safety precautions	28%	31%	43%
Unable to specify	19%	18%	21%
Where to learn more about flooding	4%	7%	16%
Ways floods are controlled	12%	10%	13%
Other	21%	18%	13%
Time of year flooding occurs	5%	12%	11%
How to protect the environment	0%	5%	4%
Availability of flood insurance	1%	4%	2%

As can be seen from the table above, what respondents remembered the most from watching the Flood Channel is the dangers of flash flooding, 41% percent of respondents reported such. This has been the item most remembered for the past three years. Most of the percentages were down this year, but there are quite a few "other" responses this year, perhaps indicating new themes in programming. There are always respondents who remember "stupid people standing on their cars", and the billboard campaign. Below are additional comments that were obtained in the survey.

Table 9: List of other comments

What Remembered from Watching Flood Channel
A lot of arguing about water rights between Clark County and Northern Nevada.
A lot of stupid people out there.
Awareness.
Basins.
Billboard - Dangers of Weather.
Boring.

Construction of detention basins.
Drainage areas.
History of Las Vegas flooding- things changing over time- no closed captioning though.
Houses were being damaged.
How stupid people are.
How they built flood channels and divert water to the soccer fields.
How to make it better in regards to flooding.
How water can affect your car.
Information was delivered in a dry matter.
The information scared her.
Just being aware when it rains hard.
Litter clogs drains.
Our area was flooded and in the news.
Past events of flooding.
People getting stuck in the flood.
People sitting on top of their cars.
It was informative.
Something about building flood channels.
Stay out of the water.
Talking about past storms and the new campaign.
There was a channel dedicated entirely to flood control. Flooding is a serious issue in Las Vegas.
The cars that were stuck in the water.
The concrete flood channels.
The history of the flood control district and why it was created.
The slogans.
The water channels.
They showed what they had done with the cement washes and talked about flooding. They showed where they had an area that was flooding and they made a soccer field out of it.
They've done a good job of getting to the people they are trying to get too and I enjoy their humor and writing.
Understanding the network of the flood control program.
Watching people trying to drive through the flooded areas.
Water conservation.
Water treatment and drinking water safety.
What was going around in the country because there was nothing going on in the local area with flooding?
Where the water channels are and where they drain.

Demographic Profile of Flood Channel Viewers

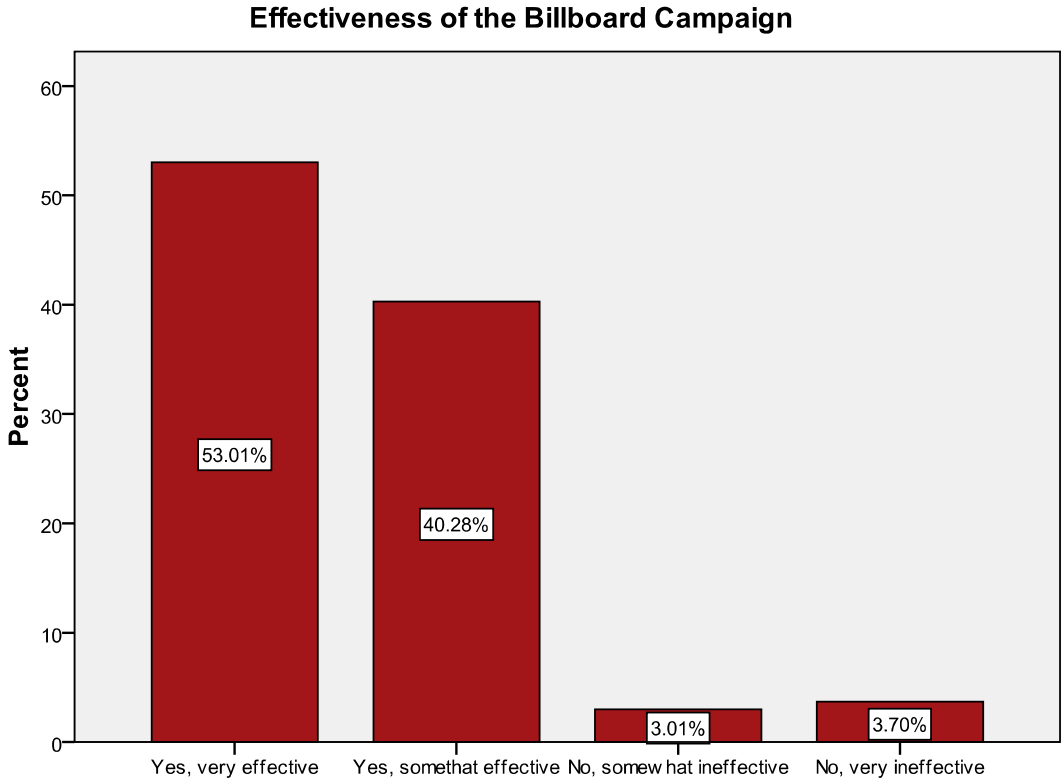
The longer a respondent lives in the area the more likely he/she is to have watched the Flood Channel. Of the 239 respondents who indicated that they watch the Flood Channel 69% have lived here for 20 years or longer. Only 1% of the residents who have lived here for a year or less have watched The Flood Channel.

When you look at the data by area of town respondents in the SE (37%) and the NW (31%) most watched The Flood Channel. Only 13% from the NE have watched it as have 19% from the SW.

Further, Flood Channel watchers are likely to be between the ages of 45 and 64 (49%), and they are more likely to be female (55%) than male (45%). The mean age of Flood Channel viewers is 52. About a quarter of the viewers reported having either a high school diploma or have completed a four year degree.

Flood Safety License Plate Billboard Campaign

The questions on the Flood Safety License Plate advertising campaign were added in 2007. This section of the survey consists of two questions: (1) Have you seen the flood safety license plate advertising campaign (2) do you think that the billboard campaign contest is an effective way to communicate flood control safety to the community. More than half (52%) indicated that they had seen the flood safety license plate advertising campaign. This is similar to the data collected in 2008 (53%). These respondents were asked to rate the effectiveness of the contest as a way to communicate flood safety to the community.



Most respondents (93%) think that the billboard public information campaign is effective, of these more than half (53%) think that it is “very effective” and 40% think the billboard campaign is “somewhat effective. The percent of respondents who think that the billboard campaign is effective is up 6 percentage points from 2008 (87%), and the percent who reported that the campaign is “very effective” is up three percentage points from 49% in 2008 to this years 53%.

Seven percent (7%) do not think the campaign is effective, of these 3% think that the contest is “somewhat ineffective” and 4% think it is “very ineffective”.

Spanish Speaking Respondents

Characteristics of Respondents

Six percent (6%) of the surveys were conducted with Spanish speaking respondents (N=49). This is lower than the number in the Spanish subset in 2008 (7%). There were some significant changes in the Spanish data this year and this is probably due to the small number in the sample. The typical Spanish speaking respondent in this survey is male (63%) between the ages of 25 – 44 (53%) and has either some high school education or has graduated from high school (76%). The majority (78%) have been residents of Southern Nevada between six and ten years; this is the highest occurrence. Nineteen percent (19%) have been residents between three and six years. Only 4% have been in Southern Nevada a year or less.

When looking at the area data for the Spanish Subset, the highest incidence is the 65% who indicated that they live in the Northeast, this followed by 24% who live in the Southwest part of the Valley. In addition 12% live in the Southeast. There are no reported cases in this sample of Spanish speaking respondents from the Northwest.

Unaided and aided awareness

Eighty percent (80%) of respondents in the Spanish speaking sub-group (74% in the overall sample) are aware of weather related dangers that can occur in the area. Of these, 15 respondents are able to mention “flood” or “flash floods” unprompted. This represents 31% of the subset as compared to 44% of those who mentioned flood or flash flooding during the 2008 administration of the survey. When prompted, 27 respondents are aware that flash flooding can occur in the area, thus combined awareness for the Spanish speaking subset is 79%. Combined awareness in the Spanish subset is down from the 2008 percentage of 84%.

Flood Related Issues

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

Flood Related Issue	% Agree English	% Agree Spanish
I know about the dangers of flash flooding	**97%**	**85%**
I know about the time of year flash flooding is most likely to occur in the area	**84%**	**72%**
I know about safety precautions relating to flash flooding	**90%**	**70%**
I know about the resources available to learn more about flash flooding	**62%**	**33%**
I know ways in which flooding is being controlled in the area	**81%**	**37%**
I know about the availability of flood insurance	**82%**	**26%**

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

This year, eighty-five percent (85%) of Spanish speaking respondents know about the dangers of flash flooding. While this percentage is down from the previous year, it still represents a clear majority of the Spanish speaking sample. The majority of respondents also know about the time of year flash flooding is likely to occur (72%) and about safety precautions relating to flash flooding (70%).

Only 37% of Spanish speaking respondents know ways in which flooding is being controlled in the area. Awareness is down 30% from 2008. Similarly, 33% of respondents know about additional resources, a decrease of 37%. The most dramatic decrease is in the percentage of Spanish speaking respondents

who are aware of the availability of flood insurance (26%). This percentage decreased by 67% and is lower than the data from both 2007 and 2008.

Sources for Information

In the next section of the survey respondents are asked to respond "yes" or "no" to a list that was read to them of possible sources for learning about flash flooding.

Table 11: Sources of obtaining flood information

Source	% English	% Spanish
Television	**87%**	**94%**
Newspaper	**59%**	**37%**
Friends / Relatives	**57%**	**69%**
Billboards	**57%**	**33%**
Radio	**56%**	**59%**
Brochure	**26%**	**35%**
CCRFCD Website	**21%**	**27%**
Welcome Home Magazine	**7%**	**12%**

The table above shows the differences in the responses of the English speaking respondents and the Spanish speaking respondents. 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 have learned about flooding via that medium. In the Spanish speaking subset, 94% indicated that they have learned about flash flooding from watching television as compared to 87% in the English speaking subset. The percentage of Spanish speakers obtaining information about floods from television did not change from 2008 to 2009.

Billboards as a source have the biggest disparity among responses. Whereas 57% of the English speaking subset indicated that billboards are a source for obtaining flood information, 33% in the Spanish speaking subset

indicated the same, and there is a 4 percentage point increase in the percentage of Spanish speakers from 2008.

The use of the CCRFCD website as a source for flood information rose 5 percentage points in the Spanish subset from 22% in 2008 to 27% in 2009. Sixty-nine percent (69%) of Spanish speaking respondents get information from friends and relatives, a 14% increase from 2008.

Cable Television and the Flood Channel

Sixty-five percent (65%) of Spanish speaking respondents have cable television compared to 73% of the English speaking respondents. Last year 59% of the Spanish speaking respondents indicated that they had cable television thus there is an increase between last year and this year of 6 percentage points in the number of Spanish speakers who reported that they have cable television. From the group with cable television 12 respondents reported to have ever watched the Flood Channel. This represents 38% of the subset who have ever watched the Flood Channel, an increase of 15 percentage points from 2008.

Flood Insurance Issues

There is an increase in awareness of several issues related to flood insurance among the Spanish respondents. The largest increase is in the knowledge that flood insurance is available to everyone. More than half (55%) of the Spanish subset are aware of this compared to 20% who are aware of the same in 2008. Another item with a large increase in awareness among the Spanish subset is "if you live in a flood zone you must buy flood insurance. Fifty-three percent (53%) of the subset is aware of this year as compared to 24% in 2008. However, there is a decrease of twenty-seven percentage points from 2008 for the item "flood insurance costs the same regardless of whether or not the residence is in a flood zone". Twenty-two percent (22%) of the Spanish subset was aware of this as compared to 49% who were aware of the same in 2008.

Fifty-five percent of the Spanish respondents know that flood insurance is available to those who do not live in a flood zone. This is an increase of 18% from the two
previous years. Forty-one percent of the Spanish subset believe "homeowners insurance covers flood damage from a storm", an item that was added this year.

Experience with Flooded Roads:

Fifty-three percent (N = 26) 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-five percent (75%) of the English speaking respondents that reported the same. Sixty-two percent (62%) of the respondents in the Spanish group made a good or appropriate choice and turned around and took an alternate route or waited for the water to go down before driving through it; this is a slight increase to the 57% of the Spanish speakers who made an appropriate choice during the 2008 administration of the survey. Seventy percent (70%) of the English speaking respondents made an appropriate choice when encountering a flooded road. Among those in the Spanish subset that made an inappropriate choice, 39% drove through the water and made it.

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

- 63% of English speaking respondents answered correctly.
- 47% of Spanish speaking respondents answered correctly.
    - This is the same as 2008 (47%) after a decrease of 15 percentage points in 2007.

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

- 40% of English speaking respondents answered correctly
- 33% of Spanish speaking respondents answered correctly
    - This is an increase of 7 percentage points from 2008 (26%).

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

- 55% of English speaking respondents answered correctly
- 12% of Spanish speaking respondents answered correctly
    - This is an increase of 4 percentage points from 2008 (8%)

Table 12: Behavior changes to improve the environment and Lake Mead

Behavior Change	*% English Speakers*	*% Spanish Speakers*
Proper disposal of general waste	**27%**	**2%**
Proper disposal of chemicals	**18%**	**31%**
Use of commercial carwash	**11%**	**0%**
Proper disposal of oil	**10%**	**2%**
Reuse bags	**8%**	**2%**
Use of green products	**11%**	**0%**
Use of organic fertilizers	**5%**	**6%**
Reporting of clogged storm drains	**2%**	**49%**
Proper disposal/clean up of pet waste	**4%**	**14%**
Unable to specify	**2%**	**0%**
Composting	**1%**	**16%**
Other	**1%**	**0%**

The table above shows the differences in the responses of the English speaking respondents and the Spanish speaking respondents. There are, however some differences in the responses of the English and Spanish speaking subsets.

While English speakers (27%) compared to 2% of Spanish speakers properly dispose of general waste. Spanish speakers are nearly two times more likely than English speaking respondents to report that they properly dispose of chemicals (18% English speakers, 31% Spanish speakers). Two percent of the

Spanish speakers reported that they are disposing of oil properly to help protect the environment, while 10% of the English speakers are. Two percent (2%) of Spanish speakers and 8% of English speakers also reported that they are reusing bags to help the environment.

None of the Spanish speakers are using a commercial car wash to help the environment and Lake Mead, while11% of English speakers are. In addition, Spanish speakers (14%) are far more likely as English speakers (4%) to report that they are properly disposing of pet waste and composting (1% English speakers, 16% Spanish speakers). Spanish speakers (6%) are also more likely to use organic fertilizers than English speakers (5%). The greatest difference, is that nearly half (49%) of Spanish speakers report a clogged storm drain, while only 2% of English speakers report doing the same.

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

- Ninety-one percent (91%) of English speaking respondents are willing to change a behavior to improve water quality
- Ninety-Eight (98%) of Spanish speaking respondents are willing to change a behavior to improve water quality.
    - This is a decrease of 2 percentage points from last year (100% 2008)

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

- Sixty-six percent (66%) of English speaking respondents would like to know more about how to keep the environment clean.
- Ninety-two percent (92%) of Spanish speaking respondents would like to know more about how to keep the environment clean.
    - This is a decrease of 2 percentage points from last year (94% 2008).

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

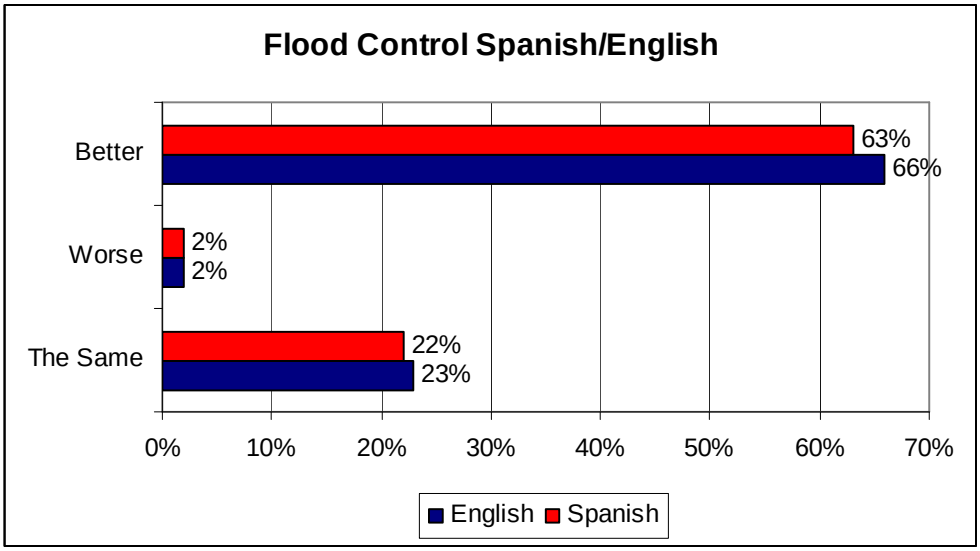
Table 13: Sources for environmental information

Rank	Source of Information	Percent (%)
1	Television	55%
2	Mail	31%
3	Brochure/Flyers	27%
4	Newspaper/Magazine	25%
5	Internet/Website/Email	18%
6	Radio	6%
6	Library	6%
6	Other	6%
9	Store	2%
9	Government Source	2%

The table above shows the most often given responses to this open ended question. In 2008 the main source for environmental information was stores (29%). This year stores dropped to 9th (2%). Similarly, the main source of information this year was television (55%), which was previously ranked 5th in 2008 (10%). This is indicative of an overall increase in Spanish responses to the television questions. Earlier in the survey it showed that both the percentage of Spanish households with cable television has risen as has the number of Spanish respondents who reported watching the Flood Channel.

Mail is the second method that the Spanish subset prefers as a source for environmental information (31%). This was followed by 27% want to use brochures/flyers and 25% who want to get the information from a newspaper/magazine. Eighteen percent (18%) want to use the internet. This is an increase of 3 percentage points from 2008, however, the ranking fell from 3rd to 5th. Six percent (6%) cited the radio, the library or other as a source for obtaining environmental information. Only 2% of Spanish speaking respondents would use a government source.

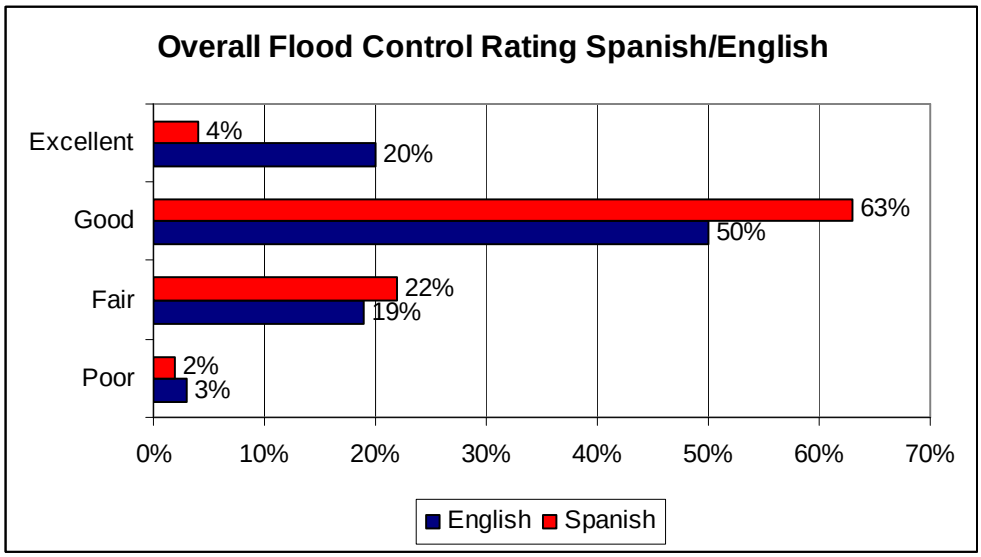
Flood Control Rating[1]:



1. Bars do not add up to 100%, "not sure" responses not depicted.

When asked *"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"* the responses of both the Spanish and English speaking respondents are almost identical. Sixty-three percent (63%) of the Spanish speakers and 66% the English speakers think that flood control has gotten better since moving to Southern Nevada. Likewise, in both the Spanish and English subsets 2% think flood control has gotten worse. Twenty-three percent (23%) of English speaking respondents and 22% of Spanish speaking respondents indicated that since they moved to the area flood control has stayed about the same.

Overall Flood Control Rating[1]:



1. Bars do not add up to 100%, "not sure" responses not depicted.

Sixty-seven percent of the Spanish speaking respondents rated flood control overall positive; this is down 33 percentage points from the 100% who rated overall flood control positively in 2008. Among these 63% rated flood control good and 4% rated flood control overall as excellent. Twenty-two (22%) of the Spanish speaking respondents rated flood control overall fair and 2% rated it poor.

Among the English speaking subset, 70% rated flood control overall positive, (50% good, 20% excellent). Twenty-two percent rated it negatively and of these 19% thought overall flood control was fair and 3% thought it was poor.

Conclusions

Overall, awareness of flooding as a weather related natural disaster continues to remain extremely high. Combined/total awareness remains high 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. With awareness so high the expectation would be for a point or two fluctuation from year to year. This has been the case over the last 11 years that this data has been collected. During the past 11 years, overall awareness of floods as a weather related danger has ranged from a low of 90% to a high of 97%. The data shows that the relationship between unaided awareness of flooding and age is statistically significant.[13] Those in the youngest age stratum only have had 36% of its members able to mention "flood" or "flash flooding" unaided. This is a decrease by 14 percentage points between 2008 (50%) and 2009 (36%). Those who are in the oldest age strata (65+, 53%) and the youngest age strata (18 – 24, 36%) are the least likely to mention "flood" or "flash flooding" unaided. They are also the least likely to mention "flood" or "flash flooding" after being prompted (18- 24, 93%) and 65 and older 77%. In the oldest age strata combined awareness is down 19 percentage points in 2009.

Awareness of the flood related issues that have been assessed since 1999[14] also continues to remain consistently high; however the data shows that the flood related issue questions had a decrease this year, for the most part back of the 2007 level. Again, the survey data has fluctuated several points over the years for this series of questions. The item that continues to have the highest response is "I know about the dangers of flash flooding". The percentage of respondents who agreed with this statement was 97% indicating that nearly all residents in Southern Nevada are aware of the dangers of flash flooding. This percentage has remained consistently high for the last three years.

[13] Pearson Chi-Square Sig. at .000.
[14] See Table 3, page 18.

The item that continues to get the lowest percentage is “I know about the resources available to learn more about flash flooding”; 61% agreed with this statement this year, this is a decrease of 6 percentage points. This is an area for the Flood District to address in its marketing efforts. While respondents indicated that currently they receive information via television (88%) newspaper (58%) and word-of-mouth (58%) in a later question in the survey respondents are asked their preferred method for receiving environmental information and 56% indicated that that method is the internet/website. Currently only 21% have indicated that they are obtaining flood related information from the CCRFD website. The items in this section continue to yield lower results than that of the other flood related issues. More effort should be put forth to provide information about flood insurance to the public to increase overall awareness.

Seventy- percent (N = 426) of respondents made a good or appropriate choice when encountering a flooded road in Clark County. This is up from 67% who reported the same in 2008, although these percentages do fluctuate a few points every year this is the highest positive response obtained for this item in the past three years. By far the largest percentage of respondents who made a good or appropriate choice (64 %) “turned back and took an alternate route” (N = 393). Seven percent (5%) “waited for the water to go down then drove through it” (N = 33).

Thirty percent (N = 184) of respondents made a poor or inappropriate choice when encountering a flooded street or road in Clark County. The 184 individuals who made a poor or inappropriate choice when encountering a flooded street were asked why. The most often cited reason why a poor choice was made was “didn’t think it was unsafe to do so” (55%, N = 100). This is up 3 percentage points from those that didn’t think it was unsafe to do so in 2008 (52%); this after an increase of 14 percentage points between 2007 and 2008. Nine percent (N = 17) were “in a hurry”, 6% “didn’t know any better” and 2% (N = 4) thought “it would be fun”. There were some answers provided this year why poor or inappropriate choices were made to drive through a flooded street that have

never been included in the past 11 years that this survey has been administered. Eighteen respondents (37% of the subset) reported that they decided to drive through the water because they were in a large vehicle.

There are some substantial increases this year in respondent knowledge of the flood control system. For example, respondents are asked whether "some" or "all" of the urban runoff that travels through the flood control system drains into Lake Mead. The percentage who correctly answered that "all" of the urban runoff that travels through the flood control system drains into Lake Mead increased by 10 percentage points this year and has produced a three year high. Forty-six percent (N = 387) responded correctly while in 2008 only 36% responded correctly and in 2007 the percentage was 37%). Last year it was recommended that materials be developed to address this issue and the data indicates that this was a success not only by the responses to this question, but also there were respondents who remembered watching this topic when viewing The Flood Channel. Similarly respondents were asked whether the stormwater and urban runoff that travels through the flood control system is "treated" or "untreated". Fifty-four percent of respondents (N = 449) correctly responded that the stormwater and urban runoff that travels through the flood control system is untreated. This is an increase by 8 percentage points from the data collected in 2008 (46%).

In one series of questions, the respondents were asked it they would like to know more about how to keep the environment clean, 67% indicated that they would. This is consistent with the 2008 data. Respondents were further asked to indicate how they would like to get information on keeping the environment clean. Unprompted, 56% said they would like to receive information via the internet. This is up 2 percentage points from the 2008 survey and 10 percentage points from 2007 (43%). This may be a way for the District to provide information not only about keeping the environment clean, but also information about where individuals can go to find resources about floods and flooding, an item that consistently ranks low in the flood issues section of the survey.

The number one behavior change that people in Southern Nevada are doing to help protect the environment and Lake Mead is conserving water (29%). Other activities that more than 10 of the respondents reported they are doing are: proper disposal of general waste (27%), proper disposal of chemicals (18%), implementing or continuing with desert landscaping (11%) use of a commercial car wash (11%) and use of green products (11%).

The data collected in this year's 2009 Flood Awareness Survey indicates that the District's Public Information Program has had success in prompting residents to make behavior changes to improve water quality. Ninety-two percent (N = 771) answered yes, they would be willing to change a behavior if they know it would improve water quality. There seems to be a genuine willingness to make behavior changes to help the environment.

In addition, outreach to families with school age children showed improved scores this year. Sixteen percent of respondents (N = 137) indicated that they have school aged children. Eighteen percent (18%) of those with elementary-aged children indicated that their children did bring materials about flood awareness home in the past year (N = 25). This is an increase of 4 percentage points from the 2008 data (14%). All but one of the 25 respondents who indicated that their children brought home materials about flood awareness from school further indicated that that their children talked about flood safety that was learned at school. This represents 17.5% of the subset of respondents with school age children. This is an increase of 5.5 percentage points from the data collected in 2008 (12%).

Eight percent (8%) of respondents reported that they live in a flood zone. This is the same as the data collected in 2008. Eighty percent (80%) reported that they do not live in a hundred year flood zone, and 8% are not sure whether or not they live in a flood zone. This is a substantial increase in awareness of whether or not one lives in a flood zone. During the 2008 administration of the survey nearly half (49%) were not sure whether or not they resided in a flood zone. However, there remains a discrepancy in understanding that if you live in a flood zone you must buy flood insurance. Sixty-seven respondents live in a flood

zone and only 15 answered (unprompted) that they have flood insurance. After being read a description of flood insurance 40 of the 67 reported having flood insurance. That still leaves 27 or 40% of the respondents who live in a flood zone that reported they do not have flood insurance. This further emphasized the District's need to address the issue of flood insurance in its flood awareness messaging. Unless the respondent owns the property outright, they are required to purchase a flood insurance policy if they live in a flood zone.

Sixty-six percent (N = 556) 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. This is up 3 percentage points from 2008. Twenty-three percent think that it has stayed about the same and 9% are not sure. Only 2% (N = 14) of respondents think that the way flood control is handled has got worse.

The survey results show overall that 76% of respondents positively rate the way that flood control is being handled in Southern Nevada; 21% gave flood control an "excellent" rating, while 55% gave flood control a "good" rating. The overall rating is up twelve percentage points from the data collected in 2008 (64%). This gain is most prevalent in the percentage who rated flood control as excellent. In 2008, 12% thought that flood control overall was excellent. This year nearly 21% rated overall flood control as excellent.

Respondents were asked if they have cable television, and specifically asked to exclude DISH or satellite TV. Those respondents who answered yes (73%) were then asked if they had ever watched the Flood Channel on cable channels 2 or 4. Thirty-nine percent (39%) of those respondents that have cable television reported that they have watched the Flood Channel. This is similar to the data collected in 2008. Those respondents who had watched the Flood Channel were asked (unprompted) what they remember most from watching it. The things that they remember most are "the dangers of flash flooding" (41%) and "safety precautions" to take if flooding occurs (28%).

Finally, respondents continue to react positively to the Flood Safety License Plate billboard campaign. Similar to the data collected in 2008, more

than half (52%) indicated that they had seen the flood safety license plate advertising campaign. Most respondents (93%) think that the billboard public information campaign is effective, of these more than half (53%) think that it is "very effective" and 40% think the billboard campaign is "somewhat effective. The percent of respondents who think that the billboard campaign is effective is up 6 percentage points from 2008 (87%), and the percent who reported that the campaign is "very effective" is up three percentage points from 49% in 2008 to this years 53%. Awareness levels in excess of 90% are extremely difficult to achieve in marketing brand awareness, and the District has achieved such and done so consistently for the past decade. The efforts and programs in place should continue, including the Flood Safety License Plate Billboard Contest.

Spanish Speakers Subset

Public awareness efforts on flood related issues directed towards Spanish speaking respondents continue to be successful. Eighty percent (80%) of respondents in the Spanish speaking sub-group (74% in the overall sample) are aware of weather related dangers that can occur in the area. Of these, 15 respondents are able to mention "flood" or "flash floods" unprompted. This represents 31% of the subset as compared to 44% of those who mentioned flood or flash flooding during the 2008 administration of the survey. When prompted, 27 respondents were aware that flash flooding can occur in the area, thus combined awareness for the Spanish speaking subset was 79%. Combined awareness in the Spanish subset is down from the 2008 percentage of 84%.

Fifty-three percent (N = 26) 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-five percent (75%) of the English speaking respondents that reported the same. Sixty-two percent (62%) of the respondents in the Spanish group made a good or appropriate choice and turned around and took an alternate route or waited for the water to go down before driving through it; this is a slight increase to the 57% of the

Spanish speakers who made an appropriate choice during the 2008 administration of the survey. Seventy percent (70%) of the English speaking respondents made an appropriate choice when encountering a flooded road. Among those in the Spanish subset that made an inappropriate choice, 39% drove through the water and made it.

Those from the Spanish subset are very receptive to modifying behavior to help the environment. Ninety-Eight (98%) of Spanish speaking respondents are willing to change a behavior to improve water quality. Further, when asked what behaviors they have changed to help keep the environment and Lake Mead clean 24 of the 49 Spanish respondents (49%) indicated that they have reported a clogged storm drain.

Ninety-two percent of the Spanish subset would like to know more about how to keep the environment clean. Fewer respondents from the Spanish subset (65%) than the English subset (73%) have cable television. However, the percentage of Spanish respondents who have cable television is up six percentage points this year. In addition, 38% indicated that they have watched the Flood Channel. This is an increase of 15 percentage points from the 2008 data.

Sixty-seven (67%) of the Spanish speaking respondents rated flood control overall positive; this is down 33 percentage points from the 100% who rated overall flood control positively in 2008. One suggestion for next year is to ask an overall race/ethnicity question and include respondents who identify as Hispanic in this section of the analysis. Currently the Spanish subset is composed only of those who wanted the survey administered in Spanish.

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

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Addendum 1: Zip table and map

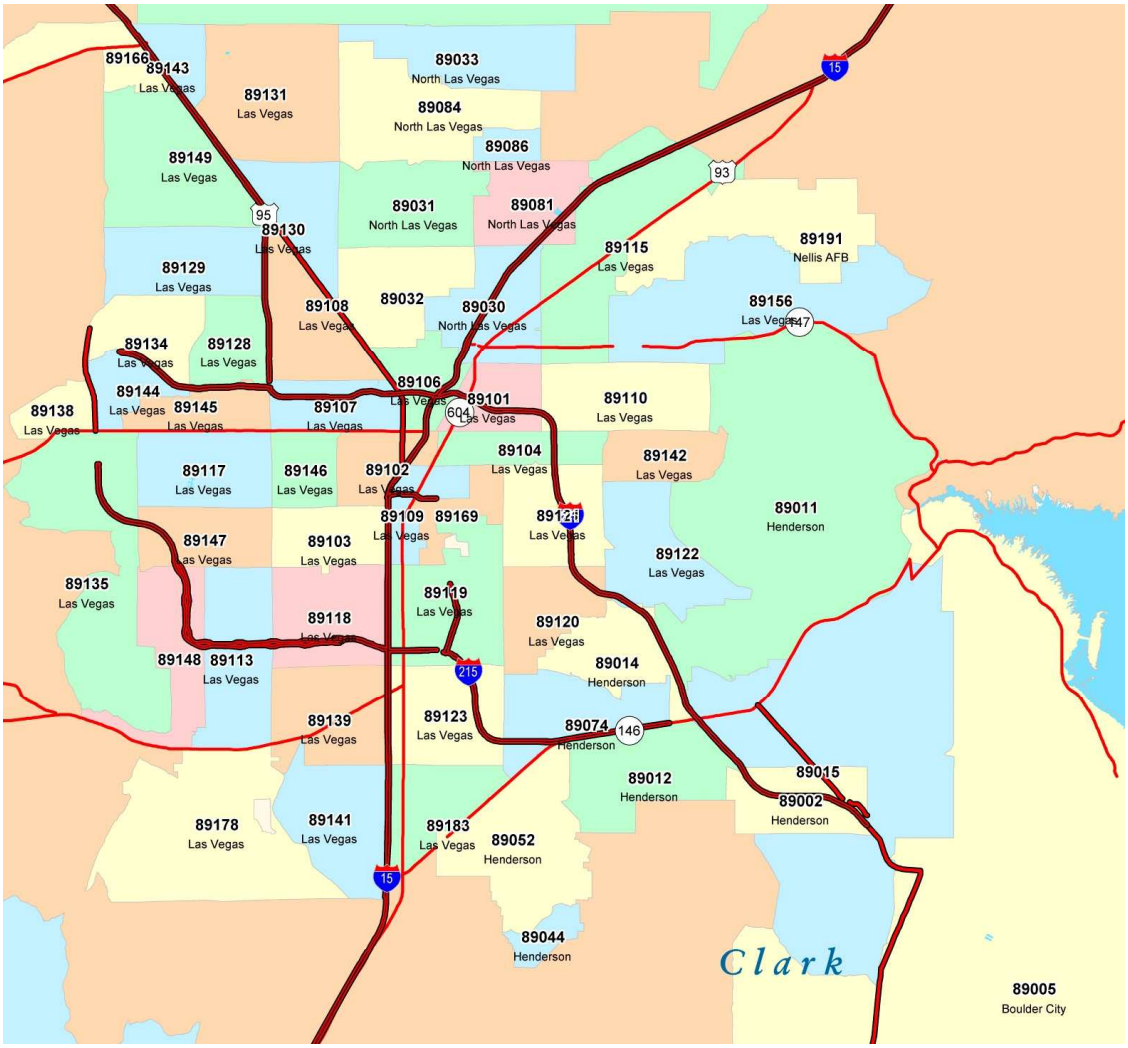
Table 13: Zip codes by area

Number	Zip	Area
16	89030	Northeast
14	89032	Northeast
2	89085	Northeast
1	89086	Northeast
10	89101	Northeast
3	89105	Northeast
8	89106	Northeast
29	89110	Northeast
21	89115	Northeast
1	89116	Northeast
1	89125	Northeast
8	89156	Northeast
25	89031	Northwest
6	89081	Northwest
6	89084	Northwest
15	89107	Northwest
26	89108	Northwest
18	89128	Northwest
25	89129	Northwest
18	89130	Northwest
18	89131	Northwest
26	89134	Northwest
7	89138	Northwest
7	89143	Northwest
13	89144	Northwest
14	89145	Northwest
16	89149	Northwest
3	89166	Northwest
6	89005	Outlying
2	89007	Outlying
9	89011	Outlying
3	89029	Outlying
16	9999	Refuse
23	89002	Southeast
25	89012	Southeast
15	89014	Southeast
21	89015	Southeast
16	89044	Southeast
25	89052	Southeast

32	**89074**	**Southeast**
14	**89104**	**Southeast**
5	**89109**	**Southeast**
24	**89119**	**Southeast**
10	**89120**	**Southeast**
29	**89121**	**Southeast**
17	**89122**	**Southeast**
25	**89123**	**Southeast**
7	**89141**	**Southeast**
5	**89142**	**Southeast**
14	**89183**	**Southeast**
15	**89102**	**Southwest**
19	**89103**	**Southwest**
10	**89113**	**Southwest**
18	**89117**	**Southwest**
6	**89118**	**Southwest**
13	**89135**	**Southwest**
6	**89139**	**Southwest**
16	**89146**	**Southwest**
20	**89147**	**Southwest**
9	**89148**	**Southwest**
14	**89178**	**Southwest**
2	**89040**	**Unable to Identify**
1	**89041**	**Unable to Identify**
1	**89050**	**Unable to Identify**
1	**89077**	**Unable to Identify**
1	**89082**	**Unable to Identify**
3	**89169**	**Unable to Identify**
1	**89024**	**Unable to Identify**
1	**89027**	**Unable to Identify**
1	**89516**	**Unable to Identify**

Addendum 2

Zip Code Map



Addendum 3

2009 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 are 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.]

[THE TOPIC OF THE SURVEY IS "WEATHER RELATED DANGERS" DO NOT BE ANY MORE SPECIFIC THAN THAT]

CONTINUE IN ENGLISH
CONTINUE IN SPANISH

What is your gender? [YES YOU MUST ASK]

Male
Female

Can you please tell me your zip code?

INTERVIEWER TYPE "9999" for refuse

How long have you lived in Southern Nevada?

Less than 6 months
6 months to less than 1 year
1 year to less than 3 years
3 years to less than 6 years
6 to 10 years
Longer than 10 years
DK
Refuse

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

Yes

No
Not Sure
Refuse

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!]

Floods / Flash Floods
Duststorms / High winds
Heavy Rain / Thunder Storms
Heat
Fire / Lightening
Earthquake
Unable to specify
Other

Are you aware that flash flooding can occur?

Yes
No
D/K
Refuse

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

I KNOW . . .

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

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.

Brochure
Billboard
Television
Radio
Newspaper
Welcome Home Magazine
Clark County Regional Flood Control District Website

Friends and/or other relatives

Do you have children in elementary school?
[INTERVIEWER: That's kindergarten through 5th grade]

Yes
No
Refuse

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

Yes
No
Not Sure
Refuse

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

Yes
No
Not Sure
Refuse

Do you live in a 100 year flood zone?

Yes
No
Not sure
Refuse

Do you have flood insurance?

Yes
No
Don't Know
Refuse

Flood insurance is a separate policy from homeowners insurance to cover flood damage from a weather related event. Do you have such a policy?

Yes
No

Not sure
Refuse

For each of the following statements about flood insurance, please tell me if the statement is true or false?

Flood insurance is available to everyone
Flood insurance is only available to those who live in a flood zone
The cost of flood insurance is the same whether or not you live in a flood zone
If you live in a flood zone you must buy flood insurance
Homeowners insurance covers flood damage from a storm

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?

Yes
No
Not Sure
Refuse

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]

Turned back and took an alternate route
Waited for the water to go down and then drove through it
Drove through it and made it
Drove through it and got stuck
Don't remember
Other
Refuse

Why did you drive through it?

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

I was in a hurry
Didn't think it was unsafe to do so
Thought it would be fun to do
Didn't know any better
Not sure
Other
Refuse

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

[INTERVIEWER READ THE FIRST TWO CHOICES ONLY!]

Streets are a part of the flood control system
Streets are NOT a part of the flood control system
Don't know
Refuse

Which of the following statements is true?

[INTERVIEWER READ THE FIRST TWO CHOICES ONLY!]

SOME of the urban runoff and rainwater that travels through the flood control system drains into Lake Mead

ALL of the urban runoff and rainwater that travels through the flood control system drains into Lake Mead

Don't know
Refuse

Which of the following statements is true?

[INTERVIEWER READ THE FIRST TWO \ CHOICES ONLY!]

The storm water and urban runoff and rainwater that travels through the flood control channels and storm drains is treated.

The storm water and urban runoff and rainwater that travels through the flood

control channels and storm drains is not treated.

Don't know
Refuse

Have you changed any behaviors to help protect the environment and Lake Mead?

Yes
No
Not Sure
Refuse

What have you done as a result?

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

Proper disposal of chemicals
Proper disposal of general waste
Proper disposal of oil
Proper disposal/clean up of pet waste
Use of a commercial car wash
Use of organic fertilizers
Reporting of clogged storm drains
Use of green products
Reuse bags
Composting
Unable to specify
Other

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

Yes
No
Not Sure
Refuse

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

Yes
No
Not sure
Refuse

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

INTERVIEWER: Don't Read. Use for coding only. Select All that apply.

Internet/Website
Direct Mail
TV
Radio
Brochure/Flyers
Newspapers/Magazines
Library
Stores
Government Source
Other
Don't Know

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?

Better
Worse
Stayed about the same
Not Sure
Refuse

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

Excellent
Good
Fair
Poor
Not Sure
Refuse

Do you have cable television, this DOES NOT include DISH or satellite television?

Yes
No
Don't know
Refuse

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

Yes
No
Not Sure
Refuse

What do you remember most from watching the program?

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

The dangers of flash flooding
Time of year flooding occurs
Safety precautions that can be taken
Where to learn more about flooding
Ways flooding is controlled
Availability of flood insurance
How to protect the environment
Other
Not Sure
Refuse

Have you seen the flood safety license plate advertising campaign?

Yes
No
Not Sure
Refuse

Do you think that the billboard campaign is an effective way to communicate Flood safety to the community?

INTERVIEWER: READ RESPONSES EXCEPT DK/REFUSE

Would you say. . .

Yes, very effective
Yes, somewhat effective
No, somewhat ineffective
No, very ineffective
Not Sure
Refuse

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?

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

Less than HS graduate
HS graduate
Some college/trade school
Two year college
Four year college
Post graduate work
Post graduate degree
Don't know
Refuse

Addendum 4

Spanish Survey Instrument

Question SINTRO
Hola, mi nombre es [SU NOMBRE] estoy llamando de Universidad de Las Vegas. Estamos hacienda un corte estudio de parte del Departamento del condado
de Clark una agencia pública. No estamos vendiendo nada o pregunto por ningun
a donación. Todas sus respuestas son confidenciales, y sus respuestas son muy importantes para este estudio.

Por favor puede hablar con un residente del condado Clark y ha celebrado su cumpleaños mas reciente? Las preguntas toman como cinco o siete minutos

[Si el/la respondiente pregunta, el nombre de la agencia se dirá al final de la encuesta.]

[El tópico de la encuesta es "Riesgos Del Tiempo" no puedes dar mas información.]

Question SGENDER
Entrevistor: No pregunte-anote sexo sobre tono de voz

Varón
Hembra

Question SQAZIP
Cual es su zona postal?

INTERVIEWER: PONGA "9999" si no tiene respuesta

Question QSB
Cuanto tiempo tiene viviendo en el sur de Nevada?

Menos de 6 meses
1 ano o más pero menos de 3 anos
3 anos o más pero menos de 6 anos
6 -10 anos
Mas de 10 anos

No se

Question QS1
Esta usted consciente de los peligros del clima que pueden ocurrir en su área?

Si
No
No Se
Negar la pregunta

Question SQ2UNAIDED
Que tipo de peligros del clima sabe usted que pueden ocurrir en su área?

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

Inundación
Tormenta de polvo / vientos Fuertes
Lluvia / Tormenta
Calor
Fuego / Relámpagos
Terremotos
No puede especificar
Otro

Question SQ2AIDED
Esta consciente que inundaciones pueden ocurrir?

Si
No
No Se
Negar la pregunta

Question SQ3KNOW
Ahora, voy ha leer unas declaraciones y quiero saber si usted-"esta de acuerdo" "mas o menos", " no esta de acuerdo", "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 racionad a inundaciones
De los recursos adonde puedo aprender de inundaciones
Como aprender deferente maneras de controlar inundaciones en el área

Del seguro para inundación disponible

Question SQ4SOUR
De la lista que voy a leer por favor diga "SI" o "NO" si ha aprendido de inundaciones por estos recursos.

Folleto
Cartelera
Television
Radio
Periodico
La revista "Bienvenidos A su Casa"
Internet del Condado de Clark para inundaciones
Familia o amigos

Question SQ5KID
¿Usted tiene niños en escuela primaria?

[INTERVIEWER: Guardería hasta quinto grado]

Si
No
Negar la pregunta

Question SQ5KID2
Sus hijos que van a la escuela trajieron información sobre inundaciones a la casa en el ultimo ano?

Si
No
No Se
Negar la pregunta

Question SQ5KID3
La 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

Question SQZONE1
Vive usted en una zona de inundación

Si
No
No se
Negar la pregunta

Question SQZONE2
Tiene usted seguro de inundación?

Si
No
No se
Negar la pregunta

Question SQZONE3
Seguro de inundación es aparte de seguro para su residencia y cobre destrozos de inundación por eventos relacionados a clima. Tiene usted esta polise?

Si
No
No se
Negar la pregunta

Question SQ6INSUR
For each of the following statements about flood insurance, please tell me if statement is true or false?

Seguro de inundación esta disponible para todos.

Verdad
Falso
No Se

Seguro de inundación es solo disponible para los que viven en zonas a donde ocurren inundaciones.

Verdad
Falso
No Se

Si no vives en una zona de inundaciones, no puedes comprar seguro de inundaciones.

Verdad
Falso
No Se

Seguro de inundación cuesta lo mismo sin tener en cuenta si la residencia esta o no esta en una zona de inundación.

Verdad
Falso
No Se

Si vive usted en una zona de inundación tiene que comprar el seguro de inundación.

Verdad
Falso
No Se

Question SQ7FLST

ENTREVISTADOR: LEE LO SIGUIENTE PALABRA POR PALABRA
[En estas dos preguntas, una calle se considera inundada cuando el agua cubre la calle desde esquina a esquina y no se ve la acera.]

Alguna vez encontró una calle inundada con agua como el conductor o pasajero de un vehiculo cuando en la calle?

Si
No
No Se
Negar la pregunta

Question SQ7FLST2
Se puede acordar de la última vez que esta calle inundada de agua cual de estas declaraciones describe lo que usted o el conductor ha hecho?

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

Se dio vuelta y se fue por otra calle
Espero que el agua se bajo y después manejo a través de la calle.
Manejo bien a través de la calle
Manejo a través la calle y se quedo parado por el agua
No me acuerdo
Otro
Negar la pregunta

Question SQFLST3
Por que manejo por la calle inundada de agua?

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

Estaba de prisa
No pensaba que fuera peligroso
Pensaba que fuera algo divertido para hacer
No supe que era mejor
No se
Otro
Negar la pregunta

Question SQ8FC
Voy ha leer unas declaraciones por favor diga cual es verdad?

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

Calles son parte del sistema de control para inundación
Calles NO son parte del sistema de control para inundación
No se
Negar la pregunta

Question SQ9RW
Cual de estas declaraciones son verdad?

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

Alguna agua del urbano derrame y lluvia camina por el sistema de control de inundación y se desagua en el lago Mead
Toda el agua del urbano derrame y lluvia camina por el sistema de control de inundación y se desagua en el lago Mead.
No se
Negar la pregunta

Question SQ9URBAN1
Cual de estas declaraciones son verdad?

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

El agua del urbano derrame y lluvia va por el sistema de control para inundación es tratado.
El agua del urbano derrame y lluvia va por el sistema de control para inundación no es tratado.
No Se
Negar la pregunta

Question SQRW3
Ha cambiado su comportamiento para proteger el medio ambiente o Lago Mead?

Si
No
No Se
Negar la pregunta

Question SQ9RW4
Que ha hecho usted como un resultado?
[INTERVIEWER: DO NOT READ CATEGORIES USE FOR CODING ONLY]

Propiamente dispone de químicos
Propiamente dispone de basura
Propiamente dispone de aceite
Propiamente dispone de basura de animales
Usar lavado público de autos
Reportar desagües de lluvia que están obstruidos
Uso de productos verdes
bolsos de la reutilización
Compuesto
No piede decir
Otra

Question SQ10BEH
Si usted supiera que hacer, fuera dispuesto a cambiar sus maneras para mejorar la calidad del agua?

Si
No
No Se
Negar la pregunta

Question SQ11INFO
Usted quisiera saber mas de cómo puede ayudar para mantener el ambiente?

Si
No
No Se
Negar la pregunta

Question SQ11INFO2
Adonde quisiera ir usted para información de cómo mantener el ambiente limpio?

Question SQ13RATE
Como usted vive en el sur de Nevada, piensa que la manera que controlan la inundación se ha mejorado, esta peor, o se ha quedado igual?

Mejor
Peor
Quedada igual
No se
Negar la pregunta

Question SQ14RATE
Sobre todo, como piensa que han manejado el sistema de inundación en el sur de Nevada?

Excelente
Bien
Igual
Mal
No se
Negar la pregunta

Question SQ15TV
Tiene cable en su televisión? Esto NO incluye antena o satélite para la televisión.

Si
No
No se
Negar la pregunta

Question SQ15TV2
Alguna vez ha mirado en canal de "El Canal De Inundación" en canales de cable 2 o 4?

Si
No
No Se
Negar la pregunta

Question SQ15TV4
De que se recuerda mas mirando el programa?

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

Los peligros de la inundación
Los tiempos del ano que ocurre inundaciones
Las precauciones de seguro que pueden tomar
Adonde ir para aprender de inundación

Maneras que controlan inundaciones
Como proteger el ambiente
Otro
No se
Negar la pregunta

Question SQ15TV5
Puede identificar específicamente temas de cualquier programa del canal de inundación que avisto? Esto fuera un programa entero a un solo tópico.

INTERVIEWER: IF YES RECORD OPEN ENDED RESPONSE IN THE BOX

Si
No
No Se
Negal la pregunta

Question SSEEBILLBOARD
Has visto la campaña de la licencia de inundaciones que se está publicando?

Si
No
No Se
Negar la pregunta

Question SQBILLBOARD2
Usted cree que la campaña que se esta publicando, a trabes de la cartelera, es una forma efectiva para comunicar con la comunidad lo importante que es saber como estar protegido(a) de inundaciones?

ENTREVISTADOR LEE ESTAS RESPUESTAS EXCEPTO "NO SE/NEGAR LA PREGUNTA"

Usted diría…

Si, muy efectivo
Si, un poco efectivo
No, un poco efectivo
No, muy efectivo
No se
Negar la pregunta

Question SQ16DEM1
Tengo dos mas preguntas por razones del estudio.

[INTERVIEWER: TYPE IN "999" FOR REFUSE]
Por favor me dice que ano nació usted?

Question SQ16DEM2

Cual es en nivel de educación que ha cumplido?
Parte de la escuela secundaria
Todos los estudios de la escuela secundaria
Algunos Estudios Universitarios/Técnicos
Dos anos de Universidad
Cuatro anos de Universidad
Trabajo de postgraduado
Titulo de postgraduado
No se
Negar la pregunta

Question QEnd
Thank respondent for their time and wish them a nice day.
Muchas gracias por contestar las preguntas para el estudio y tenga buen día.

Question SINTRO
Hola, mi nombre es [SU NOMBRE] estoy llamando de Universidad de Las Vegas. Estamos hacienda un corte estudio de parte del Departamento del condado de Clark una agencia pública. No estamos vendiendo nada o pregunto por ninguna donación. Todas sus respuestas son confidenciales, y sus respuestas son muy importantes para este estudio.

Por favor puede hablar con un residente del condado Clark y ha celebrado su cumpleaños mas reciente? Las preguntas toman como cinco o siete minutos

[Si el/la respondiente pregunta, el nombre de la agencia se dirá al final de la encuesta.]

[El tópico de la encuesta es "Riesgos Del Tiempo" no puedes dar mas información.]

Question SGENDER
Entrevistor: No pregunte-anote sexo sobre tono de voz

Varón
Hembra

Question SQAZIP

Cual es su zona postal?

INTERVIEWER: PONGA "9999" si no tiene respuesta

Question QSB
Cuanto tiempo tiene viviendo en el sur de Nevada?

Menos de 6 meses
1 ano o más pero menos de 3 anos
3 anos o más pero menos de 6 anos
6 -10 anos
Mas de 10 anos
No se

Question QS1
Esta usted consciente de los peligros del clima que pueden ocurrir en su área?

Si
No
No Se
Negar la pregunta

Question SQ2UNAIDED
Que tipo de peligros del clima sabe usted que pueden ocurrir en su área?

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

Inundación
Tormenta de polvo / vientos Fuertes
Lluvia / Tormenta
Calor
Fuego / Relámpagos
Terremotos
No puede especificar
Otro

Question SQ2AIDED
Esta consciente que inundaciones pueden ocurrir?

Si
No
No Se
Negar la pregunta

Question SQ3KNOW

Ahora, voy ha leer unas declaraciones y quiero saber si usted-"esta de acuerdo" "mas o menos", " no esta de acuerdo", "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 racionad a inundaciones
De los recursos adonde puedo aprender de inundaciones
Como aprender deferente maneras de controlar inundaciones en el área
Del seguro para inundación disponible

Question SQ4SOUR
De la lista que voy a leer por favor diga "SI" o "NO" si ha aprendido de inundaciones por estos recursos.

Folleto
Cartelera
Television
Radio
Periodico
La revista "Bienvenidos A su Casa"
Internet del Condado de Clark para inundaciones
Familia o amigos

Question SQ5KID
¿Usted tiene niños en escuela primaria?

[INTERVIEWER: Guardería hasta quinto grado]

Si
No
Negar la pregunta

Question SQ5KID2
Sus hijos que van a la escuela trajieron información sobre inundaciones a la casa en el ultimo ano?

Si
No
No Se
Negar la pregunta

Question SQ5KID3
La 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

Question SQZONE1
Vive usted en una zona de inundación

Si
No
No se
Negar la pregunta

Question SQZONE2
Tiene usted seguro de inundación?

Si
No
No se
Negar la pregunta

Question SQZONE3
Seguro de inundación es aparte de seguro para su residencia y cobre destrozos de inundación por eventos relacionados a clima. Tiene usted esta polise?

Si
No
No se
Negar la pregunta

Question SQ6INSUR
For each of the following statements about flood insurance, please tell me if statement is true or false?

Seguro de inundación esta disponible para todos.

Verdad
Falso
No Se

Seguro de inundación es solo disponible para los que viven en zonas a donde ocurren inundaciones.

Verdad
Falso
No Se

Si no vives en una zona de inundaciones, no puedes comprar seguro de inundaciones.

Verdad
Falso
No Se

Seguro de inundación cuesta lo mismo sin tener en cuenta si la residencia esta o no esta en una zona de inundación.

Verdad
Falso
No Se

Si vive usted en una zona de inundación tiene que comprar el seguro de inundación.

Verdad
Falso
No Se

Question SQ7FLST

ENTREVISTADOR: LEE LO SIGUIENTE PALABRA POR PALABRA
[En estas dos preguntas, una calle se considera inundada cuando el agua cubre la calle desde esquina a esquina y no se ve la acera.]

Alguna vez encontró una calle inundada con agua como el conductor o pasajero de un vehiculo cuando en la calle?

Si
No
No Se
Negar la pregunta

Question SQ7FLST2
Se puede acordar de la última vez que esta calle inundada de agua cual de estas declaraciones describe lo que usted o el conductor ha hecho?

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

Se dio vuelta y se fue por otra calle
Espero que el agua se bajo y después manejo a través de la calle.
Manejo bien a través de la calle
Manejo a través la calle y se quedo parado por el agua
No me acuerdo
Otro
Negar la pregunta

Question SQFLST3
Por que manejo por la calle inundada de agua?

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

Estaba de prisa
No pensaba que fuera peligroso
Pensaba que fuera algo divertido para hacer
No supe que era mejor
No se
Otro
Negar la pregunta

Question SQ8FC
Voy ha leer unas declaraciones por favor diga cual es verdad?

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

Calles son parte del sistema de control para inundación
Calles NO son parte del sistema de control para inundación
No se
Negar la pregunta

Question SQ9RW
Cual de estas declaraciones son verdad?

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

Alguna agua del urbano derrame y lluvia camina por el sistema de control de inundación y se desagua en el lago Mead
Toda el agua del urbano derrame y lluvia camina por el sistema de control de inundación y se desagua en el lago Mead.
No se
Negar la pregunta

Question SQ9URBAN1
Cual de estas declaraciones son verdad?

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

El agua del urbano derrame y lluvia va por el sistema de control para inundación es tratado.
El agua del urbano derrame y lluvia va por el sistema de control para inundación no es tratado.
No Se
Negar la pregunta

Question SQRW3
Ha cambiado su comportamiento para proteger el medio ambiento o Lago Mead?

Si
No
No Se
Negar la pregunta

Question SQ9RW4
Que ha hecho usted como un resultado?
[INTERVIEWER: DO NOT READ CATEGORIES USE FOR CODING ONLY]

Propiamente dispone de químicos
Propiamente dispone de basura
Propiamente dispone de aceite
Propiamente dispone de basura de animales
Usar lavado público de autos
Reportar desagües de lluvia que están obstruidos
Uso de productos verdes
bolsos de la reutilización
Compuesto
No piede decir
Otra

Question SQ10BEH
Si usted supiera que hacer, fuera dispuesto a cambiar sus maneras para mejorar la calidad del agua?

Si
No
No Se
Negar la pregunta

Question SQ11INFO
Usted quisiera saber mas de cómo puede ayudar para mantener el ambiente?

Si
No
No Se
Negar la pregunta

Question SQ11INFO2
Adonde quisiera ir usted para información de cómo mantener el ambiente limpio?

Question SQ13RATE
Como usted vive en el sur de Nevada, piensa que la manera que controlan la inundación se ha mejorado, esta peor, o se ha quedado igual?

Mejor
Peor
Quedada igual
No se
Negar la pregunta

Question SQ14RATE
Sobre todo, como piensa que han manejado el sistema de inundación en el sur de Nevada?

Excelente
Bien
Igual
Mal
No se
Negar la pregunta

Question SQ15TV
Tiene cable en su televisión? Esto NO incluye antena o satélite para la televisión.

Si
No
No se
Negar la pregunta

Question SQ15TV2
Alguna vez ha mirado en canal de "El Canal De Inundación" en canales de cable 2 o 4?

Si
No
No Se

Negar la pregunta

Question SQ15TV4
De que se recuerda mas mirando el programa?

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

Los peligros de la inundación
Los tiempos del ano que ocurre inundaciones
Las precauciones de seguro que pueden tomar
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Como proteger el ambiente
Otro
No se
Negar la pregunta

Question SQ15TV5
Puede identificar específicamente temas de cualquier programa del canal de inundación que avisto? Esto fuera un programa entero a un solo tópico.

INTERVIEWER: IF YES RECORD OPEN ENDED RESPONSE IN THE BOX

Si
No
No Se
Negal la pregunta

Question SSEEBILLBOARD
Has visto la campaña de la licencia de inundaciones que se está publicando?

Si
No
No Se
Negar la pregunta

Question SQBILLBOARD2
Usted cree que la campaña que se esta publicando, a trabes de la cartelera, es una forma efectiva para comunicar con la comunidad lo importante que es saber como estar protegido(a) de inundaciones?

ENTREVISTADOR LEE ESTAS RESPUESTAS EXCEPTO "NO SE/NEGAR LA PREGUNTA"

Usted diría…

Si, muy efectivo
Si, un poco efectivo
No, un poco efectivo
No, muy efectivo
No se
Negar la pregunta

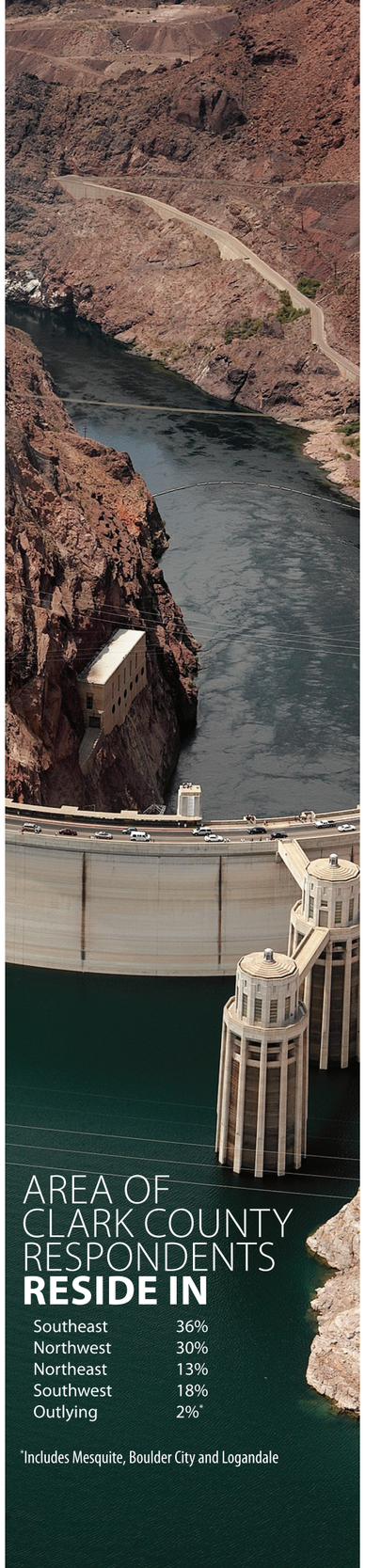
Question SQ16DEM1
Tengo dos mas preguntas por razones del estudio.

[INTERVIEWER: TYPE IN "999" FOR REFUSE]
Por favor me dice que ano nació usted?

Question SQ16DEM2
Cual es en nivel de educación que ha cumplido?

Parte de la escuela secundaria
Todos los estudios de la escuela secundaria
Algunos Estudios Universitarios/Técnicos
Dos anos de Universidad
Cuatro anos de Universidad
Trabajo de postgraduado
Titulo de postgraduado
No se
Negar la pregunta

Question QEnd
Thank respondent for their time and wish them a nice day.
Muchas gracias por contestar las preguntas para el estudio y tenga buen día.



KNOWLEDGE OF STORMWATER, URBAN RUNOFF AND THE FLOOD CONTROL SYSTEM

There have been substantial improvements in respondent understanding of environmental issues affecting the quality of water in Lake Mead and an overall understanding of the flood control system. Awareness that "streets are a part of the flood control system" has increased over the data collected in 2008. This year 62% or 518 respondets are aware that this is true as compared to 57% in 2008. The percentage who correctly answered that "all" of the urban runoff that travels through the flood control system drains into Lake Mead increased by 10 percentage points this year and has produced a three year high of 46%. Finally, more than half (54%) of the respondents knew that the stormwater and urban runoff that travels through the flood control system is untreated. This is an increase by 8 percentage points from the 2008 data.

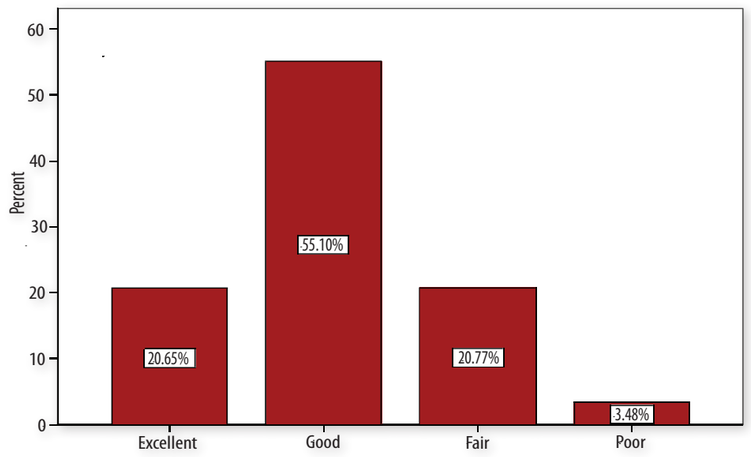
BEHAVIOR CHANGES TO **HELP PROTECT** THE ENVIRONMENT AND LAKE MEAD

When asked if they had changed a behavior to help protect the environment and Lake Mead, fifty-six percent (56%) indicated they had done so. The top behavioral changes that residents are doing to help the environment are:

Water conservation – 28%
Proper disposal of chemicals – 18%
Use of a commercial car wash – 11%
Proper disposal of general waste – 27%
Desert landscaping – 11%
Use of green products – 11%

OVERALL FLOOD CONTROL **RATING**

The overall rating of flood control remains consistently positive. Overall 76% of respondents positively rate the way that flood control is being handled in Southern Nevada. This is an increase of 12 percentage points from 2008.



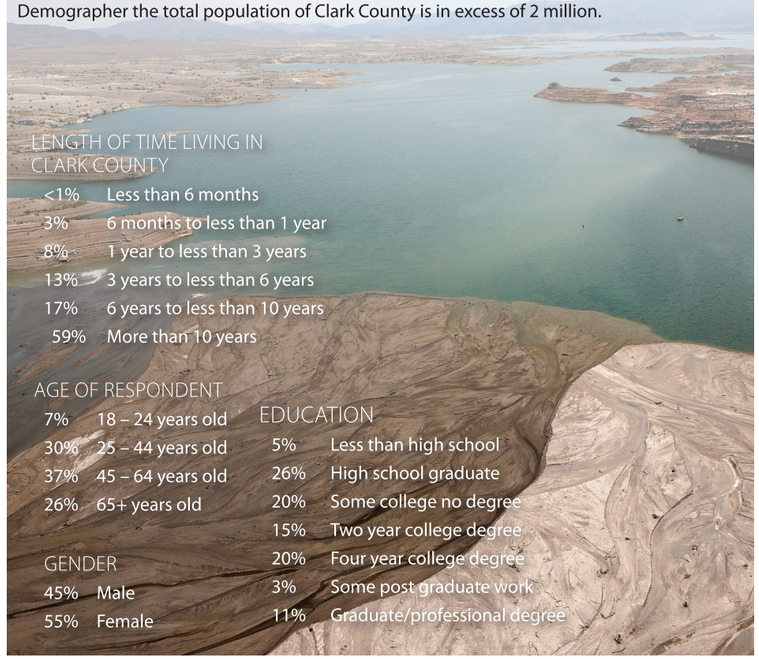
REGIONAL FLOOD CONTROL DISTRICT

2009 FLOOD AWARENESS **SURVEY SUMMARY SHEET**

600 S. Grand Central Pkwy. #300, Las Vegas, NV 89106 • (702) 685-0000 www.regionalflood.org

CHARACTERISTICS OF **THE SAMPLE**

As in previous surveys, 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". According to the Nevada State Demographer the total population of Clark County is in excess of 2 million.



LENGTH OF TIME LIVING IN CLARK COUNTY

<1% Less than 6 months
3% 6 months to less than 1 year
8% 1 year to less than 3 years
13% 3 years to less than 6 years
17% 6 years to less than 10 years
59% More than 10 years

AGE OF RESPONDENT

7% 18 – 24 years old
30% 25 – 44 years old
37% 45 – 64 years old
26% 65+ years old

GENDER

45% Male
55% Female

EDUCATION

5% Less than high school
26% High school graduate
20% Some college no degree
15% Two year college degree
20% Four year college degree
3% Some post graduate work
11% Graduate/professional degree

KNOWLEDGE OF VARIOUS SUBJECTS **RELATING TO FLASH FLOODING**

FLOOD RELATED ISSUE	Agree 2009	Agree 2008	Agree 2007
I know about the dangers of flash flooding	97%	98%	97%
I know about the time of year flash flooding is most likely to occur in the area	83%	88%	84%
I know about safety precautions relating to flash flooding	89%	93%	89%
I know about the resources available to learn more about flash flooding	61%	67%	63%
I know ways in which flooding is being controlled in the area	78%	79%	79%
I know about the availability of flood insurance	79%	85%	77%

SURVEY **PURPOSE**

An important component of the Clark County Regional Flood Control District's Public Information Program is evaluation. In October 1999 the District conducted its first flood awareness study to measure citizen awareness of the dangers of flash flooding in Clark County. The survey has been replicated during the month of October every year since 1999.

The 2009 survey was administered to 840 randomly selected residents of Clark County by UNLV's Cannon Survey Center. The margin of error for the study is + / - 3.38%. The core of the study remained the same and comparisons have been conducted. Seven percent of the surveys were conducted in Spanish.

The survey collected data on the following topics:

- Awareness of flash flooding
- General knowledge of various subjects related to flash flooding
- Sources of flash flooding education and information
- Behavior and tendencies when encountering a flooded street or road
- Knowledge of availability and other flood insurance issues
- Demographic profile of respondents who have watched The Flood Channel
- Knowledge of urban runoff and assessment of behavior changes
- Opinion of how well flood control is being handled
- Behavior changes willing to make to help protect the environment and Lake Mead
- Effectiveness of the Flood Safety License Plate Billboard campaign

FUTURE **STEPS**

- The data continues to indicate that there is a high level of awareness among residents regarding the dangers of flash flooding. Overall, 94% of respondents are aware that flash flooding can occur in the area. The data suggests that the District's educational messaging regarding flash flooding does increase awareness; this is substantiated by the consistently high percentage of respondents who indicated awareness of such over the past 11 years.

- One constant has been the significant importance of television in conveying flood safety information. Even though 2009 was an uneventful year for news coverage of rain events, continued outreach and education efforts using television to reach the population are warranted and based on survey trends since 1999.

- When looking at the respondents' knowledge of flood insurance the data suggests that there is still confusion on the topic and continued emphasis should be placed in this area. The data does suggest however, that residents are aware that flood insurance is available to everyone, not just those who live in a flood zone (73%) and that homeowners' insurance does not cover damage from rain that causes flooding (67%).

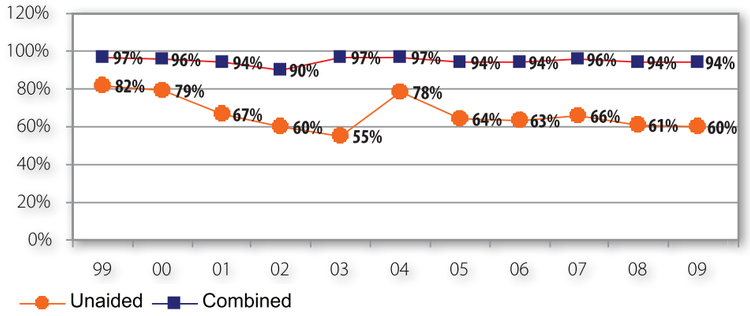
- The Hispanic population in the Las Vegas Valley is expected to exceed 600,000 in 2009[1]. This represents 28% of the population of Clark County. It is important to continue providing public information to this population. In doing so, the Hispanic population is best reached via television. The survey shows that 94% of those interviewed learned about flash flooding from television. The District's efforts to reach this population were very successful and should be continued.

1. Source: Nevada State Demographer

AWARENESS OF FLOODING IN CLARK COUNTY

Unaided awareness of flooding is measured by responding "floods or flooding" unprompted to the question "what types of weather related dangers are you aware of that can occur in Clark County?" Combined awareness is the total percentage of respondents who are aware of flooding as a weather related danger after being prompted by the question "are you aware of flooding as a weather related natural danger?" The chart below shows the results from data collected from 1999 to 2009 regarding flood awareness among Clark County residents.

FLOOD AWARENESS COMPARISONS 1999 – 2009



PROGRAM RECALL OF RESPONDENTS WHO HAVE WATCHED THE **FLOOD CHANNEL**

Seventy-three percent of respondents indicated that they have cable television (excluding DISH or satellite TV). Of these, 39% have watched The Flood Channel. Flood Channel viewers are long time residents of the area; 69% have lived here 20 years or longer. In addition, about half of the viewers are between the ages of 45 and 64 (mean age is 52), 55% are female, and appeals similarly to high school graduates (25%) and college graduates (23%). The chart below shows the items most frequently mentioned when asked, "What do you remember the most from watching The Flood Channel?"

FLOOD RELATED ISSUE	2009	2008	2007
Dangers of flash flooding	41%	45%	48%
Safety precautions	28%	31%	43%
Unable to specify	19%	18%	21%
Where to learn more about flooding	4%	7%	16%
Ways floods are controlled	12%	10%	13%
Other[1]	21%	18%	13%
Time of year flooding occurs	5%	12%	11%
How to protect the environment	0%	5%	4%
Availability of flood insurance	1%	4%	2%

1. Other responses include: "litter clogs drains", "building flood channels", "the license plate billboards", and "where the channels are and where they drain."

AWARENESS OF LIVING IN A **FLOOD ZONE**

Eight percent (N=67) of respondents reported that they live in a flood zone. This is the same as the data collected in 2008. Forty-five percent (N=378) reported that they do not live in a 100-year flood zone, and 47% are not sure whether or not they live in a flood zone (N-394). This is a substantial increase in awareness of whether or not one lives in a flood zone. During the 2008 administration of the survey more than half (64%) were not sure whether or not they resided in a flood zone. However, there remains a discrepancy in understanding that if you live in a flood zone you must buy flood insurance. Sixty-seven respondents said they live in a flood zone and only 15 answered (unprompted) that they have flood insurance. After being read a description of flood insurance, 40 of the 67 reported having flood insurance. That still leaves 27 of the respondents who live in a flood zone that reported they do not have flood insurance.

BEHAVIOR WHEN ENCOUNTERING A **FLOODED STREET**

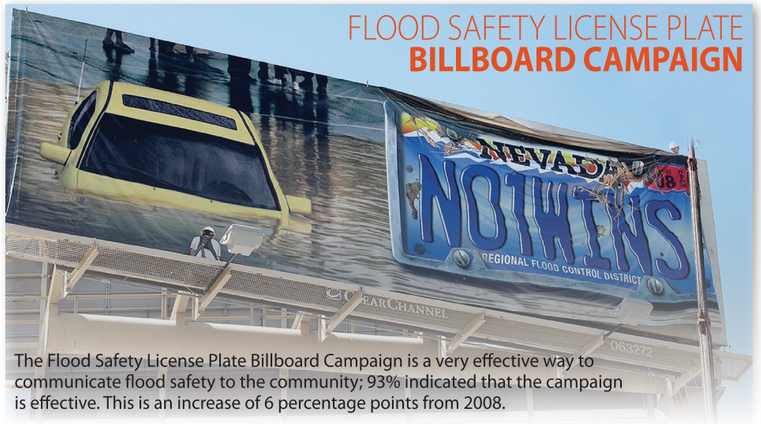
Seventy percent (70%) made a good or appropriate choice when encountering a flooded street; they either "turned back and took an alternate route" or "waited for the water to go down and then drove through it". This percentage up three percentage points from 2008 (67%). The main reason respondents made a poor choice is because they "didn't think it was unsafe to do so" cited by more than half (55%) of those who made a poor choice when encountering a flooded street.

SOURCES OF **FLASH FLOODING EDUCATION AND INFORMATION**

Survey respondents were asked to answer "yes" or "no" to a list that was read to them of possible sources for obtaining information about floods. The following table represents the responses in order. Television continues as the top source of information about flash flooding.

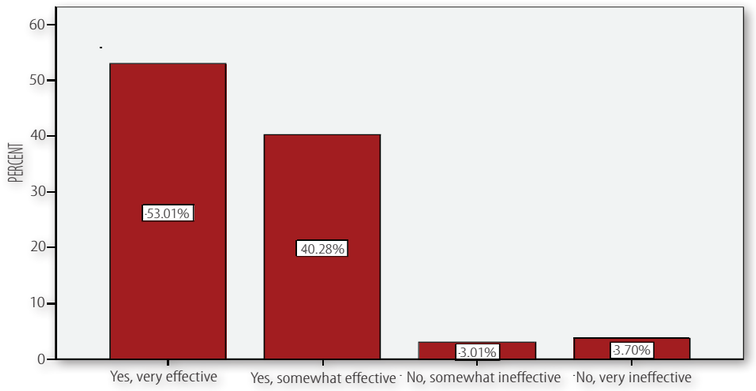
RANK	SOURCE	2009	2008	2007
1	Television	88%	90%	90%
2	Newspaper	58%	58%	60%
3	Friends/Relatives	58%	56%	54%
4	Radio	56%	57%	60%
5	Billboards	56%	53%	51%
6	Brochure	26%	26%	21%
7	CCRFCD website	21%	20%	20%
8	Welcome Home Magazine	8%	5%	6%

FLOOD SAFETY LICENSE PLATE **BILLBOARD CAMPAIGN**



The Flood Safety License Plate Billboard Campaign is a very effective way to communicate flood safety to the community; 93% indicated that the campaign is effective. This is an increase of 6 percentage points from 2008.

EFFECTIVENESS OF THE BILLBOARD CAMPAIGN 2009



FUTURE **STEPS**

- The Flood District's educational outreach to school age children continues to do well in teaching young people in Clark County about the dangers of flash flooding. There was an increase in the number of respondents with school age children who reported that their children brought home flood awareness materials and an increase in the number of parents who indicated that their children talked about the flood safety that they learned at school.

- The Flood Channel should continue to include information and education about flash flooding, awareness of when the flood season is, flood insurance issues, and precautions to take when encountering a flooded street or road. In addition, the data shows that emphasis should be placed on "resources available to learn more about flooding",while 61% reported that they knew about the resources available this item consistenty has the lowest percentage of respondents who know about it.

- The data also indicates that continued emphasis should be put on ways that individuals can help protect the environment and Lake Mead. For the second year in a row water conservation was the main activity mentioned for helping the environment (28%). In addition, nearly all (92%) reported that they would be willing to make a behavior change to improve water quality if they knew what to do.

- There were some impressive improvements in respondent understanding of the flood control system and the environmental impact of urban runoff. Forty-six percent knew that all of the urban runoff that travels through the flood control drain system drains into Lake Mead. This is a three year high. More than half (54%) also knew that the urban runoff is untreated and 62% knew that streets are a part of the flood control system. These messages have been retained by the residents of Clark County.,

- The District's Flood Safety License Plate Billboard Campaign continues to be an effective way to communicate flood safety to the community. Ninety-three percent (93%) think that the billboard campaign is effective. This is a survey high for this item and it is apparent that the campaign grows in popularity.