

Marketing and Communications Plan for the Carson River Watershed

Photo credit: © Tim Torell



Mark Damian Duda, Responsive Management
April 26, 2016

Reach of Responsive Management

- 1,000 human dimensions projects
- Almost \$60 million in research
- 50 states – 15 countries
- Every state fish and wildlife agency and most federal resource agencies; most DNRs and NGOs
- Industry leaders such as Yamaha, Winchester, Vista Outdoor (including Bushnell, Primos, Federal Premium, etc.), Trijicon, and many others
- Data collection for the nation's top universities:
Auburn University, Colorado State University, Duke University, George Mason University, Michigan State University, Mississippi State University, North Carolina State University, Oregon State University, Penn State University, Rutgers University, Stanford University, Texas Tech, University of California-Davis, University of Florida, University of Montana, University of New Hampshire, University of Southern California, Virginia Tech, and West Virginia University

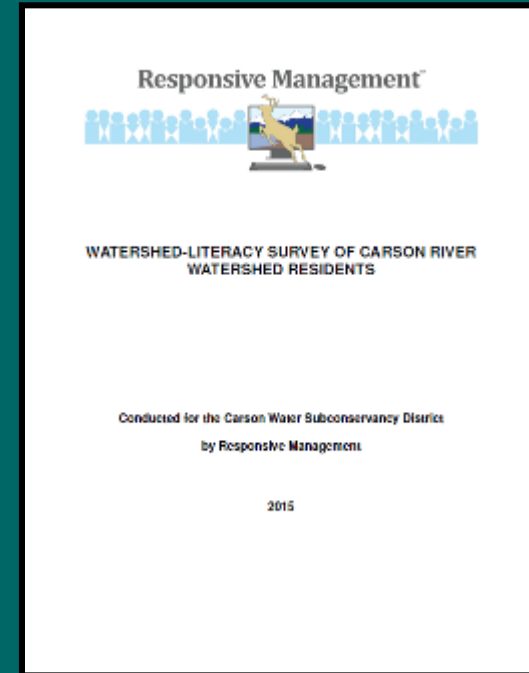


Section I: Watershed-Literacy Survey of Carson River Watershed Residents



Study Methodology

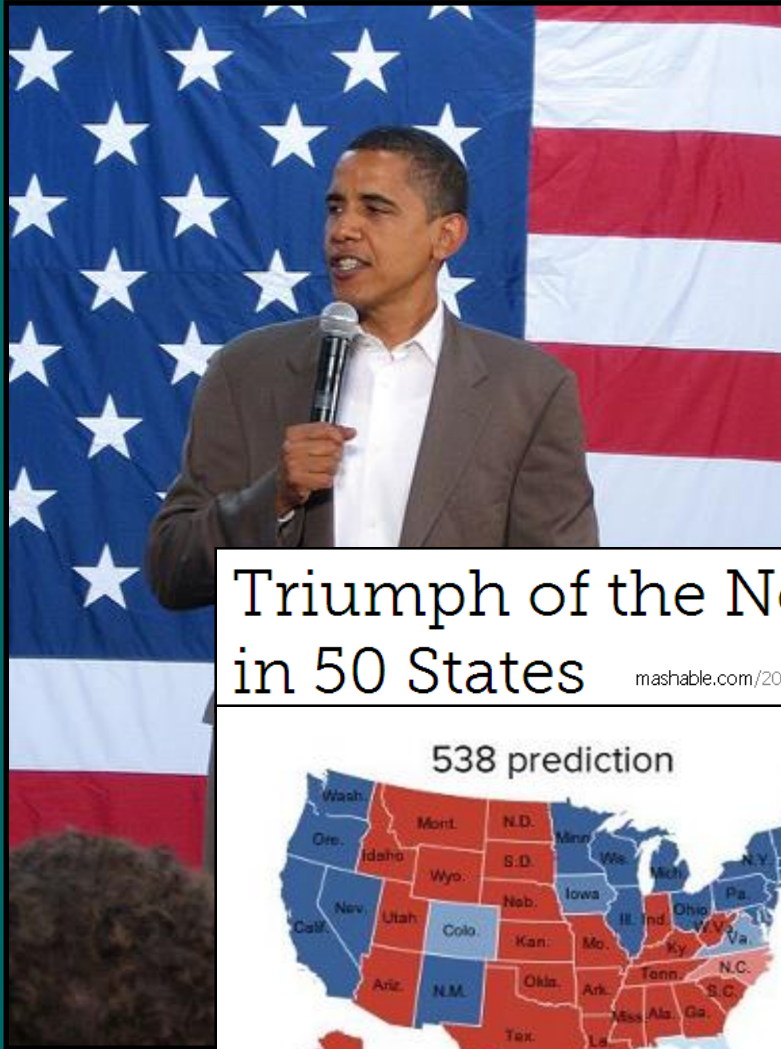
- Telephone survey conducted for the Carson Water Subconservancy District to determine Carson River Watershed residents' knowledge of and attitudes toward:
 - Watershed health
 - Knowledge of basic watershed concepts
 - Participation in activities or behaviors that may impact the watershed's environment
- Residents of the Carson River Watershed area in Nevada and California, ages 18 and older (n=846)
- Both landline and cellular telephones were called
- Conducted in June 2015
- Sampling error = +/- 3.36 percentage points



The Carson River Watershed comprises:

- **Alpine County, California**
- **Carson City, Nevada (independent city)**
- **Churchill County, Nevada**
- **Douglas County, Nevada**
- **Lyon County, Nevada**
- **Storey County, Nevada**





Triumph of the Nerds: Nate Silver Wins in 50 States

mashable.com/2012/11/07/nate-silver-wins/



Section I: Watershed-Literacy Survey of Carson River Watershed Residents

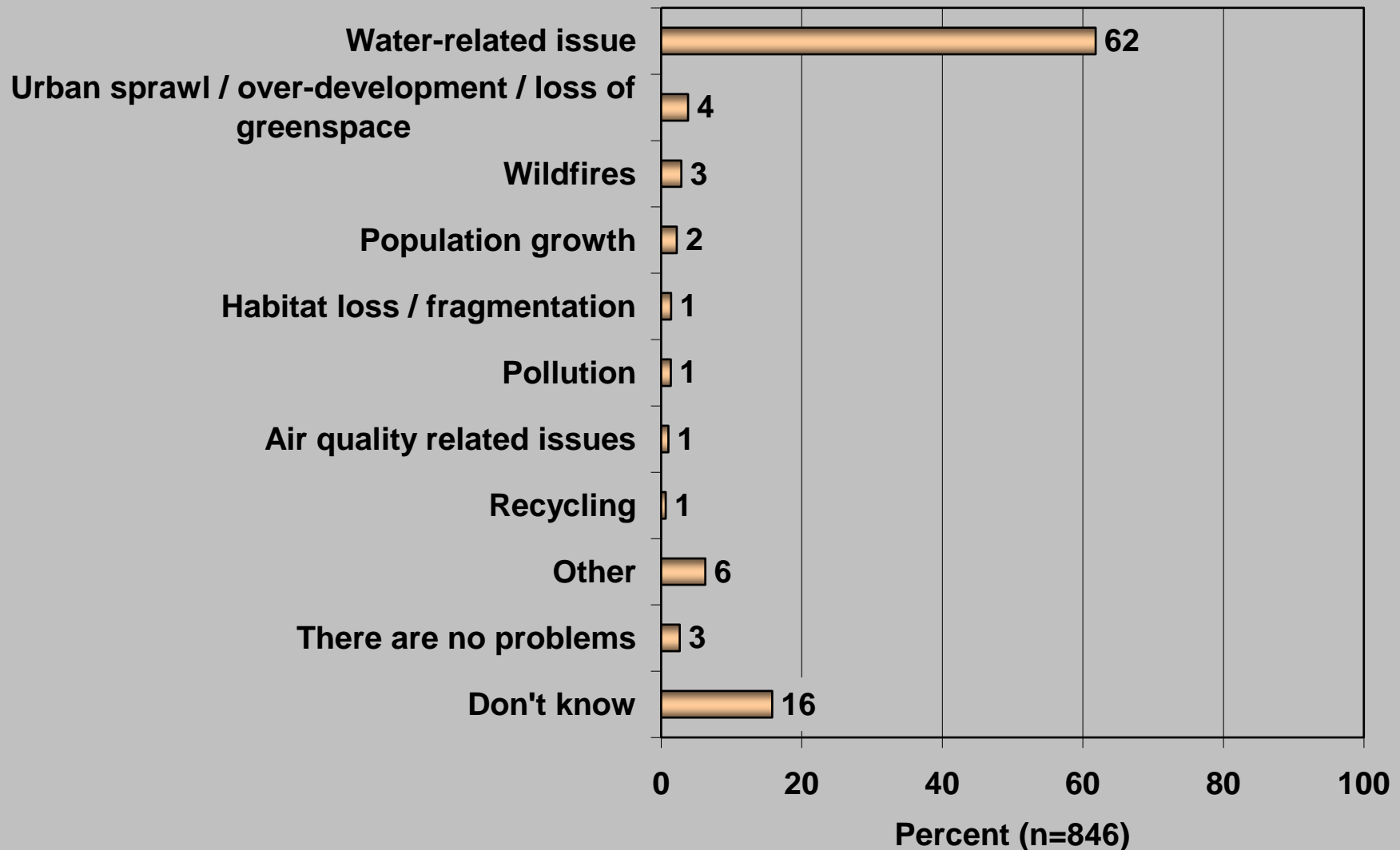
- **Environmental Values**
- **Knowledge of Watersheds**
- **Health of the Carson River Watershed**
- **Activities That Affect Watershed Conservation**
- **Sources of Information**
- **Demographics**



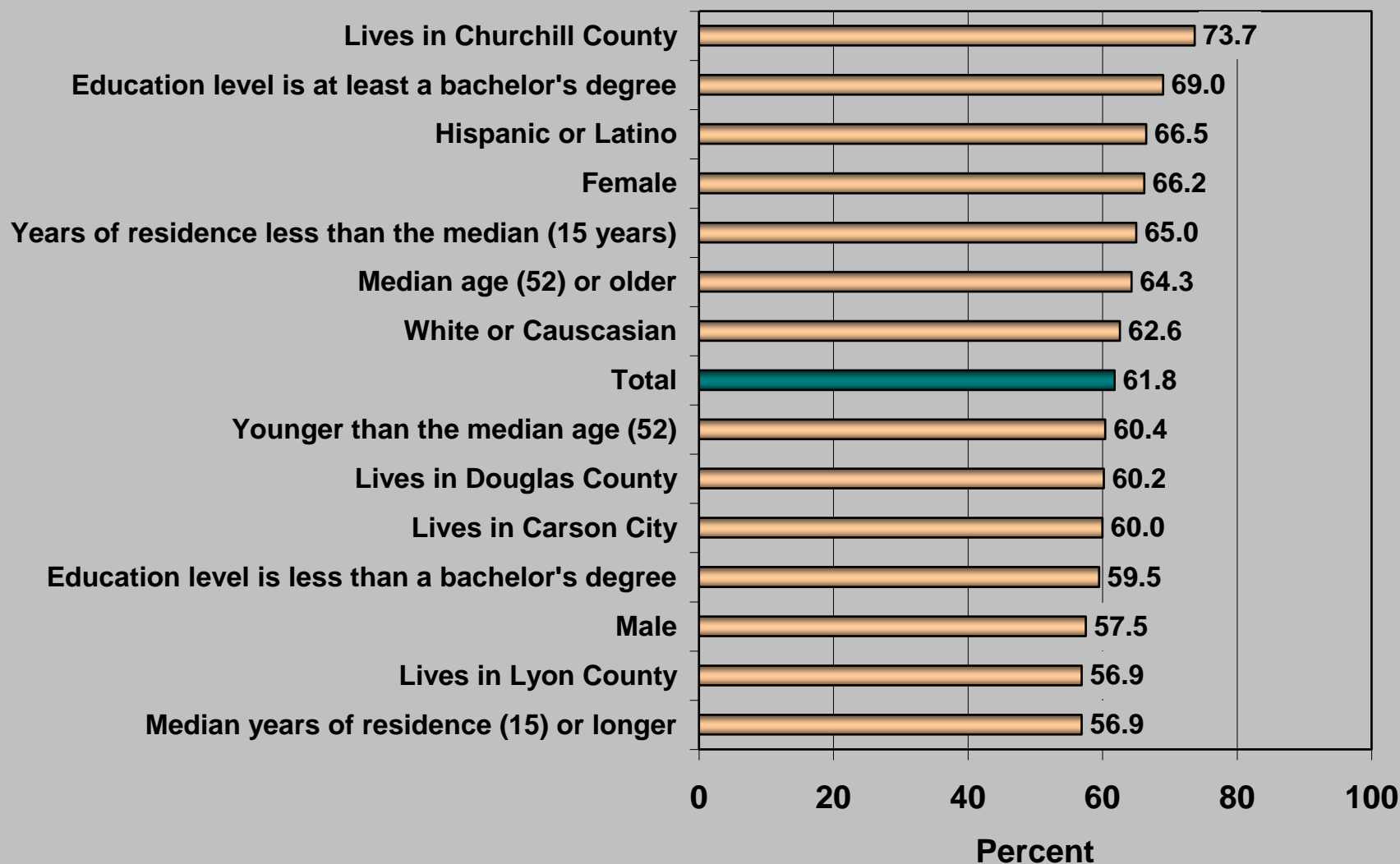
Environmental Values



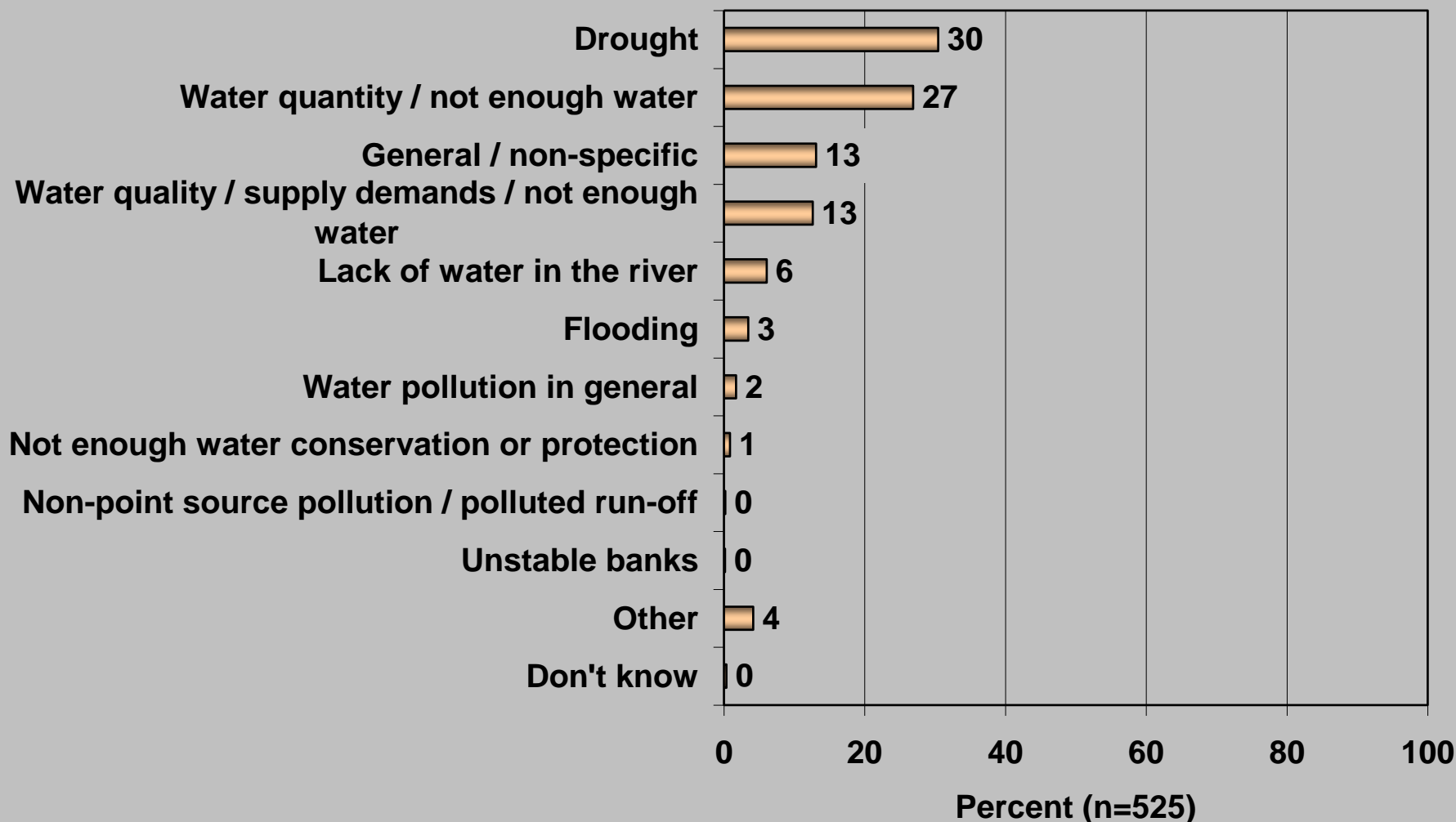
Q21. Thinking about this general area, in your opinion, what is the most important environmental issue facing the area?



Percent who believe that a water-related issue is the most important environmental issue facing the area.



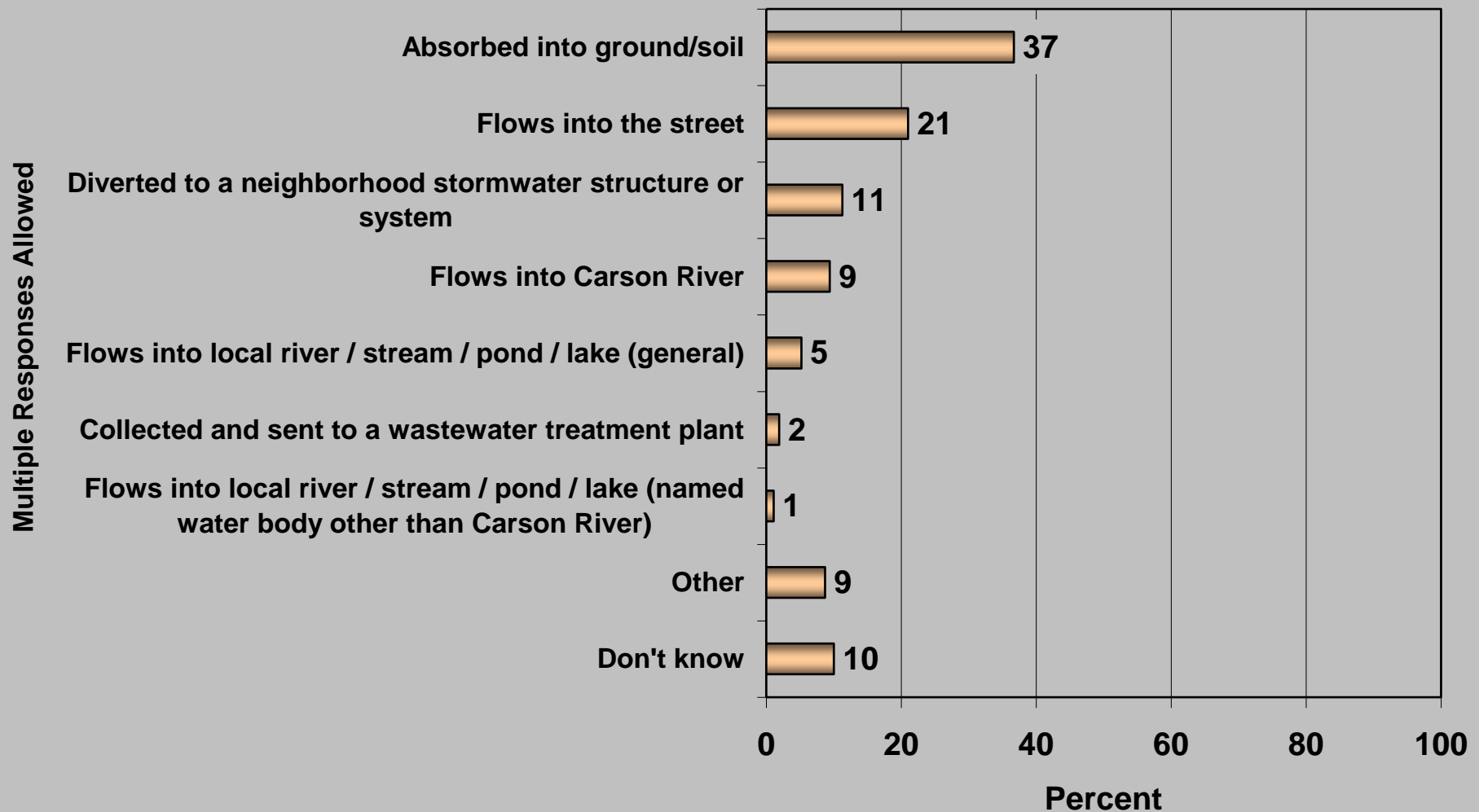
Q23. Percent who named the following specific water-related issues as the most important environmental issue facing the area.



Knowledge of Watersheds

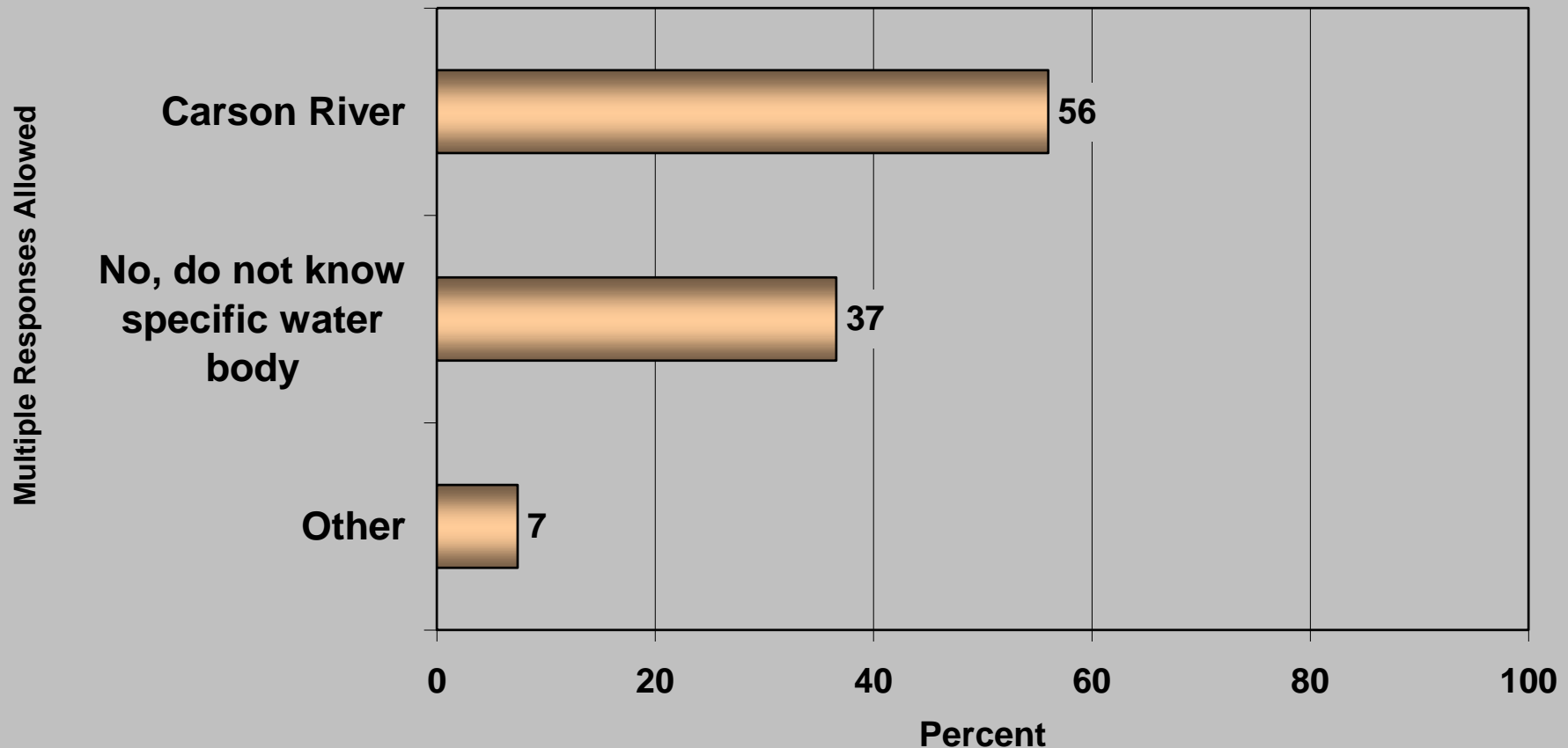


Q27. When water is flowing or draining from your property, such as storm or rain water, where does it ultimately drain or go to?

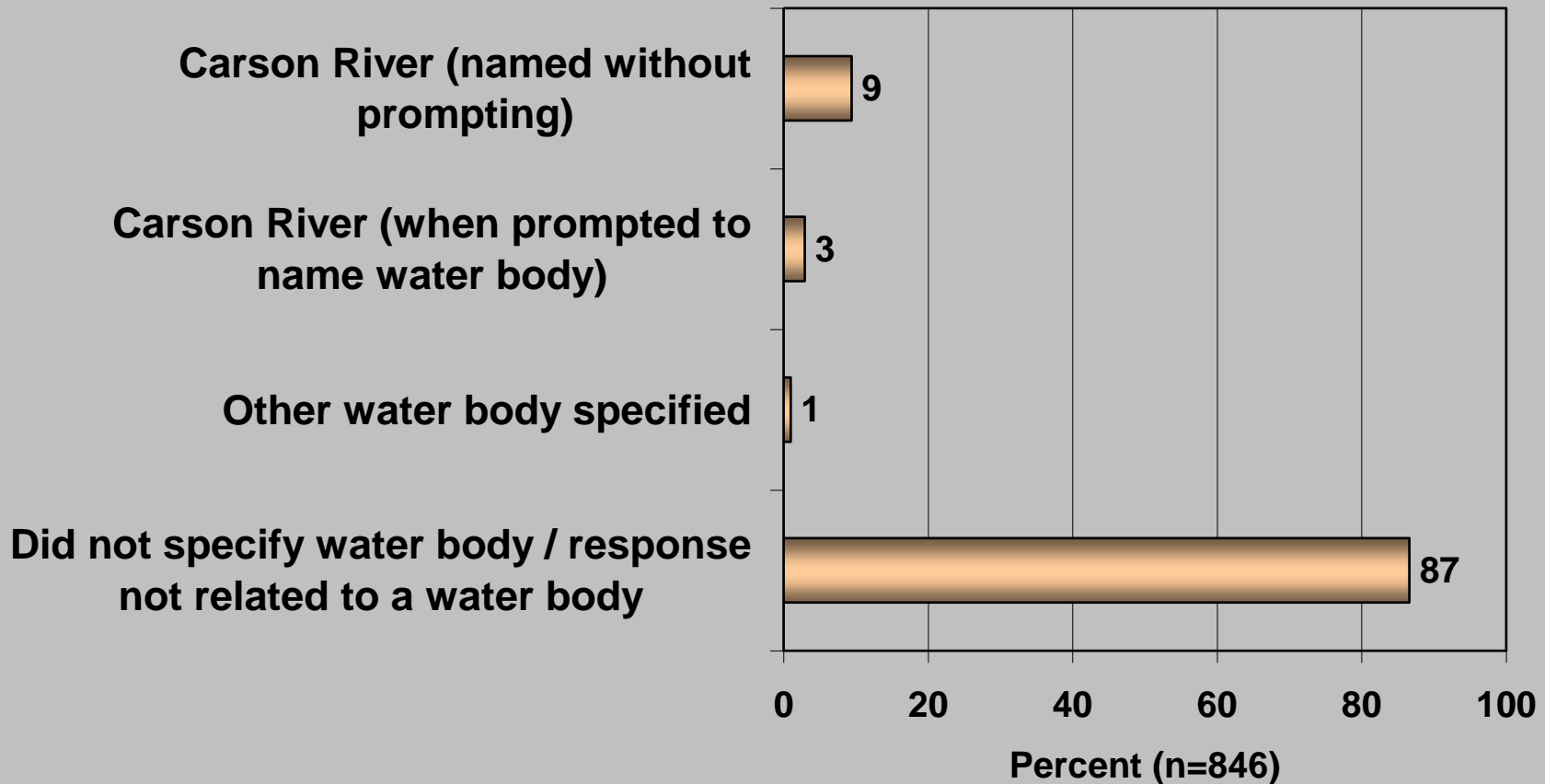


Q30. Do you know which local water body [drainage from your property] drains into?

(Asked of those who said water flowing or draining from their property ultimately flows into a local river / stream / pond / lake but did not name a water body.)

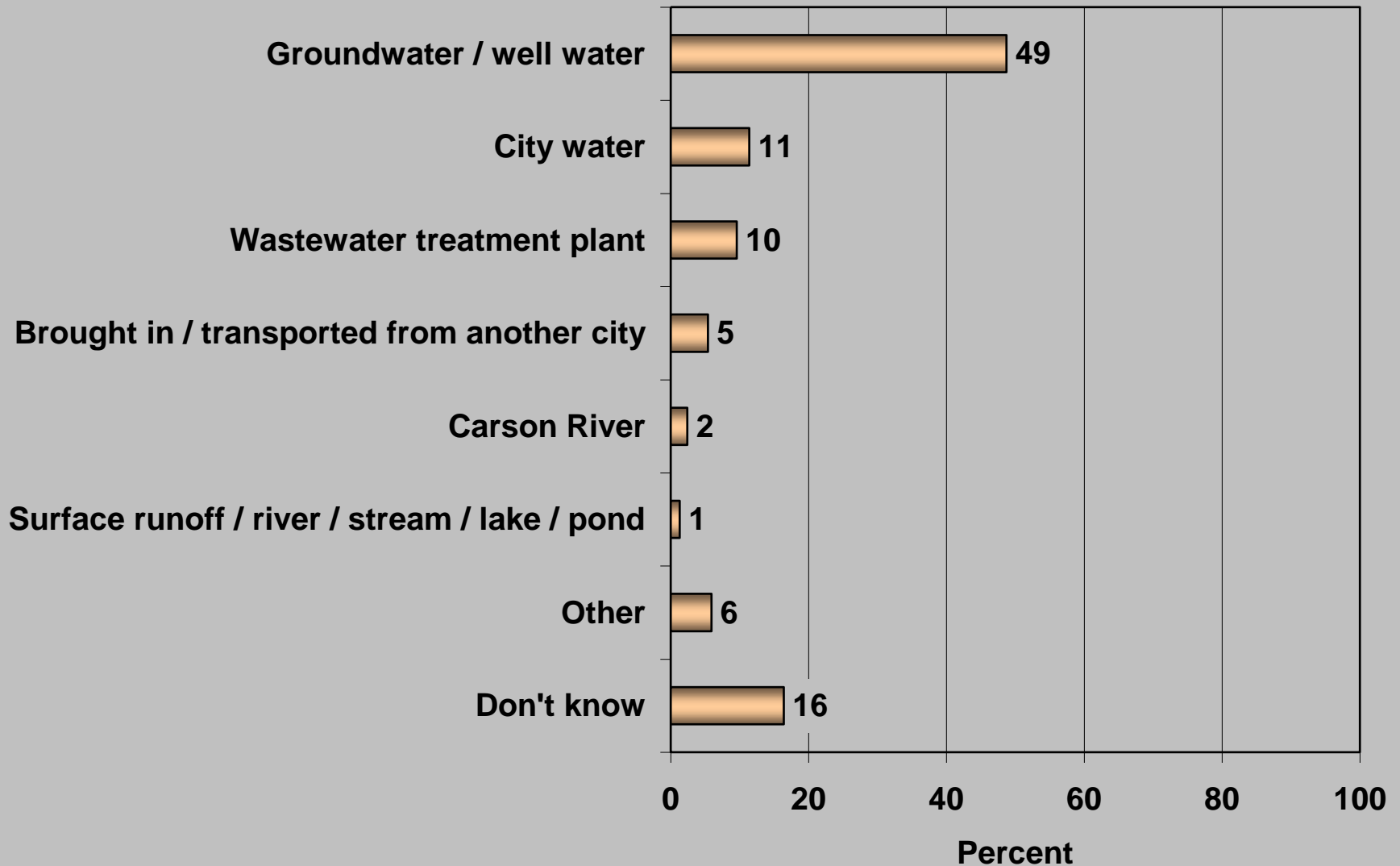


**Q27-32. When water is flowing or draining from your property, such as storm or rain water, where does it ultimately drain or go to? / Do you know which local water body it drains into?
(Responses among all respondents categorized by water body.)**

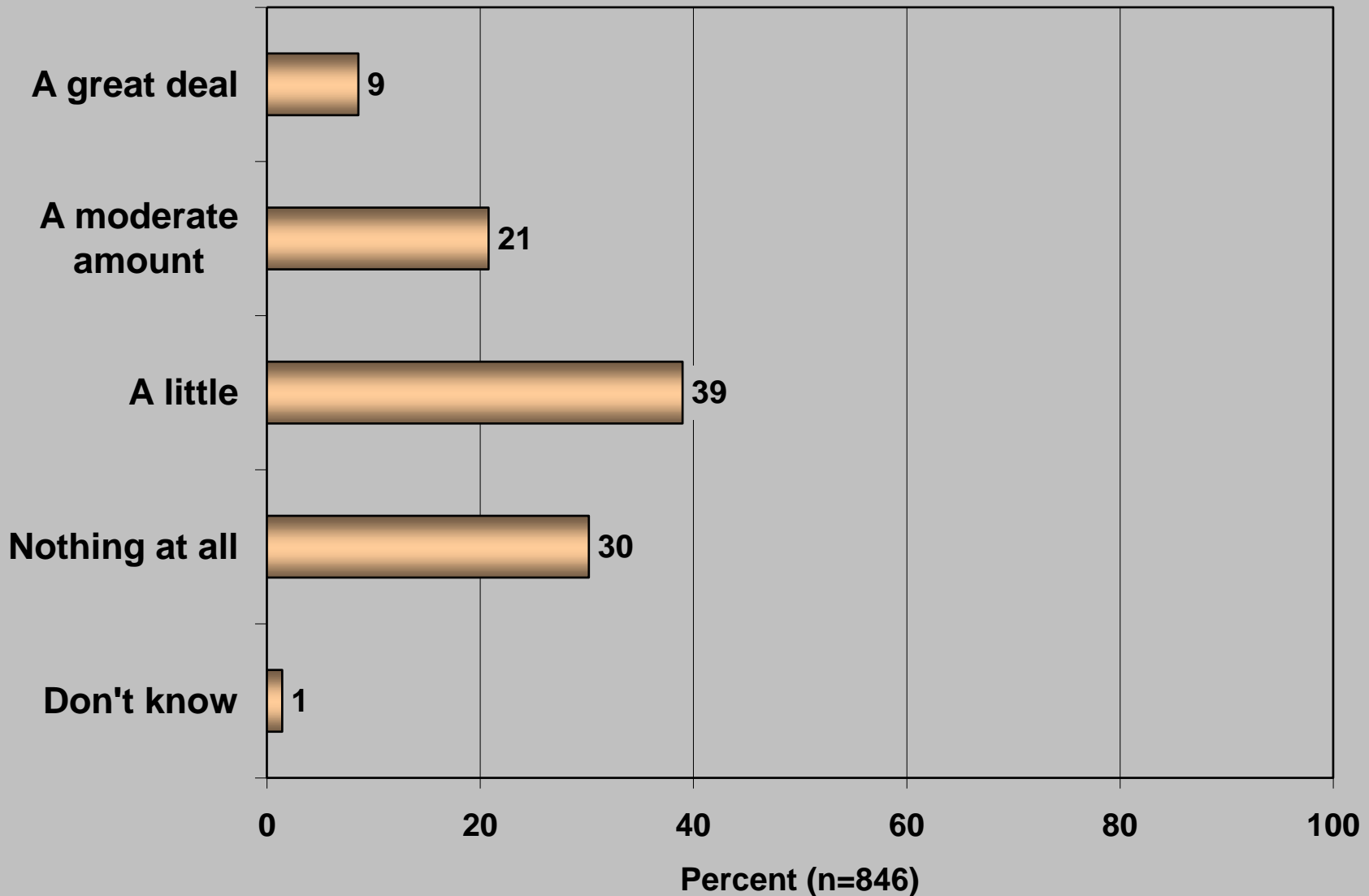


Q35. What is the source of your tap water?

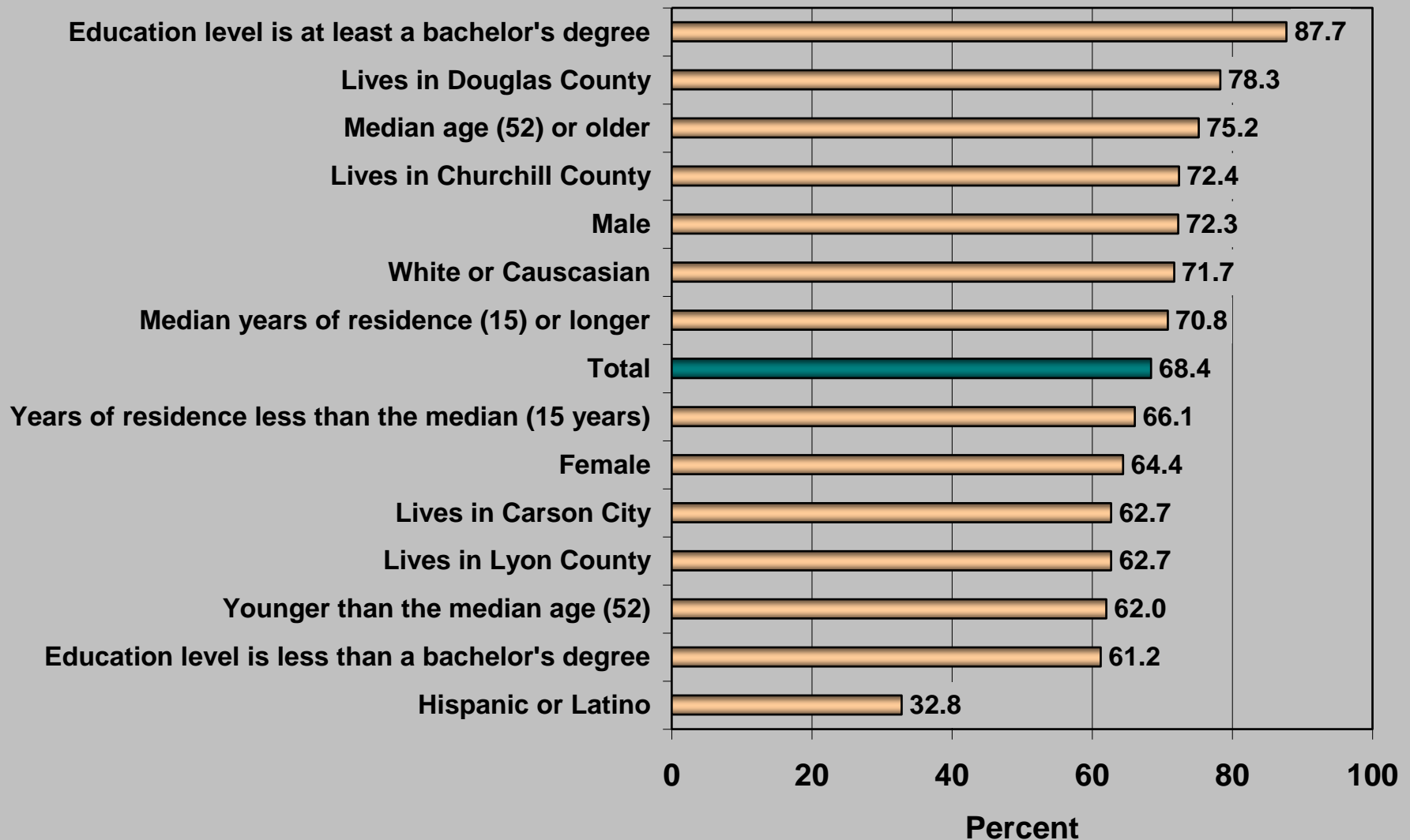
Multiple Responses Allowed



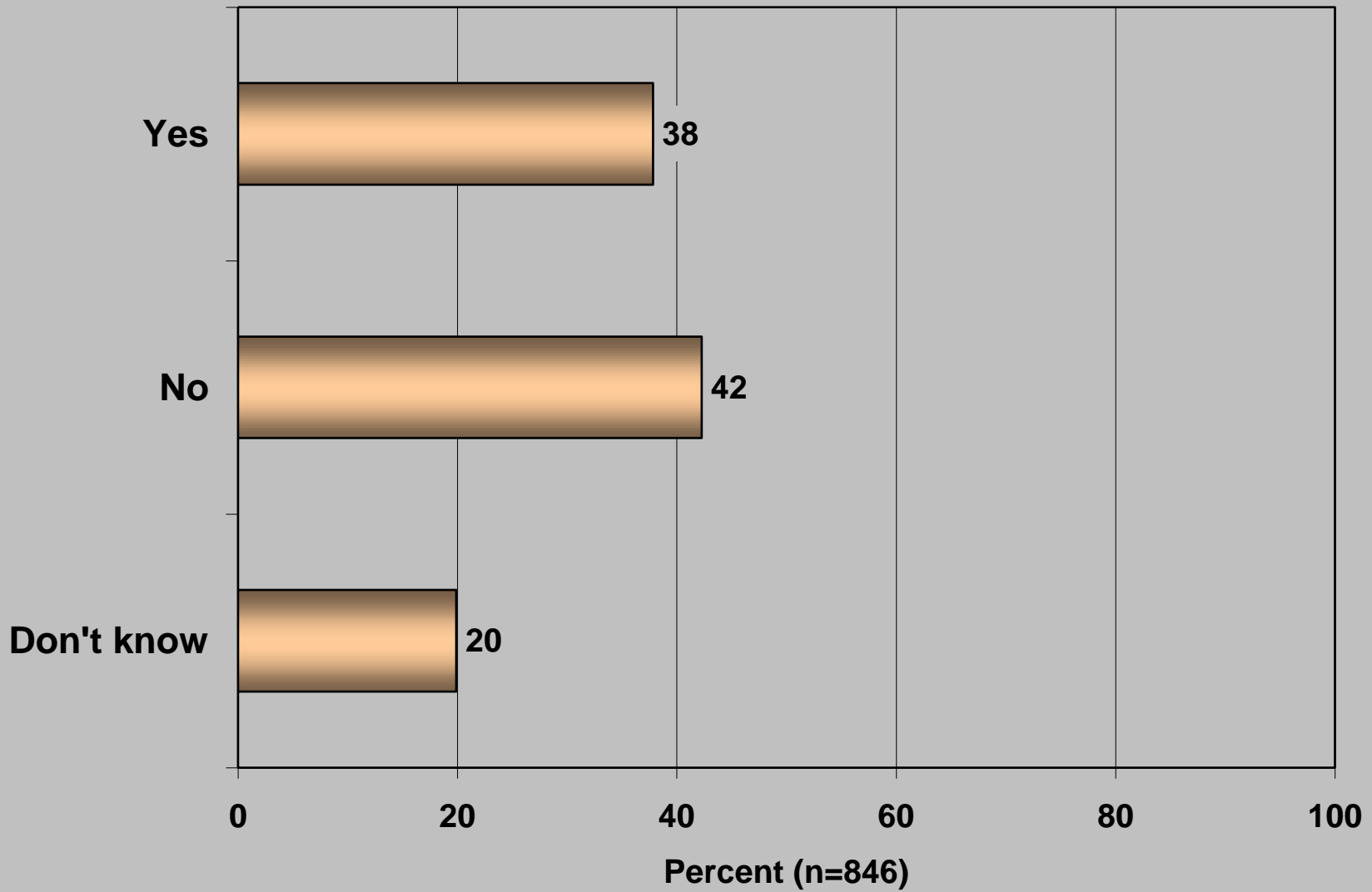
Q41. How much would you say you know about watersheds?



Percent who knows a great deal, a moderate amount, or a little about watersheds.



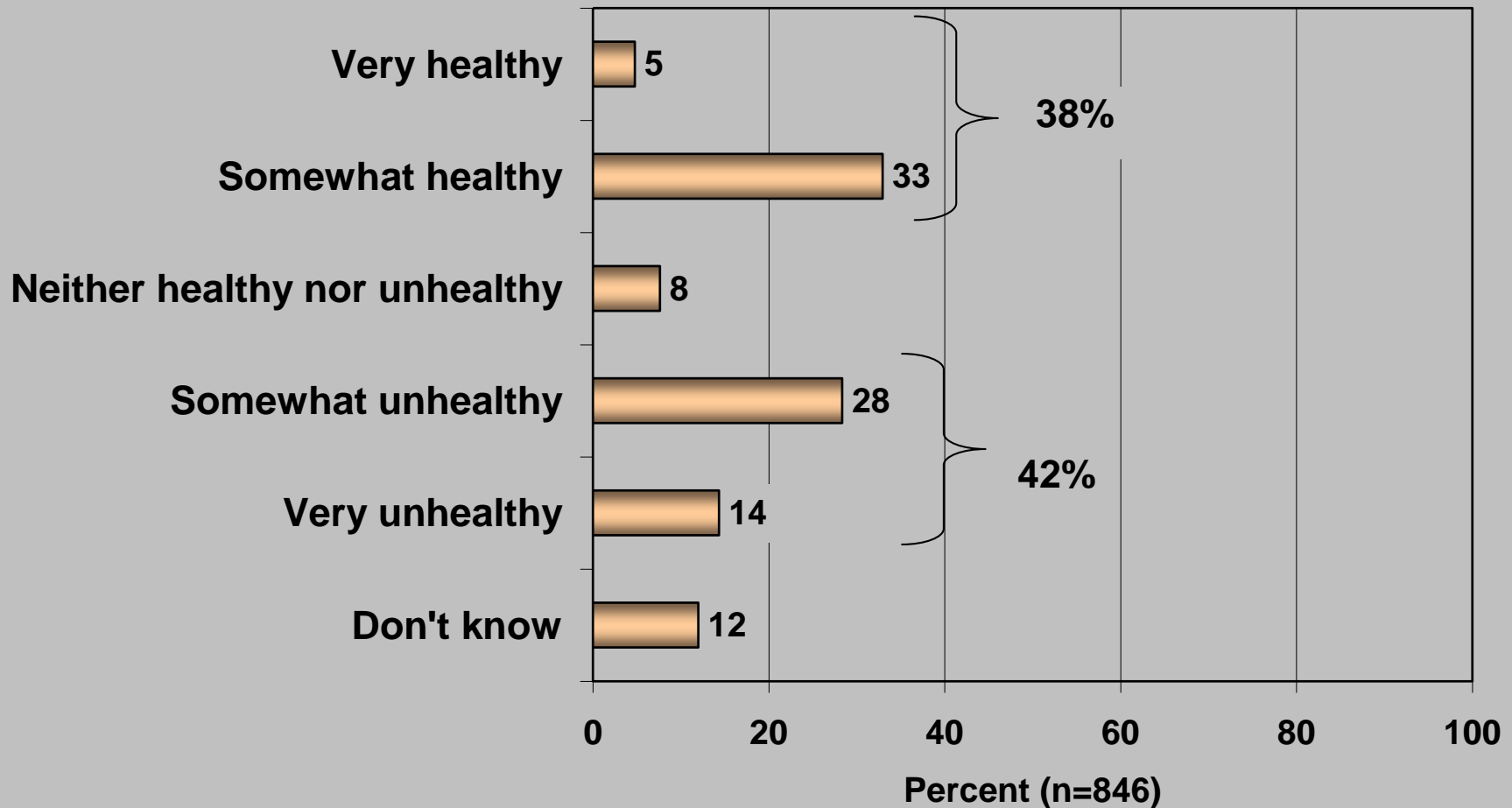
Q43. Do you currently live in a watershed?



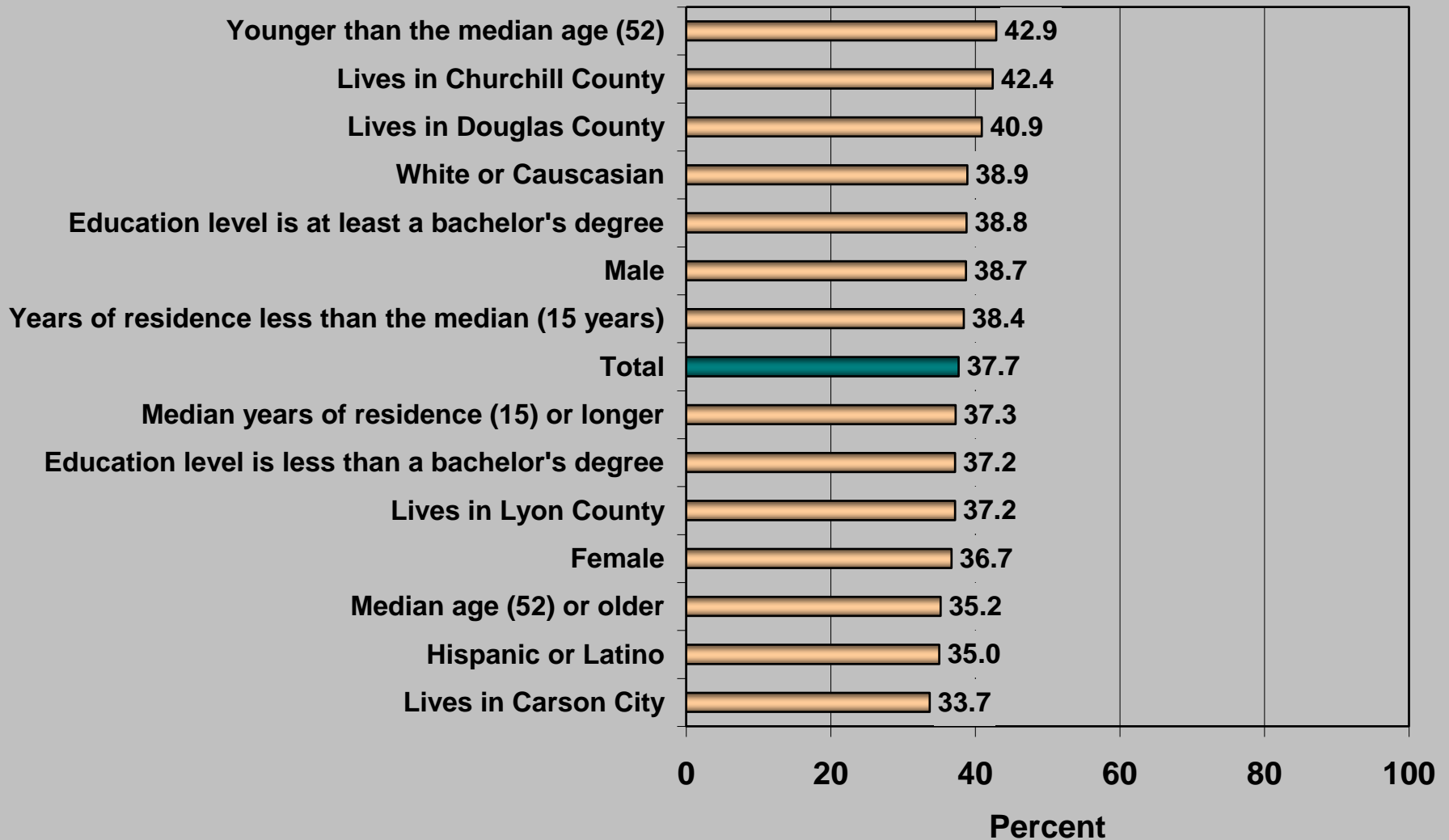
Health of the Carson River Watershed



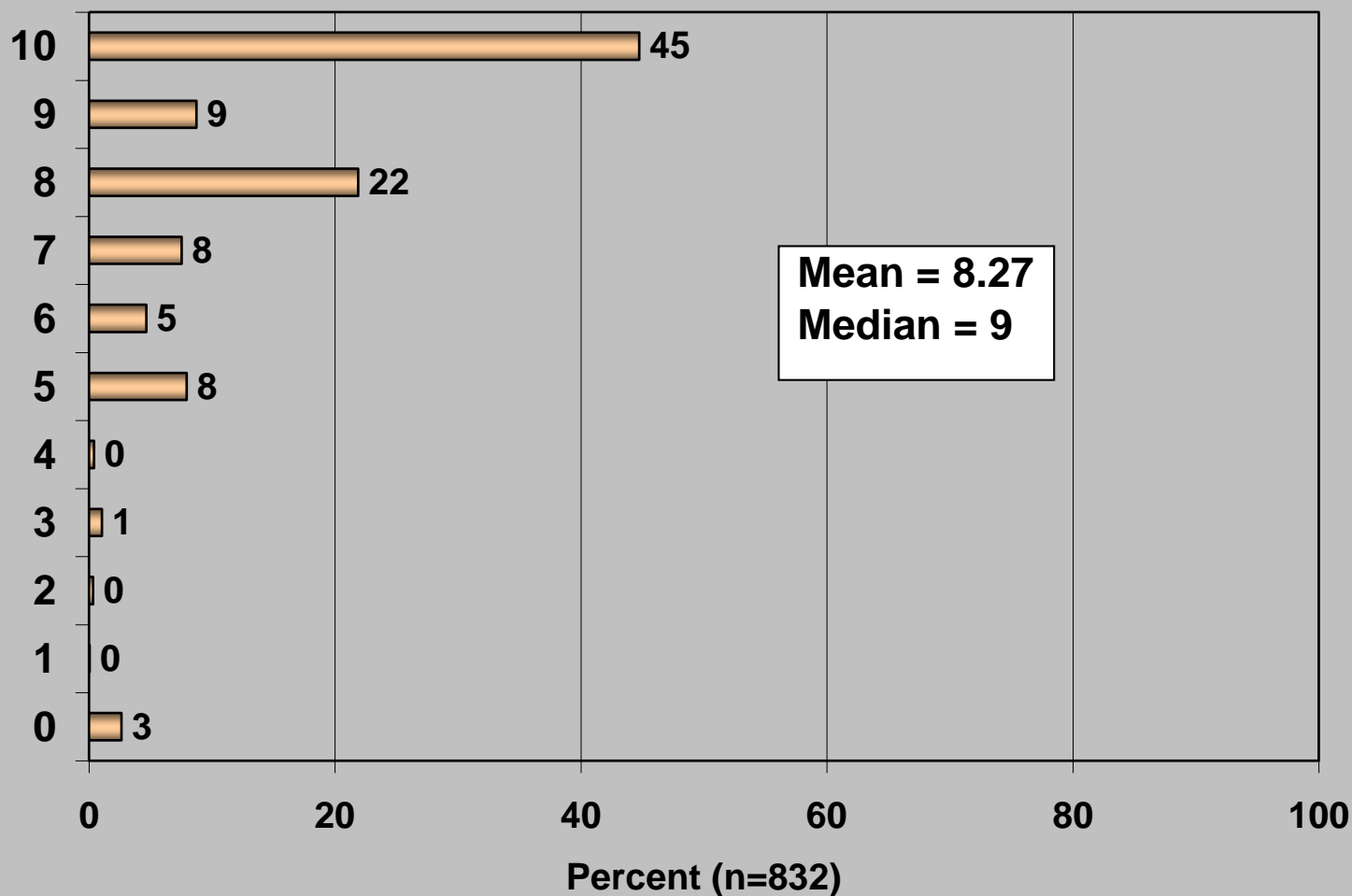
Q47. Overall, would you say the Carson River Watershed's environment is currently very healthy, somewhat healthy, neither healthy nor unhealthy, somewhat unhealthy, or very unhealthy?



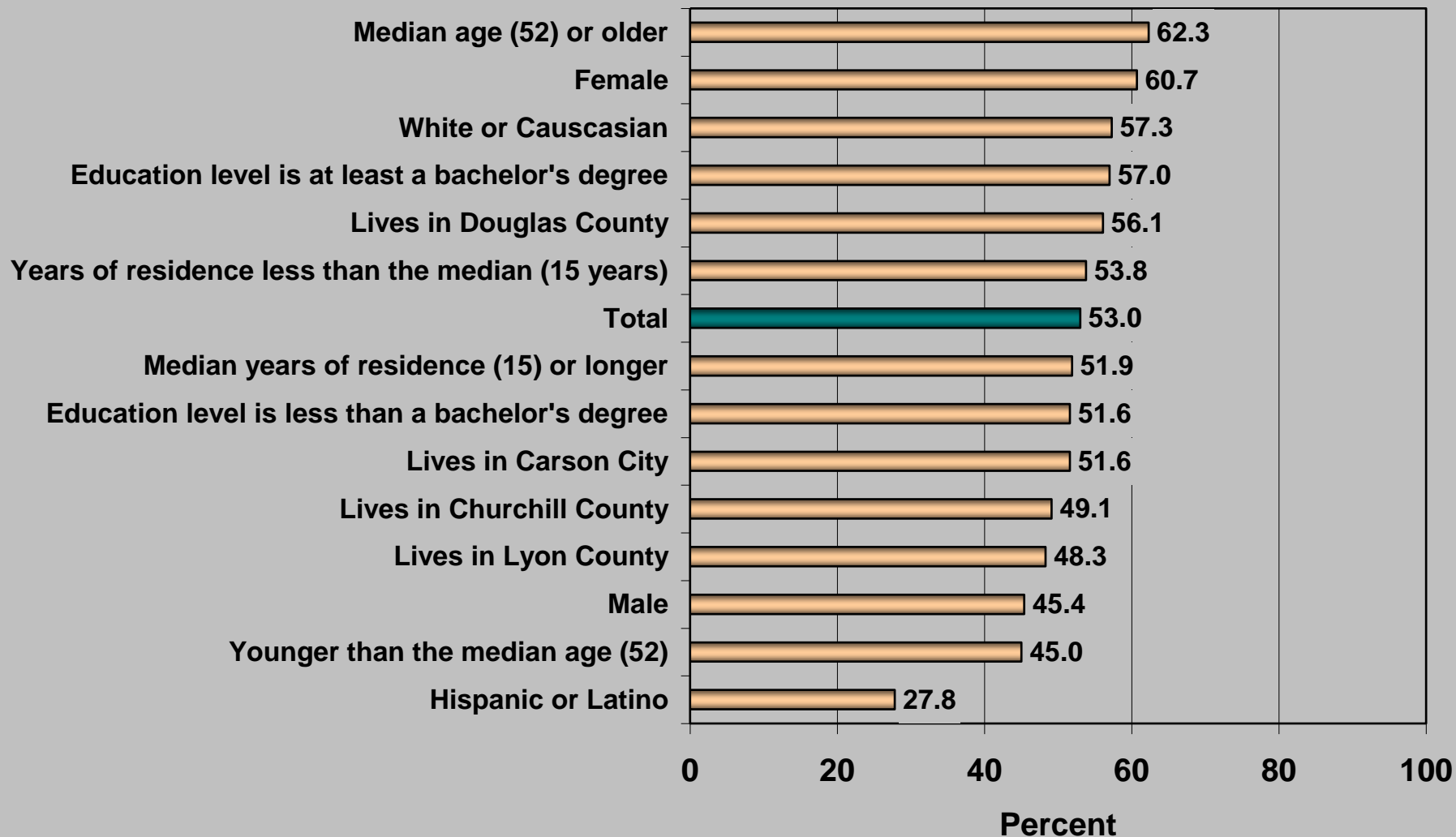
Percent who believe that the Carson River Watershed is healthy (very or somewhat).



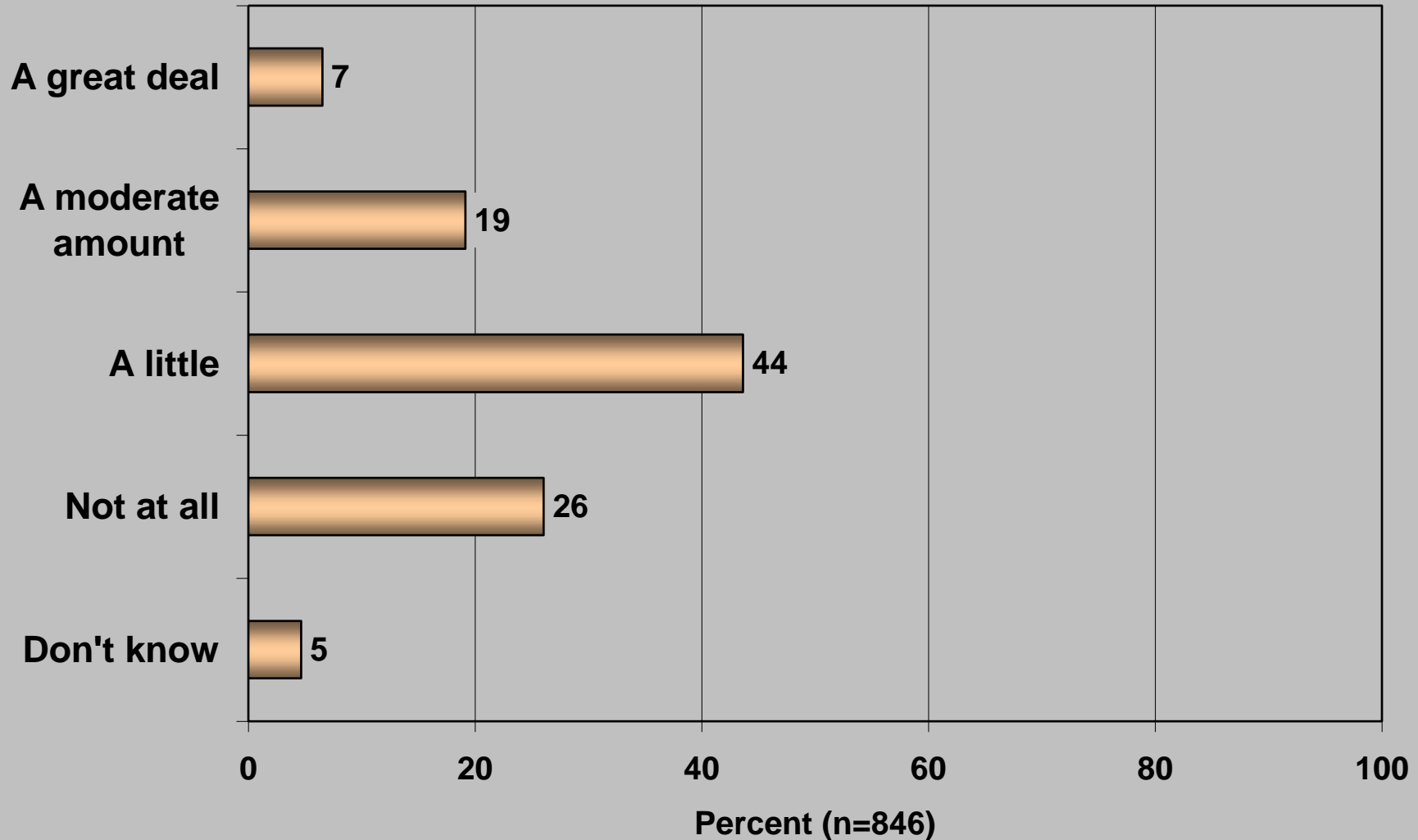
Q49. How important to you, personally, is the health of the Carson River Watershed's environment on a scale of 0 to 10, where 0 is not at all important and 10 is extremely important?



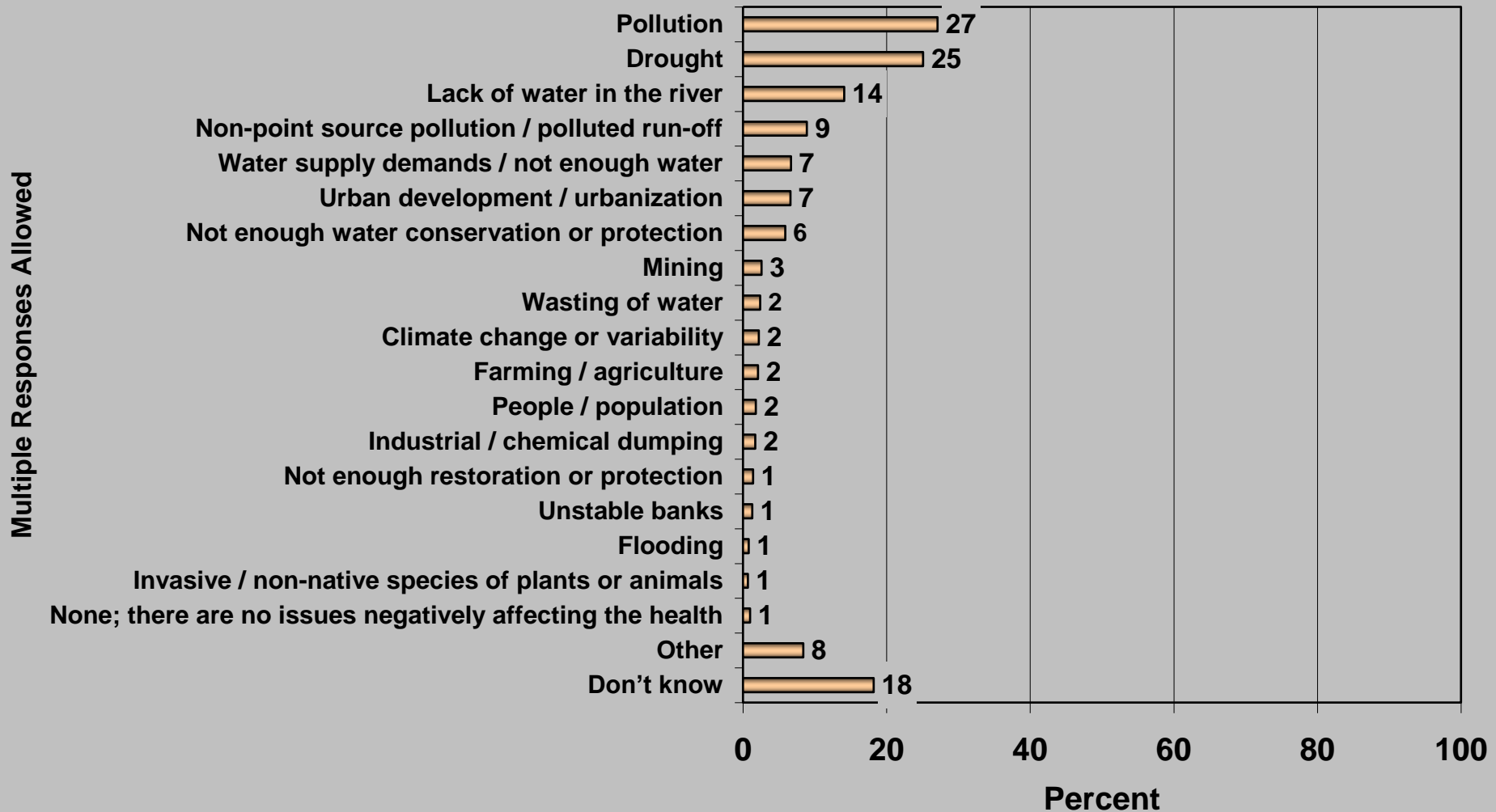
Percent who believe that the health of the Carson River Watershed is very important (9 or 10).



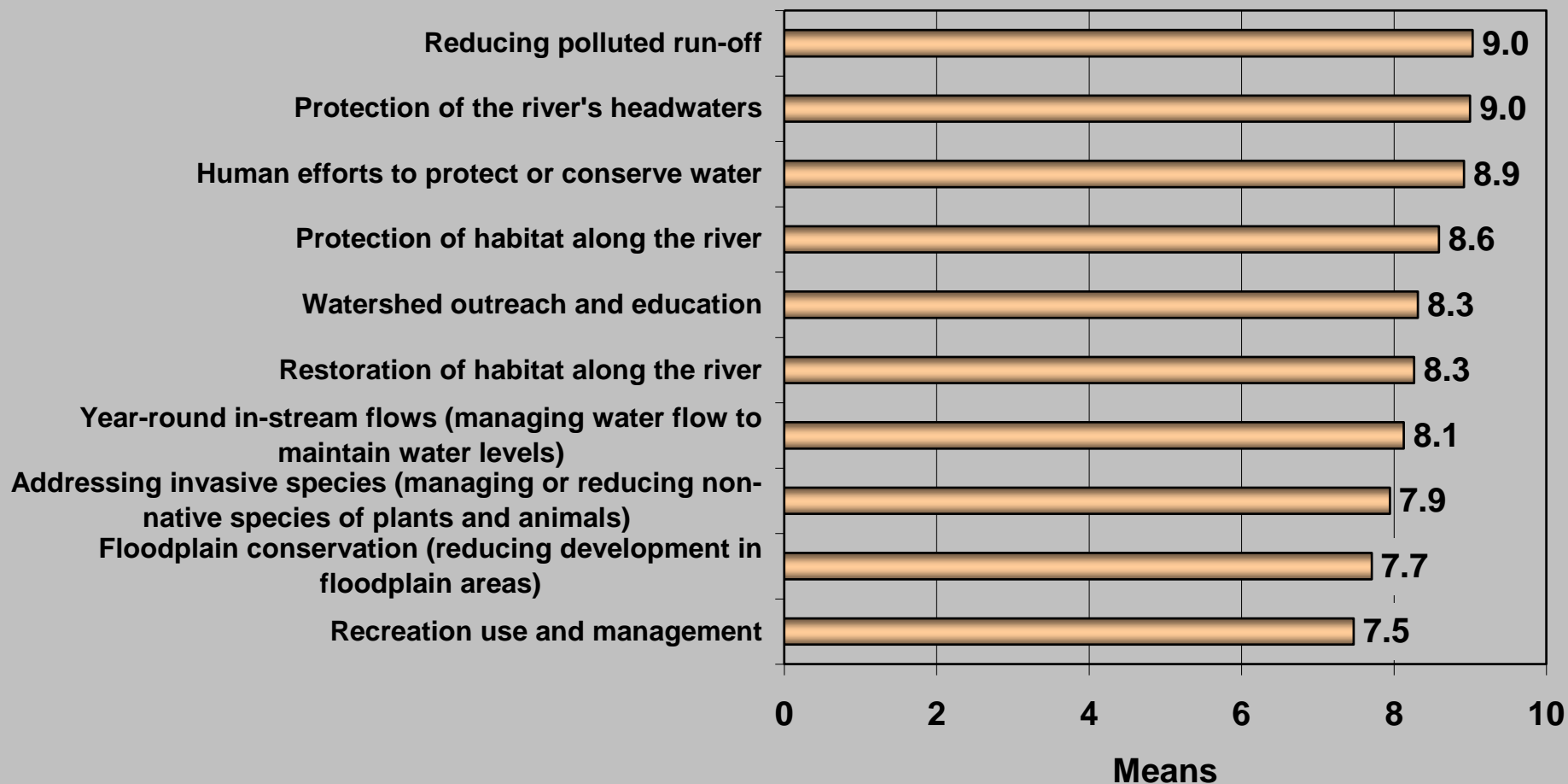
Q51. How much would you say you affect the health of the Carson River Watershed's environment?



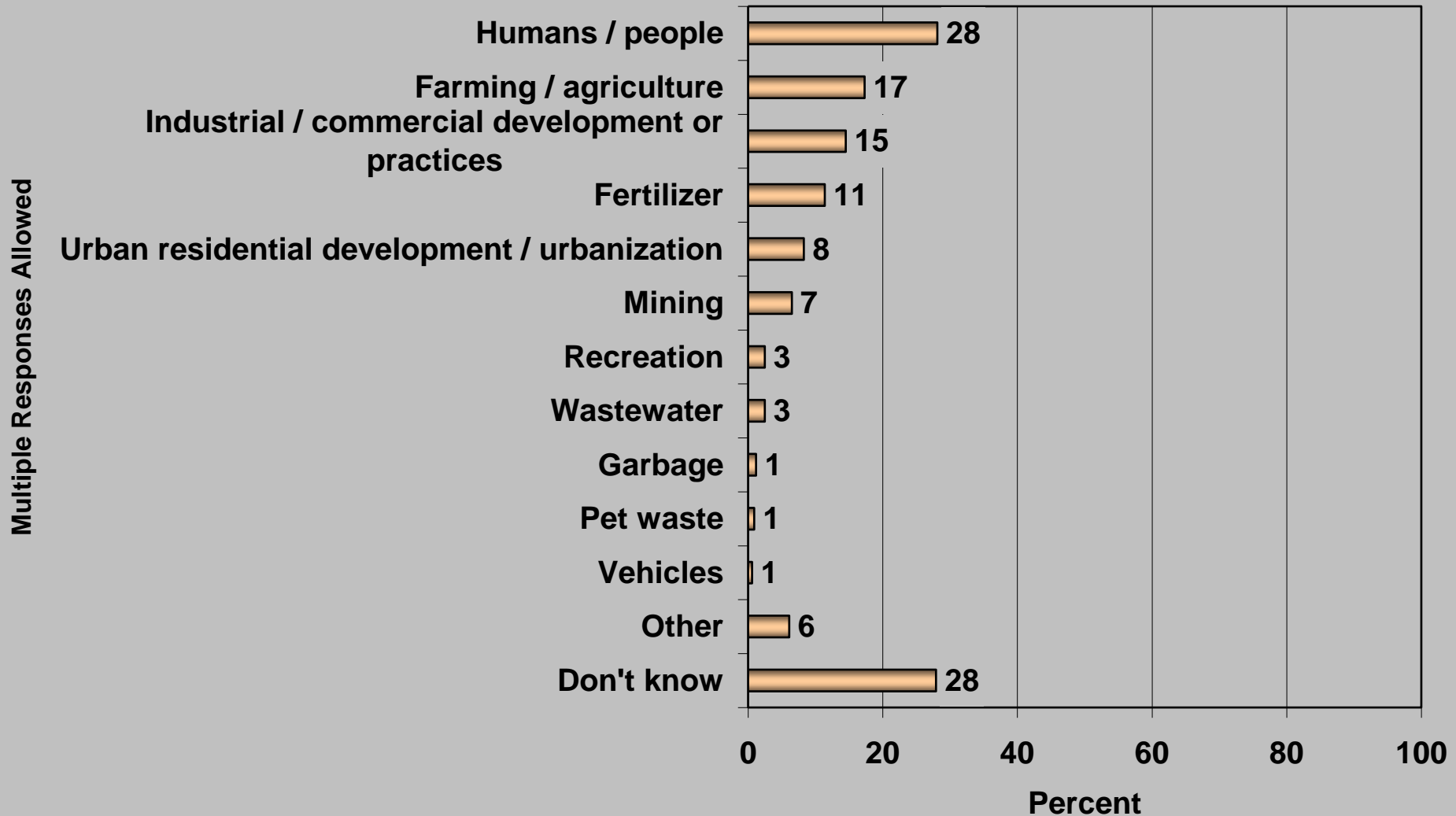
Q54. In your opinion, what are the most important issues that negatively affect the health of the Carson River and its watershed?



Q58-67. Mean ratings of importance of each of the following to the health of the Carson River Watershed's environment, on a scale of 0 to 10, where 0 is not at all important and 10 is extremely important.



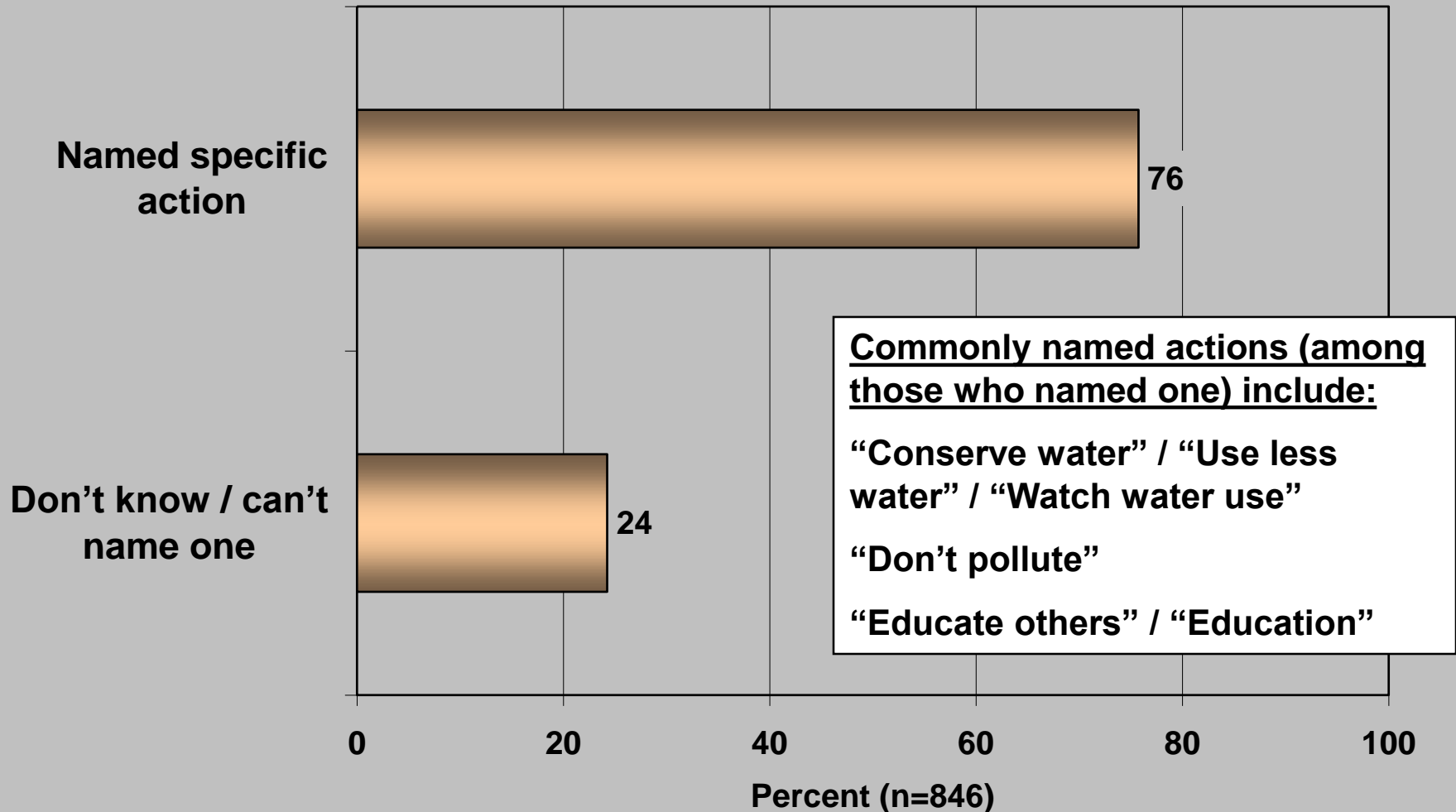
Q70. What do you think is the primary source of polluted runoff in the Carson River and the watershed's environment?



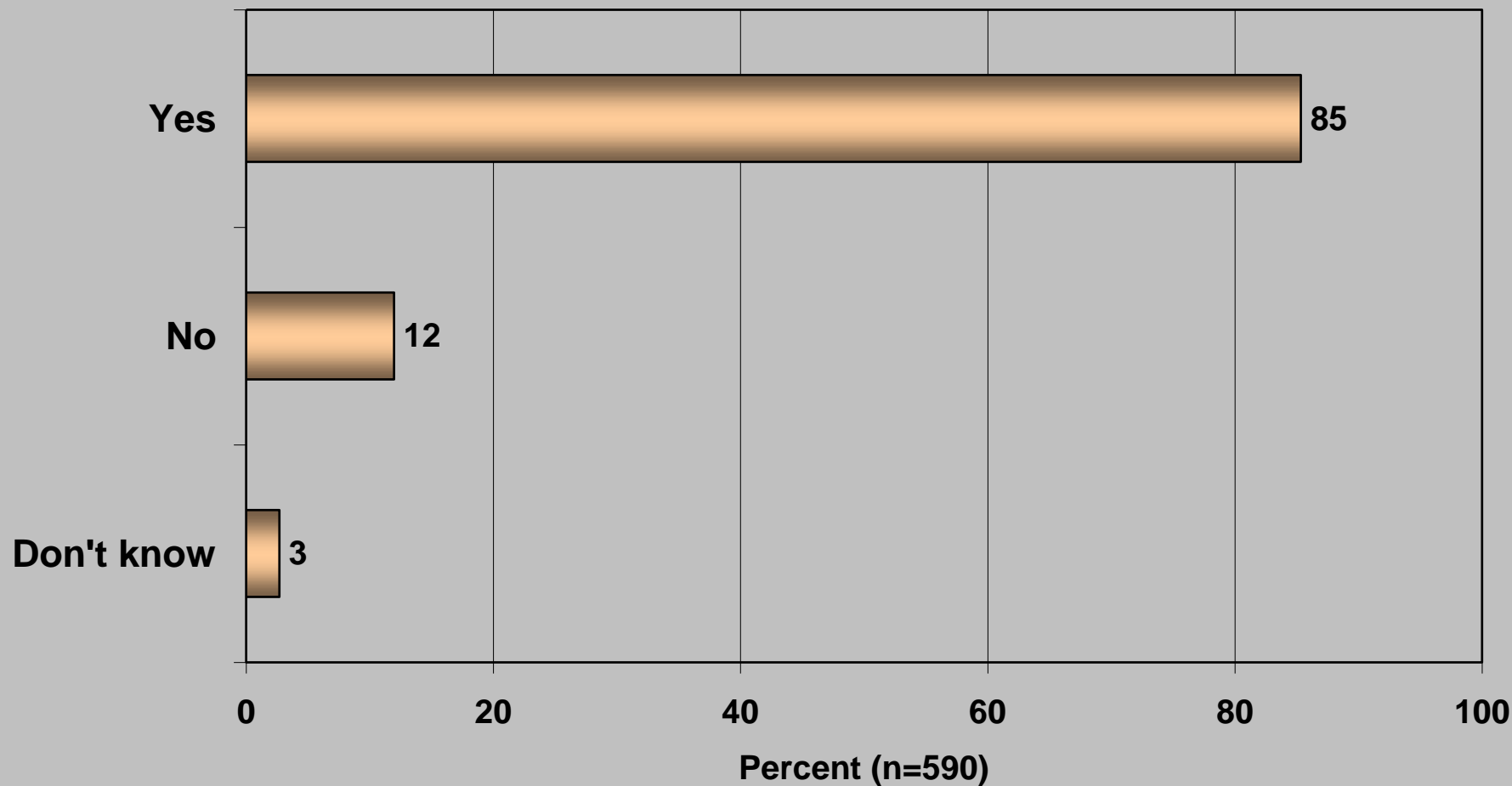
Activities That Affect Watershed Conservation



Q73. In your opinion, what is the single most important action you can take to help protect or improve the health of the Carson River and the watershed's environment?

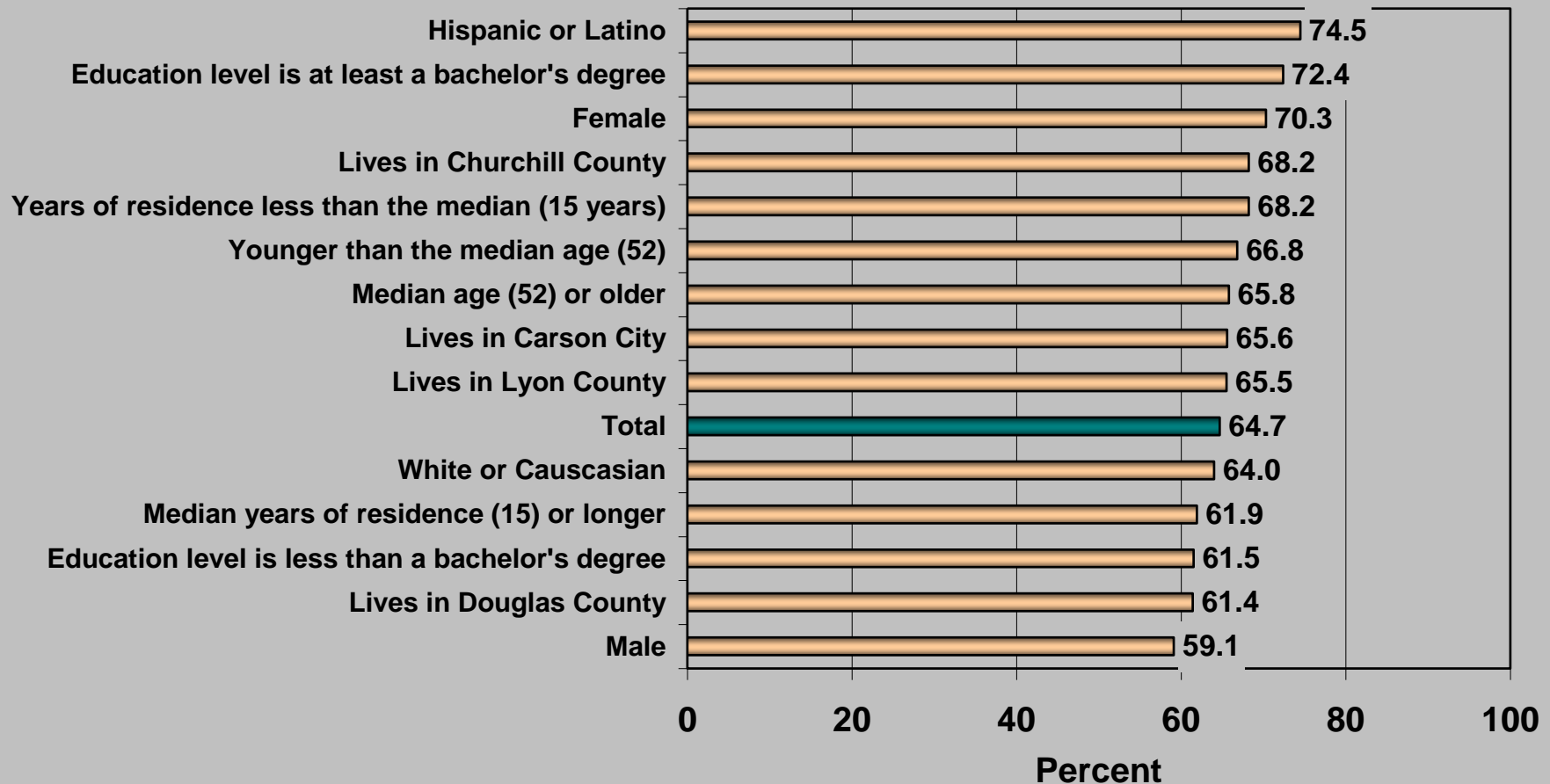


Q75. Are you currently taking this action?
(Asked of those who named a specific action they can take to help protect the health of the Carson River and the watershed's environment.)



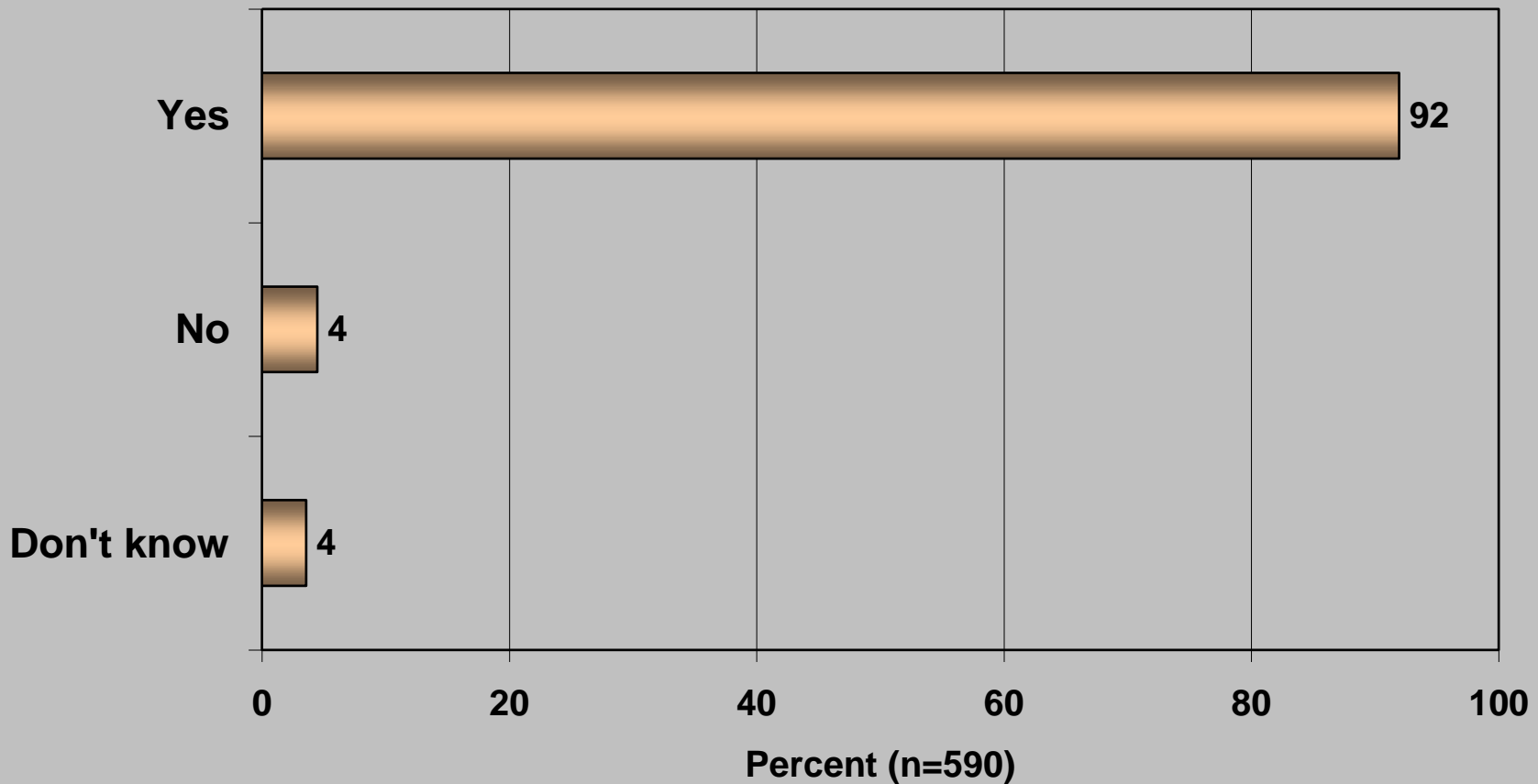
Percent who currently take action to help improve the health of the Carson River Watershed.

(Asked of those who named a specific action they can take to help protect the health of the Carson River and the watershed's environment.)

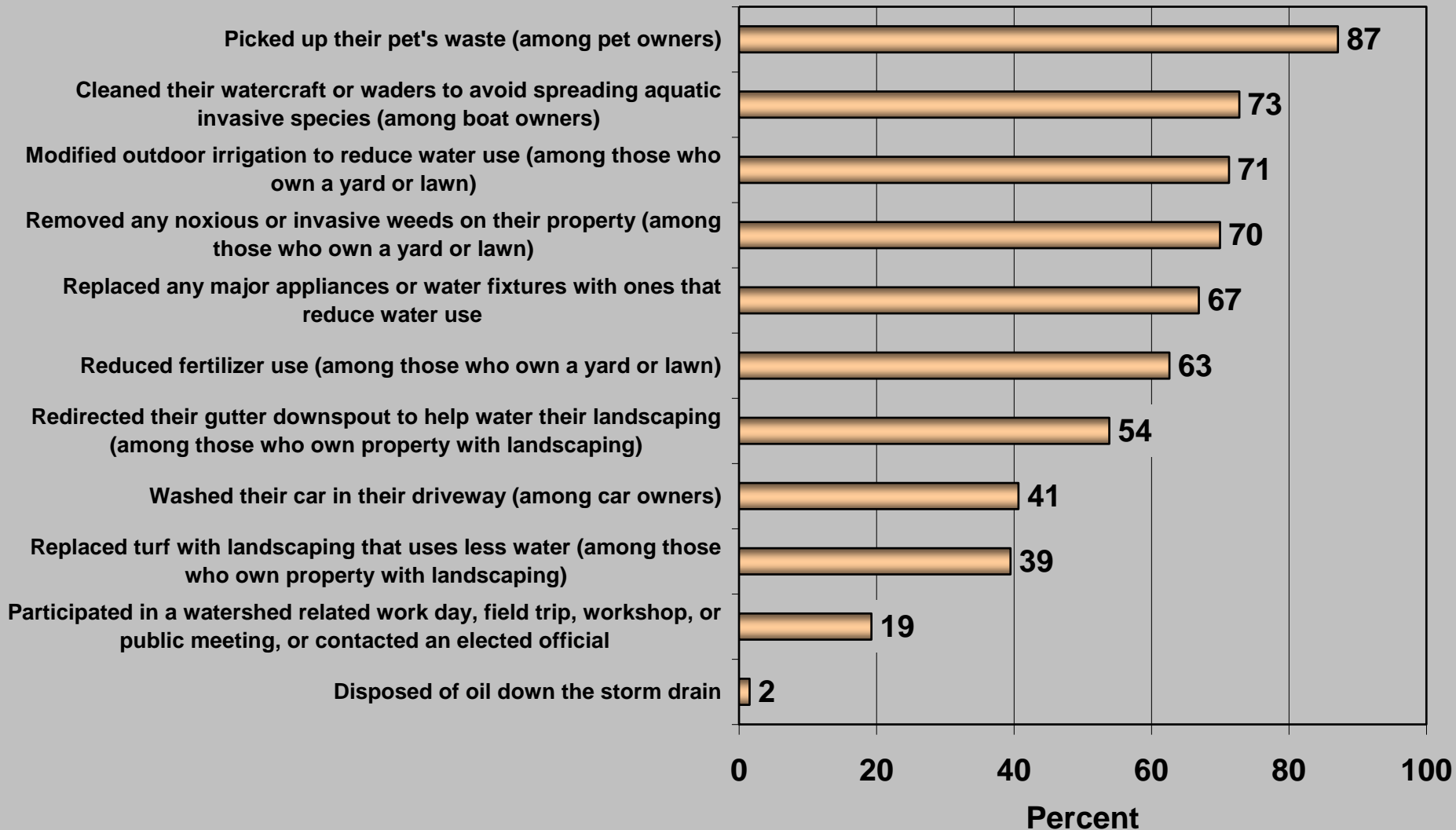


Q76. Do you plan to take or continue taking this action in the next 5 years?

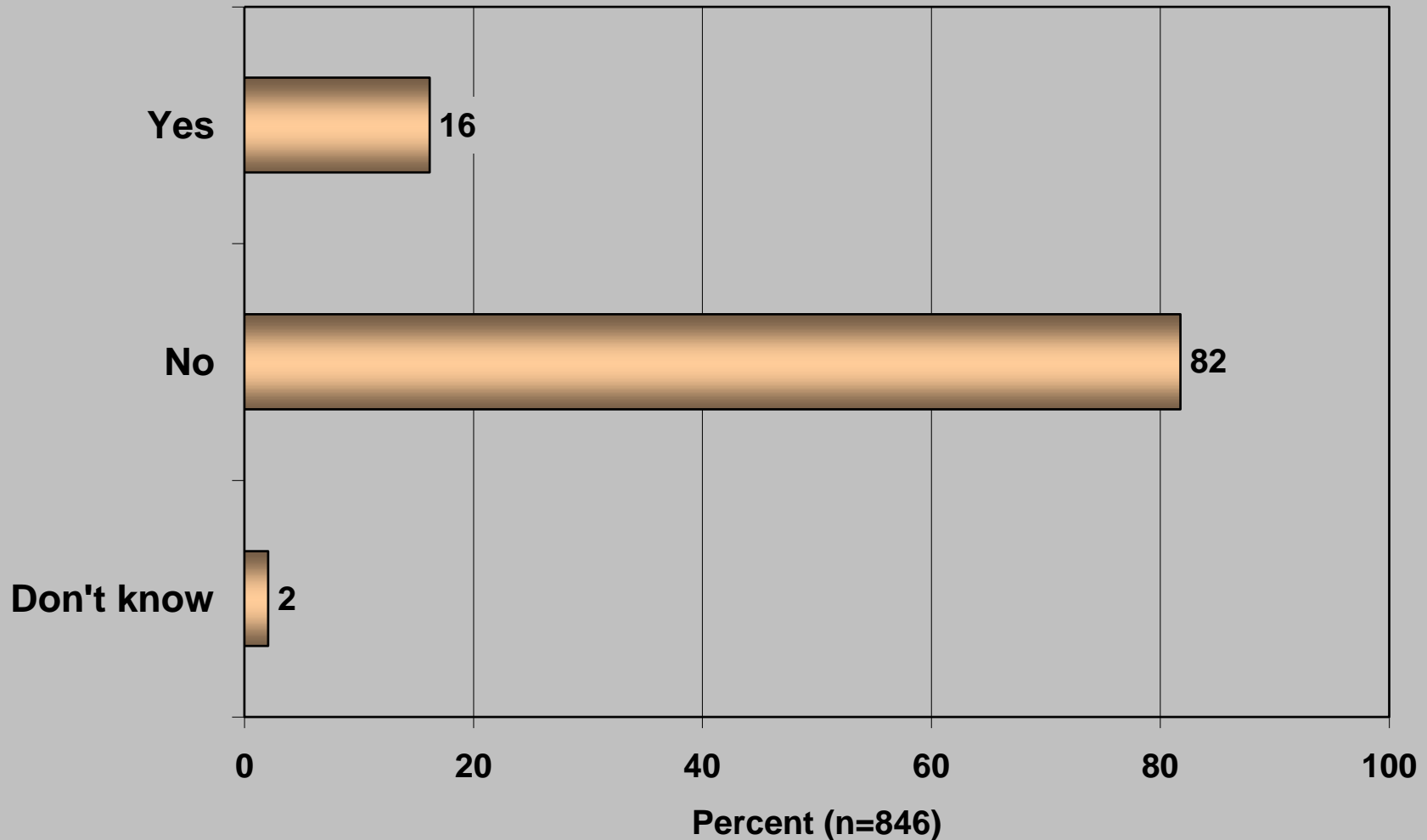
(Asked of those who named a specific action they can take to help protect the health of the Carson River and the watershed's environment.)



Q86-126. Percent who have taken the following actions within the past 5 years:



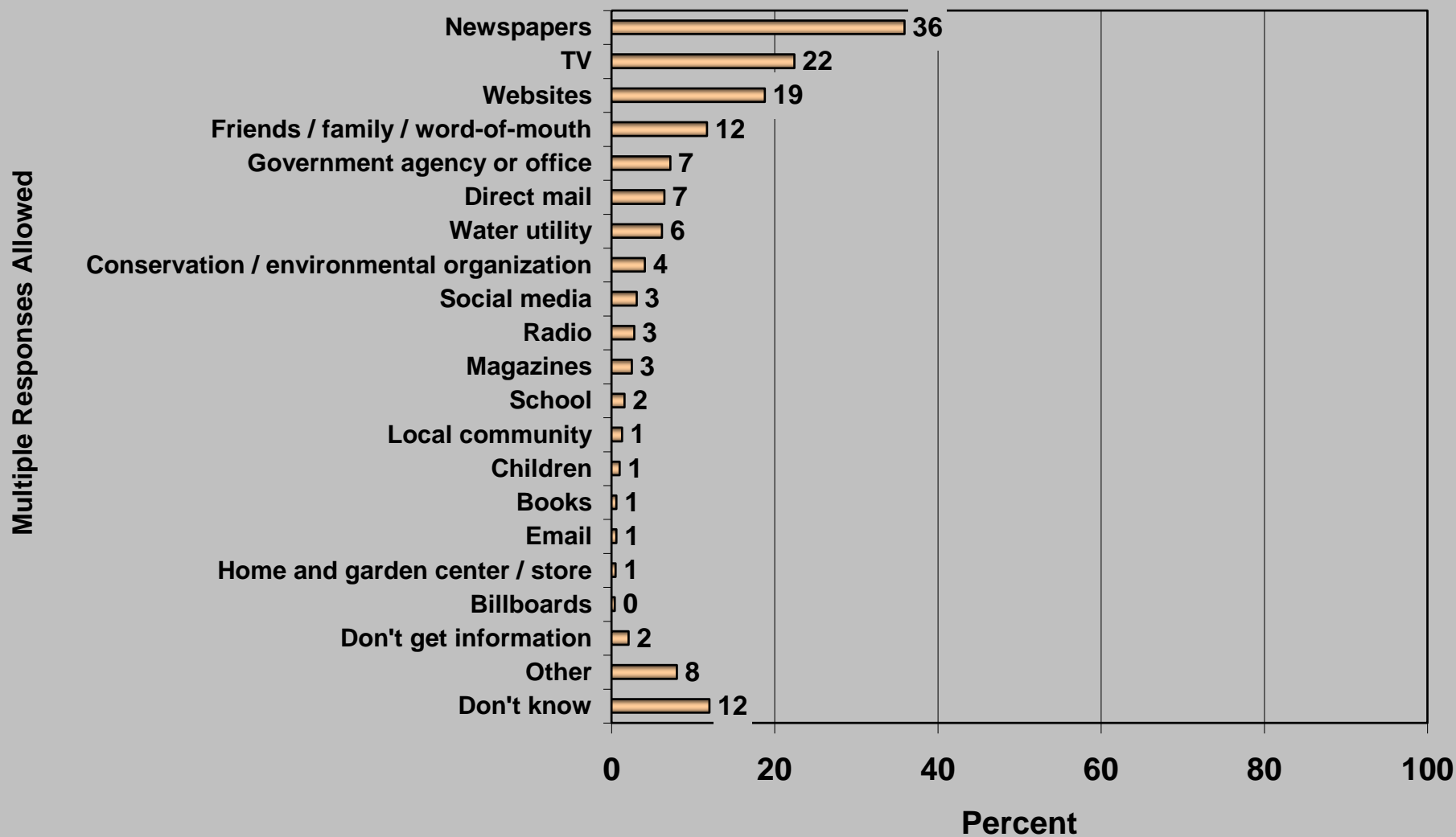
Q128. Is there anything that prevents you from personally taking action to improve the health of the Carson River and the watershed's environment?



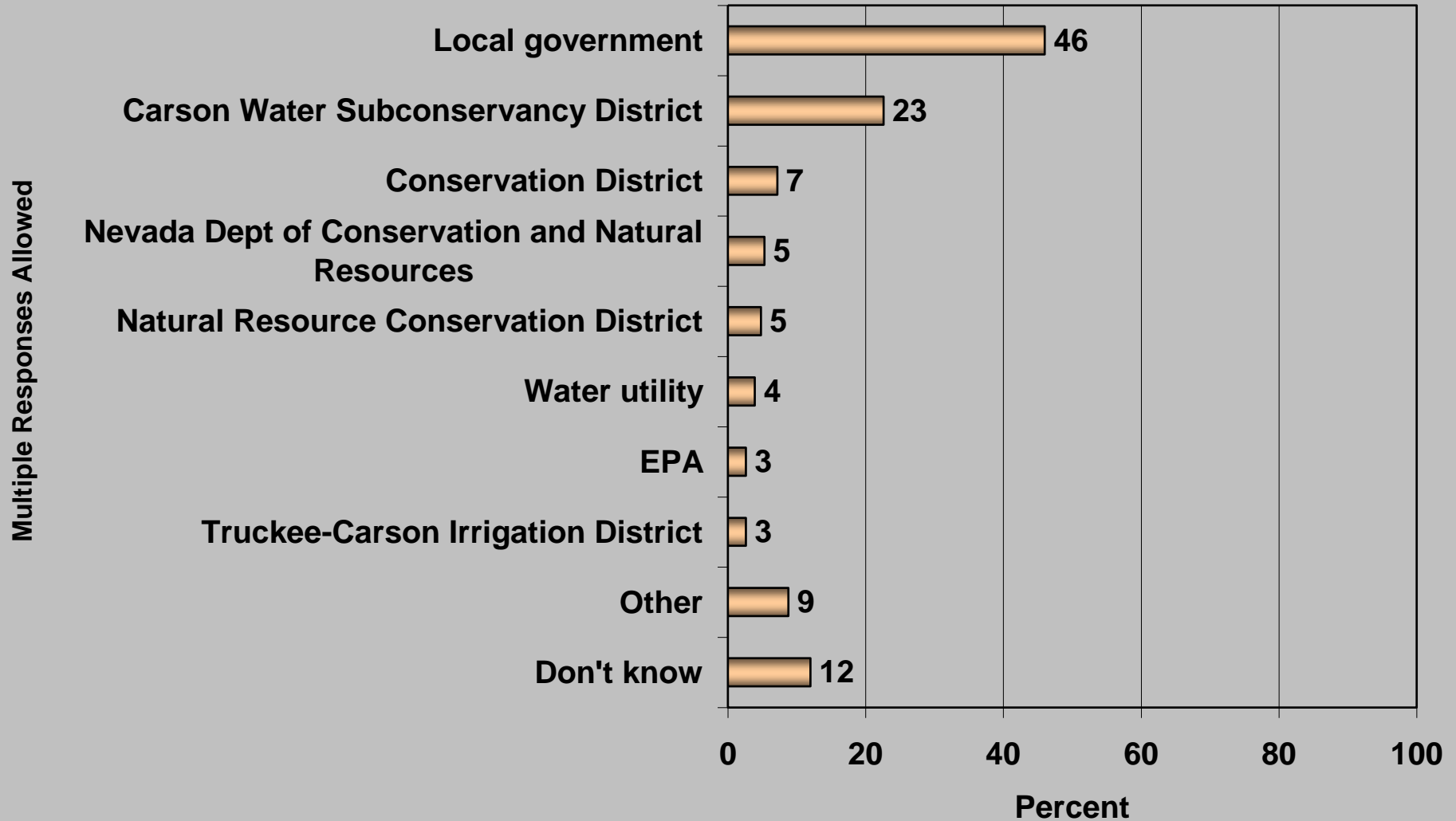
Sources of Information



Q132. Where do you get your information on local watershed or water quality issues?



Q136. Which government agencies or offices do you get your watershed or water quality information from?



Major Findings

- The category “water-related issue” is by far the most important environmental issue to Carson River watershed residents.
- Most residents are unaware that drainage from their property flows into the Carson River.
- Nearly half (49%) of respondents said that groundwater or well water is the source of their tap water; the second most named response is city water (non-specific) at 11%. Only 2% named the Carson River.
- A majority of residents claim to know little or nothing about watersheds in general. Also, a majority are unaware that they currently live in a watershed.
- Residents are divided on their perceptions of the health of the Carson River watershed, with nearly equal numbers saying it is healthy or unhealthy.
- The health of the Carson River watershed’s environment is very important to most residents.
- A majority of residents think they have little or no impact on the health of the Carson River and its watershed.



Major Findings

- In contrast to the previous finding, two-thirds of residents believe that lawn maintenance practices affect the health of the Carson River watershed.
- The factors rated as most important regarding the health of the Carson River watershed are the reduction of polluted run-off, protection of the river's headwaters, and efforts to conserve water.
- A majority of Carson River watershed residents currently take actions that benefit the watershed's environment (such as minimizing pollution or conserving water) and plan to continue these actions in the future.
- Although Hispanic or Latino residents indicate lower awareness of the Carson River watershed than other demographic groups, these residents are the most likely to take action to improve the health of the watershed.
- Residents most often get their information on local watershed or water quality issues from newspapers, followed by TV and websites.



Section II: Marketing and Communications Plan for the Carson River Watershed



Section II: Marketing and Communications Plan for the Carson River Watershed

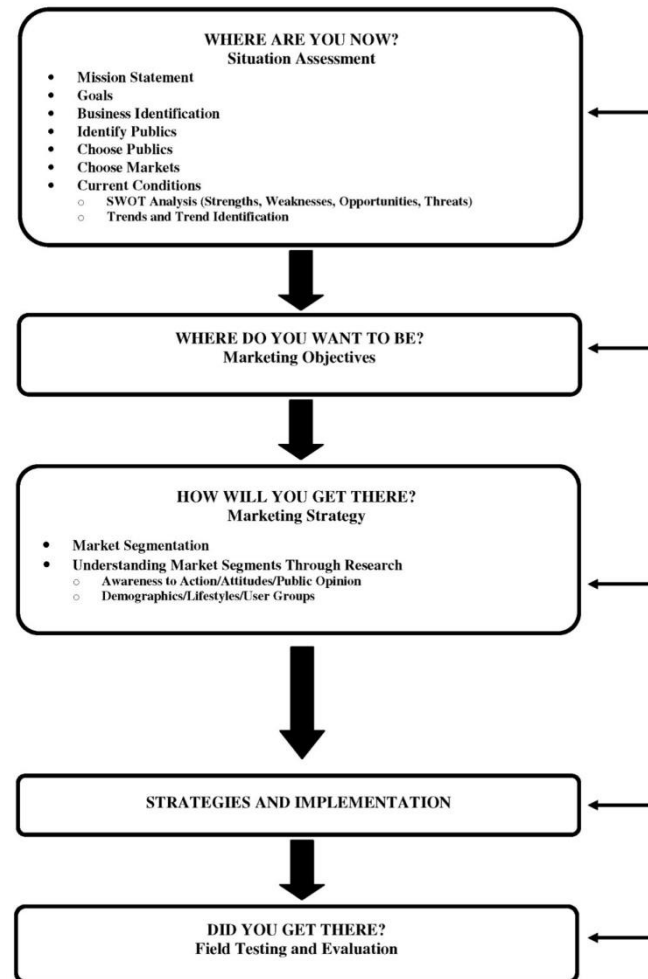
- Marketing and Communications Approach
- How Messaging Can Change Behaviors
- Demographic and Marketing Information for Key Audiences
- Census Data and Population Projections
- Findings and Recommendations
 - Specific Messages
 - Message Delivery Methods
- Message Recommendations
 - Overall Marketing Theme
 - Overarching Recommendations
- Product Suggestions
- Evaluation



Marketing and Communications Approach



Figure 2. Marketing/Systematic Communications Process Model.



How Messaging Can Change Behaviors



- **Strong attitudes may be especially resistant to change because they are based on direct experiences, identities, and values (T.A. Heberlein, 2012).**
- **Messages intended to change behaviors should focus on motivation (not information or education alone) to move the recipient to action (P.W. Schultz, 2011).**
- **The most prominent motivating elements include self-interest, social responsibility, and self-transcendent values (P.C. Stern, 2000).**
- **Messages should avoid depicting problematic behaviors as frequent or commonplace (R.B. Cialdini, 2003).**
- **Social norms may be effective at reinforcing positive behavior (Ferraro and Price, 2013).**
- **Perceived achievability of actions communicated in outreach messages may influence receptivity and compliance (Constanzo, Archer, and Pettigrew, 1986).**



Demographic and Marketing Information for Key Audiences



DEMOGRAPHIC AND MARKETING INFORMATION FOR KEY AUDIENCES

The following tables provide a summation of the 2015 project survey results, presented for all survey respondents as well as for key demographic groups. For the total sample of respondents and each demographic group, the tables below and on the following pages present (a) demographic characteristics and (b) responses to key questions related to awareness, attitudes, and behaviors regarding the Carson River Watershed.

CARSON RIVER WATERSHED SURVEY RESPONDENTS: DEMOGRAPHICS AND CHARACTERISTICS

Gender	
Male	51%
Female	49%

Age*	
Mean	51.3 years
Median	52 years

Education Level	
Professional or doctorate degree	3%
Master's degree	6%
Bachelor's degree	20%
Associate's or trade school degree	15%
Some college or trade school	23%
High school graduate	29%
Not a high school graduate	2%

County of Residence	
Alpine County, CA	0.6%
Carson City, NV (Independent City)	35.4%
Churchill County, NV	18.5%
Douglas County, NV	25.0%
Lyon County, NV	19.7%
Storey County, NV	0.8%

Race/Ethnic Background	
White / Caucasian	82.4%
Hispanic / Latino	9.6%
Native American / Alaskan native	1.8%
East Asian	0.4%

Years of Residence (Mean = 17.4; Median = 15)	
50 years or more	2%
41-50 years	4%
31-40 years	8%
21-30 years	18%
16-20 years	14%
11-15 years	17%
6-10 years	16%
0-5 years	21%

Note: "Other/don't know/none of the above/refused" removed; results may not sum to 100%.

*Survey was administered to those ages 18 and older.



CARSON RIVER WATERSHED SURVEY RESPONDENTS: KEY MARKETING INFORMATION

Stated that drainage from their property flows into the Carson River	<ul style="list-style-type: none"> ○ 9% (unprompted) ○ 3% (when prompted to specify a water body)
Stated that they live in a watershed	<ul style="list-style-type: none"> ○ 38%
Mean rating of importance of the health of the Carson River Watershed (0 to 10 scale)	<ul style="list-style-type: none"> ○ 8.3 (53% rated it 9 or 10)
Currently taking action to benefit the Carson River Watershed	<ul style="list-style-type: none"> ○ 65%
Plan to take or continue taking action to benefit the Carson River Watershed	<ul style="list-style-type: none"> ○ 70%
Took these actions that are beneficial to the Carson River Watershed:	<ul style="list-style-type: none"> ○ Cleaned their watercraft or waders to avoid spreading aquatic invasive species (73% of boat owners) ○ Removed any noxious or invasive weeds on their property (70% of those who own a lawn) ○ Replaced any major appliances or water fixtures with ones that reduce water usage (67%) ○ Reduced fertilizer use (63% of those who own a lawn)
Took these actions that are detrimental to the Carson River Watershed:	<ul style="list-style-type: none"> ○ Washed their car in their driveway (41% of car owners) ○ Disposed of oil down the storm drain (2%)



Census Data and Population Projections



- **Age distribution of Carson River Watershed counties is higher than that of Nevada and the United States as a whole:**
 - **Watershed median age = 44**
 - **Nevada media age = 37**
 - **U.S. median age = 37**
- **Portion of Hispanic residents in the Watershed (16%) is similar to that of the U.S. as a whole (17%) but notably smaller than that of greater Nevada (27%).**
- **Population projections (2015 to 2033) show an increase in Watershed counties of about 12,000 persons every 5 years, with the majority of these gains being in Carson City and Lyon County.**
- **Hispanic residents are projected to make up a larger portion of the Watershed (16% now to about 22% in 2033), particularly in Carson City.**
- **Projections of the age distribution indicate a relatively flat and stable trend from 2015 to 2033.**



Findings and Recommendations



Message Recommendations

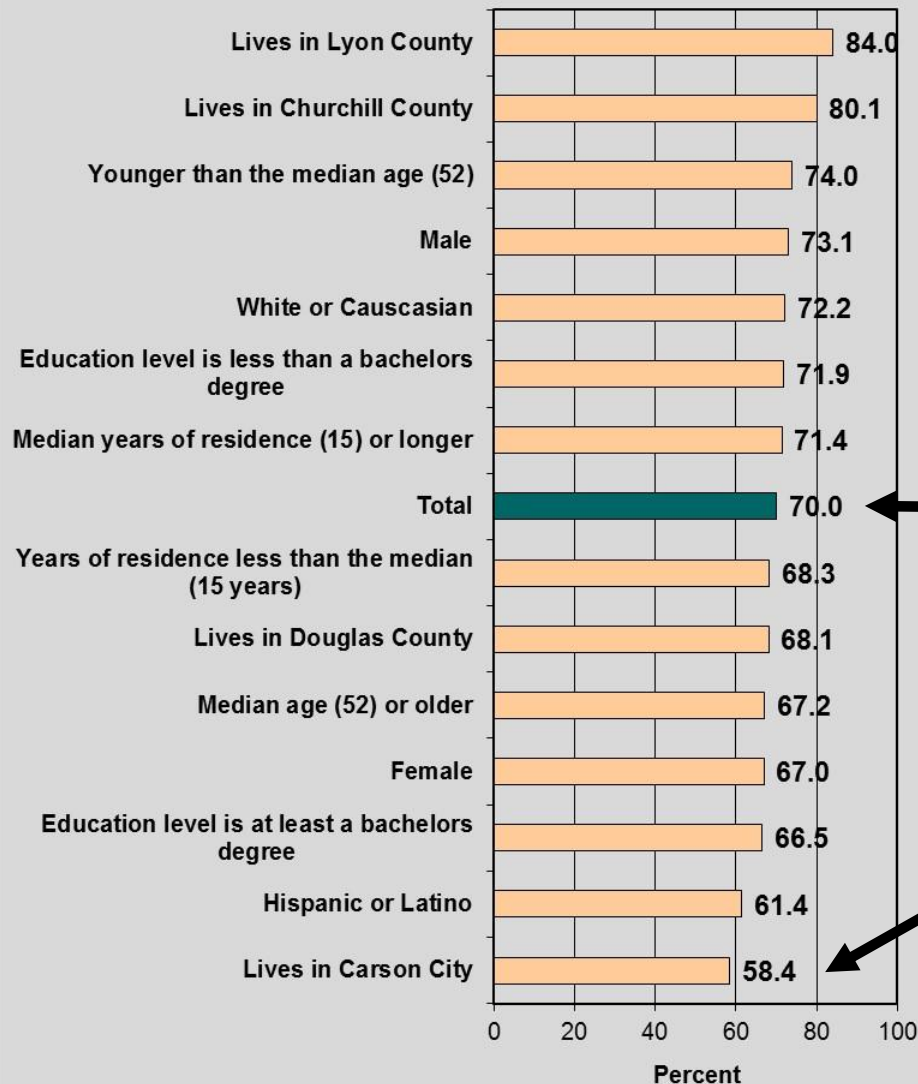


Message Selection Process

- The resident survey is subdivided into the following topic categories for this marketing plan:
 - *Awareness.* Questions that measured residents' knowledge levels regarding their watershed and water supply.
 - *Attitudes.* Questions that measured residents' opinions on the importance of the watershed's environment and activities that impact its environment.
- Survey data were analyzed in two stages:
 - *Demographic Crosstabulations.* Researchers first reviewed the demographic correlation graphs from the survey report (see example on next slide) to note apparent demographic trends for key questions.
 - *Statistical Analyses.* For the selected questions and demographic variables, statistical analyses at a confidence level of 95% were used to identify the statistical significance of various demographic groups with their survey responses.



Percent who have removed noxious or invasive weeds on their property (asked of those who own a yard or lawn).



Demographic Correlations

Of the demographic groups, property owners in Lyon County most often removed weeds on their property.

70% of all property owners in the survey removed weeds from their property.

Of the demographic groups, property owners in Carson City least often removed weeds on their property.



Specific Messages



Overall Marketing Theme

- The most important goal of communications should be to establish a connection between the residents of the Carson River Watershed *and* the river, the watershed, and its many benefits.



Specific Messages

- **Reducing runoff from property can improve water quality (including such efforts as downspout redirection).**
Target audiences: Hispanic or Latino residents, Churchill County residents, female residents
- **The Carson River and its watershed is the source of drinking water.**
Target audience: general population
- **Inform residents that they live in a watershed.**
Target audiences: Hispanic or Latino residents, female residents
- **Yard and land maintenance affects the Carson River and its watershed.**
Target audiences: Hispanic or Latino residents, Lyon County residents, male residents
- **Connect residents' health and quality of life to the health of their watershed.**
Target audiences: younger residents, Hispanic or Latino residents, male residents



Specific Messages

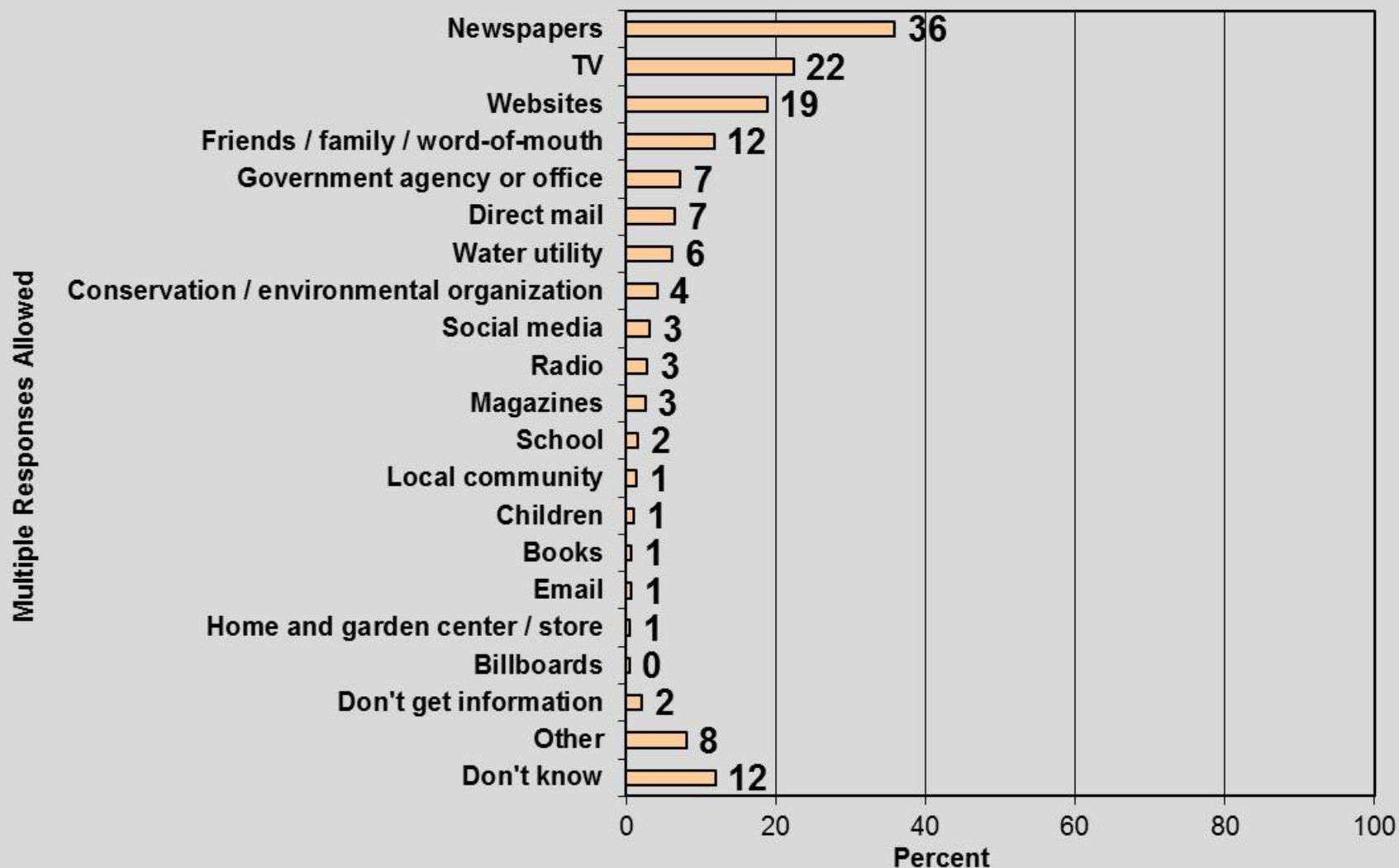
- **Educate residents on the importance of reducing polluted run-off.**
Target audiences: male residents
- **Protect water quality and avoid wasting water (address car washing).**
Target audience(s): male residents
- **Proper disposal of used oil and hazardous materials improves the health of the watershed.**
Target audiences: Hispanic or Latino residents, Douglas County residents
- **Controlling invasive species improves the health of the Carson River and its watershed (address noxious weeds and aquatic invasive species).**
Target audience: older boat owners
- **Protect the floodplain from future development.**
Target audience: general population



Message Delivery Methods



Where do you get your information on local watershed or water quality issues?



Overarching Recommendations

- Develop the recommended theme and tagline and test it in the market.
- A designated marketing manager/director for the communications as outlined in the report should be responsible for maintaining consistency and balance among all outreach efforts.
- Centralize all marketing and communications across the CRC so that anything produced has a consistent look, brand, and message.
- Develop a high-quality mail, email, and telephone database of all target audiences for future marketing efforts.
- Focus on local newspapers as the media of choice in the early phases of the campaign and continue this focus to increase awareness and empathy for the Carson River Watershed.
- Take timing and seasonality into consideration.



Overarching Recommendations

- Explore the possibilities of getting information on the Carson River Watershed into water bills of watershed residents.
- Consider males as an important overall target market for marketing and communication efforts.
- Make full use of partnership strength and coordinate all efforts.
- Identify and prioritize issues.
- Take full advantage of social media.
- Stay consistent with messages and continue hitting target audiences multiple times.
- Evaluate everything.
- Learn as much as possible about the Hispanic/Latino market in the watershed.



Product Suggestions



Healthy River

Carson River Coalition

Healthy Families





What Goes Around, Comes Around



Carson River Coalition



Responsive Management





Evaluation



Future Assessments and Grading

Grade	Metrics
F	Desired results (knowledge levels and positive conservation behaviors) decrease from baseline beyond the margin of error.
D	Desired results increase by 1% or less from baseline.
C	Desired results increase by at least 3%.
B	Desired results increase by at least 5%.
A	Desired results increase by at least 10%.





Responsive Management

